



Alberni-Clayoquot Regional District Fire Services Review

Dave Mitchell & Associates Ltd.

9 March 2022

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

Table of Contents.....	i
1. Executive Summary.....	5
2. Summary of Recommendations.....	8
3. Community Backgrounds.....	15
3.1 Alberni-Clayoquot Regional District	15
3.2 Bamfield	16
3.3 Beaver Creek	18
3.4 Sproat Lake	20
4. Regulatory Matters	24
4.1 Service Establishment Bylaws	25
4.2 Operational Criteria Bylaw No. R1023, 2012	28
4.3 Occupational Health and Safety	30
4.4 Emergency Program Bylaws.....	38
4.5 Potential Regulatory Changes - The Fire Safety Act.....	41
4.6 Recommendations.....	46
5. Mutual and Automatic Aid Agreements	49
5.1 The MA Agreement	49
5.2 Auto Aid Agreement	51
5.3 Recommendations.....	53
6. Service Agreements	54
6.1 HG Service Agreement (Bamfield).....	54
6.2 HFN Service Agreement (Sproat Lake)	57
6.3 BCEHS Agreements.....	58
6.4 Recommendations.....	60
7. Fire Underwriters	61
7.1 Fire Underwriters' Methodology	65
7.2 STSS Accreditation	69
7.3 Fire Underwriters – Summary	70
8. Financial Review	71
8.1 Operating Revenue and Expenses	73
8.2 Capital Revenue and Expenses.....	75

8.3	Recommendations.....	78
9.	Organizational Structure and Staffing Model.....	79
9.1	Regional Fire Service Organizational Structure	79
9.2	Protective Services Manager	80
9.3	Regional Fire Services Manager.....	80
9.4	Chief Officer Positions	81
9.5	Compensation	82
9.6	Administration.....	83
9.7	Recruitment and Retention	84
9.8	Recommendations.....	85
10.	Fire Prevention	86
10.1	Inspections	86
10.2	Pre-Incident Planning	87
10.3	Investigations	88
10.4	Public Education.....	89
10.5	Recommendations.....	91
11.	Emergency Program.....	92
11.1	Structure.....	92
11.2	Training and Exercises	93
11.3	Facilities and Equipment.....	93
11.4	Planning	94
11.5	Recommendations.....	95
12.	Operational Guidelines	97
12.1	Sproat Lake	97
12.2	Beaver Creek	98
12.3	Bamfield	98
12.4	Summary.....	99
12.5	Recommendations.....	99
13.	Fire Halls, Apparatus and Equipment	100
13.1	Bamfield	100
13.2	Beaver Creek	104
13.3	Sproat Lake	106
14.	Training and Qualifications	112

14.1	Applicable Standards.....	113
14.2	Approved Service Levels and Training	115
14.3	Current Levels of Qualification.....	120
14.4	Training Records	121
14.5	Recommendations.....	122
15.	Response Analysis	123
15.1	Agency by Year	123
15.2	Temporal Analysis - By Year	124
15.3	Temporal Analysis - By Month.....	128
15.4	Temporal Analysis - By Day	132
15.5	Temporal Analysis - By Hour	134
15.6	Temporal Analysis - By Day and by Hour	138
15.7	Response by Incident Type	141
15.8	Spatial Analysis	146
16.	Benchmark Survey	155
16.1	Population Served	155
16.2	Response Areas	157
16.3	Type of Departments	159
16.4	Administrative Support.....	160
16.5	Level of Service	160
16.6	Fire Halls and Staffing	161
16.7	Operating Budgets.....	162
16.8	Apparatus.....	163
16.9	Fire Prevention	163
16.10	Calls for Service	163
16.11	Mutual / Automatic Aid and Service Agreements	164
16.12	Summary.....	164
Appendix 1: Defined Terms and Acronyms		165
Appendix 2: NFPA Standards.....		168
Appendix 3: ACRD Firefighter Qualifications		171
Appendix 4: Playbook Training Requirements.....		174
Appendix 5: Benchmark Survey Questionnaire		201
Appendix 6: Consultant Backgrounds.....		206

Dave Mitchell206
Gordon Anderson.....206
Jim Cook.....207
Wayne Humphry207
Ian MacDonald.....207

1. Executive Summary

The Alberni Clayoquot Regional District (the “ACRD” or the “District”) has established three local fire service areas in which it operates or is responsible for the operation of a fire department: Bamfield, Beaver Creek and Sproat Lake (collectively, the “Departments”). The ACRD has commissioned this review to assess the administrative burden facing the three Departments in the context of their operational mandates. This review has examined the underlying regulatory structure and obligations affecting the Departments, ranging from the *Fire Services Act*, WorkSafe BC requirements, and applicable service and aid agreements, to training, budgeting processes, staffing, facilities and equipment. As each of the Departments is integral to the ACRD Emergency Program, this report also examined the relevant elements of the ACRD’s emergency planning.

The populations of the three identified communities have grown since 2016. Areas of new development in both Sproat Lake and Beaver Creek likely have driven the population growth in these two areas, which had previously seen a drop in their permanent population between 2011 and 2016. The current infrastructure improvement project designed to upgrade the road access to Bamfield is also anticipated to result in future increases in development and population in that area (which, in any event, has seen its permanent population rise from some 155 to just over 200 between 2011 and 2021).

The Departments are fundamentally volunteer based. Members receive some small compensation for practice attendance but are otherwise unremunerated for either call outs or administrative work. As a value proposition, such departments represent one of the best returns on investment that local governments can make. In addition to providing critical life safety and emergency response capabilities, the Departments have achieved credible ratings from the Fire Underwriters which, in turn, mean that service area residents save materially on their insurance costs. These savings greatly exceed the tax-cost of the Departments.

The chief officers of each Department are paid a small stipend and are responsible for ensuring the operational effectiveness of the fire service in their respective communities, along with managing the related administrative workload. Like other volunteer fire departments, most of the officers and firefighters have other full-time employment which limits the time available both for emergency responses and for the required administrative activities. As a result, the amount of time required to address all of the operational, training and other administrative records management needs currently exceeds the capacity of the chief officers. The review has identified a number of areas – occupational health and safety and training records among them – where the Departments are struggling to meet a growing administrative burden, while also trying to train to meet their operational requirements.

The Regional Fire Services Manager (the “RFSM”) is a part-time ACRD position (0.6 FTE) with responsibility for overseeing the Departments, including ensuring that they meet their operational, regulatory and administrative obligations. The RFSM also supports the ACRD’s various emergency programs, attends a variety of meetings and produces/presents reports to

the ACRD Board. The RFSM lacks the capacity to address all of the current administrative support requirements of each Department.

This report reviews the core areas of fire service operations and administration for each of the Departments along with the District's regulatory oversight and financial management processes. The principal theme that emerges is the need to provide additional support to the Departments, to assist them with their administrative requirements and obligations. This support is best provided through a centralization of certain administrative operations – such as the creation and maintenance of a standardized occupational health and safety program (and all that that entails), standardized operational guidelines, the creation of shared training plans and records keeping systems, and the provision of administrative support to each Department when required – to remove that burden from the individual Departments. We must stress, however, that this centralization process must be undertaken in consultation with the Departments and their chief officers.

Centralization will have several notable benefits: it will ensure that each Department is operating to a similar, compliant standard; it will better enable oversight and understanding of each Department's operations and challenges; and it will streamline updating of fundamental administrative documents and processes, as statutory and regulatory requirements change.

By providing this assistance, the ACRD will better enable each Department to focus on operational matters and ensure that it can provide the highest level of service to its residents, in a manner that is both safe and effective.

As a corollary to this centralization, the ACRD should review with the Departments whether members should be compensated for performing fundamental administrative tasks, such as for participation in the joint committee or work on ensuring proper records keeping, and similar essential matters.

The review of financial matters included the budget development process and an analysis of the Departments' operating and capital budgets.

The annual budget development process includes input from the Fire Chiefs and consultation with the RFSM, Chief Financial Officer and the Area Director. Generally, all the Chiefs expressed their need for additional training and guidance for planning, preparation, and overall management of their budgets. This training should be provided by the ACRD as it would strengthen the relationship with the Departments and provide transparency in the budget development and approval processes.

The 2020 and 2021 operating and capital budget reports show that all or a portion of operating surpluses from the previous year were used to reduce the tax requisition amount required to fund current year expenditures. This practice presents a potential risk due to significant fluctuations in the annual tax requisition amount needed to fund fire department operations. Optimally, the funds should be transferred to the capital reserve account, which is under-funded, to reduce the need to finance major acquisitions through borrowing, as is the case with the procurement of a new engine for Bamfield in 2022.

From a recruitment and retention standpoint, as noted above, the ACRD is well served by the dedication of its volunteer firefighters. Recruiting new members and retaining trained firefighters and officers is a challenge for all volunteer and paid-on-call departments in the Province. In consultation with the Departments, consideration should be given to assessing whether moving to a formal paid-on-call model would be beneficial. Alternatively, or as an aspect of such a transition, the ACRD also should review whether a benefits program for volunteer members (e.g., dental and extended health) may assist with retaining existing members and recruiting new ones.

This report presents more than 40 recommendations. From a priority perspective, the ACRD needs to ensure that each Department is meeting its fundamental statutory and regulatory requirements, and is capable of delivering its fundamental services. As such, the ACRD:

- needs to create more administrative capacity, which probably is best done on a centralized basis;
- needs to ensure that fundamental administrative structures – such as operational guidelines, occupational and safety programs, joint committees, and training records – are properly compliant with WorkSafe BC and Playbook¹ requirements;
- needs to issue a proper service level declaration for each Department; and
- needs to ensure that each Department is provided with the assistance required to meet the training obligations imposed by the Playbook, required by WorkSafe BC or, where medical first response services are provided, mandated by BC Emergency Health Services.

Individual recommendations covering these points are found in the Summary of Recommendations section (which are drawn from each substantive section of the report).

¹ Office of the Fire Commissioner, *British Columbia Fire Service Minimum Training Standards: Structure Firefighters Competency and Training Playbook* 2nd edition (May 2015) (the “Playbook”).

2. Summary of Recommendations

The following section extracts the recommendations contained within the report. The more expansive discussion in the report contains details regarding each of these recommendations. For convenience, the relevant headings are included as a guide to the section from which the particular recommendation is extracted.

4. Regulatory Matters

General

Recommendation: The ACRD Board should, in consultation with the Regional Fire Services Manager and the Departments, formally establish each Department's service level in accordance with and as contemplated by the Playbook.

Service Establishment Bylaws

Recommendation: In relation to the Departments' service establishment bylaws, we would recommend the following:

- **Bamfield:** Consider converting Bylaw No. 24 from a specified area to a local service bylaw. If that updating process is undertaken, ensure that the description of the services being provided is sufficiently broad to capture the range of service responsibilities undertaken by the Department, including rescue, medical response and the provision of services outside of the jurisdiction under service agreements.
- **Beaver Creek:** Consider updating and broadening the service description in Bylaw No. E1052 to cover the full range of service responsibilities of the Department, which are broader than merely "fire protection and suppression". In addition, address the provision of services by the Department into the neighbouring service areas (the Mountain Ranch Road and Granville Road service areas). If this updating is undertaken, consider increasing the maximum taxation rate as permitted by the *Local Government Act*.
- **Sproat Lake:** Consider updating and broadening the service description in Bylaw No. 856:
 - to cover the full range of service responsibilities of the Department, which are broader than merely "fire protection and suppression";
 - to address the off setting of costs through the use of fees and charges and raising of funds through other means permitted under the *Local Government Act*; and
 - if considered advisable, update the maximum taxation amount as permitted by the *Local Government Act*.

Operational Criteria Bylaw

Recommendation: The Operational Criteria Bylaw is now a decade old and could stand updating, taking into account the issues identified in the section of the report that reviewed this bylaw, including:

- addressing the ACRD Board setting service level policies for each Department in accordance with the Playbook;
- considering including language that limits or attempts to limit liability for delayed or inadequate responses by the volunteer departments;
- addressing the appointment of LAFCs;
- providing that the services authorized to provided by each Department be set by policy; and
- authorizing the Departments to enter properties to conduct pre-incident planning.

Occupational Health and Safety

Recommendation: The ACRD, in consultation with its Departments, should undertake a thorough review of occupational health and safety practices, including:

- establishing a single, consistent OH&S program to be used and applied by each of the Departments;
- ensuring that each Department operates a joint committee (or appoints a worker representative) as required by the *Workers Compensation Act* and Part 31 of the Regulation; and
- developing the necessary links and integration between the OH&S programs of the Departments and the overall ACRD OH&S program (including the latter's joint committee).

Recommendation: The ACRD, in consultation with its Fire Chiefs, should determine whether a single joint committee covering all three Departments would be a more efficient and effective approach to managing this WorkSafe BC obligation. If that approach is to be adopted as contemplated by section 31 of the WCA, an application to WorkSafe BC setting out the structure and approach would be required.

Recommendation: The ACRD should consider compensating Joint Committee members for time spent on this critical administrative task.

Emergency Program Bylaws

Recommendation: Complete and implement the bylaw for Electoral Area A (Bamfield) that formally establishes an emergency management organization and related structure for that area, with appropriate integration into the existing emergency management organization created for Electoral Areas B, D, E and F. (The same will be required for Electoral Area C if service provision through Ucluelet is not continued.)

Recommendation: Review Bylaw No. PS1006 and update as appropriate based on the comments in this section, including: expressly adopting the Emergency Plan as the plan for the four electoral areas; clarifying responsibility for the appointment of the Emergency Program Coordinator; and cross referencing to the City's complementary Bylaw No. 4836.

5. Mutual and Automatic Aid Agreements

Recommendation: The ACRD update and integrate the MA Agreement with the "best-in-class" Auto Aid Agreement.

Recommendation: When the integration is undertaken, consideration should be given to the following issues:

- whether aid responses should be made expressly discretionary, rather than based on decisions involving "operational, safety or other concerns";
- building out the dispute resolution processes to address circumstances where the parties' respective CAOs cannot settle the matter in question (e.g., by providing for mandatory or optional arbitration); and
- Schedule A updated to better describe the circumstances in which automatic aid is invoked for response into the City.

Recommendation: Consideration should be given to integrating any revised aid agreement with the City's and ACRD's emergency programs, to potentially enable the recovery by the assisting departments of their costs for any response.

6. Service Agreements

Recommendation: A series of minor drafting notes were identified in the review of the HG Service Agreement, which should be addressed when the agreement is updated. These minor drafting notes are listed in the relevant section of this report.

Recommendations: The following substantive issues were identified in connection with the HG Service Agreement:

- there should be a grant of operational powers to the Department in connection with its provision of services on HG territories;
- the service level commitment in section 4.2 should be revised so as to commit the ACRD to providing substantially the same level of service as is provided in the Bamfield Service Area, as opposed to within the ACRD at large;
- consideration should be given to including an exception in the indemnity in Article 6 for gross negligence or wilful misconduct;
- there is late fee described as a “penalty” in section 7.5: this should be revised to refer to it as an interest charge, as penalties are not enforceable under contract law; and
- the Department’s obligation to respond to interface fires should be specified.

Recommendations: The HFN Service Agreement is in substantially the same form as the HG Service Agreement, and the recommendations relating to the latter should be considered when this agreement is reviewed and updated. In addition, the following recommendations are made:

- the sections addressing how the service fee is to be calculated (ss. 7.1 and 7.2) should be revised and the drafting tightened up somewhat, including: specifying whether the calculated values include or exclude the land on which the structures sit; defining the meaning of certain capitalized terms (e.g., “Certified Appraiser,” and “Net Actual Assessed Value”), and amending the language linking the fee calculation from section 7.2 to Schedule D, to correct some minor drafting errors; and
- deleting the defined term “Residential Development,” which is included in section 1.1, but never used in the body of the HFN Service Agreement.

8. Financial Review

Recommendation: The ACRD should provide training for budget planning, development and maintenance to the chief officers.

Recommendation: The ACRD should provide a policy document to the chiefs that explains all costs charged to the Departments for services and overhead.

Recommendation: The ACRD should consider providing timely monthly or quarterly financial reporting to the Departments.

Recommendation: The ACRD should coordinate and manage grant applications for the three Departments. (Note: The ACRD has established the position of Asset Management and Grants Coordinator that will be filled on 31 January 2022.)

Recommendation: The ACRD should consider implementing a bulk purchasing policy for the three Departments. (Note: The ACRD hired a Procurement Coordinator in the Fall 2021 and will be addressing this issue in 2022.)

Recommendation: The ACRD should consider development of a policy that directs the allocation of surplus operating funds from prior years to the capital reserve account to supplement funding for major purchases.

Recommendation: The ACRD should ensure that replacement cost projections include inflation.

9. Organizational Structure and Staffing Model

Recommendation: The ACRD increase the Regional Fire Services Manager position from a 0.6 FTE to a 1.0 FTE. The added resource will allow the RFSM to better manage the roles and responsibilities of the position.

Recommendation: The ACRD create a new administrative support position that reports directly to the Regional Fire Services Manager. The duties of the position would include the management of all administrative records and reports related to the operation of ACRD fire services.

Recommendation: The ACRD clarify the reporting structure for the Fire Chief positions and update the organizational chart and/or job description as required.

Recommendation: The ACRD provide support or direct funding to the Departments for data entry, general records management and reporting functions.

Recommendation: The ACRD provide ongoing training and support to the Departments in the use of Fire-Pro software.

Recommendation: The ACRD provide a resource to develop and manage operational guidelines for the three Departments.

Recommendation: The ACRD consider implementing improvements to the compensation structure to enhance recruitment and retention of volunteers.

Recommendation: The ACRD consider implementing a wage loss replacement policy for Department members while attending training and education programs.

Recommendation: The ACRD develop a joint recruitment program with the three Departments that includes community outreach and representation at community events.

10. Fire Prevention

- Recommendation:** Create an operational guideline for the Regional District that defines the requirement for preplans, the use of a standardized template and identifies the processes to create, review and update preplans. Consider providing administrative support from the Regional District to enable the Departments to meet the preplan workload.
- Recommendation:** Consider a Regional District approach to fire investigations that includes monitoring fire investigator training, providing support to the Departments for conducting investigations and ensuring consistent fire reporting to meet the statutory requirements of the *Fire Services Act*.
- Recommendation:** Identify a training standard for fire inspectors and fire investigators for the ACRD Departments.
- Recommendation:** Consider creating and funding a Regional District Public Education program in coordination with the fire departments. This should include ongoing administrative staff support for scheduling activities, educational resource material acquisition and communications.

11. Emergency Program

- Recommendation:** Refresh the Alberni Valley HRVA.
- Recommendation:** Review and refresh the Alberni Valley emergency plan
- Recommendation:** Designate and equip a site capable of functioning as a secondary EOC for the Alberni Valley emergency program.
- Recommendation:** Formally designate an EMO in Electoral Area A (Bamfield).
- Recommendation:** Update both Bamfield and Alberni Valley emergency plans to reflect and formalize the EOC support framework for Bamfield.
- Recommendation:** Develop formal arrangements between the Huu-ay-aht First Nations emergency plan and the BCEP, including making provision for joint training and combined exercises.
- Recommendation:** The various emergency plans in the Bamfield area (covering the water system, Marine Centre and Coast Guard planning for a potential tsunami event) are a decade old. They should be reviewed and refreshed as required. The emergency plan being developed with School District 70 should be completed.
- Recommendation:** Conduct a review of the current emergency management structure and organization in use within the ACRD and consider the option of developing a district-wide EMO and emergency plan.

12. Operational Guidelines

Recommendation: The ACRD identify requirements that apply to each of the Departments and develop a centralized set of OGs for their use. This centralized set of OGs would cover primary operational activities, ACRD policies and requirements and specific regulatory obligations (e.g., OH&S matters). These common OGs would be maintained in an electronic form by the ACRD in consultation with the Departments.

Recommendation: For Department-specific OGs (e.g., covering internal administrative matters), the ACRD should establish a common OG template for use by all three Departments to ensure key components are captured. Each Department must maintain its OGs in an electronic format for ease of access, reviews and updates, with a copy of all Department-specific OGs also being provided to the ACRD.

14. Training and Qualifications

Recommendation: The Regional Fire Services Manager undertake a full review of the individual training records in all three departments and where necessary, provide the administrative support required to achieve compliance.

3. Community Backgrounds

3.1 Alberni-Clayoquot Regional District

The ACRD covers an area of nearly 6,600 square kilometres and has a population (including its municipalities) that was estimated to be just under 34,000 at the end of 2020.² The ACRD consists of:

- three incorporated municipalities: Port Alberni, Tofino and Ucluelet;
- four Treaty First Nations including: Huu-ay-aht First Nations, Yuułuʔiłʔatḥ First Nation, Uchucklesaht Tribe, and the Toquaht Nation; and
- six electoral areas: "A" (Bamfield), "B" (Beaufort), "C" (Long Beach), "D" (Sproat Lake), "E" (Beaver Creek) and "F" (Cherry Creek).

The Alberni-Clayoquot Regional District is within the traditional territory of ten First Nations, including the Ahousaht First Nation, Ditidaht First Nation, Hesquiaht First Nation, Hupacasath First Nation, Tla-o-qui-aht First Nation, and the Tseshaht First Nation.³

3.1.1 ACRD Strategic Plan

The *ACRD Strategic Plan 2021-2024* includes five focus areas.⁴ Focus Area 4, *Emergency Management*, is particularly relevant to this review and provides as follows:⁵

Goal

To be adequately prepared for emergencies and disasters by coordinating our emergency planning and response activities and promoting community preparedness and resiliency.

Why

We have identified a number of existing hazards and vulnerabilities and we recognize that changes in our climate are increasing the risk of natural disasters such as flooding,

²² BC Stats, *British Columbia Regional District and Municipal Population Estimates, 2011 – 2020*, at: <https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>. Regarding area, see: StatsCan, Alberni Clayoquot Regional District Census Profile, 2016 Census, at <https://www12.statcan.gc.ca/census-2016-ACRD>. The 2021 census numbers for the ACRD are largely similar, showing a total population of 33,521. See: Statistics Canada, [Table 98-10-0004-01 Population and dwelling counts: Canada, provinces and territories, census divisions, census subdivisions \(municipalities\) and designated places](#) (search term "Alberni-Clayoquot").

³ <https://www.acrd.bc.ca/>

⁴ ACRD, *ACRD Strategic Plan 2021-2024* at https://www.acrd.bc.ca/dms/documents/agendas/2021-board-of-directors-agendas/acrd_strategic_plan_2021_to_2024.pdf.

⁵ *Ibid.*, p. 11.

land slides and forest fires and we have a legislated responsibility to plan for such events and respond effectively.

STRATEGIES	OBJECTIVES
4.1 Identifying Hazards and Risks	Undertake a climate change risk assessment to identify areas that may have increased hazards included those due to the effects of climate change
4.2 Emergency Response Plans	Keep current and maintain regional and sub-regional emergency response plans throughout the region.
4.3 Improved Coordination	Explore opportunities for greater coordination with First Nations, municipalities and other agencies.

3.2 Bamfield

Located on the west coast of Vancouver Island approximately 90 kilometres by mostly gravel road from Port Alberni, Bamfield is a small, unincorporated, self-sufficient community. Bamfield Inlet separates East Bamfield, which is accessible by vehicle, from West Bamfield which is accessible only by boat. Bamfield’s history and focus on marine activities is reflected in the orientation of structures, streets and marine infrastructure.

Anacla, a Huu-ay-aht First Nations community, is located approximately 6 kilometres from Bamfield via a paved road.

3.2.1 Population

Statistics Canada reported that the population of Bamfield was 201 in 2021 compared with 179 in 2016.⁶ Statistics Canada also reported that the overall population of Electoral Area A (Bamfield) rose from 243 in 2016 to 256 in 2021. In both cases, as a percentage the growth is large, but it is off a small base number. The reality is that the permanent population in Bamfield and Electoral Area A remains small, albeit with a very large influx of tourists during the summer season.

The population of the neighbouring Huu-ay-aht First Nation community of Anacla was 82 in 2016 and grew to 104 in 2021.⁷

3.2.2 Official Community Plan

The ACRD initiated a review of Bamfield’s Official Community Plan (“BOCP”) in the fall of 2011 to update Bylaw No. P1026, 2000. A revised version of the BOCP was completed on

⁶ Statistics Canada: Table 98-10-0004-01 Population and dwelling counts: Canada, provinces and territories, census divisions, census subdivisions (municipalities) and designated places (search term “Bamfield”).

⁷ *Ibid.*, (using search term: “Anacla”).

14 September 2014 and adopted 22 October 2014 .⁸ The BOCP describes Bamfield’s vision and values as shown below.

The OCP describes the general goals of the community as follows:⁹

- Goal 3.1.1 Recognize and protect the unique characteristics of our community;
- Goal 3.1.2 Work closely with our neighbours, the Huu-ay-aht First Nation, to achieve common goals and objectives;
- Goal 3.1.3 Protect environmentally sensitive features and the other inhabitants of the air, lands, and water in the Plan area;
- Goal 3.1.4 Recognize the importance of our coastal location and the way in which this location shapes all our actions;
- Goal 3.1.5 Promote a strong sense of community and community pride;
- Goal 3.1.6 Ensure that there are viable employment and business opportunities in the community that will allow people to live in Bamfield and Anacla year-round.

The OCP highlights non-residential land use including:

Resource

The area surrounding Bamfield contains large tracts of forested lands which provide wildlife habitat, stream protection, and buffers between potentially conflicting uses. At the same time, forestry-related activities provide economic activity and employment.¹⁰

Industrial

Since the founding of the communities, Bamfield and Anacla have contained a range of industrial uses focusing on natural resource extraction and the sea. The overall objective of this section [of the OCP] is to encourage industrial uses for employment, but ensure that these uses do not conflict with the natural environment or other forms of land development.¹¹

Commercial

The Plan area contains both commercially designated properties and a range of home-based businesses and industries. The overall objective of this section is to emphasize the importance of supporting current businesses and encourage new

⁸ ACRD, *Bamfield Official Community Plan*, P1309 - Schedule ‘A’ at <https://www.acrd.bc.ca/bamfield-ocp>

⁹ *Ibid.*, p. 18.

¹⁰ *Ibid.*, p. 39.

¹¹ *Ibid.*, p. 41.

businesses that support the community's goals, objectives, and policies on sustainability.¹²

3.2.3 Summary

The development plan for Bamfield focusses on sustainability and environmental responsibility while supporting industrial and commercial development, and resource extraction that supports the ability of Bamfield to continue to be a complete community. Bamfield values its international reputation as a life-long learning community, and proudly protects the environment and beauty (both natural and cultural) of the community and surrounding area.

In terms of population, Bamfield is small but growing. The range of services provided within the community is indicative of its remoteness, independent nature, and its population base. There are visitor and seasonal population influences that are not captured or reflected in census data. Bamfield presents as a community larger than 201 people. In 2022, road infrastructure improvement work was commenced to provide a paved surface in place of the existing logging road, which may have the effect of driving further population growth and demand for services. At the same time, improved road access will facilitate (and make safer) travel from Bamfield to the rest of the ACRD, including the emergency transport of patients when required.

3.3 Beaver Creek

Located centrally within the Alberni Valley, Beaver Creek is a rural and semi-rural community. Beaver Creek is accessed primarily from the City of Port Alberni (the "City") via Beaver Creek Road, the main arterial road. The community forms a lineal polygon that aligns with Beaver Creek Road in a southeast/northwest direction.

Beaver Creek's rural history is reflected in the distribution and density of residential structures. In the southeastern-most areas of Beaver Creek (closest to the City) much of the residential housing is situated on small rural lots. At the northwestern end, properties are larger, including family-owned farms. This may reflect pressures of urban sprawl displacing former farming properties closest to the urban centre.

3.3.1 Population

Statistics Canada reported that the population of ACRD Electoral Area "E" (Beaver Creek) was 2,946 in 2021 compared with 2,754 in 2016, an increase of some 7%.¹³ The area had experienced a population decline between 2011 and 2016, and the new census indicates that the population now exceeds the 2011 level. Staff have indicated that new housing developments in the Beaver Creek area have driven and may well continue to drive population growth in the medium term. It should be noted that there is a good correlation between population growth and rising call volumes. Additionally, if there are major developments being

¹² *Ibid.*, p. 42.

¹³ Statistics Canada: [Table 98-10-0004-01 Population and dwelling counts: Canada, provinces and territories, census divisions, census subdivisions \(municipalities\) and designated places](#) (search term "Alberni-Clayoquot").

undertaken, planning for such developments needs to take into account the heightened fire risk during the construction period.

3.3.2 Official Community Plan

The Beaver Creek Official Community Plan (the “BC OCP”) (Bylaw No. P1291, Schedule A) was last revised on 17 October 2012 and adopted 10 April 2013.¹⁴

The BC OCP describes the community’s goals as follows:¹⁵

The goals of the Beaver Creek community are to:

- 1) provide for continued social and economic growth in the area;
- 2) protect areas adjacent to streams, water features and environmentally sensitive areas;
- 3) advance, support, promote and encourage a successful, viable agricultural industry in the Alberni Valley;
- 4) offer residents a healthy lifestyle, a good quality of life and affordable housing options; and
- 5) preserve the rural character of the area while minimizing conflict between different land uses.

The BC OCP highlights non-residential land use including:

Agriculture

The *Alberni Valley Agricultural Plan 2011* is intended to guide and assist the agricultural industry in the Alberni Valley for the next two decades. The plan notes that “there is significant capacity for increased agricultural production in the Alberni Valley” and contains 12 goals and corresponding objectives and policies that support farmers and encourage agricultural activities in the Valley. Where the ACRD has some responsibility for actions identified as needed to achieve the objectives, Regional District staff has initiated the process.¹⁶

Commercial

There are a number of smaller lots designated for commercial use in the Plan area, most of which are located on Beaver Creek Road. These include a neighbourhood store, an auto repair shop, a trucking business, a garage and a vacant lot. It is recognized that the City of Port Alberni is and will continue to be the primary retail and service centre for the Alberni Valley.¹⁷

¹⁴ ACRD, *Beaver Creek Official Community Plan*, Bylaw No. P1291, Schedule ‘A’ at <https://www.acrd.bc.ca/cms/wpattachments/wpID272atID1406.pdf>

¹⁵ *Ibid.*, p. 9.

¹⁶ *Ibid.*, p.13.

¹⁷ *Ibid.*, p.15.

Industrial

There is one area designated for industrial use within the Plan area. The ACRD recognizes that there may be some need for small-scale industrial uses to occur in rural and agricultural areas. The ACRD also recognizes that natural resources are vital to the development and maintenance of the built environment and its infrastructure. There may be some potential for the extraction of mineral and aggregate deposits in the Plan area. It is not anticipated that additional land will be required or designated for industrial use.¹⁸

3.3.3 Summary

Beaver Creek is a rural and semi-rural community that values agriculture, commercial and industrial activities while recognizing that the City provides the commercial centre for the broader region.

The population of Beaver Creek has grown since 2016 following a decline during the preceding census period. Staff have indicated that, since 2019, increased residential development has been taking place, which drive further population growth for this service area. There is a general correlation between population growth and call volumes. It also should be noted that, if there are major development projects, there is a heightened fire risk during construction – as has been evidenced by recent fires of this type.¹⁹

3.4 Sproat Lake

Located on the western side of the Alberni Valley, the community of Sproat Lake includes a mix of rural and waterfront residential housing. There is relatively little commercial or multi-family development in this area. The primary access to the area is via the Pacific Rim Highway (Highway 4), with some looping and dead-end secondary roads. Located west of Tseshaht First Nation's Tsahaheh Reserve, Sproat Lake is separated from other communities in the Alberni Valley by the Somass River. The Highway 4 bridge over that river is the only publicly owned crossing. Past development in Sproat Lake appears to have been influenced by the bays and arms of the lake itself, the frontage along Somass River, road access to Great Central Lake, and the location of the Pacific Rim Highway, which transects the community.

The desirable nature and high values of Sproat Lake waterfront properties continues to influence both the make up of the community and demands for service .

¹⁸ *Ibid.*, p.14.

¹⁹ Two recent examples include a major fire in a Langley development site in 2021, and another in a Vancouver development site in 2020. See: <https://bc.ctvnews.ca/massive-fire-in-langley-destroys-condo-towers-under-construction-dozens-evacuated-1.5394437>; and <https://www.cbc.ca/news/canada/british-columbia/fire-marpoles-vancouver-1.5618572>. There are both National Fire Protection Association (“NFPA”) standards applicable to fire safety during construction and certain requirements under the BC Building Code (which cross-reference the Fire Code).

The area encompasses the two largest freshwater lakes in the Alberni Valley. Those lakes discharge into Stamp River and Sproat River which in turn combine to form the Somass River, one of the most culturally significant and important salmon producing rivers on the west coast of Canada. The area is also home to the regional landfill and airport.

3.4.1 Population

Statistics Canada reported that immediate area around Sproat Lake saw its population grow from 1,492 in 2016 to 1,697 in 2021, while the population of the entire Electoral Area “D” (Sproat Lake) grew from 1,616 in 2016 to 1,843 in 2021.²⁰ As with Beaver Creek, recent residential developments in this area likely account for this population growth (which also had experienced a population decline in during the previous census period of 2011 – 2016).

The Sproat Lake OCP (the “SL OCP”)(Bylaw No. P1310, Schedule A) was adopted 11 June 2014.²¹ The SL OCP describes the community’s goals as follows:²²

The goals of the Sproat Lake community are to:

- 1) provide for continued social and economic growth in the area;
- 2) protect water quality and areas adjacent to streams, water features and environmentally sensitive areas;
- 3) advance, support, promote and encourage a successful, viable agricultural industry in the Alberni Valley;
- 4) offer residents a healthy lifestyle, a good quality of life and affordable housing options;
- 5) preserve the rural character of the area while minimizing conflict between different land uses; and
- 6) provide a diverse economy based on environmental and cultural tourism as well as more traditional resource activities.

Some of the non-residential land use highlighted in the OCP include:

Agriculture

The Alberni Valley Agricultural Plan 2011 is intended to guide and assist the agricultural industry in the Alberni Valley for the next two decades. The plan notes that “there is significant capacity for increased agricultural production in the

²⁰ Statistics Canada: [Table 98-10-0004-01 Population and dwelling counts: Canada, provinces and territories, census divisions, census subdivisions \(municipalities\) and designated places](#) (search terms: “Sproat Lake” and “Alberni-Clayoquot Regional District”).

²¹ ACRD, *Sproat Lake Official Community Plan*, Bylaw No. 1310, Schedule ‘A’ at https://www.acrd.bc.ca/dms/documents/planning-and-development/ocps/sproat_lake_ocp.pdf

²² *Ibid.*, p. 9.

Alberni Valley” and contains 12 goals and corresponding objectives and policies that support farmers and encourage agricultural activities in the Valley. Where the ACRD has some responsibility for actions identified as needed to achieve the objectives, Regional District staff has initiated the process.²³

Resource

Much of the Sproat Lake area is resource land, predominantly forested, with some gravel extraction on the east side of the Plan area. Large tracts of these resource lands are owned by the Province, while other portions are privately owned. Forested lands provide economic activity, employment, wildlife habitat, stream protection, and buffers between potentially conflicting uses, as well as aesthetic and environmental benefits. The ACRD also recognizes that natural resources are vital to the development and maintenance of the built environment and its infrastructure. There is some potential for the extraction of mineral and aggregate deposits in the Plan area. Known sand, gravel and mineral reserves are shown on Map No. 4.²⁴

Fish Hatchery Use

Fish hatcheries provide a substantial contribution to the important fishing industry in the Alberni Valley. There are three fish hatcheries in the Sproat Lake Plan area, all in the Great Central Lake neighbourhood. The federally owned Robertson Creek Hatchery has been producing spring and coho salmon for over 30 years. Mainstream Canada, a private enterprise, produces Atlantic salmon in its land-based operation. Omega Pacific Hatchery also operates in the area.²⁵

Industrial

There are a number of industrial uses, both heavy and light, in the Sproat Lake area that provide employment and economic diversity. The ACRD recognizes the need to designate suitable areas for industrial uses and to encourage industry and industrial uses to locate there. Lands along Hector Road, adjacent to the Alberni Valley Regional Airport and to the east of Devil’s Den Lake, designated as Industrial on Map No. 2 of this Plan, reflect present industrial uses as well as areas where future industrial uses are appropriate. New industrial uses may also be permitted on the lands designated Airport Use.²⁶

Commercial

Sproat Lake has a number of commercial properties, mainly along the Highway 4 and Hector Road. These are smaller, neighbourhood-oriented enterprises. It is

²³ *Ibid.*, p. 13.

²⁴ *Ibid.*, p. 14.

²⁵ *Ibid.*, p. 16.

²⁶ *Ibid.*, p. 17.

anticipated that some new commercial uses can be accommodated within the area designated for comprehensive development on the east side of Sproat Lake Provincial Park. The growth of commercial development is expected to be of a smaller-scale, local-service type. The City of Port Alberni is and will continue to be the primary retail and service centre for the Alberni Valley. The Tseshaht Market is a conveniently located neighbourhood and highway commercial store and gas bar.²⁷

Airport Use

The Alberni Valley Regional Airport is located in the Sproat Lake OCP area. The airport is owned and operated by the ACRD. In addition to the facilities normally associated with an airport, the airport lands provide opportunities for airport-related and industrial activities. There are currently a number of such uses on the airport lands.²⁸

3.4.2 Summary

Sproat Lake is a community that values its rural nature, is a proud steward of freshwater lakes and rivers and the recreational and residential quality of life associated with that. Sproat Lake is also host to significant infrastructure that supports and benefits the region.

The population of Sproat Lake increased in the period between the 2016 and 2021 censuses. As with Beaver Creek, the population increase that was experienced likely reflects the housing developments that have been undertaken since 2016. It also should be noted that Sproat Lake experiences a material summertime population expansion that is not properly reflected in the census data. As with Beaver Creek, the impact of development on population, call volumes and development period risk (particularly if there are large projects) should be monitored.

²⁷ *Ibid.*, p. 18.

²⁸ *Ibid.*, p. 26.

4. Regulatory Matters

As a starting point, it needs to be recognized that, for local governments, fire protection is an optional service. Unlike police and ambulance, which are established under and/or operate pursuant to provincial statutes and have a uniform range of powers across the province, a fire department only has the power and authority granted to it under the local bylaw which creates and defines its operations. Outside of its operating jurisdiction – which, in the case of a service established by a regional district, is the boundaries set in the service establishment bylaw – a fire department has no specific authority to act at or to respond to an incident. Care must be taken, therefore, to ensure that each Department has the full range of powers needed to respond effectively to incidents within its jurisdiction. Where it is responding outside of its ordinary jurisdiction, express consideration should be given to the source of the Department’s powers to respond to and operate at an incident – whether under a fire service contract, under a mutual or automatic aid agreement, or in support of another emergency response agency. By way of example, the ACRD and other parties to the 2017 automatic aid agreement (examined in the Aid Agreement section of this report), have clearly defined the operating powers and authority of the participating departments when they respond to incidents in another department’s jurisdiction.

Similarly, there is no standard range of services defined for a fire department. A fire department is authorized to provide only those services which are stipulated in its service establishment and operational bylaws. Given that fire departments are the only “all hazards” response agency directly controlled by local government, we recommend that both the grant of powers and authorization to respond to incidents be very broadly cast, but that their exercise be made subject to training and the availability of necessary personnel and equipment.

The following section reviews the existing bylaw structure governing the service establishment of each of the Departments, and the ACRD’s common operational powers bylaws. It also reviews the ACRD’s Emergency Program bylaw.

Nothing in this report should be construed as legal advice. The ACRD should review any recommendations or issues identified below, or in connection with any other agreements, bylaws, statutes or regulations, through its ordinary legal review processes.

One issue that was noted as common across the three Departments is that each is operating to a “self-declared” service level under the Playbook. Technically, the service level is required to be set by the “Authority Having Jurisdiction” (or “AHJ”), which in the case of the Departments is the ACRD Board. One of the issues identified in connection with the update of the Operational Criteria Bylaw (see section 4.2, below) is to include provision for the ACRD Board to set each Department’s service level by policy. Even without such bylaw update, the ACRD Board should officially set (or at least approve) each Department’s service level.

4.1 Service Establishment Bylaws

The services provided by each of the Departments has been authorized pursuant to a service establishment (or specified area) bylaw, as is required for creation and provision of most regional district services. In some cases, these bylaws are quite old, and lack some of the information that ordinarily would be found in bylaws of this type that are created under the current version of the *Local Government Act* [RSBC 2015] c. 1 (the “*Local Government Act*”). It may be useful to update those bylaws as noted below.

4.1.1 Bamfield

The Bamfield fire service area was established as a “specified area” under the *Bamfield Specified Area Establishment and Loan Authorization By-law No. 24, 1972* (“Bylaw No. 24”). Unlike Beaver Creek and Sproat Lake, Bylaw No. 24 has not been converted to a “local service”, as permitted by the *Local Government Act*.²⁹ Given the age of this bylaw, and the fact that it does not include some of the provisions now found in service establishment bylaws (e.g., a maximum taxation rate, list of participating areas, etc.), it may be useful to update and convert this bylaw to a service establishment bylaw.

If this bylaw is updated, consideration should be given to better describing what is included in the term “fire protection”, which is the way the service is described in Bylaw No. 24.³⁰ As is the case with most fire departments, Bamfield responds to a wide variety of emergency events, including, for example, providing a high level of first responder services. It would be useful to ensure that this broader remit is properly described in the establishing bylaw, using language authorizing, for example, “fire protection, fire prevention and other emergency response activities that may be authorized by the Board, and all activities and undertakings ancillary thereto”, or something to that effect.

As Bamfield also provides services outside of its service area under contract with the Huu-ay-aht First Nation, the ACRD should review whether this type of fee-for-service arrangement should also be included in any revised establishment bylaw. While the *Local Government Act* clearly permits the provision of mutual aid, it is less clear that the provision of such services on a fee-for-service basis, is permitted if such service provision is not contemplated by its establishment bylaw.³¹

²⁹ *Local Government Act*, s. 341 addresses continued services, including, among other things, their conversion to a local service (see s. 341(3)).

³⁰ Bylaw No. 24, s. 1(2): “to undertake and carry out or cause to be carried out...fire protection for the said specified area.”

³¹ See *Local Government Act*, s. 332(5), which expressly addresses mutual aid. There is no comparable provision addressing the contracting out of a local service to persons residing outside of the service area. Even if such authority may be inferred (as local governments can provide services under contract to other local governments or third parties), better practice would suggest that this should be specifically contemplated in the service establishment bylaw.

4.1.2 Beaver Creek

Beaver Creek was originally established as a specified area under *Beaver Creek Specified Area Establishment and Loan Authorization By-law No. 196, 1977*. It was converted to a local service in 2009, under *Beaver Creek Fire Protection Conversion and Establishment Bylaw No. E1052, 2009* (“Bylaw No. E1052”). Bylaw No. E1052:

- converted it to a local service and describes the service provided;
- establishes the service area boundaries;
- stipulates the participating areas, which includes portions of Electoral Areas “B” and “E” of the ACRD;
- specifies how costs are to be recovered; and
- sets the maximum tax requisition, being the greater of \$400,000 or \$1.30 per \$1,000 applied to the “net taxable value of land and improvements.”

The services authorized to be provided under section 1 are “fire protection and suppression”. As noted in relation to Bamfield, it might be preferable to more broadly define the services that Beaver Creek may provide, to ensure that its service remit is properly covered by Bylaw E1052.

In 1998, the ACRD expanded the list of services that Beaver Creek was authorized to provide through a separate bylaw. Pursuant to *Beaver Creek First Responder Bylaw No. PS1002, 1998* (“Bylaw No. PS 1002”), Beaver Creek was authorized to respond to the following classes of events:

“within the boundaries of the Beaver Creek, Mountain Ranch Road and Granville Road Fire Protection areas:

- a. accident or illness where medical aid is requested or required,
- b. circumstances where a person requires rescue assistance, and
- c. release of hazardous materials.”

Bylaw No. PS 1002 was repealed by the 2012 Operational Criteria Bylaw (discussed below), which addresses a broad range of potential emergency responses by the three ACRD Departments. When the services were expanded to include a broader range of emergency responses, however, the underlying establishment bylaws – i.e., Bylaw No. E1052 and/or its predecessor – were not specifically amended. As a general matter, if the range of services being provided is expanded from that initially contemplated in a service establishment bylaw, it probably is preferable to also amend that fundamental bylaw, at least in a general way as suggested above (e.g., “other emergency responses that may be authorized by the Board”). This ensures both that services are fully and properly authorized, as well as consistency between the establishment and operational powers bylaws.

Beaver Creek is also providing full emergency response services into the Mountain Ranch Road and Granville Road Fire Protection Areas. The residents of those service areas are taxed on

the same basis as residents of the Beaver Creek service area – and so are paying a full, proportionate share of the Department’s costs.³² However, there does not appear to be any documentation of these arrangements. We would suggest that this service provision be contemplated in any update to Bylaw No. E1052, and be documented either in a revised Operational Criteria Bylaw or written Board policy.

We also would note that, although section 5(b) of Bylaw No. E1052, which addresses the maximum requisition, specifies a tax on “land and improvements”, section 4, “Cost Recovery,” is less clear on this point, as it refers only to “property value taxes”. It also is common to include in the cost recovery section reference to recovering costs by way of the other means permitted by the *Local Government Act*, including fees and charges permitted by s. 397 (e.g., for issuance of a permit, or for a fire inspection, or for some other service provided by the Department, etc.). If such revenues are to be raised, they must be specified in the establishing bylaw.³³

If Bylaw No. E1052 is updated as suggested, consideration also could be given to raising the maximum permissible tax rate in accordance with the regulations to the *Local Government Act*.³⁴

Bylaw No. E1052 has been amended five times since 2009 (most recently in 2021), in each case to expand the Department’s response area.

4.1.3 Sproat Lake

Sproat Lake was originally established as a specified area under the *Sproat Lake Specified Area Establishment and Loan Authorization By-law No. 48*.³⁵ It was converted to a local service pursuant to *Sproat Lake Fire Protection Conversion and Establishment Bylaw No. 856, 1994* (“Bylaw No. 856”). Bylaw No. 856:

- converted it to a local service and describes the service provided (s. 1);
- establishes and extends the service area boundaries (s. 2);
- specifies how costs are to be recovered (s.3), albeit by reference to the old *Municipal Act*; and
- sets the maximum tax requisition (being the greater of \$200,000 or \$1.23 per \$1,000 of assessed value of land and improvements) (s. 4).

The conversion of Sproat Lake to a local service pre-dates the *Local Government Act*. As with Beaver Creek’s Bylaw No. E1023, consideration could be given to updating this bylaw:

³² Email, ACRD Regional Fire Services Manager, 30 November 2021.

³³ *Local Government Act*, s. 378(3).

³⁴ *Regional District Establishing Bylaw Approval Exemption Regulation* BC Reg. 113/2007 (as amended), s. 3, which permits a 25% increase in the maximum requisition every five years without approval by the Inspector of Municipalities.

³⁵ A copy of this original establishment bylaw was not provided for review.

- to better (and more broadly) describe the services being provided, which are described in s. 1 of Bylaw No. 856 as “fire protection and suppression”;
- to address the off-setting of costs through the use of fees and charges and raising of funds through other means permitted under the *Local Government Act*; and
- if considered advisable, to update the maximum requisition amount under section 4.

As with Beaver Creek, a bylaw was passed in 2000 expanding the range of authorized services in substantially the same form as Beaver Creek’s (except that it was limited to the Sproat Lake service area).³⁶ This bylaw was also repealed by and subsumed within the 2012 Operational Criteria Bylaw. Again, consideration should still be given to broadening the description of the service being authorized in Bylaw No. 856, to cover off the Department’s broader range of responsibilities, on the same basis recommended for Beaver Creek.

Since it was passed in 1994, Bylaw No. 856 has been amended 10 times. In each case, the amendments involved boundary extensions for the Department.

4.2 Operational Criteria Bylaw No. R1023, 2012

In 2012, the ACRD passed a single operational powers and authority bylaw covering its three Departments: *Fire Department Operational Criteria Bylaw No. R1023, 2012* (hereafter, the “Operational Criteria Bylaw”). This approach is considered best practice, as it ensures that each Department has the same operational powers and authority, and follows the same administrative requirements (e.g., reporting lines, budgeting, etc.), as the other. It also reduces bylaw maintenance since only a single bylaw needs to be updated or revised.

The Operational Criteria Bylaw is generally well drafted. However, as it is now a decade old, and significant regulatory changes have occurred that should be reflected (e.g., the advent of the Playbook in 2014, changes to the *Local Government Act*, etc.), it likely should be updated. The one caveat to that advice, however, is that when the *Fire Safety Act* is implemented, new obligations and new powers will need to be addressed. The potential impact of the *Fire Safety Act* is discussed at the end of this section of the report. Unfortunately, there is no clear timeline for the coming into force of this statute (which originally was passed back in 2016), or any updated indication as to the Province’s intentions with respect to regional districts’ obligations regarding fire safety inspections or fire investigations.

As noted in the discussion of the establishment bylaws above, to the extent that the Operational Criteria Bylaw expands the range of services provided by the Departments, those changes should also be reflected (or, at a high level, contemplated) by the establishment bylaws.

The Operational Criteria Bylaw addresses the following matters:

- The Board’s powers (fire chief appointment, renewal and removal of Department members and officers) (ss. 5, 6);

³⁶ *Sproat Lake First Responder Bylaw No. PS1004, 2000.*

- Fire Chief responsibilities (including occupational health and safety, budgeting, operational guidelines, officer appointments, training, etc.) (ss. 7 – 10, 14-15);
- Various Fire Chief, incident commander and Department powers and authority (ss. 12 – 13);
- The designation of Department members as “municipal public officers” (now “local public officers”) under the *Local Government Act*³⁷ and the application of the ACRD’s indemnification bylaw to such members (s. 16);
- Each Department’s ordinary jurisdiction and authority to operate extra-jurisdictionally, and their powers when so doing (ss. 18 - 19);
- The Departments’ authorized services, limitations on those services and a process for approving changes in what services are being delivered (ss. 20 – 25); and
- Various regulatory provisions (e.g. restrictions on individuals to prevent them from impeding Department responses, damaging equipment, etc.) (ss. 26 – 30).

In addition, each Department’s pre-existing form of an operational criteria bylaw was repealed,³⁸ along with the two “first responder” bylaws that were in effect in Beaver Creek and Sproat Lake.

When the Operational Criteria Bylaw is updated, consideration should be given to the following:

- More recent bylaws of this type have begun to emulate an approach we first saw in the Sasamat operational bylaw, passed by Metro Vancouver in 2014. In that bylaw, the regional district provided the bylaw does not contemplate: the protection of any person from economic loss; a warranty or guarantee as to the service levels that will be provided in connection with any particular incident; or any guarantee with respect to the timeliness of any response.³⁹
- The Operational Criteria Bylaw pre-dates the Playbook and makes no provision for setting of service levels by the AHJ. Any updated bylaw should require that the service level be set by ACRD Board policy (based on recommendations of the Regional Fire Services Manager and relevant Fire Chief) and establish a process for reviewing and updating same from time to time.
- The Fire Chief’s obligation to ensure the appropriate training of members and officers should be updated to reference meeting (at a minimum) the Playbook requirements (or any successor set of provincial training standards). Where the Playbook is silent on

³⁷ When the *Local Government Act* was consolidated and updated in 2015, the term was changed – see section 738.

³⁸ *Regional District of Alberni-Clayoquot, Beaver Creek Volunteer Fire Department Establishment and Regulation By-law No. 562, 1988; Regional District of Alberni-Clayoquot, Bamfield Volunteer Fire Department Establishment and Regulation By-law No. 564, 1989; and Sproat Lake Fire Protection Regulation Bylaw No. R1008, 1999.*

³⁹ Metro Vancouver, *Sasamat Volunteer Fire Department Administration and Regulation Bylaw No. 1204, 2014*, s. 1.5.

what standard applies to a function or emergency incident task or role, we also recommend that the standards set by the NFPA be adopted and used (at a level commensurate with the service being provided).

- It is typical to make provision in bylaws of this type for the appointment of the Fire Chief (and possibly other officers or ACRD staff members) as Local Assistants to the Fire Commissioner (“LAFCs”). These appointments are in the discretion of the Fire Commissioner, but, in our experience, are made readily upon application by the relevant local authority. If the Operational Criteria Bylaw is updated after the *Fire Safety Act* comes into force, such a section would be unnecessary, as the new statute dispenses with LAFCs.
- One of the issues that became apparent during this review is that the Schedule A description of the services provided has, in the case of Bamfield at least, diverged from the level to which the Department is operating. Under Schedule A to the Operational Criteria Bylaw, Bamfield is shown as providing “Basic First Aid”; “First Responder” levels were left blank, and each of the three other categories were indicated as “No” (including having a consent/indemnity with BC Emergency Health Services (“BCEHS”). In fact, since 2016 Bamfield has been providing a high level of first responder services under agreement with BCEHS. In 2020, the level of service was elevated to Emergency Medical Responder (“EMR”) from “First Responder,” a relatively rare designation among BC fire departments. As such, in relation to the services authorized for each Department, we would recommend that these be set by policy, rather than in a fixed schedule to the bylaw (which then requires a bylaw amendment to update). The changed policy may be subject to Board (or CAO) approval, as considered appropriate, based on the recommendation of the relevant Fire Chief and Regional Fire Services Manager.

It is typical to specifically empower a fire department to undertake pre-incident planning and to authorize its entry onto properties and premises for that purpose. Similarly, each Department’s responsibility for reviewing fire safety plans under the *Fire Code* usually will be addressed, along with any charges applicable for such reviews. Many bylaws now permit the fire department to specify the format in which such plans will be submitted for review, and to authorize the department to require additional information necessary for its pre-incident planning. Pre-incident planning is a requirement for interior operations departments in relation to buildings more complex than an ordinary residential structure, if the department intends to make entry if a fire occurs.⁴⁰

4.3 Occupational Health and Safety

The statutory basis for occupational health and safety programs is found in the *Workers Compensation Act* [RSBC 2019], ch. 1 (the “WCA”), and the *Occupational Health and Safety Regulation*, B.C. Reg. 296/97 (the “OH&S Regulation”), as well as in other regulations and the

⁴⁰ See: Playbook, “Interior Operations Service Level” at p. 17.

policies of WorkSafe BC. The requirements are complex and prescriptive. The WCA was recently comprehensively updated and revised: although the changes made were not substantive, virtually all of the divisions and sections were renumbered.⁴¹

Each Department's members are employees of the ACRD for workers' compensation purposes. As such, it is ultimately the ACRD's responsibility to ensure that the various obligations under the WCA and OH&S Regulation are being met.

The WCA mandates that the relevant local government's occupational health and safety program is supposed to apply to its fire departments.⁴² Many local governments, however, develop a compliant, standalone program for their fire departments, given the special circumstances and risks that they face. In the Operational Criteria Bylaw, the Fire Chiefs have been made responsible for implementing compliant OH&S programs.⁴³ Each of the Departments is using a form of the standard 13-part program originally created by the OFC back in the 1990s.

Under section 31.3 of Part 31 of the OH&S Regulation, where an employer is required to maintain a joint committee, each of its fire departments is required to operate a separate joint committee.⁴⁴

Based on discussions with the individual Departments and with ACRD staff, the current state of OH&S management can be summarized as follows:

Bamfield:

Some documentation is in place (e.g., a standardized, if somewhat aged, OH&S Program). The Department conducts a monthly meeting which includes OH&S matters. There is no formal joint committee or formal worker representative appointed. The Department is currently using a safety-conscious but informal approach to these matters. Documentation is lacking and the required training for OH&S matters is not being provided.

Beaver Creek:

The Department has a formal, if out of date, program and has established a joint committee. Department correctly noted that its program needs updating. It is not clear that the joint committee meets the formal organizational requirements of the WCA. The

⁴¹ The WCA was updated under the *Statute Revision Act*, with the revised statute brought into force with effect as of 6 April 2020, pursuant to OIC 103, 20 March 2020, and OIC 153, 30 March 2020. Under the *Statute Revision Act*, the updating can clarify and reorganize the statute in question, but not make substantive changes to it.

⁴² The language in section 3.1(1.1) of Part 3 of the OH&S Regulation notes that the employer's OH&S program must cover the "whole of the employer's operations".

⁴³ Operational Criteria Bylaw, s. 8.

⁴⁴ The need for a separate joint committee (or worker representative) for fire departments is set out in s. 31.3 of Part 31 of the OH&S Regulation.

Department is working to meet WCA requirements, but is not currently providing OH&S training to joint committee members. Joint committee members are not compensated for their time.

Sproat Lake:

The Department has a formal program set out in its operational guidelines, but this does not entirely meet WCA requirements (mainly for reasons of form). The Department also has a joint committee. However, the formal requirements of the WCA are not all being met: for example, joint committee meetings are every second month (rather than monthly) and it is not clear if co-chairs have been appointed. The Department does send its joint committee members for training, but this has been problematic over the last 20+ months as a result of the pandemic. No compensation is paid to joint committee members.

As often is the case with volunteer and paid-on-call departments, although the Departments are safety conscious, the administrative burden of ensuring full compliance with the prescriptive requirements of the WCA and the OH&S Regulation are proving challenging. The documentation we were provided with in relation to OH&S matters for each Department was relatively minimal. Bamfield and Beaver Creek appear to be using a standardized, 13-part OH&S program that we understand was originally developed by the OFC back in the 1990s. Both programs are out of date. Sproat Lake has implemented OH&S provisions and processes into its operational guidelines (“OGs”), but does not have a standalone program.

We recommend that the ACRD create an updated, common, standardized OH&S program that is used by each Department and which can be implemented through common operational guidelines. That program will need to specify the processes for both the appointment and operation of a joint committee and (for Bamfield) a worker representative. It can include a standardized agenda for each joint committee/worker representative meeting – one that covers required safety checks, but which is sufficiently flexible to enable each Department to review local matters of concern. Copies of the monthly meeting minutes, in addition to being posted as required by the WCA, should be centrally collected by the ACRD.

The ACRD, in consultation with the Fire Chiefs, should arrange for appropriate OH&S training for joint committee / worker representative members. The ACRD can also lead the annual review of the underlying program, and provide each Department with standardized forms for conducting an evaluation of their joint committee/worker representative system.

By adopting this approach, program updating and evaluation can be centrally managed to ensure that OH&S processes remain compliant and reflect any changes to the WCA and OH&S Regulation. Similarly, the common operational guidelines will ensure that each Department implements the program appropriately and consistently. We outline in section 4.3.1 the formal requirements of such a program and have outlined the formal requirements for joint committee creation and operation in section 4.3.2.

We have separately provided to the Regional Fire Services Manager a template of an OH&S program and some related documentation for consideration by the ACRD, as it looks to address these issues.

4.3.1 Formal OH&S Program Requirements

The following section sets out a general overview of the requirements for an OH&S program.

The starting point for any consideration of OH&S is section 21 of part 2 of the WCA, which makes employers responsible, among other things, for:

- ensuring the “health and safety of all workers working for that employer”;
- providing the information, instruction, training and supervision necessary to ensure the health and safety of workers in carrying out their work;
- complying with the WCA and related regulations and orders, and
- establishing OH&S policies and programs in accordance with the OH&S Regulation.

Section 3.3(1) of Part 3 of the OH&S Regulation requires an employer to initiate and maintain an OH&S program when it has a workforce of 20 or more workers and a workplace that is determined to create a “moderate or high risk of injury,” or by every employer which has 50 or more employees. The “moderate or high risk of injury” should be assumed to apply to each Department’s operations. The OH&S program must apply to “the whole of the employer’s operations”.⁴⁵ The program must be designed to prevent injuries and occupational diseases, and is required to include:⁴⁶

- (a) a statement of the employer’s aims and the responsibilities of the employer, supervisors and workers;
- (b) provision for the regular inspection of premises, equipment, work methods and work practices, at appropriate intervals, to ensure that prompt action is undertaken to correct any hazardous conditions found;
- (c) appropriate written instructions, available for reference by all workers, to supplement the OH&S Regulation;⁴⁷
- (d) provision for holding periodic management meetings for the purpose of reviewing health and safety activities and incident trends, and for the determination of necessary courses of action;

⁴⁵ Section 3.1(1.1) of Part 3 of the OH&S Regulation. Many local governments implement separate, compliant iterations of their OH&S programs for their fire departments.

⁴⁶ Section 3.3 of Part 3 of the OH&S Regulation.

⁴⁷ This provision establishes the overarching requirement for formal operational guidelines and/or standard operating procedures for the Departments’ primary activities, including emergency scene operations.

- (e) provision for the prompt investigation of incidents to determine the action necessary to prevent their recurrence;⁴⁸
- (f) provision for the maintenance of records and statistics, including reports of inspections and incident investigations, with provision for making this information available to the joint committee or worker health and safety representative, as applicable and, upon request, to an officer, the union representing the workers at the workplace or, if there is no union, the workers at the workplace; and
- (g) provision by the employer for the instruction and supervision of workers in the safe performance of their work.

4.3.2 Joint Health and Safety Committee

As part of an OH&S program, an employer is required to establish a joint committee (or appoint a worker safety representative) to review and manage safety issues in the workplace. Pursuant to section 31.3 of the Part 31 of the OH&S Regulation, in a situation where an employer is required to

“establish a joint committee or [appoint a] worker health and safety representative, then a fire department ... operated by the employer must have a separate joint committee or worker safety representative, as applicable”.

Two of the three Departments have established joint committees, but it is not clear that the manner of establishment and operation is fully WCA-compliant. Bamfield is conducting monthly meetings with a safety-OH&S component, but has not formally arranged the appointment of a worker representative.

Each Department’s Joint Committee should also have a tie-in with the ACRD’s own joint health and safety committee. In the ACRD context, after discussion with staff, it was agreed that this tie-in would best be made a responsibility of the Regional Fire Services Manager, who could ensure that the documentation from the fire service joint committee(s) were provided to the main committee, and sit on that committee to report on issues affecting the Departments.

The WCA sets out detailed and prescriptive requirements regarding joint committee establishment and operation:

Section 33: This section addresses membership on the joint committee and appointment of co-chairs from amongst the employer and employee representatives:

- (a) a joint committee must have at least four members;
- (b) it must consist of worker and employer representatives;

⁴⁸ Section 3.4 of Part 3 of the OH&S Regulation stipulates the required contents of any incident investigation report that is required to be completed.

- (c) at least half the members must be worker representatives; and
- (d) it must have two co-chairs – one selected by the worker representatives and one selected by the employer.

Sections 34 and 35: These sections set out the process for selecting the worker and employer representatives on the joint committee (or selecting the worker representative, in the case of Bamfield):

- (a) if none of the workers are represented by a union, the worker representatives are to be elected by secret ballot (s. 34(b)); and
- (b) the employer representatives on a joint committee must be selected by the employer from among persons who exercise managerial functions (i.e., an officer in the Department) for the employer and, to the extent possible, who do so at the workplace for which the joint committee is established (s. 35).

Section 36: This section sets out ten required duties and functions of a joint committee. We recommend that these be set out in the description of the joint committee’s role, both in the OH&S program and in any implementing OGS, as they are listed in section 36 (amending the final item to read: “to carry out any other duties and functions prescribed by WorkSafe BC”).

Section 37(2): The joint committee is required to meet at least monthly. The same is true for meetings with the worker representative. It is essential that proper records be kept of each meeting and it is helpful if a pre-set agenda for such meetings (covering the regular matters that need to be considered, and providing an opportunity to raise new matters) can be established. As noted above, the ACRD can provide administrative support by developing a usable meeting template for the Departments. Meeting records should track all decisions, and bring forward to the next meeting any matters that require time to address.

Section 39: This section requires an employer to respond to recommendations from the joint committee. Where a matter requires a response from the ACRD (which, ultimately, is the employer), those matters need to be brought to the attention of the ACRD and a response provided.

Section 40: This section deals with the payment of members for work on the committee. Under section 40, employers ordinarily must grant worker representatives time off from work and to pay them for that time. In volunteer and paid-on-call departments, we usually recommend that the employer develop a stipend for members serving on the joint committee (i.e., a set amount per year for regular fulfillment of this function), with a separate hourly rate if members are required to participate in an investigation of a workplace accident or similar event. This issue is addressed further, below.

Section 41, 42: Under sections 41 and 42, the employer must provide appropriate administrative support to the joint committee, and paid educational leave time for either the worker representative or the committee members. Again, in a paid-on-call system this would be met by treating time spent by the worker representative on such education as compensable.

Sections 43 – 44: These sections set out certain administrative requirements, including:

- (a) handling of records and distribution of reports (section 137)
- (b) posting of names of joint committee members and/or the worker representative (s. 138(a));
- (c) the keeping and posting of minutes of the joint committee meetings (s. 138 (b)); and
- (d) the posting of WorkSafe BC orders (s. 138(c)).

Once established, the joint committee is primarily responsible for ensuring that each Department is meeting the requirements of the OH&S program (including, for example, regular checks of the premises, apparatus and equipment), and for investigating workplace incidents should they arise. Where a workplace incident occurs, the OH&S Program should include provision for direct participation by ACRD staff (likely the Protective Services Manager or Regional Fire Services Manager) in any investigation.

The rules pertaining to the operation of the joint committee/worker representative system were updated in 2016, with effect from 2017. Under BC Reg. 312/2016, which amended the OH&S Regulation with effect from 3 April 2017:

- there must be an annual, written evaluation conducted examining, among other things:
 - whether the joint committee membership requirements and selection processes met WCA requirements (ss. 3.26(3)(a)(i) - (iii));
 - whether the joint committee fulfilled each of its duties and functions and met as required by the WCA (ss. 3.26(3)(iv) and (v));
 - whether the joint committee operated as provided in the WCA, including with respect to training, administrative support and other specified matters (ss. 3.26(3)(vi) – (xii)); and
 - the effectiveness of the rules of procedure and overall effectiveness of the joint committee (ss. 3.26(4) & (5); and
- members of a joint committee must receive certain specified training, aggregating, in total 8 hours, and worker representatives must receive similar training aggregating 4 hours (ss. 3.27 (2) & (3)), covering various matters specified in the regulations.

The training obligations apply only to new members of a joint committee or new worker representatives, in each case, appointed after 3 April 2017. In certain circumstances, the training obligation is waived where a new appointee has already received the training in question (ss. 3.27 (6) & (7)). Certain records keeping obligations are attached to the new, explicit training requirements.⁴⁹

As suggested above, the ACRD should facilitate and organize appropriate OH&S training programs (in consultation with the Fire Chiefs), as well as a standardized approach to evaluating joint committee/worker representative operations.

We would note that the WCA enables an employer to apply to create a single joint committee across multiple worksites.⁵⁰ This approach has been adopted in a number of regional districts (e.g., Columbia Shuswap Regional District) as a means of simplifying the joint committee structures, ensuring proper oversight and reducing the overall administrative burden across their various volunteer and paid-on-call departments.

The proper operation of a joint committee can be a time-consuming task. One of the issues frequently identified when working with volunteer and paid-on-call departments is a lack of interest or willingness on the part of the members to afford additional personal time to this administrative responsibility. To overcome this problem, the ACRD should consider the following:

- whether the individuals who participate on the joint committee should be remunerated for the time they will be required to commit – perhaps with a separate monthly stipend, plus an hourly rate in the event that the joint committee has to undertake an accident investigation or similar enquiry;
- where training is required for committee members, the training pay otherwise paid to members for attendance at practices should be paid (or compensation otherwise be paid for this work); and
- where possible, the regular monthly meetings of the joint committee could be timed to occur at the end of the one of the regular practice nights. Most monthly joint committee/worker representative meetings will not be long, and the individuals involved can be excused from any post-practice apparatus or equipment clean-up to attend the meeting.

4.3.3 Other OH&S Matters

The ACRD should implement a formal respiratory protection program through the standardized OH&S OGS to meet the requirements of s. 8.5 of Part 8 of the OH&S Regulation (which needs to take into account both Part 8 and sections 31.19 – 31.26 of Part 31). A template version of such a program has been provided separately, to assist the ACRD in developing such a

⁴⁹ B.C. Reg. 312/2016, ss. 3.26(8) & (9).

⁵⁰ WCA, s. 32(1)(b).

program. Similarly, each Department should be operating a Workplace Hazardous Materials Identification System (“WHMIS”): a copy of a sample program has been provided for consideration. Finally, WorkSafe requires employers to have an anti-harassment and anti-bullying policy in place. The ACRD has a Workplace Bullying and Harassment Policy, which should be expanded to expressly include the Departments, and incorporated into their OH&S OGs.

4.4 Emergency Program Bylaws

As a “local authority” under the *Emergency Program Act* (B.C.) (the “EPA”), the ACRD is required to undertake the planning, develop the systems and implement the processes required by the EPA and the *Local Authority Emergency Management Regulation* (BC Reg. 380/95). The ACRD effectively operates with three separate emergency plans and programs:

- One covers the Alberni Valley (Electoral Areas B, D, E and F). This service was established pursuant to the *Alberni Valley Emergency Programs Extended Service Bylaw No. 788* (“Bylaw No. 788”) and implemented in accordance with the EPA pursuant to the *Alberni-Clayoquot Regional District Alberni Valley Emergency Plan Bylaw No. PS1006, 2014* (“Bylaw No. PS1006”);
- The second covers Bamfield and Electoral Area A. This service was continued pursuant to *Bamfield Emergency Planning Service Establishment Bylaw No. E1060, 2019* (“Bylaw No. E1060”) which replaced the original 2004 service establishment bylaw.⁵¹ Although there is no implementing bylaw that corresponds to Bylaw No. PS1006, there is a fully developed emergency plan for Electoral Area A. We have been advised that an implementing bylaw has been developed in draft, but not yet been passed; and
- The third covers Long Beach and Electoral Area C. This service was continued pursuant to *Long Beach Emergency Planning Service Establishment Bylaw No. E1060, 2019*. As with Bamfield, there is no implementing bylaw that corresponds to Bylaw No. PS1006, but there is a fully developed emergency plan. The ACRD has contracted for the provision of emergency program services into this service area with the District of Ucluelet (for everything other than a declaration of a local emergency, responsibility for which, in accordance with the EPA, remains the ACRD Board). That service arrangement is currently under discussion and review. As there is no fire service in this Electoral Area directly operated by the ACRD (the service is provided under contract with Ucluelet), we will not be reviewing the related emergency planning.

4.4.1 Alberni Valley Emergency Program Bylaws

As noted, the Alberni Valley service was originally established pursuant to Bylaw No. 788. The service participants are Electoral Areas B, D, E and F, which include the Beaver Creek and Sproat Lake Department’s respective service areas. Bylaw No. 788 also includes the City as a

⁵¹ It replaced the *Alberni-Clayoquot Regional District West Coast Emergency Planning Establishment Bylaw No. E1043, 2004*. That 2004 bylaw also covered Long Beach and Electoral Area C.

service participant creating a single emergency program service for the entire Alberni Valley. This approach reflects best practice, by ensuring that each of the local authorities in the area are full participants in a single program.

It should be noted that the Province is in the process of developing a replacement for the *Emergency Program Act*. Ironically, perhaps, its introduction has been delayed by a series of major crises over the past 24 months – including the pandemic, the heat dome and the significant wildfire season experienced in 2021 (which has since been followed by floods). Although expected to be introduced in late 2021, the new act likely will not be passed until late 2022. When it comes into force, it will be necessary for both the ACRD and the City to review and their emergency program bylaws, at which time the comments below also can be addressed.

It also should be noted that British Columbia has formally adopted the Sendai model for planning, mitigation, response and recovery from disasters, which model is expected to be enshrined in the new statute. This model can be expected to result in increased obligations for risk mitigation efforts by local governments, improved recovery planning, and the formal inclusion of a broader range of stakeholders in emergency planning, including First Nations. The new statute also will likely impose greater obligations on local governments to ensure that they have tested their emergency plans, although the early concept of having these plans audited by the Province has been dropped.⁵²

Bylaw No. 788 pre-dates the *Local Government Act*. As such, although it provides that the costs of the service are to be recovered by property value taxes on land and improvements (s. 4), it does not prescribe a maximum tax rate. It also does not expressly contemplate the collection of revenues through other means (e.g., service fees or charges).

The joint emergency program is implemented through Bylaw No. PS1006, along with a complementary City bylaw. Bylaw No. PS1006:

- establishes the Regional Emergency Preparedness Committee, and identifies this entity as the “emergency management organization” for the Alberni Valley (as required by section 6(3) of the EPA) (s. 4);
- establishes the membership of the Regional Emergency Preparedness Committee (which includes elected representatives from the City, the relevant Electoral Area Directors, the City and ACRD CAOs, plus several other positions) (s. 4(a));
- makes the Regional Emergency Preparedness Committee responsible for emergency planning and “establishing [a] coordinated response system” to address disasters and emergencies (s. 2) and defines the committee’s other responsibilities (s. 4(b));

⁵² Province of British Columbia, “What We Heard: Modernizing BC’s Emergency Management Legislation,” 31 August 2020, at p. 12.

- creates a Regional Emergency Program Coordinator position appointed by the Board, and defines that position’s responsibilities (s. 5; also, s. 3); and
- creates a budgeting process for the service (s. 7).

Under section 6, as required by the EPA, the declaration of a state of local emergency within the four Electoral Areas is properly reserved to the ACRD Board.

The City has passed a complementary bylaw that largely mirrors Bylaw No. PS1006 - *City of Port Alberni Emergency Plan 2014, Bylaw No. 4836* (“Bylaw No. 4836”). Bylaw No. 4836:

- adopts the Alberni Valley Emergency Plan as its emergency plan (s. 3);
- adopts the Regional Emergency Preparedness Committee as its emergency management organization (s. 4);
- designates the Emergency Program Coordinator under Bylaw No. PS1006 as the emergency program coordinator for the City (s. 7); and
- addresses the City declaring a state of local emergency under the EPA, following which its powers are delegated to the Regional Emergency Preparedness Committee (s. 9).

In general, this bylaw structure works well. In relation to Bylaw No. PS1006, we have a few minor comments:

- In either section 2 or 3, the ACRD likely should explicitly state that the Alberni Valley Emergency Plan – which is defined as the “Plan” in the definitions section – is adopted as the emergency plan for the four electoral areas. Where the “Plan” is referenced, moreover, the term should be capitalized to ensure that it is clearly reference the defined term, and the use of the full name “Alberni Valley Emergency Plan” – as occurs in section 4 – can be simplified to the defined term.
- Section 4(b), which sets out the responsibilities of the Regional Emergency Preparedness Committee, states that the committee will:

“(viii) Appoint a Regional Emergency Program Coordinator”.

Section 5(a), however, reserves such appointment to the ACRD Board. Section 4(b) likely should be amended to read “Nominate to the Board”, rather than appoint.

- We would suggest that the recitals Bylaw No. PS1006 be amended to add reference to the City’s complementary bylaw. Consideration could also be given to including reference to the City’s bylaw in the operative provisions, in particular in connection with the declaration of a state of local emergency. This section would note that the City remains responsible for declaring a state of local emergency within its boundaries in accordance with its Bylaw No. 4836, and perhaps address the authority of the Regional Emergency Preparedness Committee following such declaration.

- There is a minor typographical error in section 4(a)(vii), which refers to a “Medial” officer rather than “Media” officer. The same error appears in the City’s Bylaw No 4836.

In relation to the City’s Bylaw No. 4836, we would suggest that it cross-reference, rather than repeat, the sections regarding the Regional Emergency Preparedness Committee and role of the Emergency Program Coordinator. This will simplify Bylaw No. 4836 and reduce the need to update it. So, by way of example, section 4 would be revised to read something as follows:

The Committee is hereby established as the emergency management organization for the City and is responsible for managing and implementing the Plan. The Committee shall have such composition and responsibilities as are assigned to it from time to time in [cite the ACRD bylaw].

A similar approach can then be taken in describing the role and responsibilities of the Emergency Program Coordinator.

4.4.2 Bamfield Emergency Planning

As noted above, Bamfield has a new service establishment bylaw – Bylaw No. E1060. This bylaw sets out:

- the service being established (s. 2);
- the service area boundaries and participating areas in the area, being Electoral Area A (ss. 3, 4); and
- the full range of cost recovery mechanisms permitted by the *Local Government Act*.

We have been advised that there is an implementing bylaw, conceptually similar to Bylaw No. PS1006, being developed for Electoral Area A (and C). This bylaw is necessary to formally establish an emergency management organization and address, for example, emergency program coordinator responsibilities.

As matters stand, there is a full emergency plan for the area, and a considered process for responding to emergencies using a combination of local volunteers (including the Bamfield Department), and ACRD staff. This plan is examined further in section 11, Emergency Program, below.

4.5 Potential Regulatory Changes - The Fire Safety Act

The *Fire Services Act*, which grants certain powers and authority and imposes certain obligations on municipalities, is slated to be replaced. The *Fire Safety Act* received third reading back in May 2016, but still has not come into force. The Office of the Fire Commissioner (the “OFC”) is in the process of completing the regulations and policies which are needed before the statute can come into effect. It is unclear when these processes will be finalized or publicly released. More significantly, in a 2018 letter from the Minister of Public Safety and Solicitor General to the Union of BC Municipalities, the Province announced that it was going to amend this new statute in a way that would materially impact the obligations of

regional districts.⁵³ These potential amendments, and on-going discussions between the Province and regional districts regarding their implications, have further delayed the statute from coming into effect. Our understanding is that the new statute is unlikely to come into effect until late 2022 at the earliest.

However, once the new act comes into force, it will materially affect the ACRD's obligations with respect to fire investigations and may also impose a fire inspection obligation across all of the unincorporated areas of the regional district.⁵⁴ As such, it is useful to understand what these new obligations will be, and to build them into the ACRD's medium-term planning. At a high level, this new statute impacts the following principal matters relevant to the ACRD and the Departments:

- the fire inspection regime applicable to public buildings;
- fire investigations; and
- the powers exercised by fire chiefs and local governments.

We also would note that the imposition of these obligations would also create some governance and structuring issues for regional districts. In particular, it will be necessary to determine how the function is best authorized, who should be made responsible for carrying out these obligations (and that may vary depending on whether there is a fire service area in existence), and how the function is to be taxed for and funded. These issues will depend on how the Province elects to impose any obligations on regional district governments.

4.5.1 Fire Inspections

Under the new *Fire Safety Act*, the existing obligation to operate a regular system of inspections is replaced by the obligation to establish a risk-based compliance monitoring system for public buildings which encompasses:

- fire safety inspections; and
- fire safety assessments.⁵⁵

In his 2018 letter to the UBCM, Minister Farnworth stated that the Province:⁵⁶

“has directed the Office of the Fire Commissioner to implement a single standards of fire safety for public buildings, whether located in a municipality or an unincorporated area. This means that buildings where people gather to meet, study, rest, engage in

⁵³ Letter, Farnworth (Minister of Public Safety and Solicitor General) to Booth (President, Union of BC Municipalities), 30 July 2018.

⁵⁴ These obligations throughout the unincorporated areas of the ACRD, regardless of whether there was a fire service area in existence.

⁵⁵ *Fire Safety Act*, s. 20. The term “public buildings” is defined in s. 1.

⁵⁶ Minister of Public Safety and Solicitor General to President, UBCM, dated 30 July 2018.

recreation, or receive care in a licensed daycare or group home facility will be subject to fire inspections and risk-based compliance monitoring requirements.”

Implementing these requirements would require revisions to the *Fire Safety Act*. The current status of this initiative is unclear. However, if imposed, it will create a border-to-border obligation for the ACRD: all “public buildings”, whether or not located in an existing fire service area, would require fire safety inspections and risk-based compliance monitoring. As such, it is useful to review what this obligation may entail.

Following a transition period, “fire inspectors” conducting fire safety assessments will need to meet the training and proficiency requirements specified by the Fire Commissioner.⁵⁷ Those requirements, which are expected to be similar in format to the Playbook, have not yet been issued. However, these new training requirements will potentially impact the training of officers and members in each Department, who will have to meet the new standards if they are to be made responsible for fire safety inspections.

If this obligation is imposed, the ACRD will need to conduct risk assessments of public buildings within the unincorporated areas. Clearly, each Department should be made responsible for and authorized to conduct such assessments and inspections within its own service area. Outside of existing fire service areas, the ACRD will either need to:

- contract that service to its Departments;
- create a position responsible conducting such inspections and compliance monitoring; or
- hire an external third party to undertake such inspections.

Depending on how the obligation is imposed by the Province, it may also be necessary to create a service area to fund this function in areas not covered by an existing fire service area.

Fire safety inspections will need to comply with the (yet to be issued) regulations under the *Fire Safety Act*.⁵⁸ An inspection regime will then need to be developed based on the risk assessments that are conducted. Conceptually, the *Fire Safety Act* moves away from the existing “regular” inspection requirements imposed by the *Fire Service Act*, where, in practice most municipalities have sought to inspect all properties annually, and heads towards a more flexible regime, where inspection frequency is based principally on risk. Under this approach, higher hazard or non-compliant properties should be subject to more frequent inspections, while lower risk, compliant properties can be inspected less frequently (perhaps coupled with intervening self-assessments by the owners during the non-inspection years).

The new *Fire Safety Act* also introduces the concept of a “fire safety assessment,” which is the self-inspection of a property by the owner. Under the existing *Fire Services Act*, there is some

⁵⁷ *Fire Safety Act*, s. 8(2). The transition period is provided for in s. 53.

⁵⁸ *Fire Safety Act*, s. 20(1)(b).

uncertainty about whether self-inspection systems comply with the statutory requirements.⁵⁹ That issue is now laid to rest. However, it will be up to the ACRD to determine which public buildings are to be permitted or required to conduct self-assessments, presumably as part of the overall risk analysis that must be conducted. The new self-assessment by owners will have to be conducted “in the form and manner required by the Fire Commissioner” under the new statute.⁶⁰ It is expected that the Fire Commissioner will issue policy or forms covering fire safety assessments, though these have not yet been released.

Section 10 of the *Fire Safety Act* grants various powers to fire inspectors to enter premises,⁶¹ conduct their inspection (including testing and taking of samples, etc.), and to require the production of records related to the premises by the owner or occupier. Section 11 empowers a fire inspector to issue orders requiring an owner bring the property into compliance with the *Fire Safety Act* and regulations (which regulations will include the *Fire Code*).

Under ss. 20(2) and (3) of the *Fire Safety Act*, the ACRD would be permitted, by bylaw, to charge “a reasonable fee” for conducting a fire safety inspection required by the new Act. Subsection 20(4) specifies the criteria which may be applied when setting such fee.

We have noted that updates to the service establishment bylaws should include reference to the ability of the ACRD to recover costs, in part, through fees and charges. Fees for this service could then be built into an updated Operational Criteria Bylaw and/or a standalone Fire Safety Inspection bylaw.

4.5.2 Fire Investigations

While an argument can be made that LAFCs (and not local governments *per se*) are currently responsible for fire investigations and reporting, the new *Fire Safety Act* makes it clear that the obligation will now fall directly on the “local authority” (which includes a regional district). This obligation applies border-to-border, regardless of whether a fire service area has been established. The requirements relating to fire investigations are set out in Part 7 of the *Fire Safety Act* (ss. 22 – 27). As with fire inspectors, a local authority:⁶²

must designate in writing persons or a class of persons as fire investigators to conduct fire investigations.

⁵⁹ For opposing views, see the Fire Inspection and Prevention LAFIC Inspection Working Group Sub-Group, *BC Fire Services Act: Regular System of Inspections – Considerations for Development* (January 2015) at p. 8 (suggesting such a system, on its own, is not compliant with the *Fire Services Act*); versus: L. Staples, Q.C., “Opinion letter to Fire Chiefs’ Association of British Columbia,” dated 30 Aug. 2012, which holds that such a system of self-inspections can be implemented in compliance with the existing *Fire Services Act* requirements.

⁶⁰ *Fire Safety Act*, s. 21(1).

⁶¹ The power is specifically limited in s. 10(2) to exclude private dwellings unless a warrant has been obtained.

⁶² *Fire Safety Act*, s. 23(1).

Following a transition period, fire investigators must meet the training standards which are to be specified by the Fire Commissioner.⁶³ Those standards have not yet been promulgated. These new training requirements will likely impact the Department's officers and fire prevention members, who are most likely to be charged with investigating fires.

Under section 25, each local authority is required to commence a fire investigation within five days of learning of a fire that has destroyed or damaged property or resulted in death or injury. The investigation must examine the "cause, origin and circumstances" of the fire. The facts ascertained about the cause, origins and circumstances of the fire must then be submitted to the OFC within 30 days after such fire.⁶⁴

Fire investigators are granted broad powers of entry onto property or premises for the purposes of conducting a fire investigation, and to remove a record or thing, conduct testing, take samples and make such records, as required.⁶⁵

4.5.3 Powers and Authority

Under the *Fire Services Act*, powers and authority were granted principally through the mechanism of appointing fire chiefs (and others) as LAFCs.⁶⁶ The role of local assistant, however, is being abolished.⁶⁷ In place of the powers granted to local assistants, the new statute:

- grants a fire chief (or designate) the power to order a tactical evacuation where he or she "believes that there is an immediate threat to life due to a fire or explosion";⁶⁸ and
- deems "fire chiefs," fire investigators and fire inspectors to be peace officers for the purposes of the new act.

In addition, as noted above, broad powers are granted to fire investigators conducting investigations, and to fire inspectors conducting inspections. Additionally, local authorities are granted the power to order a "preventive evacuation" where the local authority "believes that conditions exist on or in the premises that fire on or in the premises would endanger life."⁶⁹ Each of these new powers should be contemplated in any updated bylaw.

⁶³ *Fire Safety Act* s. 23(2); the transition period is provided for in s. 53.

⁶⁴ It is unclear in the statute whether the report must be submitted 30 days after the date of the fire, or 30 days after completion of the investigation of the fire.

⁶⁵ *Fire Safety Act*, s. 27.

⁶⁶ *Fire Services Act*, s. 6.

⁶⁷ Under s. 55 of the *Fire Safety Act*, local assistants are required to return their badges within three months of the new statute coming into force.

⁶⁸ *Fire Safety Act*, s. 13.

⁶⁹ On fire inspectors' powers, see ss. 10 and 11; on fire investigators' powers, see s. 26. The power of a "local authority" to order a preventive evacuation is set out in s. 14 of the *Fire Safety Act*.

When the *Fire Safety Act* comes into force, it will be necessary to update the Operational Criteria Bylaw (or any replacement bylaw), to address the new requirements and authorities.

4.6 Recommendations

4.6.1 General

Recommendation: The ACRD Board should, in consultation with the Regional Fire Services Manager and the Departments, formally establish each Department's service level in accordance with and as contemplated by the Playbook.

4.6.2 Service Establishment Bylaws

Recommendation: In relation to the Departments' service establishment bylaws, we would recommend the following:

- **Bamfield:** Consider converting Bylaw No. 24 from a specified area to a local service bylaw. If that updating process is undertaken, ensure that the description of the services being provided is sufficiently broad to capture the range of service responsibilities undertaken by the Department, including rescue, medical response and the provision of services outside of the jurisdiction under service agreements.
- **Beaver Creek:** Consider updating and broadening the service description in Bylaw No. E1052 to cover the full range of service responsibilities of the Department, which are broader than merely "fire protection and suppression". In addition, address the provision of services by the Department into the neighbouring service areas (the Mountain Ranch Road and Granville Road service areas). If this updating is undertaken, consider increasing the maximum taxation rate as permitted by the *Local Government Act*.
- **Sproat Lake:** Consider updating and broadening the service description in Bylaw No. 856:
 - to cover the full range of service responsibilities of the Department, which are broader than merely "fire protection and suppression";
 - to address the off setting of costs through the use of fees and charges and raising of funds through other means permitted under the *Local Government Act*; and
 - if considered advisable, update the maximum taxation amount as permitted by the *Local Government Act*.

4.6.3 Operational Criteria Bylaw

Recommendation: The Operational Criteria Bylaw is now a decade old and could stand updating, taking into account the issues identified in the section of the report that reviewed this bylaw, including:

- addressing the ACRD Board setting service level policies for each Department in accordance with the Playbook;
- considering including language that limits or attempts to limit liability for delayed or inadequate responses by the volunteer departments;
- addressing the appointment of LAFCs;
- providing that the services authorized to provided by each Department be set by policy; and
- authorizing the Departments to enter properties to conduct pre-incident planning.

4.6.4 Occupational Health and Safety

Recommendation: The ACRD, in consultation with its Departments, should undertake a thorough review of occupational health and safety practices, including:

- establishing a single, consistent OH&S program to be used and applied by each of the Departments;
- ensuring that each Department operates a joint committee (or appoints a worker representative) as required by the *Workers Compensation Act* and Part 31 of the Regulation; and
- developing the necessary links and integration between the OH&S programs of the Departments and the overall ACRD OH&S program (including the latter's joint committee).

Recommendation: The ACRD, in consultation with its Fire Chiefs, should determine whether a single joint committee covering all three Departments would be a more efficient and effective approach to managing this WorkSafe BC obligation. If that approach is to be adopted as contemplated by section 31 of the WCA, an application to WorkSafe BC setting out the structure and approach would be required.

Recommendation: The ACRD should consider compensating Joint Committee members for time spent on this critical administrative task.

4.6.5 Emergency Program Bylaws

Recommendation: Complete and implement the bylaw for Electoral Area A (Bamfield) that formally establishes an emergency management organization and related structure for that area, with appropriate integration into the existing emergency management organization created for Electoral Areas B, D, E and F. (The same will be required for Electoral Area C if service provision through Ucluelet is not continued.)

Recommendation: Review Bylaw No. PS1006 and update as appropriate based on the comments in this section, including: expressly adopting the Emergency Plan as the plan for the four electoral areas; clarifying responsibility for the appointment of the Emergency Program Coordinator; and cross referencing to the City's complementary Bylaw No. 4836.

5. Mutual and Automatic Aid Agreements

Mutual aid agreements are essential tools that enable fire departments to provide aid to one another when circumstances warrant. They permit departments to share resources and specialty services (e.g., specialty rescue or hazardous materials responses), and enable them to obtain critical support for major incidents or other situations where a department's resources are overwhelmed by events. Mutual aid agreements require a specific request for assistance from the requesting department before another department responds to the incident.

Operationally, it usually means that a department arrives on scene, determines it will need assistance, and then makes a request through its dispatch provider for a mutual aid turn out. This process can result in a significant delay before assistance arrives.

Automatic aid agreements are a variant under which the participating departments agree that they will be automatically dispatched to assist neighbouring departments. Many of these types of agreements limit the call-outs to certain classes of calls, such as structure fires. Some automatic aid agreements further refine the approach by specifying particular areas covered (e.g., areas along each department's border), the nature of assistance provided (e.g., ladder trucks or tenders, motor vehicle incidents, etc.), the time of day (e.g., call-outs during workdays when responses may be weak for volunteer or paid-on-call departments) and similar factors. Automatic aid agreements require close collaboration between the participating departments and with their dispatch providers. The principal benefit of automatic aid agreements is that they minimize the delay before additional resources begin responding from an assisting department, which enhances the safety of residents and responders alike.

The Fire Underwriters grant partial staffing and apparatus credit to departments using aid agreements, with more credit generally being granted for automatic aid than mutual aid. As such, the ratings enjoyed by the area departments – from the ACRD's perspective, Beaver Creek and Sproat Lake in particular – are dependent, in part, on these arrangements.

The ACRD has developed a best-in-class approach to automatic and mutual aid with the City and Cherry Creek Waterworks District, covering the four Alberni Valley departments. There are two agreements: a mutual aid agreement dated 10 February 2012 (the "MA Agreement") and an automatic aid agreement (the "Auto Aid Agreement") dated 28 June 2017. These agreements reflect careful thought and a deep level of professionalism and cooperation among the four departments. The ACRD and its partners are to be commended for the effort put into developing such a high level of functional coordination between the four departments.

5.1 The MA Agreement

The MA Agreement was entered into in 2012 and has not been updated since that time. The Auto Aid Agreement was entered into some five years later. We would suggest that it may be useful to update both agreements, and create a single mutual and automatic aid agreement. This approach makes contract maintenance an easier task, and by combining the two agreements, consistency is ensured (e.g., in relation to the operation of the "Incident Command

System,” the applicability of various common operational guidelines, the creation of a single, consistent set of liability allocation and indemnification provisions, etc.).

The MA Agreement covers the following matters:

- the circumstances in which mutual aid may be requested (ss. 2 – 3);
- the discretion of a responding department to determine what aid (if any) is to be provided (ss. 4 – 5);
- the incident command structure (s. 6);
- the right of a responding department to recall its personnel and apparatus and the early release of such apparatus as an incident winds down (ss. 7 – 10);
- the right of a responding department to recover costs for consumables, but not to charge for its assistance (ss. 11 – 12); and
- risk allocation, release of claims, indemnification and insurance requirements (ss. 13 – 18).

The MA Agreement has no set term.

In general, it is a reasonably well constructed agreement. However, it would benefit from integration with the Auto Aid Agreement, which addresses the same issues, as well as some not covered in this agreement, in a more comprehensive fashion – for example, with regards to response protocols (i.e., what assistance generally will be provided or made available), incident command, joint training, the use of common operational guidelines, etc.

In connection with the indemnity granted by a requesting department to a responding department in section 15, we would note that there is generally a carve-out for gross negligence and wilful misconduct.

In addition, the liability allocations and indemnification obligations should be conformed with those set out in the Auto Aid Agreement (which are somewhat differently expressed).

One of the issues not expressly addressed is the operational powers of a responding department in the requesting department’s jurisdiction. As a fire department generally has no operational powers outside of its ordinary jurisdiction, it is best practice to stipulate those powers in the aid agreement. There are two basic approaches that may be adopted:

- a responding department may be granted the same powers when operating in the requesting department’s jurisdiction, as is enjoyed by the requesting department; or
- a responding department can exercise the same powers in the requesting department’s jurisdiction as it has in its own service area.

With respect to the two ACRD departments involved (Sproat Lake and Beaver Creek), section 19 of the Operational Criteria Bylaw specifies that each Department, when providing assistance to the other, is entitled to exercise in the other Department's jurisdiction the powers provided in the Operational Criteria Bylaw.

5.2 Auto Aid Agreement

The Auto Aid Agreement was entered into on 28 June 2017. It has no set term. Under this agreement, the parties have agreed to provide automatic aid responses to confirmed working structure fires, with the qualifier that only certain areas of the City are covered by this mandate. The Auto Aid Agreement lays out a clear structure for automatic aid responses, including:

- a structure and process for determining what calls fall within the ambit of automatic aid, and what portions of each participating department's service area are covered (ss. 3, 8 – 11 (Automatic Aid Committee), Schedule A);
- response protocols establishing what type of response will be provided by each participating department (Schedule A);
- a process for establishing a common incident command structure and other common operational guidelines relevant to joint responses (ss. 3(d), and 5, and Schedule C, Uniform Operational Guidelines OG#1.04);
- a process for keeping the dispatch provider informed of the Auto Aid Agreement and any changes to it (s. 3(e));
- the right of a department to decline to respond, not respond or respond with different apparatus and equipment that may have been requested or expected, with a corresponding obligation to notify the requesting department of any such decision (ss. 4(a), (b));
- the right of a department to recall its assigned resources (s. 4(c));
- an express grant of powers to responding departments (s. 6);
- a provision addressing compensation (none is to be paid) and reimbursement of consumables (e.g., foam) (s. 7);
- the creation of an Automatic Aid Committee comprising the area Fire Chiefs (or designates), which committee has fairly wide-ranging responsibilities to address operational, training, command and safety matters, and the power to amend the schedules to Auto Aid Agreement (ss. 8 – 11);
- provisions addressing risk allocation and liability, supported by indemnification provisions (ss. 12 – 15). The indemnity does not cover gross negligence or wilful misconduct, damage caused when mustering members or responding to the scene; or WorkSafe BC

claims. It should be noted that the language in the Auto Aid Agreement differs from that in the MA Agreement, even though the intent appears to be largely the same;

- a provision addressing WorkSafe BC claims (which remain the responsibility of each participating department) (s. 16);
- a provision expressly excluding third party rights (s. 17);
- provisions addressing minimum insurance requirements (ss. 18 – 19); and
- a dispute resolution process (ss. 22 – 23).

The Auto Aid Agreement is among the best we have ever reviewed. It is comprehensive in coverage of the issues that need to be addressed. Aside from minor typos (e.g., s. 27 should read “enures to the benefit of” not “ensures”):

- consideration should be given to making the decision not to respond in section 4(a) purely discretionary, rather than a decision based on “operational, safety or other concerns”;
- in the dispute resolution processes, consideration could be given to establishing time frames, and then describing what happens if the CAOs of the parties cannot settle the matter – e.g., mandatory or optional arbitration; and
- in relation to the City, Schedule A stipulates that automatic aid is invoked when there is a working structure fire “as Identified on the Map.” Based on discussions with ACRD staff, it appears that the map is the North Island 9-1-1 dispatch map, on which is indicated the City’s “targeted” buildings. If a call relates to one of these structures, then automatic aid is invoked. Schedule A should be updated accordingly.

As noted above, however, the most significant issue is really to fully integrate the MA Agreement with this best-in-class Auto Aid Agreement. There are differences between the two, some of which have been noted above (e.g., different language regarding risk allocation and indemnification), which could be problematic.

When integrating the two, our suggestion would be to draft it so that the body of the agreement covers both mutual aid and auto aid call outs. If appropriate, separate response protocols can be drafted for different call-out types.

One other issue that may need to be considered is the impact of auto and mutual aid agreements during major area emergencies. Emergency Management BC has a set of policies that impact the ability of assisting departments to recover costs during such events. Proper integration of these policies into the ACRD and City emergency programs, therefore, is necessary if a party wishes to recover any portion of the costs of assistance provided during a declared emergency.

This issue requires careful consideration. In some jurisdictions, they have a “hard stop” in their aid agreements that makes the agreements cease to apply after a specified time (in one case,

four hours). That approach presents risks. It probably is better to frame it from the perspective of the emergency programs themselves and give the power to call for aid under the revised aid agreement to the EOC, or have the assistance request be formally transferred to a request by the EOC if an emergency is declared or the EOC activated. If that approach is adopted, a revised compensation provision (section 7 in the Auto Aid Agreement) would be needed. This new section would contemplate that if the assistance request is directed from, or assigned to an activated EOC, the responding department may claim its costs. An agreed basis for those costs (e.g., the agreed compensation schedule established between the Province and the Fire Chiefs' Association of BC in relation to wildfire responses), should be established.

5.3 Recommendations

Recommendation: The ACRD update and integrate the MA Agreement with the “best-in-class” Auto Aid Agreement.

Recommendation: When the integration is undertaken, consideration should be given to the following issues:

- whether aid responses should be made expressly discretionary, rather than based on decisions involving “operational, safety or other concerns”;
- building out the dispute resolution processes to address circumstances where the parties’ respective CAOs cannot settle the matter in question (e.g., by providing for mandatory or optional arbitration); and
- Schedule A updated to better describe the circumstances in which automatic aid is invoked for response into the City.

Recommendation: Consideration should be given to integrating any revised aid agreement with the City’s and ACRD’s emergency programs, to potentially enable the recovery by the assisting departments of their costs for any response.

6. Service Agreements

The ACRD is party to two fire protection service agreements with First Nations:

- an agreement dated 26 April 2019 between the ACRD and the Huu-ay-aht Government (the “HG”) under which Bamfield provides fire protection services to the HG (the “HG Service Agreement”); and
- an agreement dated 9 December 2020 between the ACRD and the Hupacasath First Nation (the “HFN”), under which Sproat Lake provides fire protection services to the HFN (the “HFN Service Agreement”).

In addition, in connection with the provision of medical responses by the Departments, the ACRD has entered into several agreements with BCEHS:

- a First Responder and BC Emergency Health Services Collaboration Agreement, dated 22 September 2016, relating to services provided by Bamfield, as amended by an amending agreement dated 8 January 2020 (the “Bamfield Agreement”);
- a First Responder Agreement (Consent and Indemnity), dated 12 August 2009, relating to the provision of first responder services by Beaver Creek; and
- a First Responder Agreement (Consent and Indemnity), dated 16 September 2009, relating to the provision of first responder services by Sproat Lake (collectively, the agreements relating to Beaver Creek and Sproat Lake are referred to as the “Consent and Indemnity Agreements”).

6.1 HG Service Agreement (Bamfield)

The HG Service Agreement has a five-year term, expiring in April 2024. It is terminable by either party on two years’ notice.⁷⁰ In relation to early termination, it is not clear whether subsections 19.1(a) and (b) (which attempt to address refunds and obligations for partial year’s service) are intended to apply to an early termination by the ACRD. We also would note that the two subsections potentially conflict with each other. This issue should be addressed in any update to the agreement.

Under the HG Service Agreement:

- the HG is responsible for ensuring that there is an adequate water supply, including providing hydrant maintenance (Art. 2), and the ACRD is relieved of liability for losses arising from insufficient water supply (s. 2.2). This section is further supported by a broad indemnity from the HG in favour of the ACRD under section 6.1;

⁷⁰ The term is set out in section 10.1; the early termination is in sections 18.1 and 19.1 (and technically is “(730) days’ notice”, rather than two years).

- the ACRD has the right (but not obligation) to conduct hydrant testing (s. 3.1);
- the right of the Bamfield Department to enter HG lands is addressed in Article 3, including permissive fire inspections and delivery of fire suppression and first responder services;
- the ACRD is contracted to provide fire suppression and first responder services from the Bamfield hall to all structures identified in Schedule C to the agreement (ss. 4.1, 5.1);
- the nature and level of service to be provided, and limitations on the services, are identified in sections 4.2, 4.6, 4.9, 4.10, 4.11, 4.13 and 4.14;
- the ACRD has committed Bamfield to conducting one practice per month on HG lands, and is required to deliver an annual report on all services (ss. 4.3 and 4.4);
- the HG is required to ensure that the Units to which services are provided, and any new Units that may be added, are constructed in accordance with “the applicable federal, provincial and local government enactments[,] standards and codes” (s. 4.5), and that the Units are given visible and compliant street addresses (s. 4.8);
- the HG can add new Units to the HG Service Agreement on notice to the ACRD (ss. 4.6 and 4.7);
- the fee for service is set based on the number “Units”, with the cost per Unit determined to be the same as the amount charged per “Unit” within the Bamfield fire protection area (ss. 7.1, 7.2, and Schedule C);
- the HG is also responsible for the cost of any additional aid that may need to be brought in to address an incident on HG lands (s. 8.1); and
- disputes arising in relation to the HG Service Agreement are to be managed in accordance with the dispute resolution procedures under Article 21.

In general, the HG Service Agreement covers the issues that need to be addressed in these types of service arrangements. There are some issues that could be considered when the HG Service Agreement is renewed or otherwise considered for revision:

Minor Issues

Several minor issues were noted during the review:

- the defined terms in section 1.1 should be placed in alphabetical order;
- where defined terms (e.g., “Structural Fire Suppression”) are used in the body of the agreement, those terms should be consistently capitalized;
- a definition of “First Responder Services” should be created, and replace the term “First Responder”;

- the term “Campground Unit” cross-references to Schedule C, but is not further defined in that Schedule;
- section 2.4 – which addresses non-operational fire hydrants, standpipes and water valves – should be revised to read: “the party which discovers a non-operational fire hydrant [etc.] shall notify the other party.” It also should be made clear the HG is responsible for correcting the matter in accordance with section 2.3. It may be useful to broaden section 2.3 to cover “all fire hydrants, standpipes and water valves” on HG lands;
- section 4.6 – which addresses, in part, adding more Units to Schedule C – currently provides that the consent of the ACRD for such an addition “may be unreasonably withheld.” We assume that it probably should say “may not be unreasonably withheld.” Alternatively, if the ACRD wishes to retain discretion in this matter, it should state that “approval may be withheld in the ACRD’s sole and absolute discretion”; and
- the dispute resolution provisions in Article 21 reference the *Commercial Arbitration Act*. This statute was renamed the *Arbitration Act* quite some time ago, and has recently been replaced by the *Arbitration Act*, SBC 2020, c.2.

Major Issues for Consideration

The following substantive issues should be considered:

- Operational Powers: either Article 3 or Article 5 should be expanded to include a specific statement regarding Bamfield’s right to exercise within HG lands, the operational powers granted to it under the Operational Criteria Bylaw, in connection with incident responses;
- Service Provision: in section 4.2, the ACRD commits to providing “the same level of service that the Regional District provides ... to its own inhabitants within the Regional District.” The latter portion should be revised to read: “within the Bamfield Service Area.”
- Indemnity (Art. 6): it is common for indemnities of this nature to expressly exclude gross negligence and wilful misconduct. Indemnities are complex and, along with the release of liability in section 2.2, should be reviewed in consultation with legal counsel;
- Fees for Service – New Units: a section should be added that expressly contemplates the payment of a pro-rated fee for any new Units which are added to Schedule C during a calendar year.
- Penalties/Interest: section 7.5 provides for a 10% “penalty” for late payment of the service fee. Section 7.6 refers to this penalty amount as “interest”. Technically, penalties are not enforceable as such under contract law. Section 7.5 should be re-drafted and the any additional amount that is added to the service fee being treated as an interest charge. It is more common to see a specific interest rate on late payments, one that accrues and compounds monthly.

- Interface Fires: consideration should be given to expressly addressing what obligation exists to respond to interface fires. Where possible, this response should take into consideration the processes identified by the BC Wildfire Service in its operational guidelines addressing the activation of structure fire fighting departments to respond to such incidents.

We also would suggest that the service level and service limitation provisions be reviewed and, if possible, condensed. The goal is to make clear that:

1. The services provided will be substantially similar to that provided within the Bamfield Service Area, in relation to “Structural Fire Suppression” and “First Responder Services,” subject to any greater travel distances involved, and any conditions on HG lands that may make an incident worse.
2. The services are delivered by volunteer and paid-on-call members. The response to any given incident may be delayed or inadequate if insufficient or no members are available to turn out. No liability should attach as a result (and the indemnity should cover this issue).
3. In relation to concurrent incidents, the Fire Chief or designate has sole and absolute discretion to assign or reassign emergency responses. Again, no liability should attach as a result of such decision (and the indemnity should cover this issue).

6.2 HFN Service Agreement (Sproat Lake)

The HFN Service Agreement is in substantially the same form as the HG Service Agreement, with some minor updates and revisions. Except as specifically noted, therefore, the comments on the HG Service Agreement generally apply to the HFN Service Agreement as well.

The HFN Service Agreement also has a five-year term, which expires in December 2025. It is terminable by either party on two years’ notice, and clarifies that the HFN is not entitled to any refund for partial years.⁷¹

Unlike the HG Service Agreement, service provision by Sproat Lake is limited to “Structural Fire Suppression” – it does not include any first responder services.

The calculation of the service fee is undertaken somewhat differently. Rather than ascribing a “per Unit” cost, the HFN is required to provide an annual list of “the number of residencies together with an appraisal of the Net Actual Assessed Value of improvements of buildings [sic] on the Reserve as conducted by a Certified Appraiser” (s. 7.1). Under section 7.2, the HFN is required to “pay an annual fee as shown outlined [sic] on Schedule ‘D’.”

⁷¹ The term is set out in section 10.1; the early termination is in sections 18.1 and 19.1 (and technically is “(730) days’ notice”, rather than two years).

These two sections could usefully stand some attention. It appears that section 7.1 is limited to the assessed value of the “improvements” on the lands in question. We would suggest that it should be amended, in relevant part, to read something as follows

“a statement setting forth the number of Units together with an appraisal of the value of such Units (excepting out any value of the land), as determined by a Certified Appraiser.”

The term “Certified Appraiser” then needs to be added into the defined terms in section 1.1. If it is intended to include the value of the land, then the portion in brackets would be revised accordingly.

If the term “Net Actual Assessed Value” is to be retained in Schedule D, it needs to be defined in section 1.1.

Section 7.2 should be revised to read:

“The First Nation shall pay the ACRD an annual fee calculated by the ACRD in accordance with Schedule ‘D’ and as otherwise provided in that Schedule.”

We would note that in section 1.1, a new defined term, “Residential Development,” is introduced, but not used in the body of the agreement.

6.3 BCEHS Agreements

The agreements with BCEHS are generally necessary for fire departments to provide medical first responder services.

The Consent and Indemnity Agreements relating to Beaver Creek and Sproat Lake are of the type that originally was instituted in 2009 by what was then the BC Emergency Health Services Commission. These two agreements are in substantially the same form, and authorize the two Departments to provide “EMA FR” (Emergency Medical Assistant First Responder) services.⁷² Provided that the Departments maintain their licensing requirements and operate within the limits of those licences, then:⁷³

“[t]o the extent that the Agency [i.e., the ACRD] is not indemnified under a valid and collectible policy of insurance, the Commission will indemnify and save harmless the Agency, against and from, all claims which may brought or made by any person against the Agency or its First Responders in consequence of providing the Services [...]”.

The Bamfield Agreement is more recent and quite different. This agreement reflects the fact that the community is considered remote and lacks any local ambulance station. As amended, it permits Bamfield (subject to appropriate training) to provide a higher level of service – i.e., at

⁷² As contemplated by section 8(1) of the *Emergency Medical Assistants Regulation*, BC Reg. 210/2010 (the “EMA Regulations”).

⁷³ BCEHS, Consent and Indemnity Agreement, s. 8.1.

the “Emergency Medical Responder” level.⁷⁴ Those more advanced services include: lifting, loading, evacuation and transportation of patients, as more particularly described in a new Schedule B.⁷⁵ Bamfield’s obligation to provide such services is dependent on available staffing and resources.⁷⁶

BCEHS has agreed to cover the cost of the following:⁷⁷

- medical supplies used in the provision of the Services;
- training Bamfield personnel to the required level, including maintenance training and training updates;
- providing EMR instructor training to Bamfield personnel; and
- the cost of other operational training and support “as and when required” by Bamfield.

In relation to patient transportation, BCEHS also agreed to provide the ACRD with a “decommissioned ambulance from its fleet that is in compliance with commercial vehicle inspection standards,” and which is otherwise fully equipped. The ACRD is required to maintain commercial vehicle insurance on the vehicle and not less than two million dollars in liability coverage.⁷⁸

Schedule B also added back in the form of indemnity found in the Consent and Indemnity Agreements (which was lacking in the original, 2016 form of the agreement).⁷⁹

Bamfield has developed a comprehensive set of “Emergency Medical Unit” policies and procedures, with the assistance of external advisors (Orca Health and Safety).⁸⁰ These policies were created in November 2019 and reviewed by the Regional Fire Services Manager in April 2020. There also is an agreement in place with the City of Nanaimo (and its Vancouver Island Emergency Response Academy), in connection with first responder training. This agreement appears to be designed as a “train-the-trainer” program, pursuant to which some Bamfield personnel are trained to an agreed level, and then provided with the necessary materials to conduct training within the Department.

⁷⁴ The EMA Regulations specify six levels of Emergency Medical Assistants’ licensing, from the most basic (“EMA FR”) to the most advanced (“Critical Care Paramedic”). The EMR designation is one level above EMA FR.

⁷⁵ Bamfield Agreement, Schedule B to the amending agreement, Part 1, s. 1(a), “EMR Services”; and Part 2, s. 1, “Patient Transportation Services.”

⁷⁶ Bamfield Agreement, Schedule B to the amending agreement, Part 1, s. 1(b).

⁷⁷ Bamfield Agreement, Schedule B to the amending agreement, Part 1, ss. 3, 4.

⁷⁸ Bamfield Agreement, Schedule B to the amending agreement, Part 2, ss. 1.5 and 2.1.

⁷⁹ Bamfield Agreement, Schedule B to the amending agreement, Part 2, s. 2.2, “Indemnity.”

⁸⁰ Bamfield Emergency Medical Unit: Policy and Procedure Manual.

6.4 Recommendations

6.4.1 HG Service Agreement

Recommendation: A series of minor drafting notes were identified in the review of the HG Service Agreement, which should be addressed when the agreement is updated. These minor drafting notes are listed in the relevant section of this report.

Recommendations: The following substantive issues were identified in connection with the HG Service Agreement:

- there should be a grant of operational powers to the Department in connection with its provision of services on HG territories;
- the service level commitment in section 4.2 should be revised so as to commit the ACRD to providing substantially the same level of service as is provided in the Bamfield Service Area, as opposed to within the ACRD at large;
- consideration should be given to including an exception in the indemnity in Article 6 for gross negligence or wilful misconduct;
- there is late fee described as a “penalty” in section 7.5: this should be revised to refer to it as an interest charge, as penalties are not enforceable under contract law; and
- the Department’s obligation to respond to interface fires should be specified.

6.4.2 HFN Service Agreement

Recommendations: The HFN Service Agreement is in substantially the same form as the HG Service Agreement, and the recommendations relating to the latter should be considered when this agreement is reviewed and updated. In addition, the following recommendations are made:

- the sections addressing how the service fee is to be calculated (ss. 7.1 and 7.2) should be revised and the drafting tightened up somewhat, including: specifying whether the calculated values include or exclude the land on which the structures sit; defining the meaning of certain capitalized terms (e.g., “Certified Appraiser,” and “Net Actual Assessed Value”), and amending the language linking the fee calculation from section 7.2 to Schedule D, to correct some minor drafting errors; and
- deleting the defined term “Residential Development,” which is included in section 1.1, but never used in the body of the HFN Service Agreement.

7. Fire Underwriters

This section examines the role and importance of Fire Underwriters' reviews for property owners in a fire protection area and provides a brief overview of the methodology that those surveys employ. As the rating provided by the Fire Underwriters materially impacts insurance costs for both residential and commercial properties, it is important to understand how the rating system operates and the potential impact it has on the cost-benefit analysis of local governments investing in their fire services. In particular, it is important to understand how investing in the fire service through civic taxes, to establish, maintain or improve an area's rating from the Fire Underwriters, can potentially result in a net return (or the maintenance of major net savings) for residents and area businesses.

The Fire Underwriters are a national organization administered by Opta Information Intelligence. It has operated under a variety of names in the past (including SCM Risk Management Services Inc.), but in each instance, the organization was, and we believe remains, owned or controlled by the insurance industry.

The primary purpose of the Fire Underwriters is to establish the Dwelling Protection Grade ("DPG") and Public Fire Protection Classification ("PFPC") for each community in the country. The DPG rating generally applies to single family detached residences,⁸¹ whereas the PFPC rating applies to multi-family residential, commercial, industrial and institutional buildings or districts, and generally is applied by the "commercial lines" arm of the insurance industry.⁸²

The current Fire Underwriters' ratings for the three ACRD fire service areas are shown in the table below.

Table 1: Current Fire Underwriters' Ratings

Service Area	DPG Rating (residential)	PFPC Rating (commercial)
Bamfield	Bamfield East: DPG 3A	Bamfield East: PFPC 8
	Bamfield West: DPG 3A(P)	Bamfield West: PFPC 8(P)
Beaver Creek	DPG 3A	PFPC 7
Sproat Lake	DPG 3B(s) (within 8 km. of a fire hall)	PFPC 9 (within 5 km. of a fire hall)
	DPG 5 (more than 8 km. from a fire hall)	DPG 10 (more than 5 km. from a fire hall)

⁸¹ Under the Fire Underwriters' definitions, the DPG ratings generally apply to the following: "One- and Two-Family Detached Dwellings (buildings containing not more than two dwelling units) in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms." In addition, under this system a "typical" detached dwelling is a maximum of 3,600 square feet in size. Fire Underwriters Survey website, "Terms of Reference", <http://www.fireunderwriters.ca/dwelling-protection-grade.html> accessed on 19 October 2021.

⁸² Fire Underwriters Survey website, "What is the PFPC" at <http://www.fireunderwriters.ca/public-fire-protection-classification.html>, accessed on 19 October 2021.

Both Bamfield and Beaver Creek have recent upgrade letters setting their DPG and PFPC ratings;⁸³ Sproat Lake, however, although it has recently been re-accredited for its “Superior Tanker Shuttle” capabilities (“STSS Accreditation”), does not appear to have any recent Fire Underwriters grading. The ones shown in the table above are from approximately 2007.⁸⁴

It needs to be noted that Bamfield’s rating for the western (i.e., peninsula) portion of its service area has been made provisional. The existing apparatus serving that portion of the service area is well beyond the age permitted by the Fire Underwriters. A provisional rating is typically in force for about a year, to give the relevant department time to correct the identified deficiency. If new apparatus is not acquired, this rating will drop to either DPG 4 or DPG 5 (unprotected).

Most residential homeowners and businesses carry fire and general perils insurance, and any person with a mortgage is required to maintain such insurance by the mortgagee bank or financial institution. Entities responsible for strata developments are required by provincial legislation to maintain insurance coverage.

Where a community has a fire department that meets Fire Underwriters’ standards for performance, the cost of insurance can be significantly decreased. Thus, one of the cost-benefit analyses that underpins the investment required to establish or maintain a rated fire department is the trade-off between the taxes needed to pay for the department (and meet Fire Underwriters’ standards) and the expected savings for residents and businesses on insurance costs.

With a well-rated fire department, the aggregate savings on insurance premiums often will offset, in whole or in significant part, the costs of operating the department. For an individual with a house that is assessed at a replacement cost⁸⁵ for insurance purposes of \$300,000, a “protected” or “semi-protected” rating will generally result in cost saving on insurance of between more than \$2,000 annually. For commercial properties, significant reductions in insurance rates can be expected when the community obtains a PFPC rating of 7 or better. From the savings enjoyed on insurance, the tax cost of maintaining the service would then need

⁸³ Fire Underwriters, “Fire Protection Area of Bamfield Fire Insurance Grade Classification,” letter dated 11 August 2021 to Chief Lavoie; and Fire Underwriters, “Beaver Creek Fire Insurance Grade Update,” letter to Chief Kobus, 23 September 2020.

⁸⁴ Fire Underwriters, “Superior Tanker Shuttle Accreditation Effective November 22nd 2018,” letter to Sproat Lake dated 22 November 2018. The STSS Accreditation will need to be renewed in 2023. The existing ratings are from: Fire Underwriters, *Fire Protection Assessment of Sproat Lake Fire Protection Area* (August 2007), at pp. 9 – 10.

⁸⁵ It is important to emphasize that “replacement cost” and the “assessed tax value” of a home are not interchangeable concepts. Replacement cost is driven by square footage, level of finishing and the cost of construction, while the assessed tax value of a home is driven by market factors.

to be deducted to determine the net direct financial benefit (or cost) of having a “rated” department.⁸⁶

The following table is often shown in some Fire Underwriters’ reports. The table shows the amount by which “average” insurance costs drop for residential properties as the DPG rating improves:⁸⁷

Table 2: DPG Rating—Estimated Insurance Costs

Replacement Value \$	Unprotected Rate \$		Semi Protected Rate \$		Fully Protected Rate \$
100,000	1,165	60± % Reduction	465	32± % Reduction	315
125,000	1,470		585		400
150,000	1,750		700		475
175,000	2,040		815		555
200,000	2,710		1,215		739
250,000	3,290		1,475		893
300,000	3,880		1,741		1,053
350,000	4,422		1,987		1,201
400,000	4,953		2,226		1,349
450,000	5,489		2,465		1,491

Table 2 while somewhat dated in that it refers to average insurance costs from ~2015, is still useful in showing the material savings that result from having a semi- or fully-protected rating from the Fire Underwriters.

The savings achieved for commercial and multi-family properties comes from the Department’s PFPC rating. The table below shows the estimated savings as the rating improves:⁸⁸

⁸⁶ The rating system is described in greater detail in the next section. It must be stressed that the actual cost of insurance for any homeowner or business varies based on a number of individual and site-specific factors. While the Fire Underwriters’ fire grading for the area has a significant impact, a host of other considerations are also involved in the setting of insurance rates, including matters specific to the individuals or properties involved, or the competitive forces at work in the region.

⁸⁷ This table is drawn from a 2015 Fire Underwriters’ report. While the estimated rates are now low (as insurance costs have risen since that time), the approximate cost savings are still enjoyed.

⁸⁸ Again, this table is drawn from a 2015 Fire Underwriters’ report.

Table 3: PFPC Rating—Estimated Insurance Cost Decreases

Public Fire Protection Classification	U- Rate Percentage Decreases
PFPC 10 to PFPC 9	99.2%
PFPC 9 to PFPC 8	96.6%
PFPC 8 to PFPC 7	82.4%
PFPC 7 to PFPC 6	74.4%
PFPC 6 to PFPC 5	63.1%
PFPC 5 to PFPC 4	53.8%
PFPC 4 to PFPC 3	48.0%
PFPC 3 to PFPC 2	47.3%
PFPC 2 to PFPC 1	45.8%

As can be seen in Table 3, ratings improvements in the commercial classification do not result in linear decreases. From a cost-benefit perspective, moving a rating from PFPC 8 down to ~PFPC 4 seems to provide the optimal savings for businesses and multi-family properties. That non-linear relationship is worthy of consideration on a cost-benefit analysis between the amount required to be invested in improving the service and the expected insurance savings for owners of commercial, industrial and multi-family properties.⁸⁹ Below PFPC 4, the amount of investment needed to obtain the improved rating may well outweigh any insurance savings.

A complicating factor is that the ratings applied to a community are not necessarily uniform. The Fire Underwriters consider a series of issues (examined further below), which include distance from the fire hall and availability of water supplies. As such, depending on the size and nature of the service area, the insurance benefits may not be equally enjoyed by all ratepayers. Thus, if the fire zone extends more than eight kilometres by road from the fire hall, the residents outside of the eight-kilometre zone may not enjoy the cost savings received by those residents who live within the zone. For commercial properties, the maximum distance drops to five kilometres. Similarly, the ratings are better where fire hydrants are available.

This issue applies with respect to the Sproat Lake service area, where certain residential properties are more than eight kilometres distant from the fire halls, and some commercial properties which are more than five kilometres from one of the fire halls.

There are no current detailed Fire Underwriters’ reviews for the three service areas (only letter updates). As such, the following sections will set out a general overview of how the Fire Underwriters ratings are determined.

⁸⁹ The amount of savings can also vary with the particular type of industry or commercial undertaking. The table gives the average of all savings, across all property types and uses.

7.1 Fire Underwriters' Methodology

7.1.1 Overall Ratings Weighting

The Fire Underwriters' ratings are weighted against the following four areas of assessment:

- Fire Department: 40%
- Water Supply: 30%
- Fire Safety Control: 20%
- Fire Service Communications: 10%.

The assessment involves a consideration of the principal fire risks covered by the subject department, including determination of the required fire flows (i.e., water flow requirements for the particular hazards and risks), from which they derive the "basic fire flow" ("BFF") for a department's service area. The BFF calculation is, in many ways, a gating item: the level at which the minimum required water flow is set drives the apparatus needs, the staffing requirements and impacts the assessment of the water system's flow and capacity. The fire flow requirements are based on a series of calculations, including building size, height and exposures (how close one building is to another in the community). Taller buildings and more densely built communities generate a higher BFF – which, in turn, requires more apparatus, more firefighters and increased water supplies.

One of the factors included in the determination of the BFF is whether there are sprinklers in the building being considered. The better and more comprehensive the sprinklering, the lower the water flow requirements.

The fire department assessment includes a consideration of apparatus, equipment, staffing, training, operations and administration, as well as the location/distribution of fire halls and fire companies. In this segment of its review, the Fire Underwriters analyze the fire department's ability to extinguish fires in all parts of its fire protection area. More recent (post-2013) reviews have 19 separate factors which are assessed in this category.

Part of the fire department assessment includes a review of the apparatus in use and its suitability for the subject department's fire risks. In general, the Fire Underwriters set 20 years as the maximum age for front-line use of apparatus by small to medium-sized communities (and recommends front-line use be limited to 15 years). It also has requirements for certain apparatus types (e.g., aerial devices) depending on its assessment of the community's fire risks, and an aggregate pumping requirement based on the BFF calculation.⁹⁰ The age of apparatus can be extended (generally to 25 years), but only by application to the Fire Underwriters and by meeting annual certification requirements. Such extension can also lead to a down-rating of a

⁹⁰ The Fire Underwriters recommend an aerial device once a community has a water flow requirement that is calculated to exceed 3,300 Imperial gallons per minute or where there are five or more buildings in the community which exceed 3 stories (10.7 metres) in height.

department's pumping capacity, which in turn can adversely affect the rating for the service area.

The "Water Supply" section examines the hydrant system (if present), and considers issues such as water flow, supply reliability and system redundancy, based on criteria set out in the Fire Underwriters' "Water Supply for Public Fire Protection" document.⁹¹ In the post-2013 reports, there are 15 factors which are assessed in this category. Where no hydrant system is present or where the hydrant system only covers a portion of the fire protection area, the Fire Underwriters then look at the ability of the fire department to access, load, transport and unload water against the risks faced in the non-hydrant protected area. In such cases, the assessment is usually considered as part of the "Fire Department" analysis.

The "Fire Safety Control" category covers fire prevention programs/public education, fire inspections and building/fire code and bylaw enforcement. There are four factors which are assessed within this category. In general, the Fire Underwriters are looking at whether local government is making effective use of these tools in managing the level of fire risk throughout the fire protection area (e.g., inspections, code enforcement, fire prevention/education programs, smoke alarm programs, etc.).

The "Fire Service Communications" category involves an assessment of dispatch services, paging systems and radio communications. Seven factors are assessed within this category, including the communications centre, dispatching and paging processes, and radio communications.

7.1.2 Ratings System

As noted above, Fire Underwriters' reviews involve two entirely separate rating systems – one for residential properties (DPG) and one for commercial/multi-family properties (PFPC). Strata entities are subject to the PFPC rating, which is a more stringent standard, though individual units within a strata occupied on a residential basis, typically are subject to the DPG rating. The DPG rating is calculated on a five-point numerical scale, whereas the PFPC rating is based on a 10-point scale. In both cases, a "1" is the highest achievable rating. In simplest terms, the goal of a Fire Underwriters' review is to provide insurance companies with a grading of fire protection services provided within a particular fire protection area.

Insurance companies use the grading provided by the Fire Underwriters as one of a number of factors in determining local fire protection insurance rates. It should be emphasized that the system is quite fluid, and individual insurers can and will set rates based on considerations other than the Fire Underwriters' ratings (either higher or lower, depending on the insurer's perception

⁹¹ Fire Underwriters, "Water Supply for Public Fire Protection" (1999), which is available at: <http://www.scm-rms.ca/docs/Fire%20Underwriters%20Survey%20-%201999%20Water%20Supply%20for%20Public%20Fire%20Protection.pdf> accessed 20 January 2020.

of actual risk, competitive concerns and other factors).⁹² It is the responsibility of individual insurance companies to determine what weight they give the Fire Underwriters’ grading when determining insurance rates.

DPG Rating

For residential properties, the rating system is graded on a scale from 1 – 5 where “1” is the best possible rating. The rating of “3” is split into two subcategories where “3A” indicates that there is an approved hydrant or water supply system, and “3B” indicates that the department in question relies on mobile water supplies. From the insurance industry’s perspective, the ratings for residential homeowners are generally treated as follows:

Table 4: DPG Rating Details

DPG Rating	Insurance Status	Comment
5	Unprotected	No savings on insurance from having a fire department.
4	Semi-protected	Some savings on insurance likely will be enjoyed; in some regions, this rating and “3B” are often treated as essentially equivalent, though that varies with the underwriter.
3B	Semi-protected	This is usually the rating level at which significant cost savings on insurance are enjoyed. This is usually the highest rating available in areas which are not hydrant-protected.
3A 3B(S) 3B(L) ⁹³	Protected	Progressively greater savings on insurance. Fully protected status typically means a savings of 50-60+% on insurance costs.
2	Protected	
1	Protected	

In general, the Fire Underwriters estimate that a community which achieves fully protected status can enjoy savings on insurance of up to 60% (or more) versus communities which are rated as “unprotected”.⁹⁴

⁹² See a list of other factors on the Fire Underwriters Survey website, “How the PFPC affects individual insurance policies” at <http://www.fireunderwriters.ca/public-fire-protection-classification.html>, accessed 20 January 2020.

⁹³ A rating of 3B(s) is a Fire Underwriters’ accreditation for tanker shuttle capability, where a department is able to demonstrate its ability to maintain a specified water flow for a stipulated period of time, using tanker units. It applies to areas which are not hydrant-protected, and must be periodically renewed. This specialty rating is treated by most insurers as being the equivalent of a “DPG 3A” (fully protected) rating. Similarly, a 3B(L) rating indicates the department has been accredited for “large diameter hose lay,” which doubles the reach from a fire hydrant from 300 metres to 600 metres.

⁹⁴ This estimate is based on statements in various reviews conducted by the Fire Underwriters we have reviewed for other clients over the past decade or more.

There are some fundamental location and distance requirements for a property to receive a protected or semi-protected rating under the DPG classification:

- residents must live within eight kilometres by road of a fire hall (i.e., the measurement is based on distance travelled on the existing road network, not in a straight line from the fire hall); and
- for hydrant protected areas, the property must be within 300 metres of a fire hydrant (otherwise, the residence is classed based on the community's "non-hydrant protected" rating).⁹⁵

Single family residential properties which are more than eight kilometres by road from a fire hall are treated as DPG 5 (unprotected).

Note that these travel distances are relevant to Sproat Lake, which has a large service area.

The DPG rating is calculated at the same time as the PFPC rating, using essentially the same assessment process. However, the factors explicitly considered in applying the rating are managed slightly differently. For this assessment, based on descriptions in other reports we have reviewed, the Fire Underwriters consider the following:

- Organization (authorized by bylaw, supported by taxation);
- Membership (career versus volunteer or composite);
- Training system – NFPA 1001 FF-I or better for personnel, proper training records, and established training program;
- Required apparatus meeting NFPA 1901 or ULC-S515 standards (and within the maximum age requirements set by Fire Underwriters);
- Necessary additional equipment for operational requirements;
- Appropriate fire hall (location, suitability for purpose, condition);
- Alarm notification system (proper emergency communications); and
- Water supply meeting FUS requirements (and/or ability to transport water as required).

How well each of these factors is met determines the DPG rating.

⁹⁵ This distance can be extended to 600 metres if a department is certified by the Fire Underwriters as capable of "large diameter hose-lay". See: Fire Underwriters, *Accreditation of Alternate Water Supplies for Public Fire Protection* (2012), at: <https://fireunderwriters.ca/Resources/FUS-AlternativeWaterSupplyAccreditationProtocol2012.pdf> accessed on 23 August 2020.

PFPC Rating

The PFPC rating, which is determined at the same time as the DPG rating, is based on the four fundamental assessment categories (Fire Department, Water Supply, Fire Prevention and Communications) identified above. This rating has a 10-point scale, where 1 is the best and 10 is “unprotected.” The PFPC rating is essentially a benchmarking against various standards or requirements in each category and in relation to other communities.

For a commercial property, the application of the rating system depends on the distance from the fire hall (a maximum of five kilometres) and distance from a fire hydrant (a maximum of 150 metres). These requirements can result in “split ratings” for a fire protection area. The Fire Underwriters website used to include a description of split ratings as follows: ⁹⁶

"In many communities, FUS develops a split classification (for example, 5/9). Generally, the first class, (Class 5 in the example) applies to properties insured under Commercial Lines within five road kilometres of a fire station and within 150 metres of a fire hydrant. The second class (Class 9 in the example) applies to properties insured under Commercial Lines within five road kilometres of a fire station but beyond 150 metres of a hydrant. FUS assigns Class 10 to properties insured under Commercial Lines that are located beyond five road kilometres from the responding fire station."

It should be noted that newer Fire Underwriters’ reviews, in addition to introducing more detailed ratings and some new concepts,⁹⁷ are increasingly focused on fire prevention, fire education and the importance of bylaws which support good fire protection practices (e.g., sprinklering requirements, a well-considered fire inspection program, building and electrical code enforcement, etc.).

The shorter travel distance under the PFPC ratings may affect some commercial properties in the Sproat Lake service area. It also may affect the rating of institutional and commercial properties in some parts of the lands covered under the ACRD’s fire service agreement with the Huu-ay-aht Government. It is approximately five kilometres to the entrance to these lands, which would affect the rating for any insured commercial or institutional properties beyond that distance.

7.2 STSS Accreditation

Sproat Lake has achieved and maintained STSS Accreditation from the Fire Underwriters. It first achieved this rating more some 15 years ago. The effect of this accreditation is to treat residential properties within eight kilometres of a fire hall as though they are covered by a fire

⁹⁶ The Fire Underwriters’ website has been reorganized and this particular language is no longer found, although the concept is still applied.

⁹⁷ Some of the concepts introduced over the past several years include a “divergence penalty” – where either the water supply system or the fire department is markedly better than the other, the overall score will be reduced – and a general penalty for “special hazards analysis”, which seems to be a largely subjective assessment of risks from natural or environmental factors (e.g., earthquake, wildfire and weather).

hydrant system, even if there are no hydrants or the property is more than 300 metres from an existing hydrant. The rating given is “DPG 3B(s)”, and is treated, for Fire Underwriters’ purposes, as the equivalent of DPG 3A.

7.3 Fire Underwriters – Summary

The principal benefit of having an effective, well-equipped and well-trained fire department is that it will materially improve the life safety of residents in its fire protection area. Indeed, we would stress that the life-safety issues are the principal ones to focus on, when communities examine the benefits and weigh the costs of investing in their fire services. From a financial perspective, however, it also is important to understand that a fire department which is well rated by the Fire Underwriters will likely result in materially reduced insurance costs for both residential and commercial property owners.

All three Departments hold good ratings for residential properties, which ensures residents enjoy material savings on their insurance. Beaver Creek has achieved a creditable PFPC 7 rating for commercial properties. Bamfield’s rating in this area is PFPC 8, while Sproat Lake’s rating is PFPC 9. The latter rating is poor relative to the size and general effectiveness of the SLVFD, but is based on the lack of a recognized water supply (i.e., the lack fire hydrants) in the service area.

8. Financial Review

The ACRD Board of Directors is required to adopt, by bylaw, a five-year financial plan by 31 March of each year as required by section 374 of the *Local Government Act*.

Duties related to the management of financial matters are specified in the Fire Chief job descriptions for the ACRD Departments. These duties include:

- in consultation with the Area Director and the Chief Financial Officer, developing an annual and capital budget for approval by the Board;
- providing, upon request, the necessary information to the Board of Directors to support the consideration of the annual fire department budget;
- being responsible to approve and code all invoices that are relevant to the department; and
- being responsible to oversee all capital projects.

The respective Fire Chiefs are responsible for preparing a draft annual budget for operating and capital expenditures for their department. Generally, the Fire Chiefs begin the budget process with a request for input from the deputy chief and officers to identify administrative and/or operational changes that may impact funding requirements for future operating and capital budgets. The individual Fire Chiefs then meet with the Regional Fire Services Manager and the ACRD Chief Financial Officer to review the draft budget and make any changes. The draft budget is added to the financial plan for consideration and approval by the Board. If required, the Fire Chiefs provide verbal or written information to the Board to support the budget request.

During meetings with the Consultants, the Departments provided the following comments about the current budget process.

- all expressed the need for training and guidance on budget planning, preparation, and management;
- there is a concern about administrative charges collected from the Departments by the ACRD as the justification for those charges is unclear;
- the ACRD has taken over the responsibility of processing accounts payable but there is no regular financial reporting back to the Fire Chiefs and this makes it difficult to know how much funding is left in the current year's budget;
- automatic monthly reports and/or the ability to access to the accounting system would be helpful;
- there is a need for a grant writer to ensure the Departments can access other funding sources;
- some Departments have 'shovel-ready' projects on the shelf awaiting grant funding, but lack the time, skill and expertise to put together an effective application;

- Combined purchases of basic equipment and supplies should be implemented.

These Finance Department deficiencies were identified by finance staff in 2020 and additional resources were approved by the Board in 2021. The Finance Department is in the process of adding a Procurement Coordinator, Assistant Accountant and Grant Coordinator to support all ACRD services including the fire departments.

Bamfield

- The Fire Chief indicated that the Department depends on its treasurer for budget development and management;
- The budget process was described as ‘a roll-over and lift’ process;
- No requests for tax requisition increases have been made for the last 20 years or so;
- They are aware of the new asset management plan but have not been tasked with its implementation into the budget preparation process;
- The Fire Chief codes and approves the expenses monthly and receives a quarterly snapshot in the form of a financial report;
- Bamfield has been asked to reserve funds for capital expenses to eliminate borrowing costs;
- The Society applies for Gaming fund grants that have been used to fund SCBA equipment and maintains a \$10,000 fund for training; and
- Revenue from the First Nations for fire services is collected by the ACRD and allocated to the Department’s operating budget.

Beaver Creek

- The current budget preparation process was described as outdated;
- The ACRD has not yet provided the Departments with ready access to financial information and the ACRD’s financial system seems very complex;
- The Regional Fire Services Manager provides a summary financial statement which is useful;
- The ACRD has asked the Department for a 10-year budget forecast but that is difficult to do with limited details of the current system;
- The Fire Chief would like to see detailed financial reports on a monthly basis but quarterly would be okay;
- Budget software would be helpful in preparing the capital and operating budgets and for analysis required for forecasting future funding requirements that the ACRD wants to see;
- There have been no significant budget increases in the past several years and it is difficult to obtain increases needed for inflation;

- Capital reserves for apparatus are underfunded on an annual basis and need to be increased to align with future replacement costs identified in the Asset Management Plan;
- The ACRD should implement joint purchasing among the Departments for equipment and supplies.

Sproat Lake

- Capital planning requires some additional assistance from the ACRD;
- The Department receives financial reports on request, but they are 30 days old and they want to see more current information; and
- There is no ability to monitor revenues and expenses without making a special request to the ACRD.

8.1 Operating Revenue and Expenses

The table below shows the approved 2021 operating budgets with a breakdown of the percentage of total revenue and expenses for the three departments.

Table 5: 2021 Department Operating Budgets

Item	Bamfield	%	Beaver Creek	%	Sproat Lake	%
Revenues						
Conditional Grant	500	0.2%	20,000	4.6%	12,500	2.4%
Contracts with Other Gov'ts	30,000	13.7%	-	0.0%	4,000	0.8%
Other Sources	-	0.0%	6,615	1.5%	-	0.0%
Surplus/Deficit from Prior Yrs	36,815	16.9%	42,365	9.8%	791	0.2%
Tax Requisition	150,985	69.2%	361,570	84.0%	503,459	96.7%
Unconditional Grant	-	0.0%	-	0.0%	-	0.0%
Total Revenues	\$218,300	100%	\$430,550	100%	\$ 520,750	100%
Expenses						
Consultant Costs	-	0.0%	-	0.0%	10,000	1.9%
Contribution to Capital Fund	62,200	28.5%	190,000	44.1%	154,000	29.6%
Firefighter Expenses	33,000	15.1%	108,100	25.1%	116,000	22.3%
Grants-in-Aid	-	0.0%	2,000	0.5%	5,709	1.1%
Insurance	9,000	4.1%	4,800	1.1%	12,600	2.4%
Labour & Benefits	25,600	11.7%	28,000	6.5%	29,900	5.7%
Office Operations	3,150	1.4%	7,600	1.8%	3,800	0.7%
Operating Costs	48,950	22.4%	82,050	19.1%	168,750	32.4%
Repairs & Maintenance	9,000	4.1%	8,000	1.9%	20,000	3.8%
Debt Repayment Interest	1,200	0.5%	-	0.0%	-	0.0%
Debt Repayment Principal	26,200	12.0%	-	0.0%	-	0.0%
Total Expenses	\$218,300	100%	\$430,550	100%	\$520,759	100%

8.1.1 Revenue

Operating revenue sources for the three Departments include conditional grants, service contracts, prior year surpluses and the annual tax requisition. Unconditional grants were discontinued in 2020 and are unlikely to be considered in the future. The Departments are eligible for conditional grants related to specific projects and when approved, are added to the financial plan after the funding is secured.

The table below shows the 2021 tax requisition amounts, the limits per \$1,000 of assessed value and the maximum (where applicable) 2022 requisition amount for the three departments.

Table 6: 2021 Tax Requisition

Department	2020 Tax Requisition	2021 Tax Requisition	Limit per \$1,000 Assessed Value	2022 Maximum Requisition
Bamfield	\$110,380	\$150,985	No Limit	No Limit
Beaver Creek	\$315,236	\$361,570	\$1.30	\$1,059,830
Sproat Lake	\$489,712	\$503,459	\$1.23	\$1,970,760

Service contracts with other governments generated revenue in the amount of \$34,000 and has been used to partially fund the operating costs for the Bamfield and Sproat Lake Departments:

- Bamfield receives \$30,000 for the provision of structural fire protection and emergency medical services to the Huu-ay-aht First Nations; and
- Sproat Lake receives \$4,000 from the Hupacasath First Nation for structural fire protection services to the Kleekeet Indian Reservation No. 2.

8.1.2 Expenses

A significant operating cost for the Departments is the annual contribution to the capital reserve fund. For 2021:

- Bamfield will contribute \$62,200 (28% of the total operating budget);
- Beaver Creek will contribute \$190,000 (44% of the total operating budget); and
- Sproat Lake will contribute \$154,000 (30% of the total operating budget).

Other major costs include firefighter expenses, labour and benefits, and operating costs.

COVID protocols have had a significant impact on the Departments' operations, particularly in the areas of training and education, special projects and related activities.

The ACRD has set a goal to transfer the full amount of the operating surplus from the prior year to the capital reserve fund, but the amount transferred may be adjusted to reduce a significant increase to the next year's annual tax requisition. These decisions are made during the budget

process and are based on the annual increase limit set by the Directors. All three Departments had operating surpluses from the 2020 fiscal year and those funds were either transferred to capital reserves or used to reduce the tax requisition amount for 2021.

- The 2020 surplus for Bamfield was \$36,815, mainly due to a combination of grants and other sources and reduced expenditures for labour and operating costs. The surplus was transferred to the 2021 operating budget revenues.
- The 2020 surplus for Beaver Creek totalled \$42,365 and was generated by unanticipated revenue from other sources, lower costs related to automobile, equipment, firefighter expenses, labour and other operating costs. The surplus was transferred to the 2021 operating revenue budget and used to reduce the overall tax requisition.
- Sproat Lake had a nominal surplus totalling \$791. The surplus was transferred to the 2021 operating budget and had a negligible impact on the tax requisition funding.

In our view, using surplus from previous years to fund operating costs may present a risk due to the potential fluctuation in the amount of the tax requisition required in future years. For example, if Bamfield's surplus for 2021 is nil, the tax requisition required for 2022, if service levels are unchanged, will need to increase by 25% from \$150,985 to \$187,800 (not including inflation). The ACRD's Finance Department has established a practice of recommending that surplus funds from previous years be directed to each Department's capital fund. In Bamfield's situation, this would help to reduce interest charges related to borrowing for large capital acquisitions (which charges are part of the operating budget expenses).

8.2 Capital Revenue and Expenses

In May 2020, the ACRD adopted a General Government Asset Management Plan (the "AMP") to facilitate informed decision-making and effective allocation of resources for infrastructure. The AMP applies to all service areas and individual plans have been developed for the three fire departments by the Asset Management Coordinator with the assistance of the chief officers. A long-term financial plan that links the AMP and the five-year Financial Plan is needed but, has yet to be created.

The charts in the sections below show the projected revenues and expenditures for major capital items for each of the three Departments.

8.2.1 Bamfield

Bamfield contributed \$62,200 to its capital fund from 2021's operating budget and originally had plans to borrow an additional \$400,000 from the Municipal Finance Authority for the purchase of a new fire truck in 2021. During our site visit, the Chief advised that the Department was still in the process of developing specifications for this truck and the need for funding has been deferred to 2022. An update was later provided by the RFSM confirming this truck has been ordered. The Department planned to purchase another replacement fire truck in 2024 but the Fire Chief advised that this will be delayed until 2027 when the East Side pumper ages out.

Table 7: Bamfield VFD Capital Fund

Item	2021	2022	2023	2024	2025
Revenue					
Balance, beginning of year	154,666	88,266	152,610	218,723	31,630
Contribution from operating fund	62,200	63,444	64,713	66,007	67,327
Grants and other contributions	-	-	-	-	-
MFA equipment financing	400,000*	-	-	-	-
Interest earnings	1,400	900	1,400	1,900	500
Total Credits	\$618,266	\$152,610	\$218,723	\$286,630	\$99,457
Expenditures					
COVID Funding-front load extractor	20,000	-	-	-	-
Fire truck*	510,000	-	-	255,000	-
Total Expenditures	\$530,000	-	-	\$255,000	-
Capital Fund Balance, End of Year	\$88,266	\$152,610	\$218,723	\$31,630	\$99,457

*Deferred to 2022

8.2.2 Beaver Creek

Beaver Creek contributed \$170,000 to its capital fund from 2021's operating budget and planned to expend a total of \$56,000 in 2021 for procurement of a front load extractor (needed to clean turn-out gear), rescue tools and parking lot improvements. Major expenses planned for 2022 include the replacement of SCBA equipment and purchase of additional rescue tools.

Table 8: Beaver Creek VFD Capital Fund

Item	2021	2022	2023	2024	2025
Revenue					
Balance, beginning of year	30,055	164,755	115,855	294,123	477,228
Contribution from operating fund	170,000	173,400	176,868	180,405	184,013
Grants and other contributions	20,000	-	-	-	-
Interest earnings	700	900	1,400	2,700	4,100
Total Credits	\$220,755	\$339,055	\$294,123	\$477,228	\$665,341
Expenditures					
COVID Funding-front load extractor	20,000	-	-	-	-
Parking lot improvements	16,000	-	-	-	-
Rescue Tools	20,000	34,400	-	-	-
SCBA replacement	-	188,800	-	-	-
Total Expenditures	\$56,000	\$223,200	-	-	-
Capital Fund Balance, End of Year	\$164,755	\$115,855	\$294,123	\$477,228	\$ 665,341

8.2.3 Sproat Lake

Sproat Lake contributed \$154,000 to the capital fund from 2021's operating budget and planned to expend \$241,000 in 2021 for a front load extractor, a generator for Hall 3, replacement of water tanks and, upgrades to the parking lot, dock and fire halls. The replacement of the cab and chassis for Trucks #48 and #43 will each cost \$200,000 and are planned for 2022 and 2025, respectively. It is noted that inflation costs have not been factored into the replacement cost for Truck #43.

Table 9: Sproat Lake VFD Capital Fund

Item	2021	2022	2023	2024	2025
Revenue					
Balance, beginning of year	236,100	150,200	108,280	269,902	435,928
Contribution from operating fund	154,000	157,080	160,222	163,426	166,695
Grants and other contributions	-	-	-	-	-
Developer Contributions	-	-	-	-	-
Interest earnings	1,400	1,000	1,400	2,600	3,100
Total Credits	\$391,500	\$308,280	\$269,902	\$435,928	\$605,723
Expenditures					
COVID Funding-front load extractor	20,000	-	-	-	-
Dock upgrades - hall 2	17,000	-	-	-	-
Firehall upgrades #1	5,000	-	-	-	-
Firehall upgrades #3	80,000	-	-	-	-
Generator - hall #3	80,000	-	-	-	-
Parking lot upgrades - hall #3	12,000	-	-	-	-
Replace water tanks	20,300	-	-	-	-
Truck #43 Cab & chassis	-	-	-	-	200,000
Truck #48 Cab & chassis	-	200,000	-	-	-
Truck #489 upgrade	7,000	-	-	-	-
Total Expenditures	\$241,300	\$200,000	-	-	\$200,000
Capital Fund Balance, End of Year	\$150,200	\$108,280	\$269,902	\$435,928	\$405,723

8.3 Recommendations

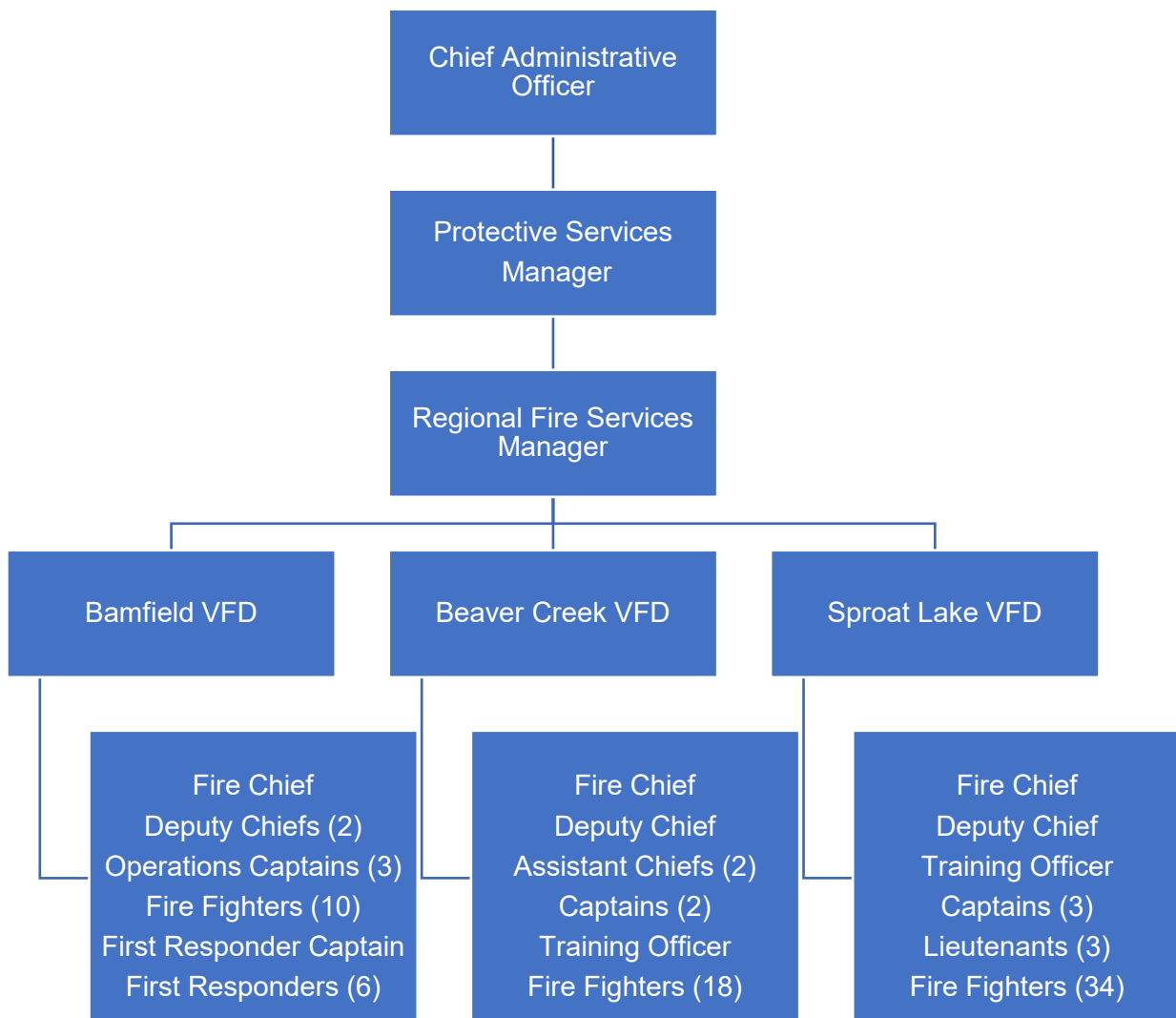
- Recommendation:** The ACRD should provide training for budget planning, development and maintenance to the chief officers.
- Recommendation:** The ACRD should provide a policy document to the chiefs that explains all costs charged to the Departments for services and overhead.
- Recommendation:** The ACRD should consider providing timely monthly or quarterly financial reporting to the Departments.
- Recommendation:** The ACRD should coordinate and manage grant applications for the three Departments. (Note: The ACRD has established the position of Asset Management and Grants Coordinator that will be filled on 31 January 2022.)
- Recommendation:** The ACRD should consider implementing a bulk purchasing policy for the three Departments. (Note: The ACRD hired a Procurement Coordinator in the Fall 2021 and will be addressing this issue in 2022.)
- Recommendation:** The ACRD should consider development of a policy that directs the allocation of surplus operating funds from prior years to the capital reserve account to supplement funding for major purchases.
- Recommendation:** The ACRD should ensure that replacement cost projections include inflation.

9. Organizational Structure and Staffing Model

The ACRD is responsible for the operation of the Bamfield, Beaver Creek and Sproat Lake Fire Departments. The Operational Criteria Bylaw, reviewed above, was adopted to establish consistent powers, responsibilities, authorities and operating criteria for all three Departments.

9.1 Regional Fire Service Organizational Structure

The organizational chart for the ACRD fire services is shown below.



9.2 Protective Services Manager

The Protective Services Manager (the “PSM”) is responsible for evaluating, planning and leading the Emergency Preparedness Program in the Alberni Valley and, for providing leadership support to the Regional Fire Services Manager.

The main roles of the PSM involve liaising with various emergency planning committees and working groups, coordinating, facilitating and implementing emergency programs in the region, maintaining emergency plans and, when required, providing operational support to the Emergency Operations Centre.

9.3 Regional Fire Services Manager

The roles and responsibilities of the RFSM are substantive and require a significant level of oversight, management, mentorship and support for the ACRD fire departments and the Emergency Program.

While not directly responsible for the operation of the departments, the RFSM has a responsibility to ensure that departments comply with Occupational Health and Safety regulations, WorkSafeBC, the OFC Playbook, fire training standards, ACRD operational guidelines, regulations and policies and, all required documentation is complete and current at all times.

The RFSM is also required to liaise and collaborate with the fire chiefs of other departments to arrange joint training, manage automatic and mutual aid agreements and to deal with other initiatives that would be of general benefit to the region. The RFSM is also the administrative liaison to North Island 9-1-1 on behalf of the ACRD.

As a member of the ACRD management team, the RFSM is required to attend Board and Committee meetings to present periodical reports and annual budget requests to the Directors.

The RFSM also works closely with the PSM, providing back-up support in evaluating, planning, and leading the Alberni Valley Emergency Program, as well as providing emergency response and recovery support and, performing designated functions during emergencies.

As noted above, the RFSM has a significant workload and realistically, should be staffed as full-time position and be provided with dedicated administrative support. The position is currently funded as a .6 FTE which equates to three working days per week, less any vacation, statutory holidays and other leave.

During our meetings with ACRD staff and the fire departments, similar concerns were expressed regarding the need for additional support for administration, training, budget preparation and other related tasks. The fire chiefs and their members are volunteers and most have full time jobs which limits the amount of time they can commit to the fire department. Not surprisingly, once the training and equipment maintenance is completed, administrative duties are often deferred and, in some cases, never completed. These concerns are noted in the

Administration section of this report and support the need for additional resources required to address the increased workload being experienced by the RFSM and the fire departments.

To ensure the RFSM and the fire chiefs can meet their obligations, they will require dedicated, administrative support to manage the collection, maintenance and accuracy of all fire department records. This should be a new position that would be a resource for the fire chiefs in records management and reporting requirements and report to the RFSM.

It is recommended that the ACRD increase the RFSM position to a 1.0 FTE and, that a full-time administrative support position be created to collect and manage the required records.

9.4 Chief Officer Positions

9.4.1 Fire Chief

Each Fire Chief reports to the RFSM and is responsible for the overall management, administration, and operation of their respective Department.

In October 2017, the ACRD adopted the policy *Appointment of Fire Chiefs in Bamfield, Beaver Creek and Sproat Lake*. Fire Chief appointments are made based on a three-year term that can be extended by Board resolution. The rationale for the policy was set out as follows:

The position of Fire Chief has significant responsibility for the safe and effective delivery of fire services. Rising standards for equipment and training, growing risk management concerns, stricter occupational health and safety regulations, and an increased potential risk for liability are some of the factors that identify the importance for the Alberni-Clayoquot Regional District (ACRD) to appoint the most qualified candidate available for the position of Fire Chief from each of the respective ACRD Volunteer Fire departments.

Input from the fire department officers and members, ACRD elected officials and Chief Administrative Officer (CAO) are important in the selection of a Fire Chief, as well as the candidate's level of training, education, experience, leadership, communication skills, availability, and other factors.

The job description for the position of Fire Chief includes responsibility for the overall management and operation of the relevant Department. In addition, the Fire Chief is responsible for leading Department personnel during emergency and non-emergency situations. The Fire Chief is also responsible for the overall management of Department personnel and works in conjunction with the Deputy Fire Chief to conduct recruitment and, where required, dismissal of Department members. Other highlighted duties/roles of the position include:

- Local Assistant to the Fire Commissioner;
- performs the role of duty officer;
- develops the annual capital and operational budget;
- responsible for coding and approving all invoices;

- responsible to oversee all Capital Projects;
- responsible to ensure that training meets or exceeds the BC Fire Service Minimum Training Standards; and
- active member of the OH&S committee.

It is noted that, the organizational chart shows the Fire Chief reporting to the RFSM, but the job description states that the position reports directly to the ACRD Chief Administrative Officer. This anomaly should be reviewed and changed to clarify the actual reporting lines.

9.4.2 Deputy Fire Chief/Training Officer

The Deputy Fire Chief reports directly to the Fire Chief and is responsible for training of the Department personnel. The Deputy works closely with the Fire Chief and acts in that position in his or her absence. Other highlighted duties/roles include:

- plans and supervises the training of all Department personnel;
- responds to emergency calls 24/7 as required;
- assists the Fire Chief to organize volunteers to fulfill duties;
- acts as the Incident Safety Officer
- Local Assistant to the Fire Commissioner; and
- assists the Fire Chief in implementing strategies and tactics through fire officers.

9.4.3 Assistant Chief – Beaver Creek

The two members that presently hold the rank of Assistant Chief are founding members of the Department. They bring a wealth of knowledge and experience to the management team and are literally “assistants to the Fire Chief”. These positions will likely be eliminated when the incumbents leave the Department.

9.5 Compensation

The Fire Chiefs, Deputies and Assistant Chiefs receive annual stipends (paid monthly) as compensation for the operational and administrative work required to run their respective Departments. These stipends paid to these positions are shown in the table below.

Table 10: Chief Officer Annual Stipends

Position	Bamfield	Beaver Creek	Sproat Lake
Fire Chief	\$9,600	\$9,600	\$8,400
Deputy Fire Chief	\$6,000	\$6,000	\$7,500
Assistant Chief	N/A	\$1,500	N/A

Members are compensated for attending practices that are organized by their Department however, there is no paid-on-call system for members when responding to incidents.

Compensation for administrative duties is included in the stipends paid to the chief officers but there are significant differences amongst the three Departments in the manner in which the work is managed.

- Bamfield – The Chief and the Deputy are supported by a Society member who receives no compensation for the services provided.
- Beaver Creek – Departmental administrative duties are mainly performed by the Chief and Deputy. Administrative work performed by other members of the Department for related duties is unpaid.
- Sproat Lake – The Chief and Deputy are supported by a paid part-time administrative assistant who works 25 to 40 hours per month. Funding for the position is provided in the Department's operating budget.

9.6 Administration

Regulatory requirements for documentation and records management represent a significant administrative workload for all three Departments. As previously stated, administrative duties are included in the roles and responsibilities of the chief officers and in some cases, delegated to other members of the respective Departments.

Essentially, documentation must be maintained for most activities and functions performed by the department and include:

- human resources information;
- OH&S meetings, accidents and exposures;
- education, training, qualifications and evaluation;
- fire hall, apparatus and equipment inspections and maintenance;
- incident responses; and
- budget preparation, procurement, project management and annual reports.

The Consultants heard from all three Departments that the ACRD needs to consider providing meaningful administrative support as the Departments are in dire need of assistance and expertise in several areas where record-keeping and reporting are required. Comments included:

- record-keeping has become a significant commitment;
- funding should be provided to pay volunteers for administrative work;
- assistance and instruction should be provided for budget preparation and management; and

- Qualicum has implemented a personnel tracking system that might be of interest.

The three Departments have access to the ACRD FirePro2 records management system (“RMS”) for recording incidents, maintenance and training. The Fire Chiefs expressed some frustration about the configuration and use of the RMS, but all agreed that more hands-on training would be helpful in connection with data input and reports, and especially with managing training records. Another concern was the need for complete and accurate statistical data required to support funding initiatives when dealing with the ACRD Board. Some of the specific comments from the Departments related to the RMS included:

- unable to attend the Fire-Pro tutorials when they were offered;
- it is difficult to get the representative out to resolve issues;
- there are too many steps to get to the appropriate section to enter information;
- they would like to see additional codes for training, maintenance, SCBA filling, etc., to eliminate the need for paper records;
- standard reports should be developed for things like computerized truck inspection and activity forms;
- members do not use the program often enough and there is a lack of time to learn how to use it;
- the ACRD preferred that the Departments input their data but the Departments indicated that they do not have the time to complete this;
- the information is usually recorded on paper forms by the crews instead of being entered directly into the RMS; and
- Department culture has not included paperwork in the past and it has been difficult to get members to complete the necessary forms.

The Departments also expressed interest in finding administrative solutions through the sharing of standard operating guidelines amongst the Departments to help keep up with operational changes and maintain consistency. Currently, each Department is responsible for maintaining its own operational guidelines, but they are having difficulty finding the time and expertise to develop new ones or to update others due to changes to OH&S regulations or the introduction of new equipment.

9.7 Recruitment and Retention

The ability of the Departments to attract and retain volunteers was reviewed during the site meetings. Sproat Lake appears to be doing reasonably well in this area. Bamfield and Beaver Creek, however reported challenges arising from the turnover of members who leave for a variety of reasons - the most common being the additional commitment of their personal time to maintain the training and qualifications required by each Department.

Bamfield manages recruitment informally and usually through direct contact in the community. They find it especially challenging due to the small permanent population but there is a strong attachment in the community to the Department. The Department's policy is to limit new members to those who are prepared to agree to a minimum commitment of at least one year.

Beaver Creek noted that it has no funding for recruitment activities or brochures. They suggested that paid benefits may help to attract more members to the Department. Many volunteers are self-employed and must fund their own medical and dental expenses that are not covered by the BC Medical Services Plan. This is an approach that has been used to good effect in other jurisdictions, and may be worth exploring across the three Departments.

Sproat Lake reported that retention is not currently a problem, and they have several members who have been with the Department for a significant number of years. They suggested that a move to provide benefits and/or a paid-on-call system might help to attract more members.

9.8 Recommendations

Recommendation: The ACRD increase the Regional Fire Services Manager position from a 0.6 FTE to a 1.0 FTE. The added resource will allow the RFSM to better manage the roles and responsibilities of the position.

Recommendation: The ACRD create a new administrative support position that reports directly to the Regional Fire Services Manager. The duties of the position would include the management of all administrative records and reports related to the operation of ACRD fire services.

Recommendation: The ACRD clarify the reporting structure for the Fire Chief positions and update the organizational chart and/or job description as required.

Recommendation: The ACRD provide support or direct funding to the Departments for data entry, general records management and reporting functions.

Recommendation: The ACRD provide ongoing training and support to the Departments in the use of Fire-Pro software.

Recommendation: The ACRD provide a resource to develop and manage operational guidelines for the three Departments.

Recommendation: The ACRD consider implementing improvements to the compensation structure to enhance recruitment and retention of volunteers.

Recommendation: The ACRD consider implementing a wage loss replacement policy for Department members while attending training and education programs.

Recommendation: The ACRD develop a joint recruitment program with the three Departments that includes community outreach and representation at community events.

10. Fire Prevention

Fire prevention is an essential component of the community fire safety continuum. The existence of strong fire prevention programs usually results in a reduction in the frequency and severity of fires within a community. While municipalities have a mandated role with respect to the provision of fire inspections under the *Fire Services Act* legislation, regional districts are not required to undertake any fire prevention related activities. The ACRD's Operational Criteria Bylaw grants each Department general authority to undertake "public fire education and public fire prevention," but is not specific in relation to these obligations or activities.⁹⁸ Schedule A to the Operational Criteria Bylaw indicates that all three Departments are qualified to undertake *Fire Code* inspections, fire safety planning and fire investigations.⁹⁹ It should be noted, however, that the language in the Operational Criteria Bylaw stops well short of instituting a regular system of fire safety inspections, such as that contemplated by sections 26 and 36 of the *Fire Services Act*.

Under the existing *Fire Services Act*, individuals who are appointed as an LAFC have certain responsibilities for undertaking the investigation and reporting of fires and are delegated powers to conduct fire inspections on complaint or if deemed advisable, and to issue remedial orders.¹⁰⁰ All three Departments have persons who have been appointed as LAFCs by the Fire Commissioner.

When the new *Fire Safety Act* is brought into force, it will introduce a number of changes that will impact the ACRD with respect to fire prevention roles and responsibilities. Those changes, as currently understood, are considered in greater detail in the regulatory section of this report.

10.1 Inspections

Although the Operational Criteria Bylaw does provide the authority to undertake fire inspections, none of the departments is required to conduct inspections. Similarly, although LAFCs have the power to undertake an inspection if the circumstances warrant such action (and are likely required to do so if a complaint is made), no comprehensive inspection program has been implemented by any of the Departments. Some fire department members have received basic inspection training however while there are no scheduled inspections there are some inspections done by request.

⁹⁸ Operational Criteria Bylaw, s. 20(h).

⁹⁹ Operational Criteria Bylaw, Schedule A identifies the services provided by the Departments, each of whom is authorized to provide these fire prevention services.

¹⁰⁰ *Fire Services Act*, ss. 9 (fire investigations and reporting), 10 (fire investigation powers), 13 (reporting of suspicious fires) and 24 (authority for an LAFC to exercise the Fire Commissioner's powers to conduct fire inspections under s. 21 and issue remedial orders under s. 22).

10.1.1 Bamfield

The Department has a draft operational guideline for fire safety inspections, but its implementation remains in abeyance pending the appointment of a trained fire inspector. The operational guideline identifies the risk level and inspection frequency schedule based upon the occupancy classification as defined by NFPA 1730-16¹⁰¹ and spells out an inspection process to be followed.

10.1.2 Beaver Creek

The operational guidelines manual contains a placeholder for a future operational guideline related to fire inspections, but there is nothing currently in place and there is no formal inspection program.

10.1.3 Sproat Lake

There is a position identified as Fire Prevention Officer in the department's organizational chart, however there are no operational guidelines related to fire prevention. While fire inspections are possible there is no fire inspector training standard identified.

10.2 Pre-Incident Planning

The creation and maintenance of preplans is an important safety process and industry best practice. It can be a challenge for small and volunteer-based departments to develop the necessary preplans and the work required to ensure they remain up to date can necessitate a level of administrative support that varies between departments based upon the number and nature of the structures in their response areas.

Under the Playbook, Interior or Full-Service fire departments need to create and train to preplans for certain types of structures.¹⁰² Currently there are no formal preplan programs in place for the Departments and no dedicated resources assigned to address the creation or maintenance of preplans.

Some of the essential preplan elements include:

- quick access plan;
- floor plan (including all floors of multi-story buildings);
- site plan showing access and hydrant/water supplies;

¹⁰¹ National Fire Protection Association, *NFPA 1730-16 Standard on Organization and Deployment of Fire Inspection, and Code Enforcement, Plan Review, Investigation, and Public Education Operations*.

¹⁰² Playbook, "Interior Operations," at p.17/20, makes such preplans mandatory for structures larger or more complex than a single family dwelling. The required use of preplans by Full Service departments is implicit.

- photos; and
- hazardous material storage (if applicable).

Preplans need to be regularly updated, to ensure that they are current.¹⁰³ They also should be readily accessible to responding fire crews – e.g., through tablets or in-vehicle mobile workstations.

10.2.1 Bamfield

Bamfield is an exterior operations department. Technically, it does not require preplans, as it is not authorized to undertake offensive interior operations. Consequently, there are no preplans or related operational guidelines in place.

10.2.2 Beaver Creek

The Assistant Chief's job description includes the responsibility for the development of preplans and the Deputy Chief job description includes "conducting preplanning work in conjunction with the Fire Chief". A few preplans have been completed however there is no current program or operational guideline in place to address preplanning.

10.2.3 Sproat Lake

The Department has developed a few preplans and a Quick Action Plan form to assist with responses to properties, however there is no current program or operational guideline in place to address preplanning.

10.3 Investigations

As noted above, under the current form of the *Fire Services Act*, regional districts are not required to undertake fire investigations. The Operational Criteria Bylaw, however, does contemplate and authorize each Department to undertake fire investigations, though it is silent on whether this is a required activity. However, as each Department has one or more LAFCs appointed, those LAFCs are required, under sections 9 and 13 of the *Fire Services Act*, to investigate and submit to the OFC reports on fires in their respective jurisdictions. The Regional Fire Services Manager is also an LAFC and supports all three Departments in this respect.

A minimum standard of training for fire investigators has not been identified by the ACRD or the individual Departments. The OFC does have some recommendations required minimum training for LAFCs and (historically at least) provides some instructions in that regard:¹⁰⁴

"The *Fire Services Act* does not specify any technical qualification or training to become an LAFC; however, the Fire Commissioner recommends the following courses as basic

¹⁰³ An out of date preplan can dangerously mislead responding crews, and increase rather than decrease the risks they face when effecting an interior attack.

¹⁰⁴ See: OFC, "Skills and Knowledge of LAFC", at https://www.ofc.gov.bc.ca/OFC/help/role_resp/skills.htm, accessed on 25 November 2021.

requirements for all LAFC. All LAFC should take or have equivalent knowledge of the following in order to perform their duties effectively:

- LAFC Introduction Training (offered by OFC).
- Fire Scene Preservation course (PowerPoint) (offered by OFC).
- Fire Reporting Training (offered by OFC).
- Fire Investigation for LAFC (offered by OFC) or NFPA Fire Investigator I – Level 1 (offered by the JIBC, course #FPIN 150) or Fire Investigator Introduction (offered by OFC).
- Fire Inspector Training for LAFC (offered by OFC).
- Procedures for Issuing Orders (offered by OFC).

While you do not need to complete all the training before you take on the LAFC duties, we recommend you to acquire this training over a period of 3 years.”

10.3.1 Bamfield

Beyond the general wording found in s. 20(h) and Schedule A of the Operational Criteria Bylaw, there is no specific obligation created under that bylaw for the Department to carry out fire investigations. The Department has no operational guidelines covering investigations. The Fire Chief has been appointed as an LAFC and is therefore required to undertake investigations.

Currently fire investigations are undertaken by the Department on reportable fires, with assistance provided by the ACRD when requested.

10.3.2 Beaver Creek

The situation in Beaver Creek is identical to that in Bamfield: there is general authority under the Operational Criteria Bylaw; there are no operational guidelines related to investigations; and the Fire Chief and Assistant Chief are both appointed as LAFCs.

The Department undertakes fire investigations and reports to the OFC on reportable fires.

10.3.3 Sproat Lake

The situation in Sproat Lake is identical to that in Bamfield: there is general authority under the Operational Criteria Bylaw; there are no operational guidelines related to investigations; and the Fire Chief and Deputy Fire Chief are both appointed as LAFCs.

The Department undertakes fire investigations and reports to the OFC on reportable fires.

10.4 Public Education

The value of public fire education is well accepted as contributing to the prevention or mitigation of fires, particularly those programs that have target audiences such as seniors and school

children but also in the broader context of community wide hazards such as wildland interface fires. There are well developed programs for many of the common fire hazard risks that are readily available to communities, but they often require the dedication of at least some level of support to successfully deliver these programs. This is particularly true in smaller communities with volunteer-based fire departments.

The Operational Criteria Bylaw (Schedule A) empowers the delivery of public education, but the lack of full-time staff in the Departments impacts the ability to manage/deliver education programs. As such, there is value in have the ACRD take primary responsibility for public education programs which would provide for a consistent approach across the regional district. Aspects of the program can be delivered by each Department, but the program itself should be created and organized by the ACRD.

The ACRD has a Community Wildfire Protection Plan (“CWPP”) which incorporates the use of the FireSmart program to enhance public safety with respect to interface fire.¹⁰⁵ The CWPP update also includes a series of recommendations that would potentially impact the three communities however the administrative support for the program would likely be outside of the capabilities of each fire department.

10.4.1 Bamfield

The Department has no operational guidelines for public education and no formal programs in place. The Department has supported education efforts by providing a document on chimney cleaning and self-inspection, reminders to check smoke detectors and notifications of campfire bans and protocols. There is an annual visit to the school and a community fire extinguisher event which allows residents to practice with their expired extinguishers and receive vouchers towards free extinguishers and smoke detectors.

10.4.2 Beaver Creek

The Department has no operational guidelines for public education and no formal programs in place. The Department is willing to support education efforts but is not currently active due to the lack of volunteer time.

10.4.3 Sproat Lake

The Department has no operational guidelines for public education and no formal programs in place. The Department does try to support education efforts where feasible. In the pre-Covid period activities were limited to open houses and public meetings plus the promotion of Fire the Smart program and sprinkler kits for interface home protection.

In general, there are no ACRD funds budgeted specifically to support public fire education. Any activities or programs must be funded by each individual Department. Staff have identified this area as a gap requiring a formal program, funding and improved communication. With no staff

¹⁰⁵ Alberni-Clayoquot Regional District Community Wildfire Protection Plan, July 2010 (and) CWPP Update, Oct 2019

resources dedicated to the management, administration and delivery of public education, all support is currently provided as a secondary duty with other core workload taking precedent.

10.5 Recommendations

Recommendation: Create an operational guideline for the Regional District that defines the requirement for preplans, the use of a standardized template and identifies the processes to create, review and update preplans. Consider providing administrative support from the Regional District to enable the Departments to meet the preplan workload.

Recommendation: Consider a Regional District approach to fire investigations that includes monitoring fire investigator training, providing support to the Departments for conducting investigations and ensuring consistent fire reporting to meet the statutory requirements of the *Fire Services Act*.

Recommendation: Identify a training standard for fire inspectors and fire investigators for the ACRD Departments.

Recommendation: Consider creating and funding a Regional District Public Education program in coordination with the fire departments. This should include ongoing administrative staff support for scheduling activities, educational resource material acquisition and communications.

11. Emergency Program

The bylaw structure underlying the ACRD's emergency programs is examined in detail in the Regulatory Matters section of this report. In summary, there are three distinct areas and emergency programs: the Alberni Valley (Electoral Areas B, D, E and F); Bamfield/ Electoral Area A; and Long Beach/ Electoral Area C. The provision of the actual emergency program in Long Beach and Electoral Area C is undertaken by the District of Ucluelet under a service agreement with the ACRD. We did not review this element of the ACRD emergency program, as there is no ACRD-operated fire service directly involved or affected.

The current division of the ACRD into three distinct areas for emergency program purposes creates some challenges. The limited resources of smaller communities make it difficult to manage a full EOC operation while maintaining various response activities in the community. The provision of other programs, such as Emergency Support Services ("ESS"), also varies between electoral areas under the current model. While there is definitely benefit in creating local capacity, a formal integration of the smaller plans with the Alberni Valley program and other ACRD resources should be developed. We understand that the emergency program planning is to be refreshed in 2022, at which time these issues can be addressed.

In relation to Alberni Valley and Bamfield/Electoral Area A, Hazard, Risk and Vulnerability Analyses ("HRVA") were undertaken for both areas and the results reflected in the respective emergency plans. The most recent HRVA for the Alberni Valley was undertaken in 2014 and the Bamfield HRVA was completed in 2019. Consideration should be given to updating the HRVA for Alberni Valley.

11.1 Structure

The Alberni Valley and Bamfield are each required under the *Emergency Program Act* to have an Emergency Management Organization ("EMO") and emergency plan.

11.1.1 Alberni Valley

The four electoral areas within the Alberni Valley plus the City are part of an integrated regional system with a joint Emergency Planning Committee and an Emergency Program Coordinator ("EPC"), established under Bylaw No. PS1006. The City of Port Alberni is included as a service participant to the regional system and all parties use a joint emergency plan. The Alberni Valley has a comprehensive ESS plan.¹⁰⁶

11.1.2 Bamfield

There is no implementing bylaw comparable to Bylaw PS1006, formally establishing an EMO for Electoral Area A, and no implementation plan for the organization. The provision of emergency

¹⁰⁶ ACRD, *Alberni Valley: Emergency Support Services (ESS) Plan* (December 2019), at <https://www.acrd.bc.ca/dms/documents/emergency-planning/avessplandec2019.pdf>

planning services has been authorized,¹⁰⁷ and the ACRD has developed the Bamfield Community Emergency Program (“BCEP”) covering Bamfield and Electoral Area A which identifies functions, roles and responsibilities. The position of EPC is identified in that program, but no one is currently appointed to that role. Under the BCEP, there is no Bamfield EOC structure identified and no personnel formally identified to operationalize the plan in an emergency.

In the event of an emergency that required the activation of the EOC, the community depends upon a number of trained volunteers to step up to support any required activities.¹⁰⁸ Any major emergency would be supported by the ACRD EOC, though arrangements in that regard are informal.

11.2 Training and Exercises

11.2.1 Alberni Valley

The Alberni Valley program provides ICS 100 training for all EOC designated staff. Emergency program staff take a variety of individual emergency related courses and ACRD and City staff are provided training to support their identified EOC positions.

In 2021 there have been a series of training sessions conducted:

- five (half day) EOC sessions;
- half day session for staff in the five EOC section areas;
- half day EOC exercise (45+ participants)
- one day facilitated wildfire exercise (14 agencies and staff); and
- elected officials training session.

11.2.2 Bamfield

In Bamfield, the last training session for volunteers was held in 2019, but volunteers are taking Justice Institute of BC courses and a weekend ESS/EOC session is planned for the spring of 2022. Volunteers will also be invited to training sessions in Port Alberni when these are arranged.

11.3 Facilities and Equipment

11.3.1 Alberni Valley

The Alberni Valley program has identified the primary location of the EOC as being the ACRD office building which has the required equipment and the necessary IT infrastructure to support

¹⁰⁷ ACRD Bylaw No. E1060.

¹⁰⁸ There were seven volunteers in the program in 2021.

EOC operations. A secondary location has not been identified but a mobile EOC kit is being developed for use in an alternate location if needed.

There is a back-up generator supporting the designated EOC building.

11.3.2 Bamfield

Bamfield has a designated EOC location at the East Bamfield firehall which would be supported by volunteers. The space and equipment to operate an EOC is sufficient to set up a basic EOC for events of a limited scope. The ACRD EOC would manage events that exceed the Bamfield EOC capacity, but remote assistance is also available for lesser emergencies. As noted, however, the arrangements to use the ACRD EOC are presently informal.

11.4 Planning

11.4.1 Alberni Valley

There is a comprehensive emergency plan created in 2014 that contains all the key elements required for the program, its activation and the operation of an EOC. There is also an EOC Procedures Manual (not reviewed) to provide detailed guidance for staff. There are hazard specific guides provided along with call out and contact lists, however those should be reviewed to ensure they are current. Emergency planning is further supported by an ACRD Community Wildfire Protection Plan.

The table of amendments suggests that the plan and contact lists have not been reviewed or updated since its inception in 2014. The plan also has not been updated to show that the ESS plan was completed in 2019. As noted, staff have indicated that the plan is due for a refresh in 2022, at which time these issues can be addressed. It is recommended that the 2014 HRVA also be refreshed.

11.4.2 Bamfield

As noted above, an EMO has not been officially identified for Bamfield and Electoral Area A. However, the BCEP was developed in 2019, and it contains most of the basic elements required for an emergency program. The BCEP identifies three other, related emergency plans relevant to the area:

- Coast Guard Tsunami Contingency Plan (2012);
- Bamfield Marine Sciences Centre Emergency Response Plan (2012);
- Bamfield Water System Emergency Plan (2012).

These plans were not reviewed; however, they are now a decade old and they likely should be reviewed and refreshed as required.

The BCEP also references the Huu-ay-aht First Nations 2010 Emergency Plan and related Risk Management Policy Regulation. Although the need for cooperation between the two emergency programs is recognized, the BCEP notes:¹⁰⁹

There is currently no formal Mutual Aid or Service Agreement in place, however, BCEP, if requested, will provide resources as available.

A formal arrangement between the two programs should be developed, along with joint training and combined exercises to ensure a clear delineation of mutual responsibilities during a major emergency.

The BCEP noted that work was on-going with School District 70 to develop an emergency plan and a communication plan for the school. Various supplies are stored in the school basement, which is designated as the primary reception centre for area in the event a major emergency.¹¹⁰

The emergency plan states that it can be activated by the EPC, Fire Chief, ACRD Chief Administrative Officer or ACRD Chair (including their respective designates).

The existing plan does not include provisions or guidance for the establishment and operation of an EOC. While volunteers do receive some EOC related training to provide basic EOC supports, for any significant emergencies the EOC function is currently provided by the ACRD.

11.5 Recommendations

Recommendation: Refresh the Alberni Valley HRVA.

Recommendation: Review and refresh the Alberni Valley emergency plan

Recommendation: Designate and equip a site capable of functioning as a secondary EOC for the Alberni Valley emergency program.

Recommendation: Formally designate an EMO in Electoral Area A (Bamfield).

Recommendation: Update both Bamfield and Alberni Valley emergency plans to reflect and formalize the EOC support framework for Bamfield.

Recommendation: Develop formal arrangements between the Huu-ay-aht First Nations emergency plan and the BCEP, including making provision for joint training and combined exercises.

Recommendation: The various emergency plans in the Bamfield area (covering the water system, Marine Centre and Coast Guard planning for a potential tsunami event) are a decade old. They should be reviewed and refreshed as

¹⁰⁹ BCEP, at p. 10

¹¹⁰ BCEP, at p. 10.

required. The emergency plan being developed with School District 70 should be completed.

Recommendation: Conduct a review of the current emergency management structure and organization in use within the ACRD and consider the option of developing a district-wide EMO and emergency plan.

12. Operational Guidelines

The use of OGs is a best practice for fire departments. Under the WCA and Regulations, WorkSafe BC requires employers provide written directions for principal tasks. Under Part 31 of the OH&S Regulations, there are requirements that fire departments have specific operational guidelines dealing with certain matters identified in that Part. The updating and maintenance of OGs is, in our experience, a challenge for all fire departments and those that operate as part of a regional district have the added responsibility of ensuring that their OGs cover and align with ACRD policies and guidelines. Similarly, the ACRD has a responsibility to ensure its Departments are provided sufficient information and direction for them to be compliant with any relevant ACRD requirements.

Each Department is currently maintaining its own set of OGs. The structure, format and section headings of the OGs used by all three Departments were examined. The OGs were not reviewed with respect to how comprehensively they cover the necessary topics and the accuracy of the content of each OG was outside the scope of the review.

The administration of the OGs varies between the three Departments and the frequency of OG reviews is not standardized. The SLVFD last reviewed all OGs in 2016 and the OGs for BCFVD indicate the latest reviews having been done between one and 14 years ago. Bamfield's OGs indicate they were created in 2019.

12.1 Sproat Lake

SLVFD's OGs are divided into five main sections:

1. Safety
2. Operations
3. Training
4. Interagency Operations
5. Administration

There is a comprehensive Table of Contents and each OG has an approval date and signature. The date of last review is also shown in each OG.

12.2 Beaver Creek

BCVFD's OGs are divided into the following six sections:

0. Definitions
1. Safety
2. Operations
3. Training
4. Interagency Operations
5. Administration

Generally, the OGs are well structured but the lack of a Table of Contents makes it difficult to locate specific OGs or identify topics that are in need of an OG. Some OG numbers include asterisks without an indication of the significance of these symbols and there is no OG page numbering.

The OG format provides a space for the approval signature, however the OGs are not signed. Consideration should be given to adjusting the format to replace the former Fire Chief's name by the position "Fire Chief" and add a space for the "Date Approved". This would allow for either a printed name or signature on the line (in the event of acting FC approvals).

It was noted there are numerous OGs which appear to be placeholders without actual content. It is recommended that they be reviewed and either removed or developed and approved for inclusion in the OG manual.

12.3 Bamfield

The OGs for the BVFD were provided in a PDF document that includes a Table of Contents. The OGs are divided into the following seven sections:

1. Safety
2. Equipment Training, Use and Maintenance
3. Vehicle Operations
4. Operations
5. Communications
6. Training
7. Administration

Each OG has an original date but there is no name or signature of the person approving the OG, nor is there a date of approval and it lacks a field to record a date of review. It is recommended that the format be amended to add a field for a date of review, approval date

with the signature line and that all OGs be reviewed by the Fire Chief to confirm they remain current and signed off accordingly.

It was noted that the content portion of the OGs do not use headings to provide information about the scope of the OG or the policy relevant to each OG. It is recommended the format be amended to add those headings and insert the relevant information as part of the Fire Chief's review of the OGs.

12.4 Summary

Each of the Departments has a functional set of OGs, however there are some administrative aspects identified in this section that may require ACRD support in order to ensure that the Departments have the necessary OGs to address key operational and administrative needs. From a risk and liability perspective the ACRD will want to ensure it provides the necessary guidance and clarity to the Departments both as the authority having jurisdiction and to ensure adherence to ACRD policies and guidelines.

In general, there is clearly an opportunity to create a single set of OGs to be used by each Department, and managed by the ACRD. Department-specific OGs can still be created to address particular administrative issues or area-specific risks or conditions. However, the fundamental OGs governing each Department's operations (including OH&S matters) should be centralized – a point that was raised by the Departments themselves. This approach has been adopted elsewhere with significant success (e.g., Columbia Shuswap Regional District). It improves oversight and reduces the administrative burden on each of the Departments.

If this approach is taken, it is critical the Departments are active participants in the creation of the centralized set of OGs.

12.5 Recommendations

Recommendation: The ACRD identify requirements that apply to each of the Departments and develop a centralized set of OGs for their use. This centralized set of OGs would cover primary operational activities, ACRD policies and requirements and specific regulatory obligations (e.g., OH&S matters). These common OGs would be maintained in an electronic form by the ACRD in consultation with the Departments.

Recommendation: For Department-specific OGs (e.g., covering internal administrative matters), the ACRD should establish a common OG template for use by all three Departments to ensure key components are captured. Each Department must maintain its OGs in an electronic format for ease of access, reviews and updates, with a copy of all Department-specific OGs also being provided to the ACRD.

13. Fire Halls, Apparatus and Equipment

13.1 Bamfield

The Department operates out of two fire halls and one boat house equipped with a total of three apparatus, one emergency medical response unit, one command vehicle and one fireboat. The fire halls, first-line apparatus, fireboat and equipment are included in the 2021 Bamfield Volunteer Fire Department Asset Management Plan, Version 1 (the “Bamfield AMP”).

13.1.1 Fire Halls

Hall 1 (Bamfield East Hall) is located at 352 Pachena Road. It has two truck bays and appears to be in good condition. A 22kW emergency power generator and above-ground diesel fuel tank for apparatus re-fueling are located next to the building behind a security fence.



Figure 1: Bamfield, Hall 1

The truck bays are not equipped with an exhaust extraction system which potentially presents a safety hazard to the members due to exposure to diesel exhaust. The Department also uses the bay area for the storage of turnout gear and other equipment and there is an adjacent small office that is subject to exposure due to the accumulation of exhaust particulate. The Department should consider the installation of an exhaust removal system as soon as practical.



Figure 2: Bamfield, Hall 2

Hall 2 (Bamfield West Hall) is located at 164 Bond Street on the peninsula. This part of Bamfield is not accessible by road from the rest of Bamfield. It has two truck bays and a small office and was originally the playground area for the adjacent school that has been decommissioned. The truck bays are very narrow with a low ceiling and there is minimal space for equipment storage.

Hall 2 is located on property owned by the Province which potentially poses a risk related to the long-term plans for the location of the fire hall.



Figure 3: : Bamfield, Hall 2 Truck Bay



Figure 4: Bamfield, Fire Boat and Boathouse

The boathouse is located a short distance from Hall 1 in the Kingfisher Marina at 211 Nuthatch Road in Bamfield. It must be accessed over the dock walkway which is in need of some repair. The boathouse is well-built and allows for easy access from the dock to the fireboat from the port, starboard and bow.

13.1.2 Apparatus



Figure 5: Bamfield, Units E1 and E2 at Hall 1

The Department's frontline fleet consists of two engines, one quick attack vehicle, one command vehicle and one emergency medical response unit ("EMRU"). The Bamfield AMP recognizes that the two engines are due or overdue for replacement based on age, and the area around Hall 2 is subject to a "provisional" rating (and potential downgrade) by the Fire Underwriters. During the site visit, the Department advised it has begun the procurement process to replace W2 but is having difficulty finding a vehicle suited to the road system and

steep terrain on the peninsula. Details on the apparatus can be found in Table 11 and the apparatus replacement schedule is found in Table 12.

Table 11: Apparatus Details

Location	Unit No.	Year Built	Type	Make	Water Tank Capacity (gallons)	Pump Rating GPM
Hall 1	BF E1	1997	Engine	Hub	800	840
	EMRU	2009	Ambulance	Chevrolet	N/A	N/A
	BF E2	1999	Command	Suburban	N/A	N/A
Hall 2	W1	1980	Mini pumper	GM Pick-up	300	TBD
	W2	1993	Engine	Anderson	1050	TBD
Boathouse	Fireboat	2017	Fireboat	Custom	Unlimited	420

Table 12: Apparatus Replacement Schedule

Unit	Model Year	Replacement Year
BF E1	1997	2027
EMRU	2009	TBD
BF E2	1999	TBD
W1	1980	2022-23
W2	1993	To Reserve Status
Fireboat	2017	TBD



Figure 6: Bamfield, Units W1 and W2 at Hall 2

13.1.3 Equipment

A detailed review of equipment was not conducted but the following items were noted in the Bamfield AMP and in discussions with the Department during the site visit.

- The Department uses Scott 2.2 air packs (2013 standard), and the current inventory includes 16 air packs and 40 spare cylinders. There is a 15-year replacement plan, but units are replaced after 10 years if contaminated. Flow tests are conducted every two years by an external contractor.
- Most minor fire equipment maintenance and repairs are done in-house but external service contractors are also used when required.

13.2 Beaver Creek

The Department operates out of one fire hall and is equipped with a total of five apparatus consisting of two engines, two rescue trucks and one utility vehicle. The fire hall, equipment and first line apparatus are included in the 2021 Beaver Creek Asset Management Plan, Version 1 (“Beaver Creek AMP”).

13.2.1 Fire Hall

Hall 1 is located at 6038 Beaver Creek Road. It is a two-storey building with four bays, has separate ground level access to the office area and is equipped with a 150kW power generator. The hall received seismic upgrades in 2014 that extended the expected service life to 65 years, well beyond the 40-year amortization period applied to buildings within the ACRD. The Beaver Creek AMP identifies concerns about the septic system, which is believed to have been installed when the fire hall was constructed and the condition of the 20-year-old roof. An additional concern raised by the Fire Chief is the presence of asbestos in the ceiling.



Figure 7: Beaver Creek, Hall 1



Figure 8: Beaver Creek, Hall 1 - Office Entrance

13.2.2 Apparatus

The Department took delivery of a new pumper (Truck 55) built by Fort Garry Fire Trucks in July 2020. The second line apparatus, Truck 51, will be due for replacement in 2025 and the reserve, Truck 53 was retired in 2020. Details on the apparatus can be found in Table 13.

Table 13: Apparatus Details

Location	Unit No.	Year Built	Water Tank Capacity (gallons)	Pump Rating GPM	Replacement Year
Hall 1	Truck 51	2000	1,000	1,050	2025
	Truck 55	2020	1,000	1,050	2040
	Rescue 52	2006	N/A	N/A	N/A

Apparatus maintenance is performed by Profire Emergency Equipment and Aggressive Truck.

13.2.3 Equipment

A detailed review of equipment was not conducted but the following items were noted in the Beaver Creek AMP and in discussions with the Department during the site visit.

- Scott Air Packs will be upgraded from 2.2 to 4.5 in 2022. They currently have 16 packs and 24 spare cylinders. The benefits of the 4.5 model are the reduced weight and size and the ability to carry more air due to the increased pressure; 4,500 psi vs 2,200 psi.
- Every member is provided with two sets of Personal Protective Equipment.
- Equipment maintenance and repairs are completed by outside contractors.

13.3 Sproat Lake

The Sproat Lake fire halls and apparatus were examined in detail in a report prepared by the Consultants in June 2021 (the “June Report”).¹¹¹ This section is extracted from that report, with some updates discussed with the Fire Chief and ACRD staff. The June Report examined the possibility of the SLVFD transitioning to a two-hall model and outlines the potential impact of such a move in detail. The Department subsequently adopted the June Report and closed Hall #2 and redistributed its apparatus. For details on this fire hall realignment, please see the June Report. The parts of that report relevant to this study are set out below, with some updates and amendments.

The Department currently is equipped with a total of seven apparatus consisting of three tenders, three engines and one rescue vehicle, responding out of the two halls. The fire halls, apparatus and major equipment are included in the Sproat Lake Volunteer Fire Department Asset Management Plan (Version 1, adopted May 27, 2020).¹¹²

13.3.1 Fire Halls



Figure 9: Sproat Lake, Hall 1

¹¹¹ DMA, *Sproat Lake Fire Department: Fire Hall Assessment* (June 2021).

¹¹² <https://www.acrd.bc.ca/am-documents>

Hall 1, located at 10605 Lakeshore Road, has three bays, approximately 40 feet in length. Hall 1 houses Tender 48 and Engine 41, as well as the SLVFD's antique 1943 Jeep. Amenities include turnout gear stalls, a turnout gear laundry unit and a modest size training/meeting room. Currently, there are 14 turnout gear stalls. A seismic upgrade has been completed, but Hall 1 requires other updating as well.



Figure 10: Sproat Lake, Hall 2

Hall 2 is located at 9501 Faber Road. With the adoption of the June Report, the hall has been partially decommissioned and currently serves as a training site and houses Rescue 40 which responds to FMR calls. The two additional bays on the lower level are used for storage. There is a lengthy dock and launching area on the lake adjacent to the fire hall. Storage for 15 sets of turnout gear and training props is in two of the bays on the main floor. A meeting room (approximately 20' by 20') on the second floor is equipped with audio-visual equipment and is used for classroom training purposes. Hall 2 is subject to a 10-year lease recently renewed by the ACRD. It is anticipated that the hall will be fully decommissioned around 2036.



Figure 11: Sproat Lake, Hall 3

Hall 3, located at 7667 Pacific Rim Highway, is the SLVFD's main fire hall. It has two apparatus bays, a training/meeting room and offices for administration, fire prevention and the chief officers. The main floor includes two apparatus bays for Tender 43 and Engine 49, the SCBA air compressor and cascade filling system, turnout gear laundry and 20 turnout gear stalls. The Fire Chief's office and a small storage room are also located on the main floor. The second floor includes offices for fire prevention and administration, and a large room used for training and meetings.

The fire hall property has room on the west side for potential expansion for a (detached) two bay building, without impacting the existing septic system. If the recommendations from the June Report are implemented, various expansions and upgrades to Hall 3 would be required.

Other issues noted in the June Report include the following:

- Seismic upgrading of Hall 3 has been completed, along with some interior upgrades.
- Most of the spare SCBA cylinders are stored on the apparatus due to limited storage space in the hall. Additional storage space would be beneficial.

- Currently, the hall is not equipped with an emergency generator and has no ability to maintain operations during power outages. The Fire Chief advised that a capital funding request for a generator is being submitted.
- If Hall 2 is partially decommissioned, the existing number of turnout gear stalls may need to be increased depending on the reallocation of responding firefighters. These new stalls could be accommodated in the proposed new apparatus bay.

13.3.2 Apparatus

The Department’s frontline fleet currently consists of three pumpers, three water tenders and one rescue truck. There is also a 1943 Willies Jeep 4X4, equipped with a pump and hose reel that is used for ceremonial purposes. The hall location and specifications for each unit is shown in the table below.

Table 14: Current Apparatus Assets

Location	Unit No.	Year Built	Water Tank Capacity (gallons)	Drop Tank Capacity (gallons)	Portable Pump GPM	Pump Rating GPM
Hall 1	Tender 48	2002	1,500	2,000	500	500
	Engine 41	2008	1,000	N/A	500	1,050
Hall 2	Tender 45	2010	1,500	2,000	500	200
	Engine 47	2000	1,250	N/A	N/A	625
	Rescue 40	1998	N/A	N/A	N/A	N/A
Hall 3	Tender 43	2004	1,500	2,000	500	500
	Engine 49	2019	1,000	N/A	N/A	1,250

Each tender is equipped with a 1,500-gallon water tank, a bumper mounted pump, portable water pump and other related fire equipment.

The three engines are outfitted with large capacity water tanks ranging from 1,000 to 1,250 gallons and pumps capable of flowing 625 to 1,250 imperial gallons per minute (“IGPM”). The current maximum pumping capacity of all apparatus including portable pumps is 4,200 IGPM, subject to adequate water supply.

The Department has indicated that Engine 47 will be reclassified to reserve status and at this time, there is no plan to replace this vehicle. Removal of this unit from the front-line fleet will reduce the total pumping capacity to 3,575 IGPM, but the Fire Chief has advised that this change will not impact the SLVFD’s STSS accreditation.

The rescue truck was procured from BC Hydro in 1998 and the plan is to keep the vehicle in service at Hall 2 for FMR calls. There is no capital replacement plan for this vehicle.

In May 2020, the Department and the ACRD adopted a 20-year replacement plan for fire apparatus. The replacement cycle recommended by the Fire Underwriters for fire apparatus is 20 years but, by application, may be extended to a maximum of 25 years. In general, after 25 years, no credit is given for apparatus by the Fire Underwriters. Extensions are approved contingent on the vehicle condition, ongoing maintenance and annual testing. One of the major benefits of extending the life cycle of apparatus past 20 years, is the reduction in the annualized capital or borrowing costs. It is recommended that apparatus over 20 years in age, however, operate as reserve rather than frontline vehicles.

The table below shows the replacement schedule for the current apparatus.

Table 15: Apparatus Replacement Schedule

Unit	Model Year	Replacement Year
Rescue 40	1998	N/A
Engine 47 ¹¹³	2000	2020
Tender 48	2002	2022
Tender 43	2004	2024
Engine 41	2008	2028
Tender 45	2010	2030
Engine 49	2019	2039

The SLVFD holds STSS accreditation for all three fire halls, which improves the Fire Underwriters’ Dwelling Protection Grade rating to DPG 3B(S) (or “fully protected” status). The accreditation, which was renewed in 2019, was granted based on ability of the Department to deliver adequate fire flows for insurance grading purposes throughout the fire protection district within eight kilometres by road from a fire station. The apparatus and equipment required for the STSS accreditation included three tenders plus one engine acting as a tender plus one engine to provide fire flows. The specific units used to obtain accreditation include:

- Tender 48;
- Tender 45;
- Tender 43;
- Engine 41; and
- Engine 49.

The June Report identifies changes to the apparatus allocation, if the partial decommissioning of Hall 2 takes place. Please refer to that report for such a change to the configuration.

¹¹³ Engine 47 will be removed from frontline service and placed in reserve. There is no plan to replace this unit.

13.3.3 Equipment

A detailed review of all fire equipment was not conducted but the following items were highlighted during the site visits:

- The Department does not have a back-up generator for any of the fire halls but there is a plan to install one in Hall 3. In the longer term, generators should be installed in all fire halls.
- An SCBA compressor and cascade air filling system is located in Hall 3.
- For SCBA, the SLVFD currently has 18 Scott 2.2 air packs (ranging from two to five years old) and 48 spare cylinders that are carried on the trucks. Additional storage for spare packs and cylinders is needed in the fire halls.
- Personal protective equipment is in good condition and is replaced after 8 years or a maximum of 10 years. Turnout gear is cleaned internally.
- Most of the fire hose inventory is stored on the trucks with a small quantity at each of the fire halls. Additional fire hose storage is required in the fire halls.
- Annual maintenance is mainly provided by third-party contractors.

14. Training and Qualifications

The key to ensuring effective emergency ground operations, and the safety of firefighters and members of the public, is effective and comprehensive training. Each operational member of a fire department must have the appropriate level and types of training to fulfil the roles and tasks he or she will be assigned at an emergency incident. To enable each of the Departments to manage its obligations effectively, it is vital to ensure that all firefighters are trained to the appropriate level for the operations that they undertake. Appropriate training will improve firefighter safety and effectiveness and limit liability concerns for both the Department and the ACRD.

The need for training needs to be examined in light of the risks faced by fire service personnel. The nature of modern construction techniques has amplified the risks faced by firefighters and the public. Lightweight construction components and contents made of composites, synthetics and similar fuel types, cause fires to get hotter faster and with less predictability, creating a much more volatile fire environment than that of the past. Although firefighters are now better equipped, fires today pose a greater risk than those faced in the 1970s and 1980s.

Aggressive interior operations such as fire attacks and primary searches require firefighters to enter a hazardous environment, dramatically increasing the potential for adverse fire events such as flashover, smoke explosion, or backdraft, along with exposure to a variety of other perils, thereby posing the most significant risk to firefighters involved in fire ground operations. A line of duty death or serious injury is a risk that all fire departments must seek to avoid. In the event of a serious injury or line of duty death, the impact on the individuals involved, their families and the department can be severe and long lasting. There is also a significant potential for liability for the Departments, their officers, and the ACRD.

As a result, the fire service is increasingly focused on issues that affect firefighter safety, including the need to effectively manage and control interior operations, as departments seek to mitigate the risks to which firefighters are exposed. One of the primary ways to improve firefighter safety is to increase the level of comprehensive emergency incident management training – the knowledge and various skills required to perform a variety of supervisory functions safely and effectively at emergency incidents.

Many fire departments also provide other emergency response services in addition to fire suppression, such as FMR, vehicle extrication and rescue, high and low angle rescue, confined space rescue, hazardous materials responses, and other specialty services. Each of these service specialities, however, requires proper training for the firefighters involved, and appropriate incident scene management training for the officers. The time and costs involved in achieving both the initial qualifications required to deliver the service and then manage the on-going maintenance training necessary to keep the skills current, can prove challenging.

This issue of appropriate training levels also needs to be considered in the context of WorkSafe BC requirements and the obligation of employers to ensure that their workers are properly trained for their duties and supervised while performing them. An employer that fails to train

and supervise its employees properly is in breach of the *Workers Compensation Act* (B.C.). The goal, therefore, should always be to maximize training for all firefighters, and to limit their fire ground operations to those tasks for which they have been properly trained. To put it another way: firefighters should NEVER be permitted to exceed their training.

14.1 Applicable Standards

Under the *Fire Services Act*, the Fire Commissioner is responsible for issuing training standards for “fire services personnel” in the province.¹¹⁴ A major new set of standards was issued in 2014 in the form of the Playbook, which was then updated and revised in a second edition in May 2015. A third edition of such standards, which will be broader in scope, updated to the current NFPA requirements, and renamed, is being actively developed at the time of the writing of this report. Its release was expected in 2021, but it now has been delayed until sometime in 2022.

The current version of the Playbook contemplates that a fire department may deliver one of three possible levels of service, and establishes the principal minimum training required to qualify for each level of service:

Exterior Operations – includes fire fighting activities restricted to the control and/or extinguishment of fire from an external position to the building or object; where a fire department does not undertake interior attack or rescue operations on a fire-involved structure or object, or to operate in an environment that is “immediately dangerous to life and health”.

Interior Operations – where a fire department, in appropriate circumstances, will enter a fire-involved structure or object to undertake fire suppression activities or conduct rescue operations. Interior operations by these departments are generally to be limited to smaller structures, single family dwellings and vehicles, except where specific hazard assessments and planning have been undertaken in respect of more complex risks.

Full-Service Operations – a full-service department is equipped, staffed, and trained to provide a full spectrum of fire services by firefighters and fire officers that are trained to the competencies outlined in the NFPA 1001 FF-II and relevant NFPA 1021 Fire Officer standards; and that such activities are based on response protocols which include appropriate staffing levels, and number and type of apparatus on scene.

The Playbook establishes an explicit requirement for the “Authority Having Jurisdiction” over a fire department to expressly set the level of service that is expected to be provided by its fire department. The rationale for this requirement is obvious: the level of service expected from a

¹¹⁴ *Fire Services Act*, s. 3(3)(b). This power and obligation are continued in the new *Fire Safety Act*. The term fire services personnel is defined in the *Fire Services Act*: it covers essentially all fire departments undertaking structure firefighting, but excludes fire suppression operations undertaken by Wildfire Services under the *Wildfire Act* (B.C.).

fire department determines how that department needs to be staffed, equipped, trained and organized.

The Playbook is not yet a complete system: it does not cover all emergency scene functions and responsibilities. Indeed, one of the main goals of the third edition is to broaden the scope and coverage of the standards. One challenge, therefore, is the question of what standards apply to matters that are not covered by the Playbook. Although there are several indications that the NFPA standards are expected to apply to other functions (which was what was required by the previous Minister's Order on training),¹¹⁵ ambiguity now exists as to the standards applicable for a wide range of firefighter training.

Given the requirements of the *Workers Compensation Act*, which imposes a positive obligation on employers to train workers appropriately and given that the only recognized standards that exist in North America for the training of fire services personnel are those established by the NFPA, the better approach is to assume that those standards remain as an "industry best practice" to guide all aspects of the Department's operations. Should a local government choose to adopt a different standard (or no standard at all) in relation to the training applicable to other fire service functions, if there is a serious accident or line of duty death which relates back to training issues (as occurred in the Clearwater case¹¹⁶), that local government will be faced with the unenviable task of justifying the approach that it has taken in circumstances where there is clear evidence of a problem.

As such, when formally implementing the service level standards for the Departments, it is recommended that the ACRD also identify that the NFPA standards form the basis of all training for the operational functions undertaken and emergency services provided by the Department. It is then the responsibility of the incident commander to ensure that firefighters are tasked only with those functions (and situations) for which they have been trained. In some respects, this approach has been adopted in Schedule A to the ACRD's Operational Criteria Bylaw. That schedule, however, pre-dates the Playbook, and does not address certain requirements that have since been imposed (e.g., the need to appoint a Risk Management Officer in exterior operations departments). Schedule A also does not address other, relevant NFPA standards – such as those applicable to rapid intervention teams, or emergency vehicle operations. When the Operational Criteria Bylaw is updated, a broader consideration of the appropriate training standards for members and officers needs to be included, one which explicitly ties into both the Playbook and NFPA.

¹¹⁵ The second edition of the Playbook did not entirely clarify the matter, though it even more clearly suggests that the appropriate standards applicable to matters not yet covered, are those set by the NFPA. The previous Minister's Order on training - MO-368 (December 2002) – incorporated by reference all NFPA standards.

¹¹⁶ The death of fire fighter Chad Schapansky in Clearwater, BC in 2004 which resulted in a Coroner's report "Judgement of Inquiry into the Death of Chad Jerry Schapansky". This report found that the Clearwater fire department lacked written operational guidelines governing interior attacks; it could also produce no training records for accredited training done by the interior attack team, rapid intervention team or fire officers in charge.

The Playbook also establishes minimum standards for individuals providing training. The second edition clarified that no third-party certification is required for in-house trainers. Rather, they must be “qualified” in the subjects or areas they are teaching. That means that they must have already met the requirements for the competency they are teaching, which is achieved when they have been suitably evaluated so as to demonstrate they meet the requirements of the given standard.

Another critical requirement in the Playbook is that fire departments must maintain accurate and current individualized records of each member’s training and qualifications, which show compliance with the minimum and other applicable training standards:¹¹⁷

Assessments and evaluations of Competencies can be carried out internally by the AHJ so long as the evaluation instruments follow the criteria of this Playbook (and other applicable NFPA Standards) and that detailed records of firefighter training and evaluation are maintained. [...]

It is the responsibility of all fire departments/AHJs to be able to accurately identify record, edit, and report out on a complete list of training records for each individual firefighter including specific training subjects covered at each training session. All training records must be kept in accordance with the requirements of the *Workers Compensation Act* (B.C.) and related regulations, and any other regulatory requirements.

This section of the report will examine the Departments’ training processes in the context of its operational requirements, declared or apparent service levels and the associated standards, along with a review of the training facilities, the current levels of qualifications, and the Departments’ training and evaluation processes, and the training records.

The Consultants attended site visits/meetings with the Regional Fire Services Manager, Fire Chiefs, Deputy Chiefs, Training Officers and firefighters. During these meetings, various aspects of the Departments were reviewed, including the training and training records as an opportunity to learn more about the current state of training and operational readiness. As a part of these site visits, the Consultants toured the communities to better appreciate the nature of each Department’s operational environment, and its training area and related facilities.

This section of the report references various NFPA training and related standards. A list of those standards can be found in Appendix 2.

14.2 Approved Service Levels and Training

The AHJ in relation to the Departments is the ACRD, and the service level and services that have been authorized for each department are substantively indicated in Schedule A to the Operational Criteria Bylaw. It should be noted that this schedule, however, pre-dates the

¹¹⁷ Playbook, pp. 4 and 6. The Playbook’s requirements are drawn from and reflect the records keeping requirements established under the *Workers Compensation Act* and regulations.

Playbook, and is unclear, for example whether Beaver Creek and Sproat Lake, are “Interior Operations” or “Full Service” departments.

The ACRD has a policy outlining job descriptions for the positions of Fire Chief and Deputy Fire Chief. The policy also includes the training requirements and qualifications from the Playbook.

The assigned Training Officer (“TO”) for each Department is responsible for the planning and overall management of training portfolios. The TO is also responsible for determining a department’s training needs, developing training programs, planning, organizing, and directing training activities, and evaluating for continuity of training throughout the membership. In addition to scheduling training, the TO is also responsible for conducting some aspects of training and for maintaining the Department’s training records.

In addition, joint training with mutual aid partners is critical to ensure effective and safe emergency scene operations. Departments and their mutual aid partners should invest the time and resources required to undertake regular joint training.

14.2.1 Bamfield

Bamfield is declared as a “defensive operations” fire department under Schedule A to the Operational Criteria Bylaw, which we take to mean that it is an “Exterior Operations” department within the meaning of the Playbook.¹¹⁸ As such, its fire fighting activities are restricted to the control and/or extinguishment of fire from an external position to the building or object. At this service level, the fire department is not authorized or qualified to undertake interior attack or rescue operations on a fire-involved structure or object.

Based on Schedule A to the Operational Criteria Bylaw, the approved services provided by the BVFD include:

- defensive structural fire fighting;
- basic first aid;
- forestry/interface;
- vehicle fires;
- airport fire fighting;
- fireboat/marine firefighting; and
- emergency planning.

The Department provides medical services at the EMR level and patient transport to the community in accordance with its agreement with BCEHS. The required training is provided through an agreement with the Vancouver Island Emergency Response Academy (VIERA)

¹¹⁸ As discussed in the Regulatory Matters section, each of the Departments is operating to a self-declared service level. We have recommended above that the ACRD declare a service level for each Department.

located in Nanaimo, BC using the 'train the trainer' method for certification and maintenance training. The EMA Regulations require that EMR members complete twenty continuing education credits and twenty patient contacts per year. These requirements are a condition of retaining a licence and the regulation requires that records be maintained and submitted for each individual licensee.

We understand that the training and other requirements associated with this higher level of service are potentially problematic for the Department. Given the travel times required to get an ambulance to the community, however, this is a potentially life critical issue for residents in Bamfield and the neighboring First Nations. As such it would be useful to review with the Department the nature of the challenges involved and find a mechanism (e.g., compensating members who receive the higher level of training and respond on EMR calls) to encourage maintenance of the necessary skills and qualifications, and to ensure a reasonable level of availability for medical responses.

The Department's chief officers noted that Bamfield is not currently authorized to provide vehicle extrication¹¹⁹ but if requested, it would respond to motor vehicle incidents. The Fire Chief indicated that, overall, the number of responders attending emergency call outs has been good but it is dependent on who is available in the Village when a call comes in.

Training sessions are well attended, and usually include 10-14 members. The Chief recognizes that the members require more training than currently being provided. The attendees and training topics are not always recorded but they conduct a debriefing at the end of each session. No formal records are kept that would show which the Playbook or NFPA "Job Performance Requirement" ("JPR") has been trained in a particular session.

The Fire Chief also expressed the need for clarity about training assessment and evaluation processes as this has not been done for the last two years. The Department has not been keeping up with evaluations due to uncertainty around the qualifications necessary for evaluators. In the past, it has used Vancouver Island Emergency Response Academy in Nanaimo ("VIERA"), but there is a plan to qualify its own instructors as evaluators and to utilize contractors to meet the Department's needs. Online training has been useful, but they find it hard to find time to complete the programs.

The Department uses their burn pan for training every two months. As an Exterior Operations department, they do not conduct live-burn scenarios in buildings.

Recruit training is delivered internally with a set program, often with one member at a time. The program includes a three-month probation period and requires attendance at all training sessions.

There is no formal officer training program but members with initiative and interest are encouraged to take accredited Fire Officer training. However, getting members to take the

¹¹⁹ The BVFD would like to add MVI responses in the future.

training at, for example, VIERA or JIBC, is difficult as there is no wage loss coverage available. The time commitments involved are significant, as are the costs involved.

Notwithstanding these challenges, the Department needs to ensure that it has properly qualified officers and Team Leaders (as defined in the Playbook). The problem of properly managing training, however, is a shared one, and the ACRD should work with its Departments to develop and implement the necessary training programs, from recruit through to officer, in a manner that accommodates or mitigates the challenges that are faced.

14.2.2 Beaver Creek

Based on Schedule A to the Operational Criteria Bylaw, Beaver Creek is intending to undertake interior operations. It is not clear whether this intention is equivalent to “Interior Operations” or the “Full Service” level under the Playbook, though the Fire Chief expressed the view that he felt the Department was, in many respects, operating at a “Full Service” level.

The approved services provided by the Department include:

- defensive and offensive structural fire fighting (Firefighters NFPA 1001, Level 1&2);
- medical first responder:
 - FR Level;
 - A.E.D.; and
 - spinal management;
- vehicle rescue (NFPA 1006);
- technical rescue;
- confined space (NFPA 1006) (but see discussion below);
- low angle rope rescue (NFPA 1006);
- hazardous materials – awareness level (NFPA 472);
- forestry/interface – (S100, S215); and
- vehicle fires (NFPA 1001).

The Fire Chief indicated that the Department is generally meeting or exceeding the fundamental training for its members, although there are challenges to be addressed. He also noted that the Department is not presently providing confined space rescue, which is included in their Schedule A list of authorized services, as the training and response requirements are not attainable at the present time.

Despite the impacts of COVID, the attendance for training has been good and most members show up regularly. The current roster is at 23 members and training is conducted on Tuesday evenings. General information and attendance are taken during practices, but the training is not tied to JPRs or to specific Playbook or NFPA requirements. The Department uses internal evaluators and trainers.

A recruit training program exists but it is not working well due to a lack of consistency in the scheduling and delivery of initial and ongoing maintenance training. At this time, they have a good group of recruits, but the Department is finding it difficult to provide a consistent program due to a lack of time needed to organize and deliver the training. The problem is not limited to the recruit program but also impacts maintenance training for the longer-term members. This is often due to the fact that, on short notice, the assigned trainers become unavailable for the scheduled session due to last-minute changes to work or family commitments.

Fire Officer- I (“FO-I”) training is provided by the JIBC and is required for all officers. The Fire Chief has completed Fire Officer-II through VIERA but questioned the value of that program. Comox has also provided some operational training to the Department, as well. Lastly, online training is used for many of the fire officer courses but the Fire Chief would prefer classroom delivery where possible.

In response to the Consultant’s question as to whether any services should be added or dropped, the Fire Chief noted that the Department is providing the appropriate services but might consider adding fire inspections and providing assistance for SLVFD responses to the Stamp River area. He would also consider dropping confined space rescue due to the resources required to deliver the program.

Generally, the Department finds that the quality and frequency of the training has become difficult to achieve due to the lack of time and resources to plan, administer and deliver the programs needed to meet regulatory requirements. It was suggested that the only way to improve the situation would be to obtain additional support through regional assistance in the form of funding and/or staff resources.

14.2.3 Sproat Lake

In accordance with Schedule A to the Operational Criteria Bylaw, Sproat Lake is training to undertake offensive interior firefighting operations. Based on discussions with the Fire Chief, it was his view that the Department was properly to be categorized as an “Interior Operations” service level department.

An Interior Operations service level department may enter a fire-involved structure or object to undertake fire suppression activities or conduct rescue operations. Interior operations by such departments are generally to be limited to smaller structures, single family dwellings and vehicles, except where specific hazard assessments and pre-incident planning have been undertaken in respect of more complex risks.

The approved emergency services provided by the Department include:

- defensive and offensive structural fire fighting (Firefighters NFPA 1001, Level 1&2 & Officers NFPA 1021);
- medical first responder:
 - C, D, E, Lift assists;
 - AED; and
 - spinal management;

- low angle rope rescue (NFPA 1006);
- hazardous materials – awareness (NFPA 472);
- forestry/interface – S100/S215; and
- vehicle fires.

The Department is currently training firefighters to the NFPA 1001 FF- II standard and confirmed that eight members completed the program in the past year. In addition, another eight members have completed the FO-I program that is required for all officers. They are generally meeting or exceeding training requirements but admitted that progress in this area has been impacted by COVID restrictions and the return to hands-on training. Social distancing and other restrictions have been challenging but the Department is adapting and making progress in this area. The Department used to have a First Responder instructor, but that person has since resigned.

The Department enters the training records into Fire-Pro with the appropriate JPRs noted for each training session. They find the RMS helpful as it tracks the specifics of the training and has additional fields for notes. The Department uses VIERA processes for evaluation and qualified evaluators (in-house and external). A total of seven members are qualified evaluators including the Fire Chief and Deputy.

The Department uses their training site six times per year plus the Comox center through the JIBC for live-fire training. The goal is to find other locations and contractors to deliver the training every two months.

The recruit training program consists of an orientation and FMR training then over to VIERA for completion of NFPA 1001 training. The Department requires officers to complete FO-I through VIERA or other agencies.

As an interior service department, the Fire Chief believes that the current services being delivered are appropriate. In the future, the Department would consider adding vehicle extrication, a fireboat and swift water rescue to the current list of services.

It is noted that both the Fire Chief and Deputy are retired and as such, have time available to complete the administrative and operational tasks required to run the Department. The Deputy Chief advised that he is working two to three hours/day on average and stated that two hours per week does not provide enough time to complete the required training programs. To meet the training requirements, they are utilizing on-line training where possible and noted that this now constitutes 80% of their training.

14.3 Current Levels of Qualification

In 2017 the ACRD adopted a list of qualifications required for all positions in the Departments, the prerequisites for appointment to the specific rank, and the required training and certification to be completed in the first and second year of holding the rank. Essentially, the list provides a roadmap for members to follow from the rank of a junior firefighter through to the position of fire chief, if desired. The complete list of qualifications can be found in Appendix 3. It is unclear as

to whether the Departments are meeting these requirements and it is recommended that the RFSM review these with the Departments. As noted in the Section 9 of this report, the hours of the RFSM position need to be increased to ensure adequate resources are available to meet the roles and responsibilities of the position.

For all of its training, whether provided in-house or by external third parties, departments need to ensure that members are formally evaluated against the relevant standard, and the results of such evaluation consistently recorded on an individual basis.

As noted above, the determination of required training levels is based on a department's service mandate and response requirements.

14.4 Training Records

The critical nature of proper records keeping was made evident in the accident investigation report conducted by WorkSafe BC into the 2004 line of duty death in Clearwater. In that case, the firefighters and officers involved in the incident were essentially deemed to be untrained as a result of the lack of supporting training records.

Both the WCA and the Playbook require that appropriate training records be maintained for firefighters and fire officers. The Playbook makes clear that the training records need to be maintained on an individual basis, and that the AHJ is ultimately responsible for ensuring proper records are kept.¹²⁰ That requirement is fully consistent with the AHJ's obligations as the employer under the *Workers Compensation Act* and related OH&S Regulation. Refer to Appendix 4 for more detail on the Playbook.

When setting up a training records system, such as a commercial database like Pro-Fire, or a hard copy filing system, it is critical to understand the purpose of a training record. While it is important to record what training a member has received, it is equally important to be able to determine what training an individual is missing or requires refreshing.

The importance of maintenance training cannot be overstated. In addition, as training programs are revised and updated, it is important to ensure the Department is able to track who has, and who has not, had the updated program. The subject matter of the training needs to be clearly described in the records. If the training relates to a particular JPR under the Playbook, or an NFPA standard, that JPR should be identified.

To ensure there are no gaps in members' skills and competencies between when they are initially hired to when they are trained or confirmed as officers, the required maintenance training to ensure these members are able to demonstrate the appropriate ability in a given time period, along with annual performance appraisals, should be conducted and duly recorded. The requalification frequency for all programs should be identified so as to provide a guide for the hall officers and shift instructors who are responsible to maintain these skills and competencies.

¹²⁰ Playbook, Section 6, "Instruction, Evaluation and Records Keeping" at p. 6.

The present goal for any changes is to ensure consistency and objectivity for all maintenance training and subsequent record keeping for all members.

Copies of training records were not provided to the Consultants for analysis and as such, we were unable to confirm the status of individual competencies for the members in all three departments. It is recommended that the Regional Fire Services Manager undertake a review of the training records in all three departments and where necessary, provide the support required to achieve compliance.

The Departments are in the process of transitioning their training records to the FirePro2 records management system for their electronic records management. The Departments should also be using paper forms and evaluation sheets, along with the member's personal file, to track the training of the member. All three Departments have indicated a need for additional training on the use of the FirePro system in order to become proficient and to utilize the various capabilities of the system.

14.5 Recommendations

Recommendation: The Regional Fire Services Manager undertake a full review of the individual training records in all three departments and where necessary, provide the administrative support required to achieve compliance.

15. Response Analysis

The analysis that follows is based on data provided by North Island 9-1-1 which is the dispatch provider for the three Departments. The data are from 1 January 2016 to 24 October 2021.

15.1 Agency by Year

Responses by each Department, by year, are summarized in Table 16 showing the change over the period.

Table 16: All Departments, 1 January 2016 to 24 October 2021

Department	2016	2017	2018	2019	2020	2021	Total
Bamfield	16	37	25	29	18	29	154
Beaver Creek	161	213	182	150	103	96	905
Sproat Lake	124	132	155	86	96	95	688
Grand Total	301	382	362	265	217	220	1,747

These data are shown graphically in Figure 12 and from this it can be seen that Bamfield’s responses are trending flat, Beaver Creek’s show the largest decline while Sproat Lake’s dropped from a peak in 2018 and have since leveled off.

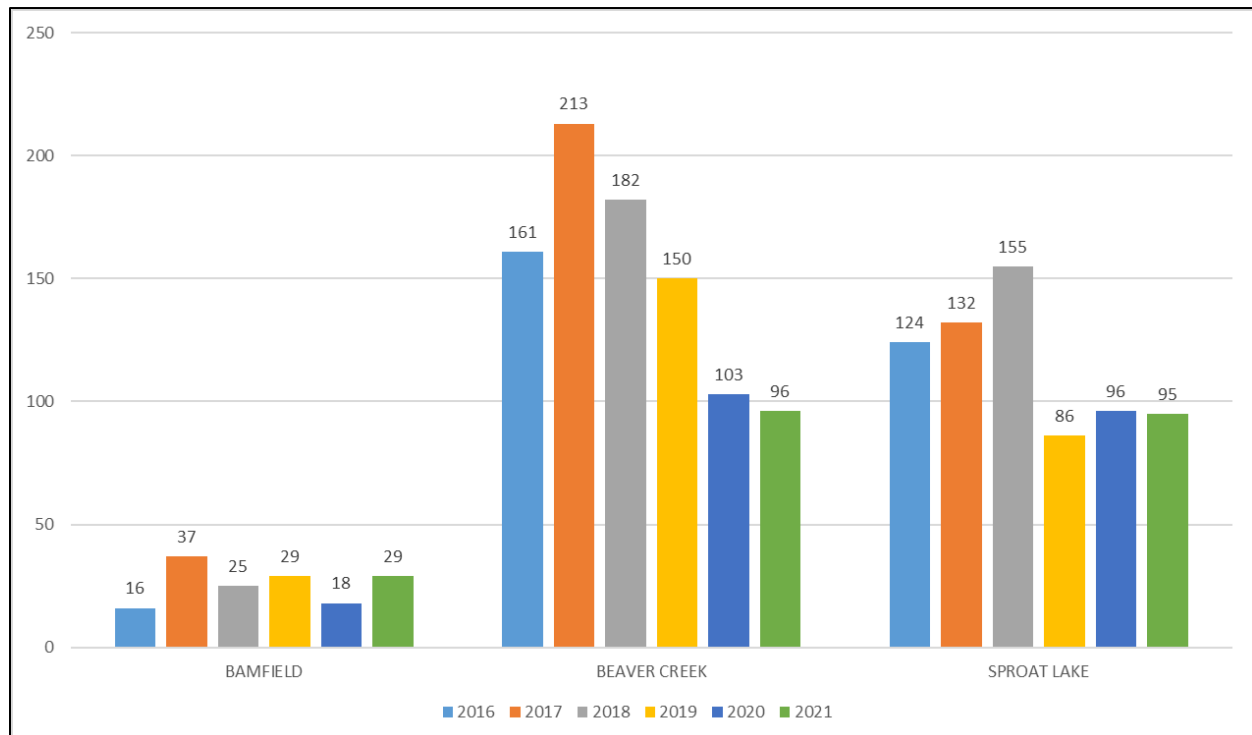


Figure 12: Bamfield, Beaver Creek and Sproat Lake - All Responses, 1 January 2016 to 24 October 2021

15.2 Temporal Analysis - By Year

15.2.1 Bamfield, Beaver Creek and Sproat Lake

Taken together the three Departments responded to a total of 1,747 emergency and non-emergency incidents. These are reflected in Figure 13 and over the period responses peaked in 2017 and 2018 and then declined in 2019 and 2020. Given that the data for 2021 are for 82% of a full year, it appears 2021 will show an increase, projected to be around 270 total calls for the year.

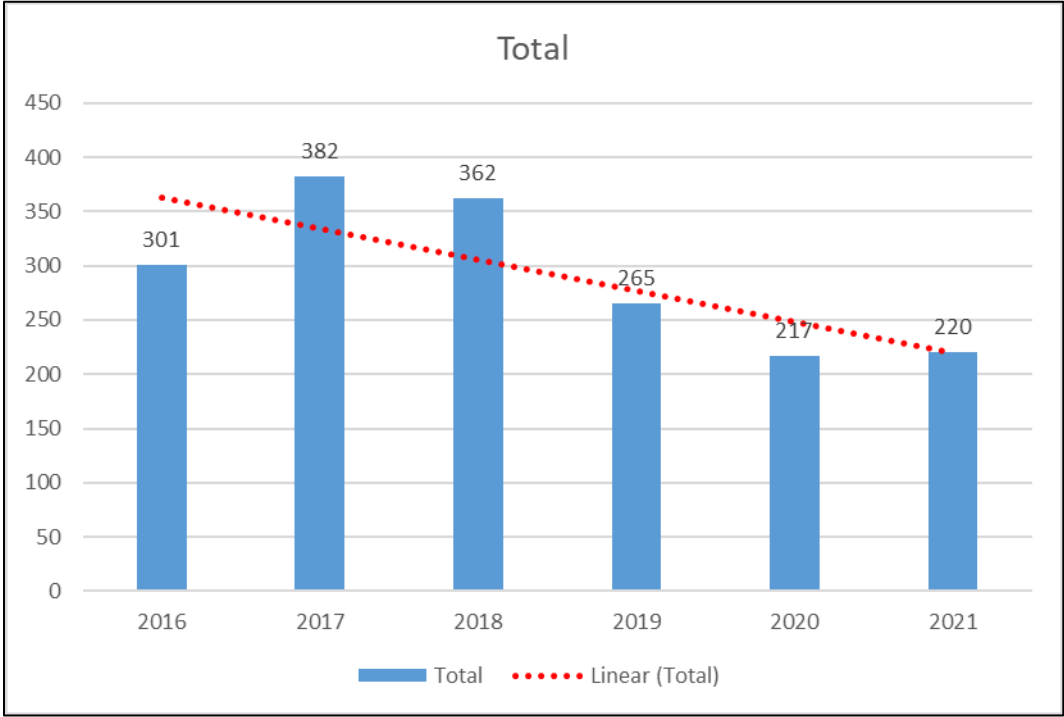


Figure 13: Bamfield, Beaver Creek and Sproat Lake - All Incidents, 1 January 2016 to 24 October 2021

All three Departments provide some level of first responder emergency medical services (“FMR”). This decline in total call numbers since 2018 is likely driven, in part, by dispatch changes made by BCEHS. The calls passed to the fire services were initially curtailed under a revised “Response Allocation Protocol” (the “RAP”). The RAP then was replaced in April 2019 by a new “Clinical Response Model,” which resulted in even fewer medical calls being directed to fire departments. These changes were then amplified starting in late March of 2020, when BCEHS significantly curtailed FMR calls in reaction to the COVID pandemic.

That COVID-related policy has now been reversed, and each of the Departments has shown an uptick in its overall call volumes in 2021.

15.2.2 Bamfield

Of the three Departments, Bamfield has the lowest number of total incidents (154) which are displayed in Figure 14. The number of responses is quite steady but given the 2021 data is for a partial year, their total for 2021 may be the second highest over the six-year period.

It should be noted that Bamfield has a more limited number of incident types to which it responds – so, for example, it does not provide vehicle extrication or any other specialty services, beyond some FMR.

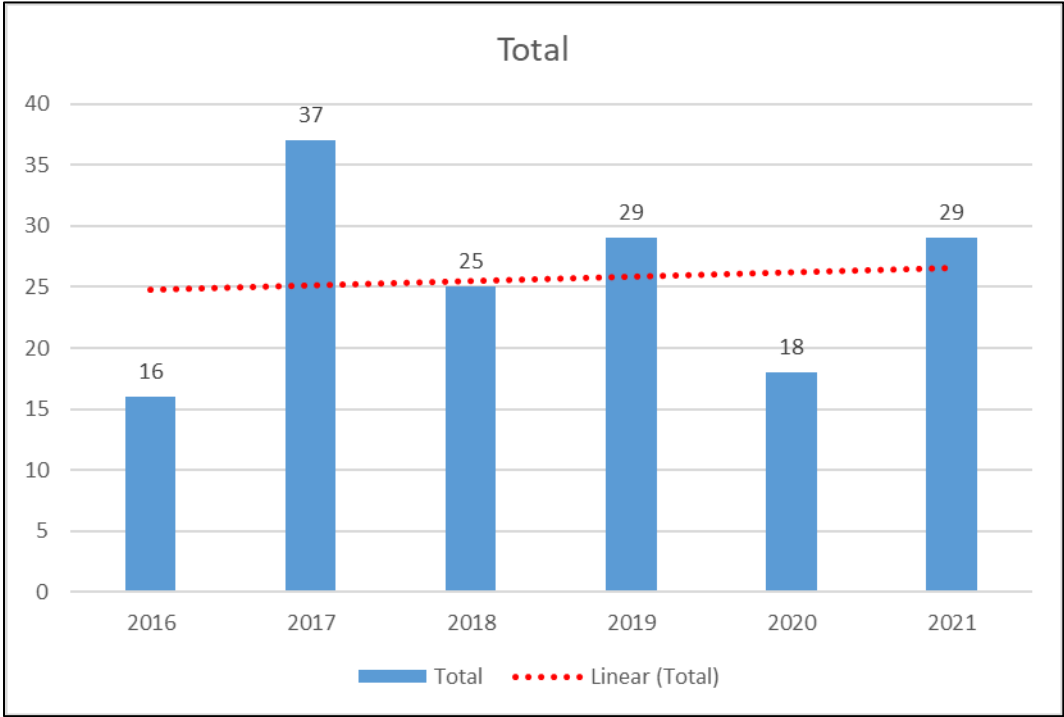


Figure 14: Bamfield - All Incidents, 1 January 2016 to 24 October 2021

15.2.3 Beaver Creek

Beaver Creek has the highest number of responses at 905 for the period being reviewed. These are illustrated in Figure 15 and show a steep decline from the peak in 2017 and 2018.

2020 and 2021 appear to be trending flat but with about 9 weeks remaining in 2021 it can be expected the total for the year may approach 125 or 130, trending back towards its 2019 levels.

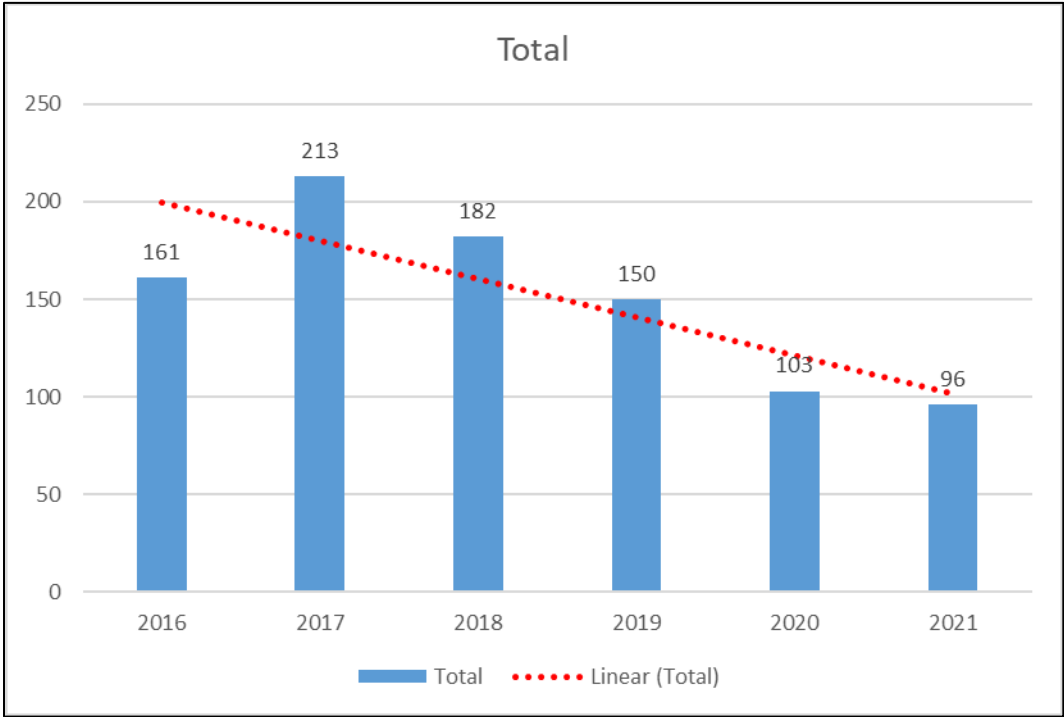


Figure 15: Beaver Creek - All Incidents, 1 January 2016 to 24 October 2021

15.2.4 Sproat Lake

Sproat Lake has responded to a total of 688 incidents of all types from 2016 to October 2021. The peak year was 2018, with a significant decline in 2019 and similarly low number of responses in 2020. The total number of calls for 2021 is increasing compared to the prior two years, and may well approach 115 calls for the year.

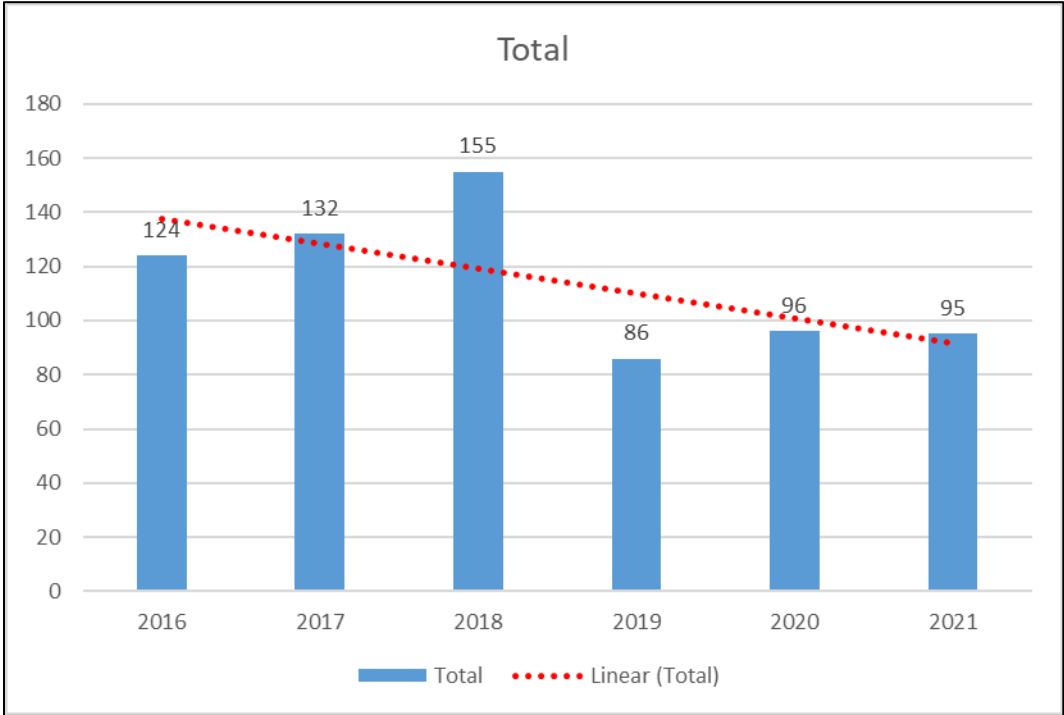


Figure 16: Sproat Lake - All Incidents, 1 January 2016 to 24 October 2021

15.2.5 Summary

Response data for the three fire Departments reflect higher incident responses in 2017 and 2018 which then trended lower. As noted, some part of the drop in call volumes likely reflects the effect of BCEHS dispatch changes as well as COVID-19 (and reduced tourist volumes in 2020 and 2021). For all three Departments the data for 2021 cover 82% of the year and when projected for a full year suggest that incident responses are increasing from the prior year.

15.3 Temporal Analysis - By Month

15.3.1 Bamfield, Beaver Creek and Sproat Lake

Responses by month for each Department are shown in Figure 17 with the busiest months being August, September and July in that order.

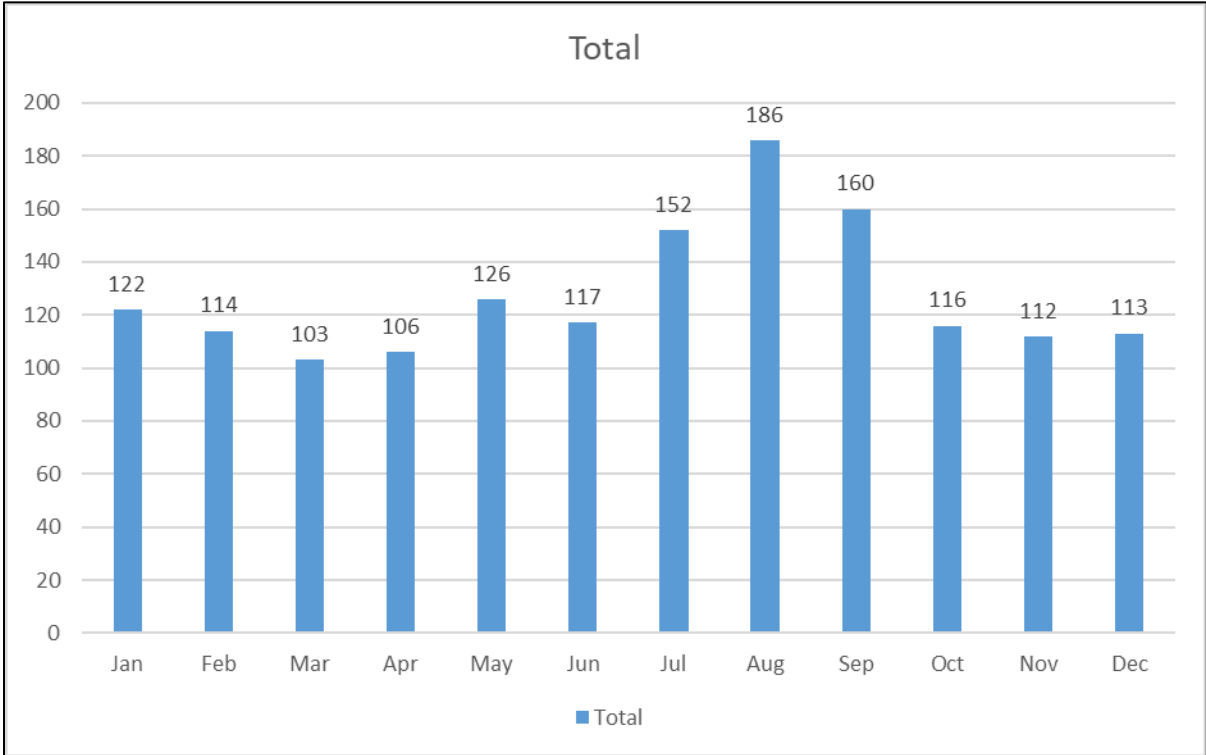


Figure 17: Bamfield, Beaver Creek and Sproat Lake - All Incidents, 1 January 2016 to 31 December 2020

15.3.2 Bamfield

Responses by month for Bamfield are illustrated in Figure 18 with July and August three times greater than February, May, October and December. The peak activity in the summer months is likely due to the influx of tourists, with incidents during non-summer months attributable to the small local resident population.

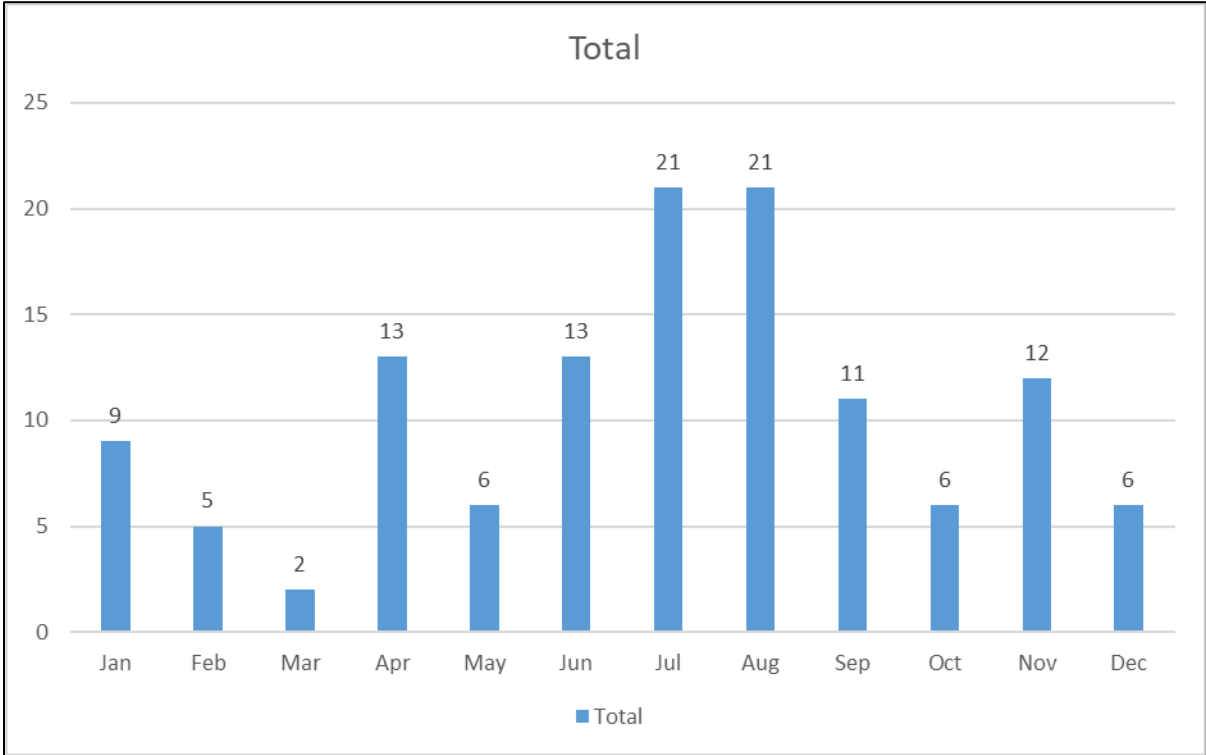


Figure 18: Bamfield, all Incident Types 1 January 2016 to 31 December 2020.

15.3.3 Beaver Creek

Responses by month for Beaver Creek as shown in Figure 19 and this shows much less of a variance between summer months and the remainder of the year. This would suggest that, of the three areas, Beaver Creek may have the most stable population with less variance over 12 months than either Bamfield or Sproat Lake.

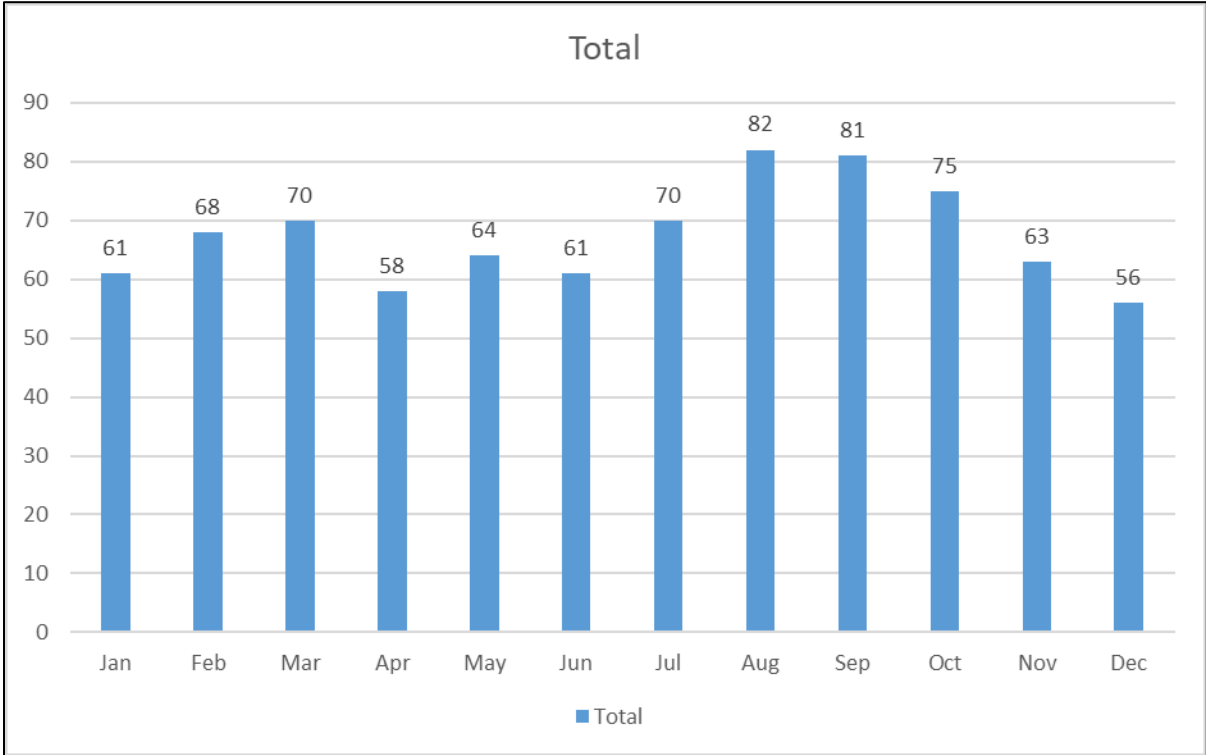


Figure 19: Beaver Creek, all Incident Types 1 January 2016 to 31 December 2020.

15.3.4 Sproat Lake

Responses by month for Sproat Lake as shown in Figure 20 and this shows the summer season-weighting similar to Bamfield. July, August and September are the busiest months, at levels more than double March, April, October and November.

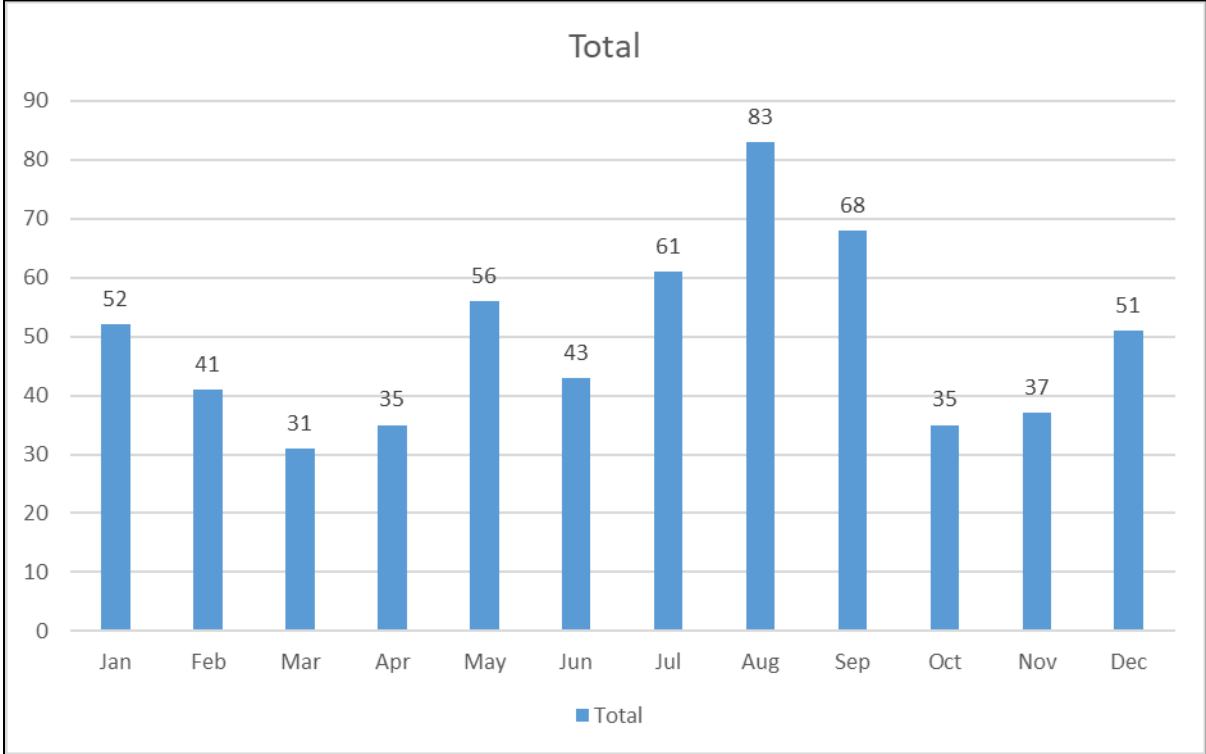


Figure 20: Sproat Lake, all Incident Types 1 January 2016 to 31 December 2020.

15.3.5 Summary

Each of the three Departments respond to their highest number of incidents during the summer months with Bamfield and Sproat Lake showing the greatest variance compared with the quieter spring/fall/winter months.

15.4 Temporal Analysis - By Day

15.4.1 Bamfield, Beaver Creek and Sproat Lake

Responses by day of the week for the three departments is shown in Figure 21 with the highest incident volume on Saturday and Sunday.

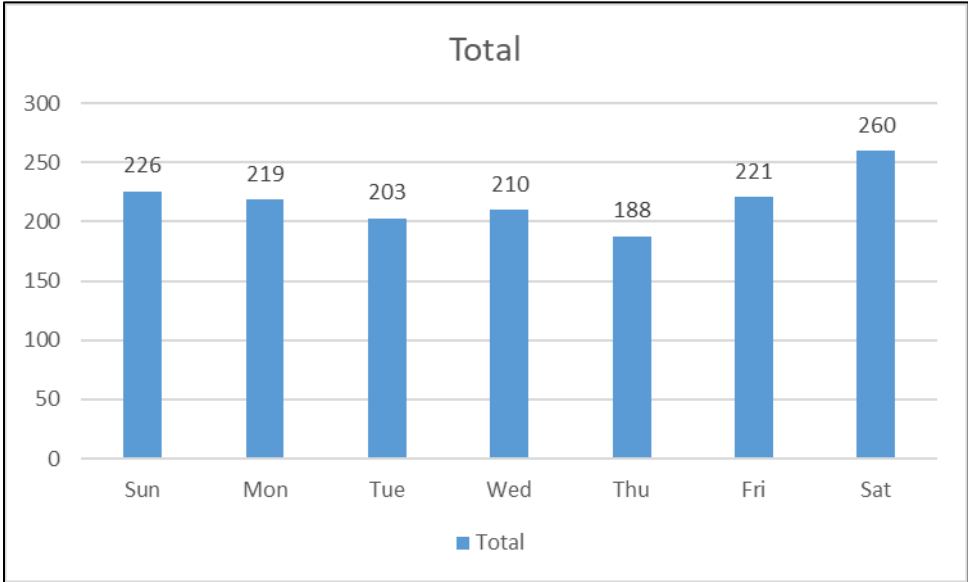


Figure 21: Bamfield, Beaver Creek and Sproat Lake, all Incident Types 1 January 2016 to 31 December 2020.

15.4.2 Bamfield

Responses by day of the week for Bamfield are shown in Figure 22 with the busiest day being Friday with a call volume double that of Tuesday, Wednesday and Saturday.

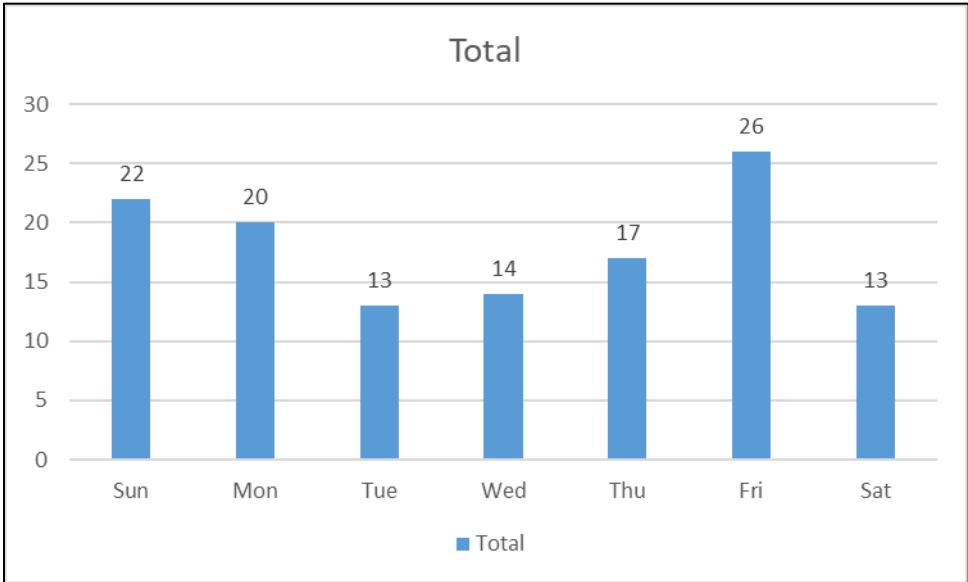


Figure 22: Bamfield, all Incident Types 1 January 2016 to 31 December 2020.

15.4.3 Beaver Creek

Response by day of the week for Beaver Creek (Figure 23) show very little variance with Saturday, Tuesday and Wednesday having quite similar event totals.

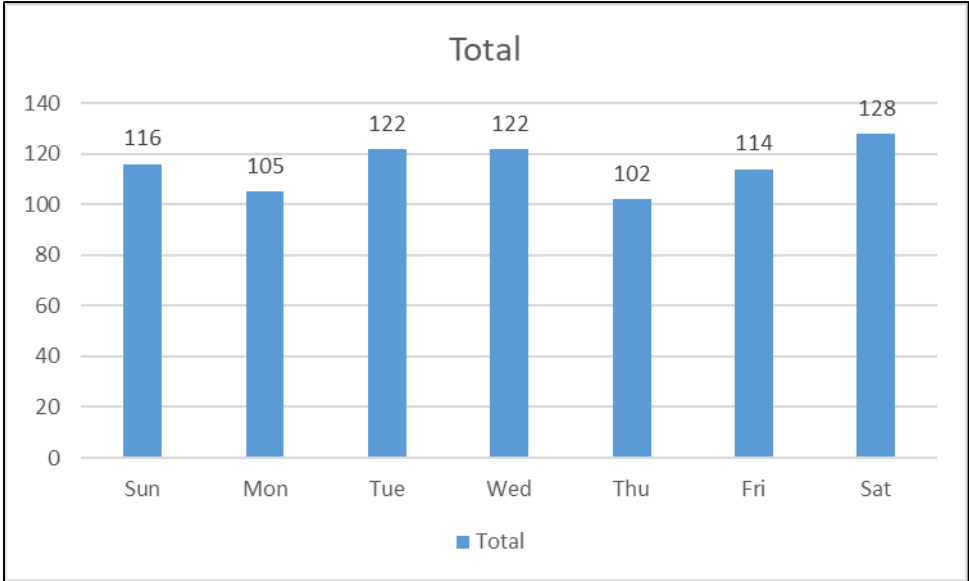


Figure 23: Beaver Creek, all Incident Types 1 January 2016 to 31 December 2020.

15.4.4 Sproat Lake

Responses by day of the week for Sproat Lake show a peak on Saturday (Figure 24) which is nearly double the total for Tuesday through Thursday.

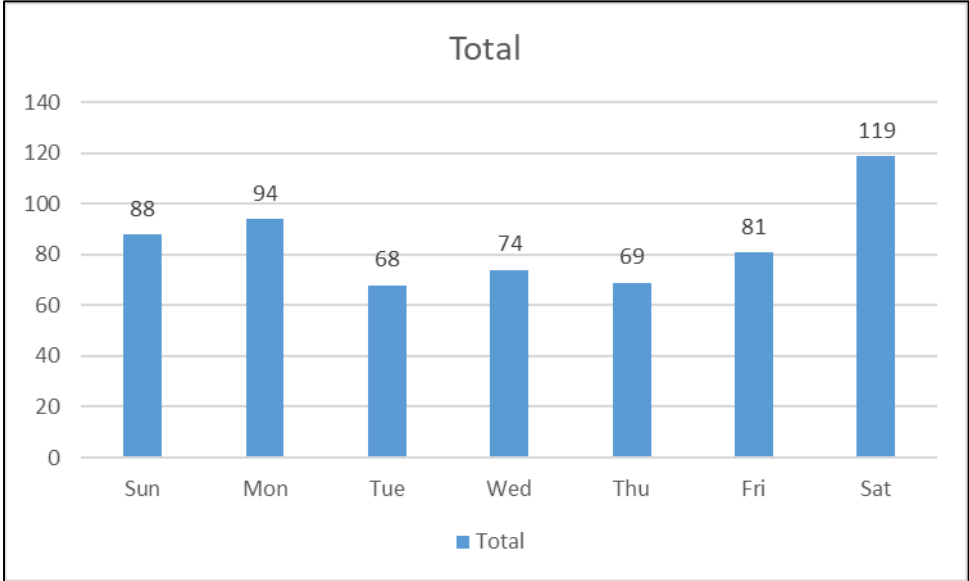


Figure 24: Sproat Lake, all Incident Types 1 January 2016 to 31 December 2020.

15.4.5 Summary

Responses by day of the week for Bamfield and Sproat Lake show significantly higher event volume at the end of the week, which is not uncommon. Conversely, Beaver Creek’s data show the least variability by weekend compared to weekday.

15.5 Temporal Analysis - By Hour

15.5.1 Bamfield, Beaver Creek and Sproat Lake

Responses by hour of the day for the three Departments are shown in Figure 25 with a clear peak of incidents during the hours from 17:00 to 18:59. The curve of the data for these departments reflects many fire departments in the province with peaks in the late afternoon, with a significant decrease of responses after midnight.

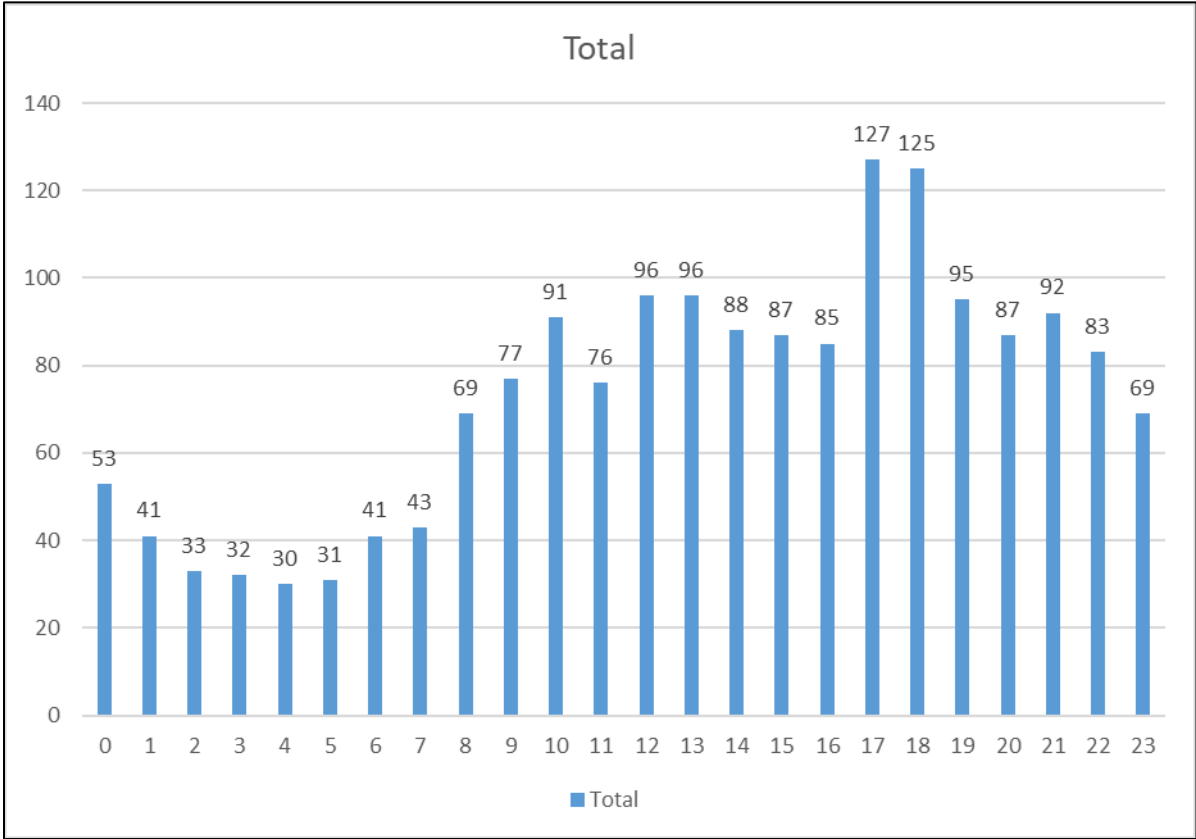


Figure 25: All Departments, 1 January 2016 to 24 October 2021

15.5.2 Bamfield

Responses by hour for Bamfield are shown in Figure 26, with the peak hours being 17:00 followed by 09:00. The data for Bamfield however have an anomaly, with an increase in event volume after midnight with the hour commencing at 01:00 being the third highest hourly total and tied with 12:00, 14:00, 16:00 and 18:00.

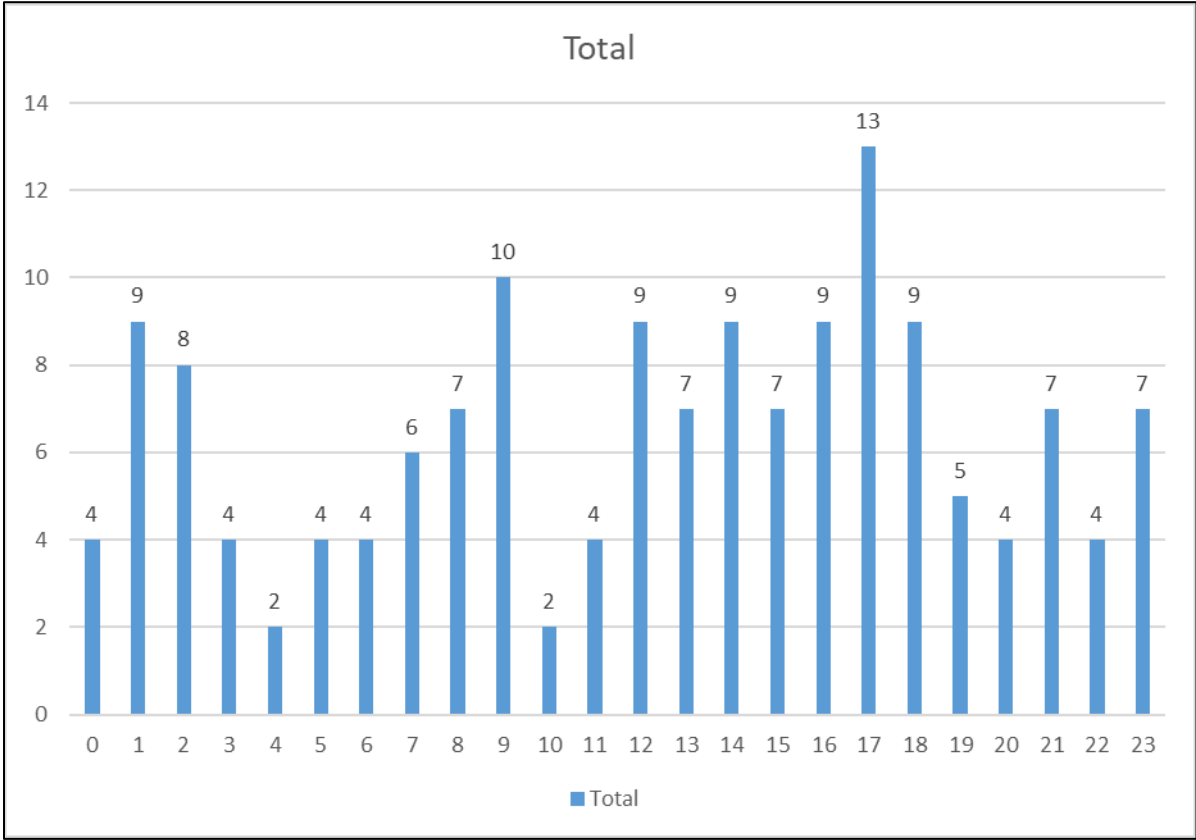


Figure 26: Bamfield, 1 January 2016 to 24 October 2021

15.5.3 Beaver Creek

The data for Beaver Creek by hour are shown in Figure 27, with a significant peak at 18:00 and the second busiest hour at 17:00. Beyond that, the hours from 08:00 to 24:00 show very steady event volume, then from 01:00 to 07:00 the number of incidents drops but is very consistent.

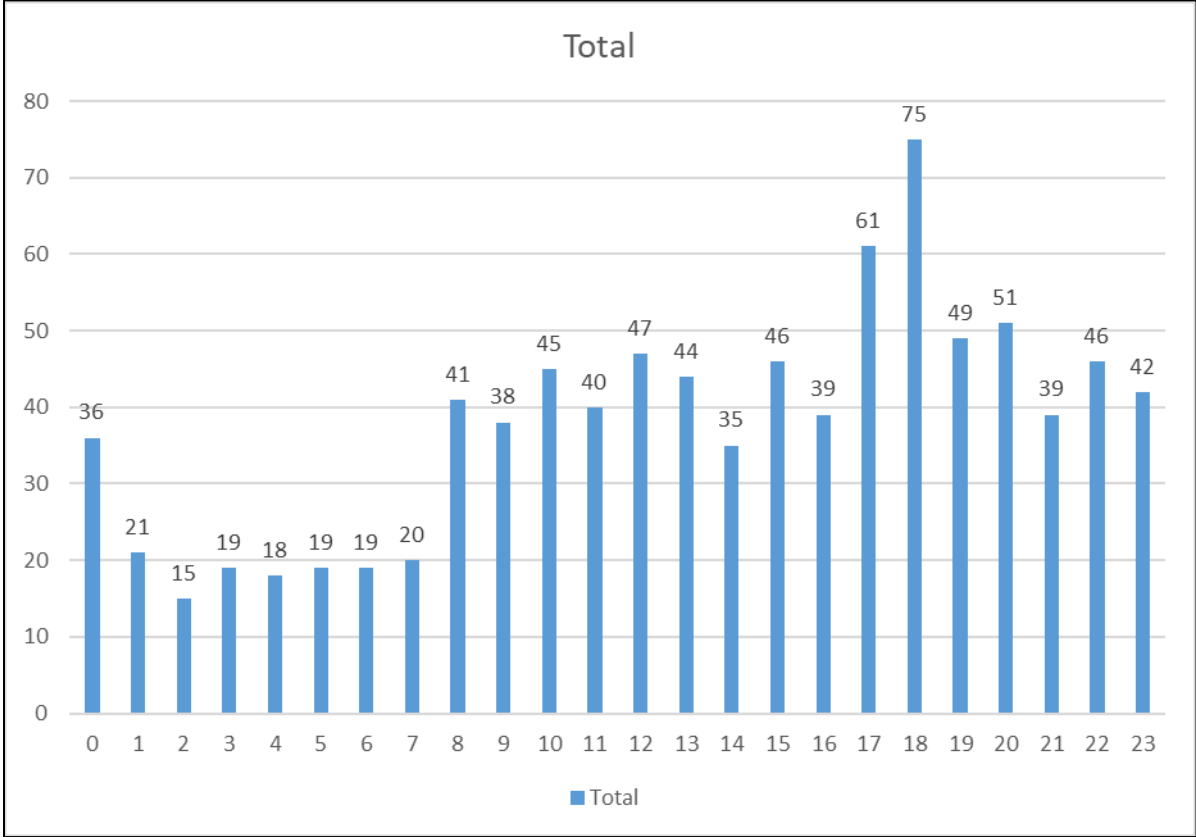


Figure 27: Beaver Creek, 1 January 2016 to 24 October 2021

15.5.4 Sproat Lake

Responses by hour for Sproat Lake are shown in Figure 28 and this 'curve' of responses from 09:00 to mid-evening is in our experience quite typical of many fire departments in the province.

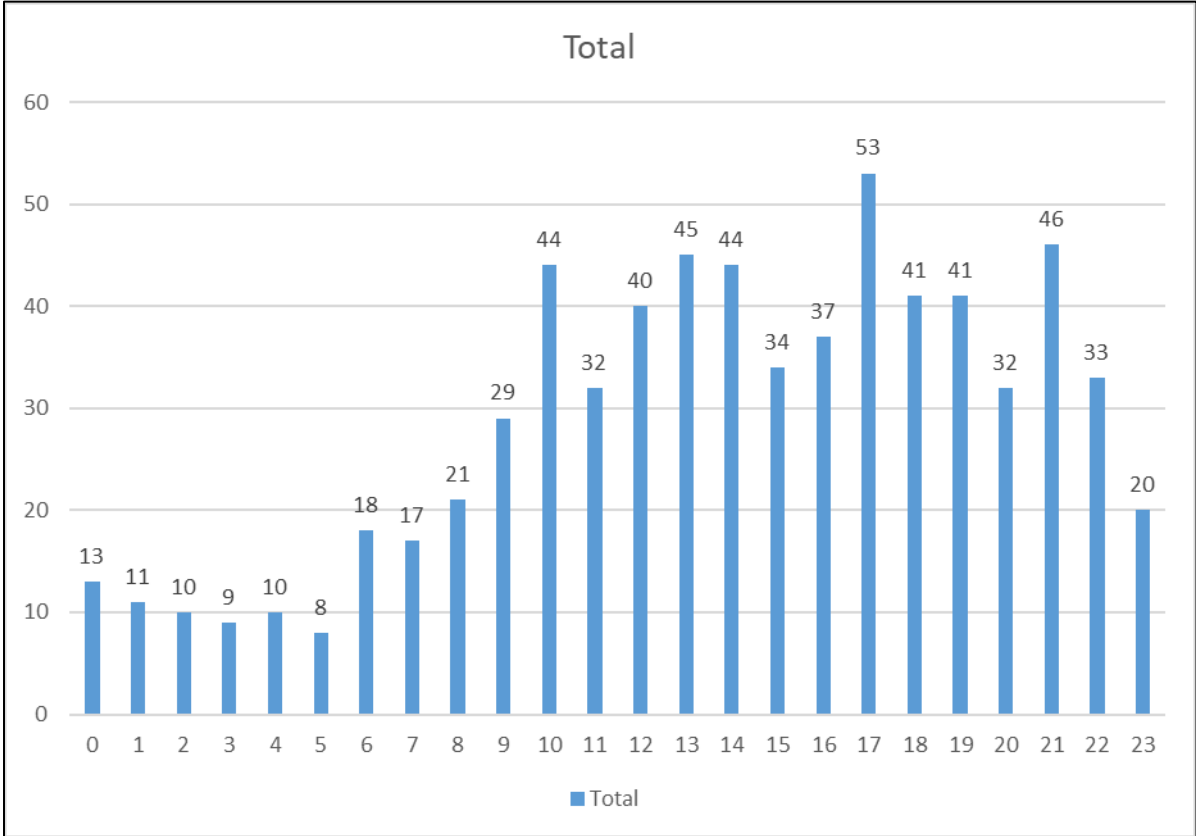


Figure 28: Sproat Lake, 1 January 2016 to 24 October 2021

15.5.5 Summary

Response by hour of the day for the three Departments shows some quite distinct variability with Bamfield being the more unique of the group. For each, the periods of peak call volume probably coincide with the times when most of the volunteer firefighters are at work; conversely the hours with peak responses by volunteers may be for times with the lowest number of incidents.

15.6 Temporal Analysis - By Day and by Hour

15.6.1 Bamfield, Beaver Creek and Sproat Lake

Responses by day of the week and hour are shown in Figure 29 with Friday, Saturday and Sunday the busiest days and with two clusters of busiest hours, the highest being 17:00 and 18:00, the second highest being 12:00 and 13:00.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Sun	8	7	12	6	4	6	12	11	11	11	13	8	19	12	16	11	12	24	23	9	10	10	13	3	271
Mon	9	2	3	4	2	4	8	7	8	9	19	17	8	16	13	14	19	15	11	11	11	11	14	8	243
Tue	8	4	5	4	4	5		7	10	6	16	14	6	10	12	13	12	27	18	16	11	14	11	7	240
Wed	4	12	2	7	3	3	5	4	12	12	11	10	16	16	10	8	7	14	16	18	12	13	9	12	236
Thu	9	4	4	1	5	2	5	3	10	11	9	10	14	14	6	11	8	14	12	15	15	14	10	6	212
Fri	9	7	5	4	9	4	3	5	10	15	13	7	11	12	12	8	9	16	27	11	12	12	14	16	251
Sat	6	5	2	6	3	7	8	6	8	13	10	10	22	16	19	22	18	17	18	15	16	18	12	17	294
Total	53	41	33	32	30	31	41	43	69	77	91	76	96	96	88	87	85	127	125	95	87	92	83	69	1,747

Figure 29: Bamfield, Beaver Creek and Sproat Lake, all Incidents, 1 January 2016 to 24 October 2021. The three busiest days and hours are highlighted.

Within this data the two busiest hours were 17:00 on Tuesday and 18:00 on Friday each with 27 incidents. For the Departments, this information may be useful in determining which day of the week is better for regular practice. It suggests, for example, Monday might have less interruptions. It may also suggest that if one day on the weekend is used for extended training that Sunday may be preferable.

15.6.2 Bamfield

Bamfield's responses by day and by hour are shown in Figure 30 showing the busiest and quietest hours with Friday the busiest day.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Sun		4	4	1			1	1	1				1		1	1	3	3	2	1	2			1	27
Mon			1	1		1	1	1	2	1	1	1			1	2	2	1	3			2			21
Tue	1	2		1	1	1			1	1		2			1	1		2			1	1	1	3	20
Wed				1		1	1		1	2			2	2	1		1	2	1			2			17
Thu	1		2		1			1		1			1	1	3	1		4	2	1	1	1	1		22
Fri	1	1	1			1		1	2	5	1	1	3	2	2		2		1	3			1		28
Sat	1	2					1	2					2	2		2	1	1				1	1	3	19
Total	4	9	8	4	2	4	4	6	7	10	2	4	9	7	9	7	9	13	9	5	4	7	4	7	154

Figure 30: Bamfield, all Incidents, 1 January 2016 to 24 October 2021. The three busiest days and hours are highlighted.

15.6.3 Beaver Creek

The data for Beaver Creek (Figure 31) show how the peak hours of 18:00, 17:00 and 19:00 vary by day of the week with the busiest single hour being from 18:00 on Fridays while Saturday is the busiest day overall.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Sun	7	3	4	3	2	3	5	5	6	8	5	3	11	8	8	6	6	10	12	5	7	4	7	1	139
Mon	4	1	1	3	1	3	4	2	4	4	10	5	4	9	4	5	13	10	4	5	8	5	3	5	117
Tue	5	2	4	3	3	3		5	7	2	9	7	6	4	4	11	4	11	11	13	5	5	8	4	136
Wed	4	11	2	5	2	2	2	2	5	6	5	6	4	9	6	4	4	8	12	9	9	6	4	8	135
Thu	6	1	1	1	3	2	4	1	6	5	3	7	8	9	2	6	4	3	5	7	7	7	9	3	110
Fri	7	2	2	3	6	3	2	2	6	5	5	5	5	2	2	4	2	9	20	4	7	5	8	9	125
Sat	3	1	1	1	1	3	2	3	7	8	8	7	9	3	9	10	6	10	11	6	8	7	7	12	143
Total	36	21	15	19	18	19	19	20	41	38	45	40	47	44	35	46	39	61	75	49	51	39	46	42	905

Figure 31: Beaver Creek, all Incidents, 1 January 2016 to 24 October 2021.

15.6.4 Sproat Lake

Responses for Sproat Lake are shown in Figure 32 with the peak hours occurring at 16:00, 21:00 and 13:00 with Saturday the busiest day.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Sun	1		4	2	2	3	6	5	4	3	8	5	7	4	7	4	3	11	9	3	1	6	6	1	105
Mon	5	1	1		1		3	4	2	4	8	11	4	7	8	7	4	4	4	6	3	4	11	3	105
Tue	2		1			1		2	2	3	7	5		6	7	1	8	14	7	3	5	8	2		84
Wed		1		1	1		2	2	6	4	6	4	10	5	3	4	2	4	3	9	3	5	5	4	84
Thu	2	3	1		1		1	1	4	5	6	3	5	4	1	4	4	7	5	7	7	6		3	80
Fri	1	4	2	1	3		1	2	2	5	7	1	3	8	8	4	5	7	6	4	5	7	5	7	98
Sat	2	2	1	5	2	4	5	1	1	5	2	3	11	11	10	10	11	6	7	9	8	10	4	2	132
Total	13	11	10	9	10	8	18	17	21	29	44	32	40	45	44	34	37	53	41	41	32	46	33	20	688

Figure 32: Sproat Lake, all Incidents, 1 January 2016 to 24 October 2021. The three busiest days and hours are highlighted.

15.7 Response by Incident Type

The following section reviews the types of incidents the departments respond to, based on how the call for service is coded in the CAD system.

15.7.1 Bamfield, Beaver Creek and Sproat Lake

Taken together the three departments' responses are summarized in Table 17 which shows the number of incidents and the percentage of the total. For purposes of illustration all fire types are shaded in green, all FMR, Motor Vehicle Incidents ("MVI") and all types of rescues ("Rescue") are shaded in light yellow.

Table 17: 1 January 2016 to 24 October 2021

Incident Type	Count	Percentage
FIRST RESP D	488	27.93%
DUTY OFFICER	232	13.28%
FIRST RESP C	229	13.11%
UNCODED	84	4.81%
ALARMS	73	4.18%
HYDRO TROUBLE	71	4.06%
MOTOR VEHICLE ACCIDENT	70	4.01%
FIRST RESP B	70	4.01%
MVI / EXTRICATION	69	3.95%
FIRST RESP E	59	3.38%
BEACH/BRUSH EMERG	43	2.46%
FIRST RESP ASSIST	38	2.18%
STRUCTURE FIRE	34	1.95%
RESCUE ROAD	26	1.49%
CHIMNEY FIRE	24	1.37%
FIRST RESP ASSIST D/E	23	1.32%
FIRST RESP DELAY B/C	19	1.09%
BURNING COMPLAINT	15	0.86%
MOTOR VEHICLE FIRE	15	0.86%
FIRST RESP DELAY D/E	12	0.69%
STRUCTURE SMOKE	11	0.63%
WILDLAND FIRE	9	0.52%
FIRST RESP A	9	0.52%
FIRST ALARM - C	5	0.29%
RESCUE LOW ANGLE/BCAS ASSIST	5	0.29%
STRUCTURE SMOKE (FIRE IS OUT)	3	0.17%
RESCUE MARINE	3	0.17%
FIRST ALARM - A	2	0.11%
NATURAL GAS/PROPANE EMERGENCY	2	0.11%

Incident Type	Count	Percentage
MVI PED STRUCK	2	0.11%
BEACH/BRUSH/MISC OUT EMERG	1	0.06%
RESCUE SWIFT WATER	1	0.06%
Grand Total	1,747	100.00%

15.7.2 Bamfield

Responses by incident type for Bamfield are listed in Table 18 and this shows that 122 or more than 73% of all response are for FMR, MVI or Rescue responses with one structure fire and four chimney fires from January 1, 2016.

Table 18: 1 January 2016 to 24 October 2021

Incident Type	Count	Percentage
FIRST RESP D	40	25.97%
FIRST RESP C	18	11.69%
FIRST RESP ASSIST	15	9.74%
DUTY OFFICER	14	9.09%
UNCODED	9	5.84%
FIRST RESP A	8	5.19%
FIRST RESP ASSIST D/E	8	5.19%
FIRST RESP B	8	5.19%
FIRST RESP E	8	5.19%
ALARMS	7	4.55%
CHIMNEY FIRE	4	2.60%
HYDRO TROUBLE	2	1.30%
FIRST RESP DELAY B/C	2	1.30%
RESCUE ROAD	2	1.30%
BEACH/BRUSH EMERG	2	1.30%
FIRST RESP DELAY D/E	2	1.30%
FIRST ALARM - C	1	0.65%
MOTOR VEHICLE ACCIDENT	1	0.65%
STRUCTURE FIRE	1	0.65%
MOTOR VEHICLE FIRE	1	0.65%
NATURAL GAS/PROPANE EMERGENCY	1	0.65%
Grand Total	154	100.00%

15.7.3 Beaver Creek

Responses by Beaver Creek are listed in Table 19 with 601 or over 66% FMR, MVI or Rescue with 14 chimney fires and seven structure fires.

Table 19: 1 January 2016 to 24 October 2021

Incident Type	Count	Percentage
FIRST RESP D	291	32.15%
FIRST RESP C	141	15.58%
DUTY OFFICER	115	12.71%
UNCODED	38	4.20%
FIRST RESP B	34	3.76%
FIRST RESP E	34	3.76%
MOTOR VEHICLE ACCIDENT	33	3.65%
BEACH/BRUSH EMERG	31	3.43%
HYDRO TROUBLE	27	2.98%
ALARMS	26	2.87%
STRUCTURE FIRE	20	2.21%
RESCUE ROAD	17	1.88%
CHIMNEY FIRE	14	1.55%
MVI / EXTRICATION	12	1.33%
FIRST RESP ASSIST	11	1.22%
BURNING COMPLAINT	9	0.99%
FIRST RESP DELAY D/E	8	0.88%
FIRST RESP ASSIST D/E	8	0.88%
FIRST RESP DELAY B/C	8	0.88%
STRUCTURE SMOKE	7	0.77%
MOTOR VEHICLE FIRE	5	0.55%
WILDLAND FIRE	4	0.44%
STRUCTURE SMOKE (FIRE IS OUT)	3	0.33%
FIRST ALARM - C	3	0.33%
RESCUE LOW ANGLE/BCAS ASSIST	2	0.22%
RESCUE SWIFT WATER	1	0.11%
FIRST ALARM - A	1	0.11%
MVI PED STRUCK	1	0.11%
NATURAL GAS/PROPANE EMERGENCY	1	0.11%
Grand Total	905	100.00%

15.7.4 Sproat Lake

Total responses for Sproat Lake are listed in Table 20, with 410 or 59% being FMR, MVI or Rescue with 13 structure fires and six chimney fires.

Table 20: 1 January 2016 to 24 October 2021

Incident Type	Count	Percentage
FIRST RESP D	157	22.82%
DUTY OFFICER	103	14.97%
FIRST RESP C	70	10.17%
MVI / EXTRICATION	57	8.28%
HYDRO TROUBLE	42	6.10%
ALARMS	40	5.81%
UNCODED	37	5.38%
MOTOR VEHICLE ACCIDENT	36	5.23%
FIRST RESP B	28	4.07%
FIRST RESP E	17	2.47%
STRUCTURE FIRE	13	1.89%
FIRST RESP ASSIST	12	1.74%
BEACH/BRUSH EMERG	10	1.45%
FIRST RESP DELAY B/C	9	1.31%
MOTOR VEHICLE FIRE	9	1.31%
RESCUE ROAD	7	1.02%
FIRST RESP ASSIST D/E	7	1.02%
CHIMNEY FIRE	6	0.87%
BURNING COMPLAINT	6	0.87%
WILDLAND FIRE	5	0.73%
STRUCTURE SMOKE	4	0.58%
RESCUE MARINE	3	0.44%
RESCUE LOW ANGLE/BCAS ASSIST	3	0.44%
FIRST RESP DELAY D/E	2	0.29%
FIRST ALARM - C	1	0.15%
FIRST RESP A	1	0.15%
FIRST ALARM - A	1	0.15%
MVI PED STRUCK	1	0.15%
BEACH/BRUSH/MISC OUT EMERG	1	0.15%
Grand Total	688	100.00%

15.7.5 Summary

The primary response types for each department are FMR, MVI and Rescue. These represent 72.7% of responses for Bamfield, 66.4% for Beaver Creek and 59.6% for Sproat Lake. In terms of the total of all fire related incidents, they represent 5.8% for Bamfield, 10.7% for Beaver Creek and 8% for Sproat Lake.

The remaining incident types are alarms ringing, reported hydro problems, burning complaints and inquiries of the duty officer.

15.8 Spatial Analysis

Response data for the departments includes a municipal address as well as an x/y coordinate and these can be used to spatially plot where in each jurisdiction incidents occur¹²¹.

15.8.1 Bamfield

The locations for all incidents Bamfield responded to are shown in Figure 33.

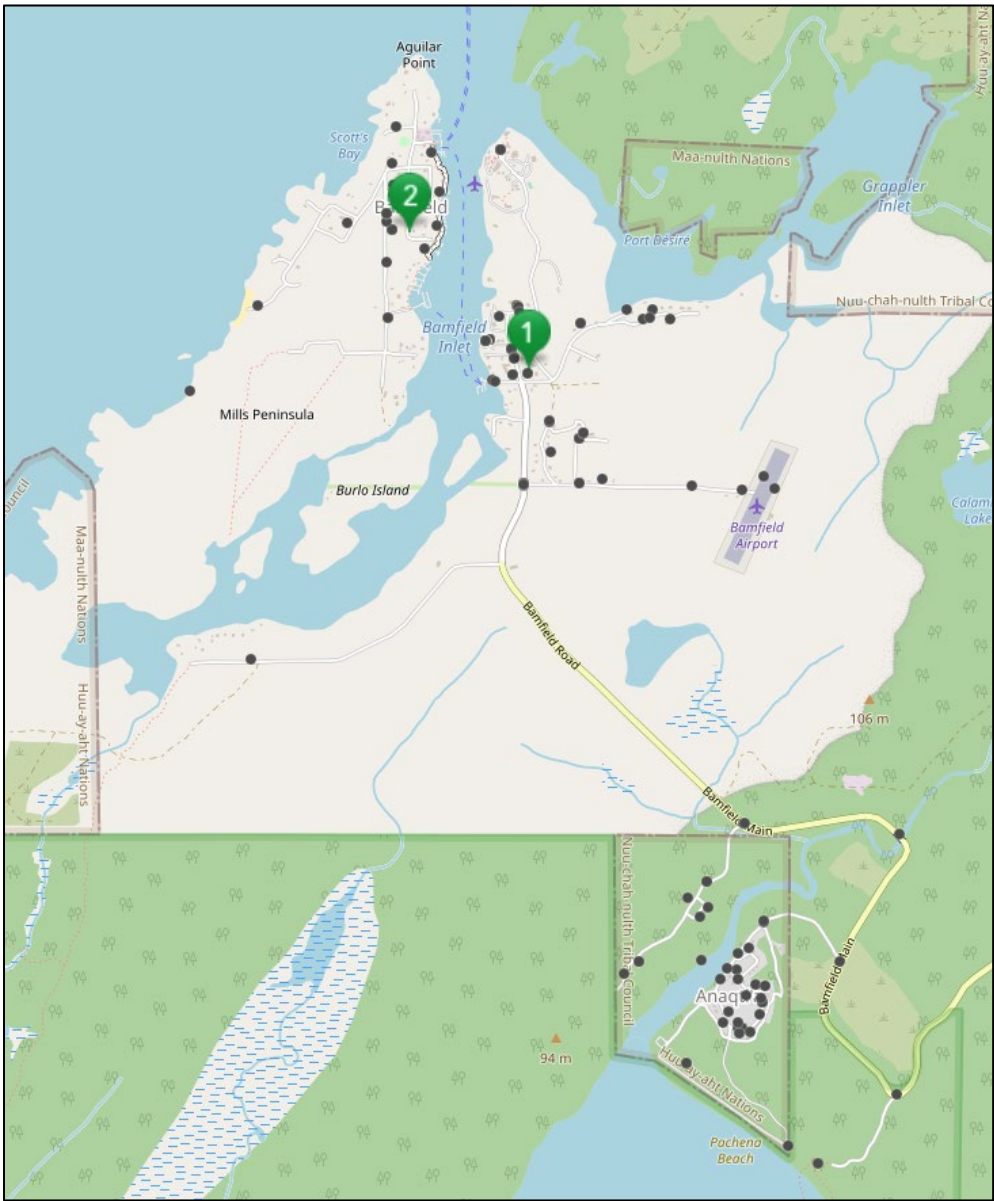


Figure 33: Bamfield, all Incidents. Location of Hall 1 and Hall 2 shown.

¹²¹ The x/y data are plotted using ESRI ArcGIS online.

The locations of the five structure fires which includes chimney fires are shown in Figure 34.

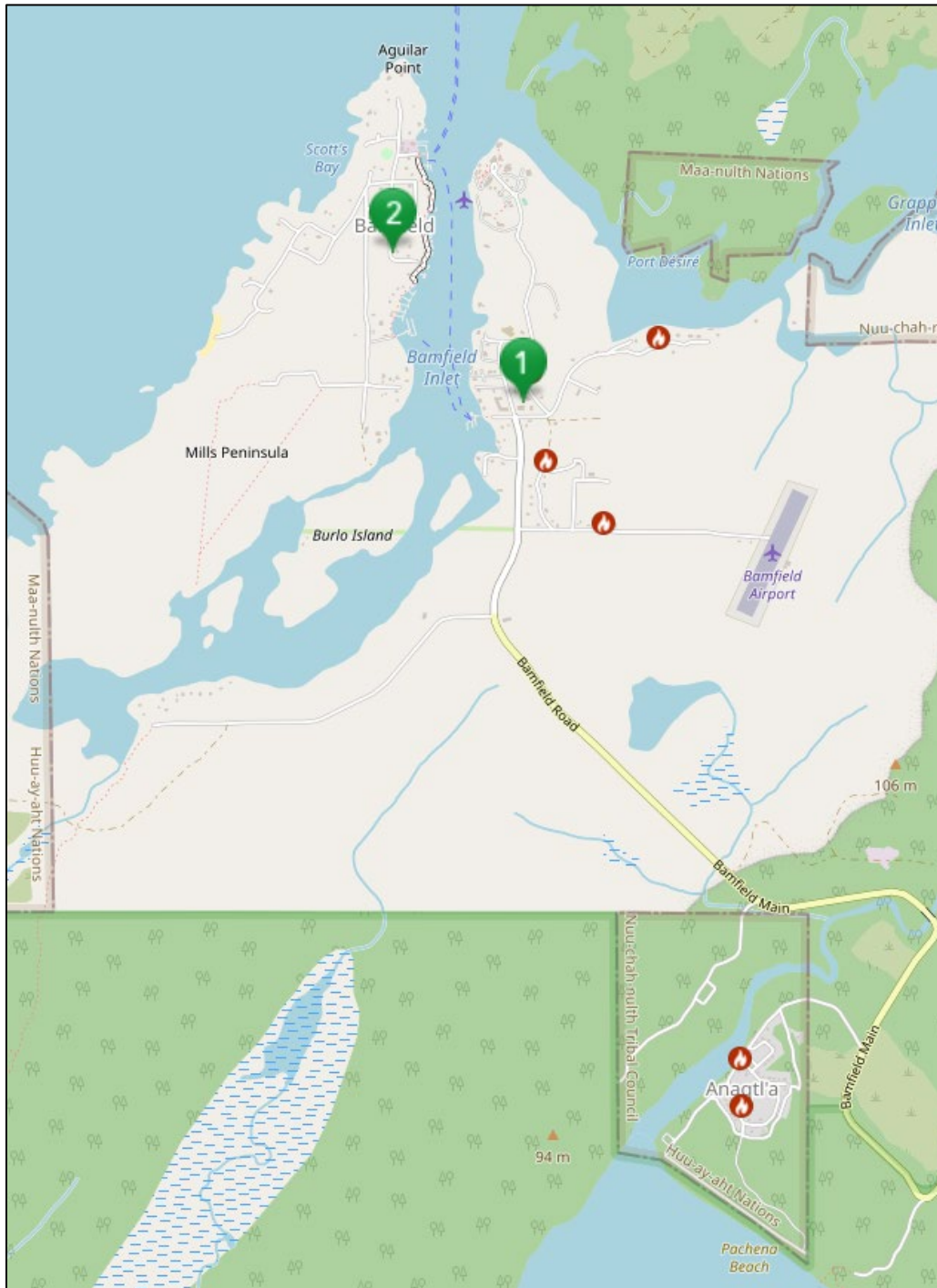


Figure 34: Bamfield, all Fire Incidents

15.8.2 Beaver Creek

The locations of all incidents in Beaver Creek and its northern response area are shown in Figure 35.

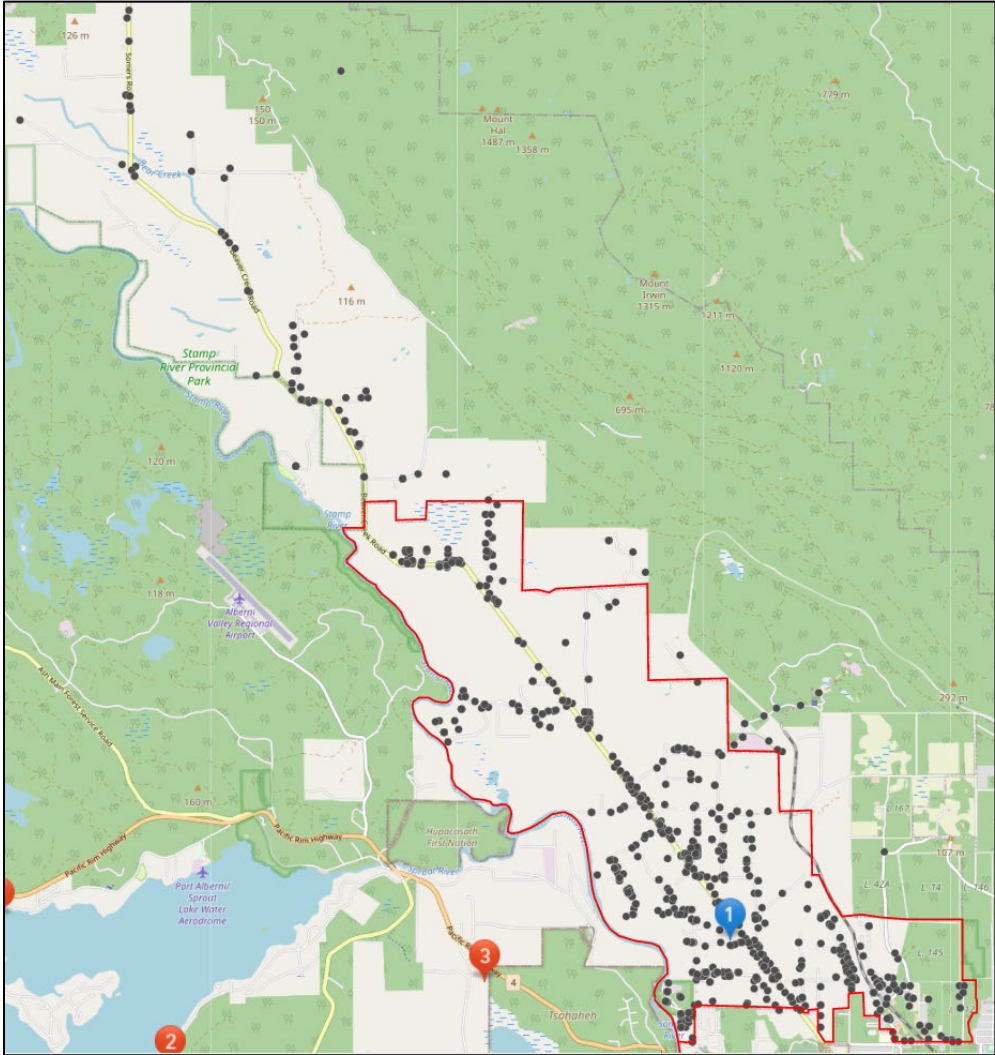


Figure 35: Beaver Creek, all Incidents. Location of Beaver Creek Hall 1 shown in Blue, Sprout Lake Halls in Red.

The locations of all fires reported in structures are shown in Figure 36.

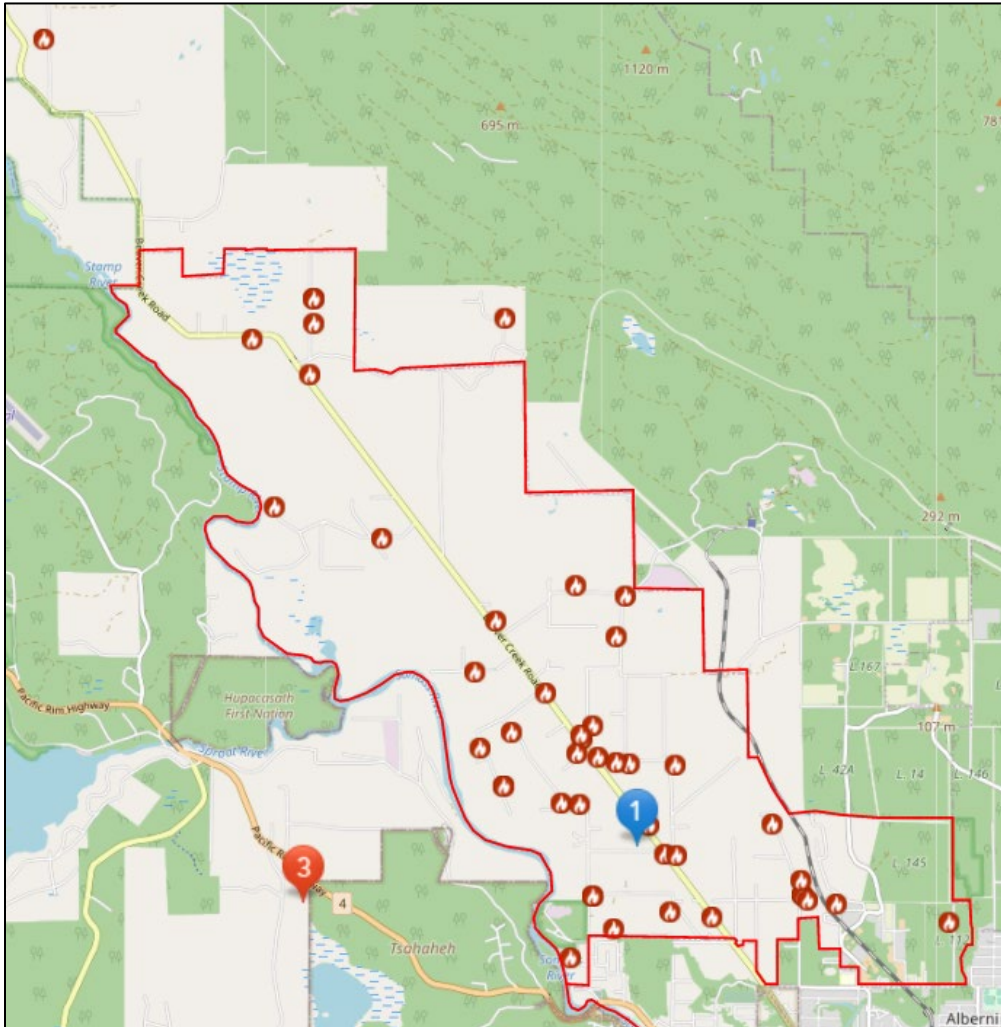


Figure 36: Beaver Creek all Fire Incidents

15.8.3 Sproat Lake

The locations of all incidents responded to in the Sproat Lake fire protection area are shown in Figure 37.

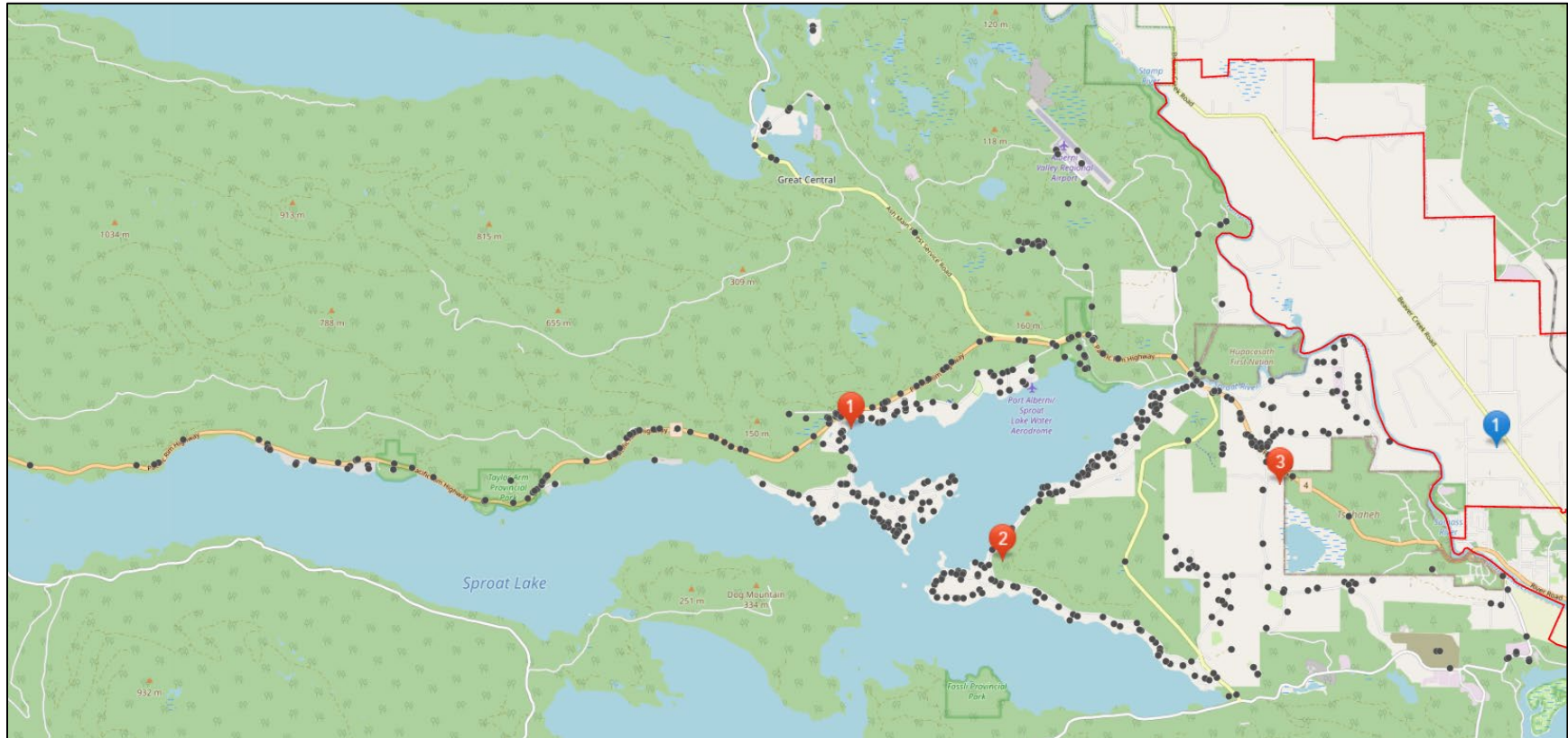


Figure 37: Sproat Lake, all Incidents.

Figure 38 shows the locations of all fires reported in structures in Sproat Lake.

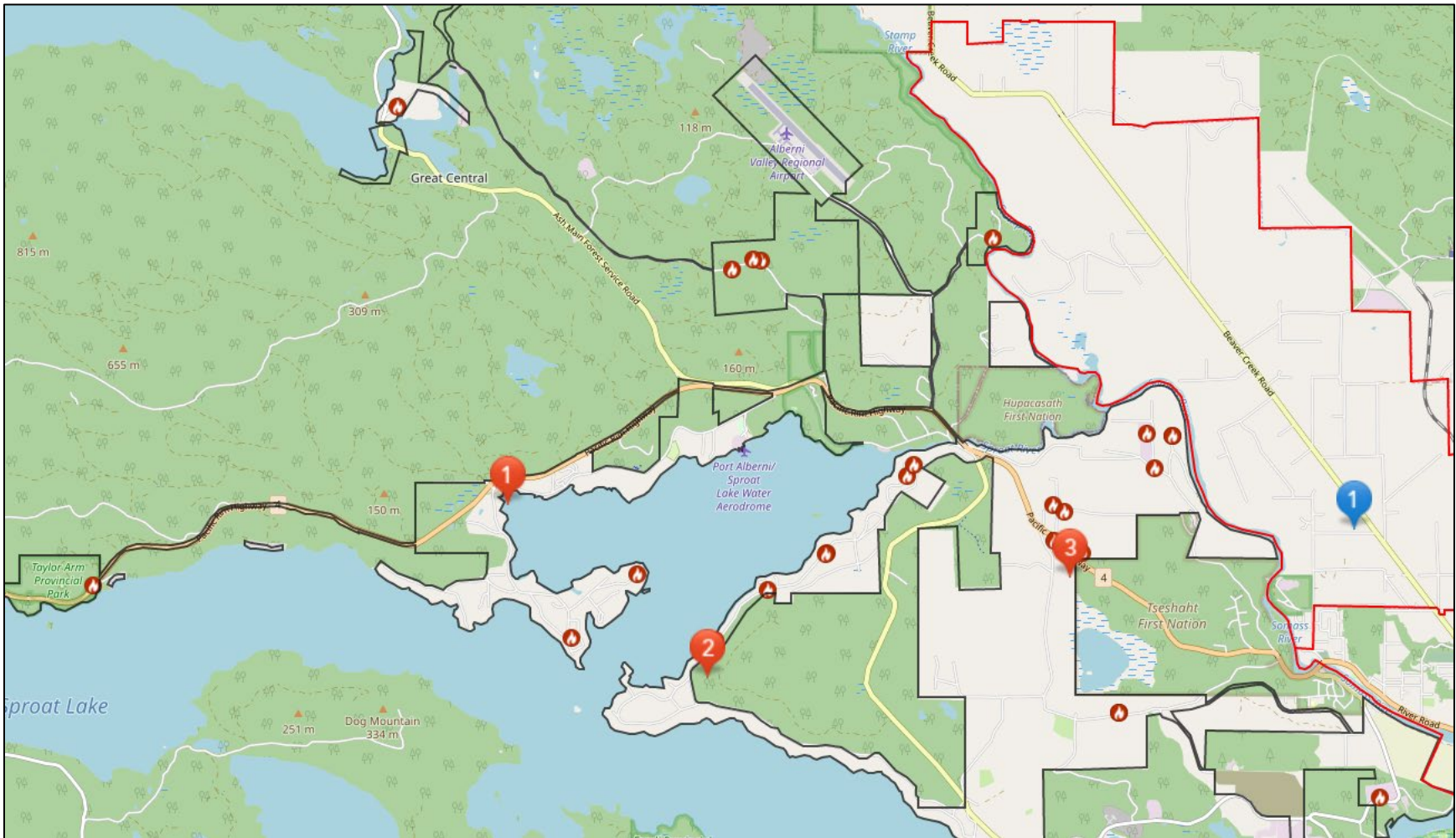


Figure 38: Sproat Lake all Fire Incidents

15.8.4 Beaver Creek and Sproat Lake

Beaver Creek and Sproat Lake share a common boundary and their total responses are shown in Figure 39 and easily illustrate the advantages that accrue in terms of automatic aid for agreed incident types.

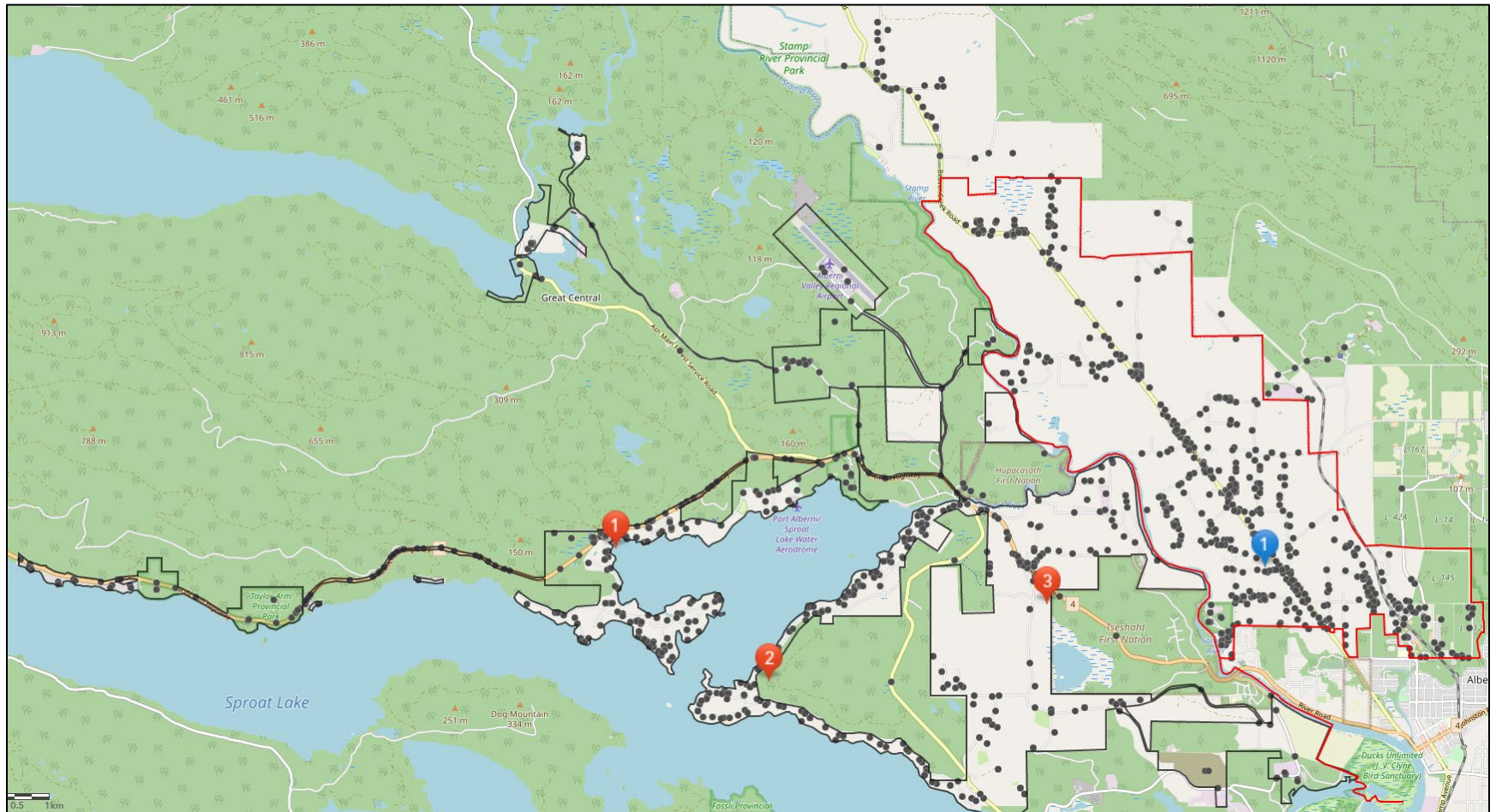


Figure 39: Beaver Creek and Sproat Lake all Incidents

Figure 40 illustrates the locations of all fires reported in structures for both departments, along with their fire halls. Given that structure fires require the largest amount of fireground personnel, the advantages of automatic aid are apparent.

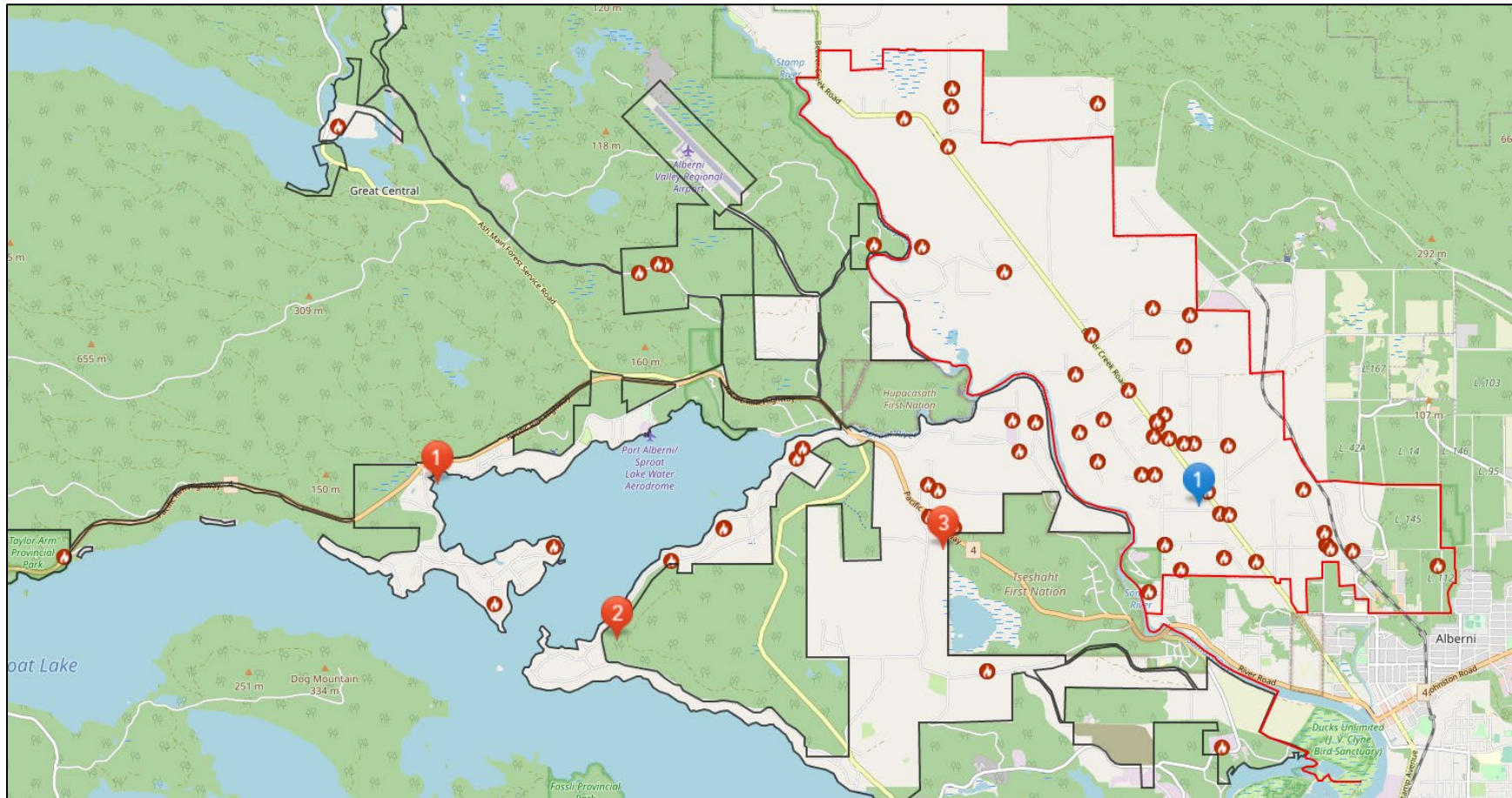


Figure 40: Beaver Creek and Sproat Lake all Fire Incidents

15.8.5 Summary

Total incidents and fires are widely distributed within each Department's response area. In terms of Beaver Creek and Sproat Lake, their ability to provide support for each is significant given they are adjacent and part of a sub-regional automatic aid model. In the case of Bamfield their responses are relatively evenly balanced between their primary area and the First Nation for which they provide service.

16. Benchmark Survey

As part of the review, a benchmark survey was distributed to three regional districts (Cowichan Valley, Comox Valley and Nanaimo) to obtain information on the fire departments in their region that are not overseen by a municipality or an improvement district. The ACRD Departments were also surveyed for comparison to these peers. The results of the survey were tabulated to understand the scope of administrative support for fire departments that is required in comparable regional districts. A sample of the questionnaire is found at Appendix 5. The regional districts to be surveyed as benchmarks were identified in consultation with the ACRD.

16.1 Population Served

Table 21 below provides the population detail for the fire departments surveyed. The total population in the fire protection areas¹²² in the benchmark regional districts ranged from 12,904 to 21,151 with the average being 16,202.

Table 21: Population Served in Fire Protection Areas

Regional District	Benchmark Department	Population Served
Cowichan Valley	Honeymoon Bay	550
	Malahat	4,733
	Mesachie	400
	North Oyster	2,500
	Sahtlam	4,121
	Youbou	600
	Total	12,904
Comox Valley	Denman Island	1,200
	Fanny Bay	750
	Hornby Island	1,000
	Oyster River	10,000
	Union Bay	1,600
	Total	14,550
Nanaimo	Bow Horn Bay	2,750
	Coombs-Hilliers	3,530
	Dashwood	3,125
	Errington	3,086
	Extension	965
	Nanoose	7,695
	Total	21,151
Benchmark Average		16,202

¹²² Includes First Nations lands

Regional District	Benchmark Department	Population Served
Alberni-Clayoquot	Bamfield	201
	Beaver Creek	2,946
	Sproat Lake	~1,843
	Total	4,990

The three figures below depict population comparisons for the ACRD Departments with comparable departments from each regional district.

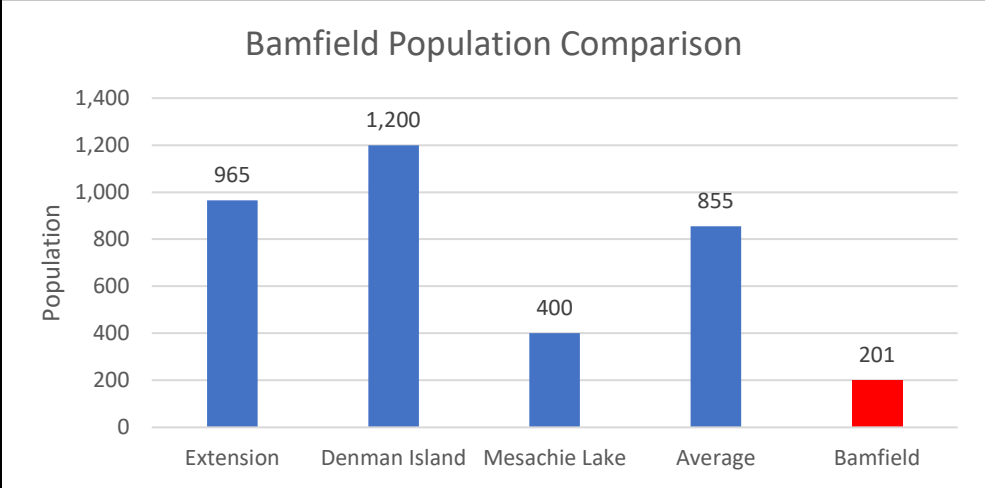


Figure 41: Bamfield Population Comparison

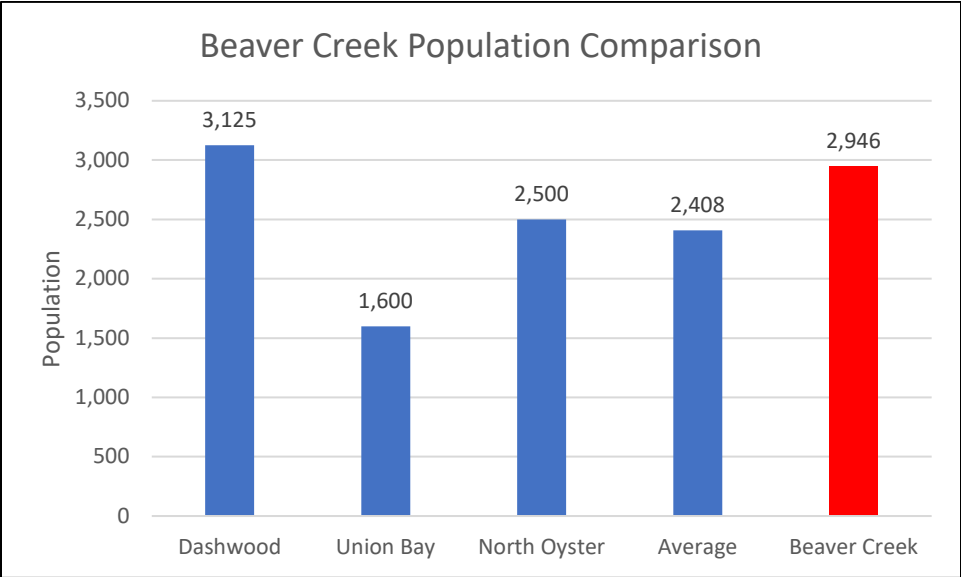


Figure 42: Beaver Creek Population Comparison

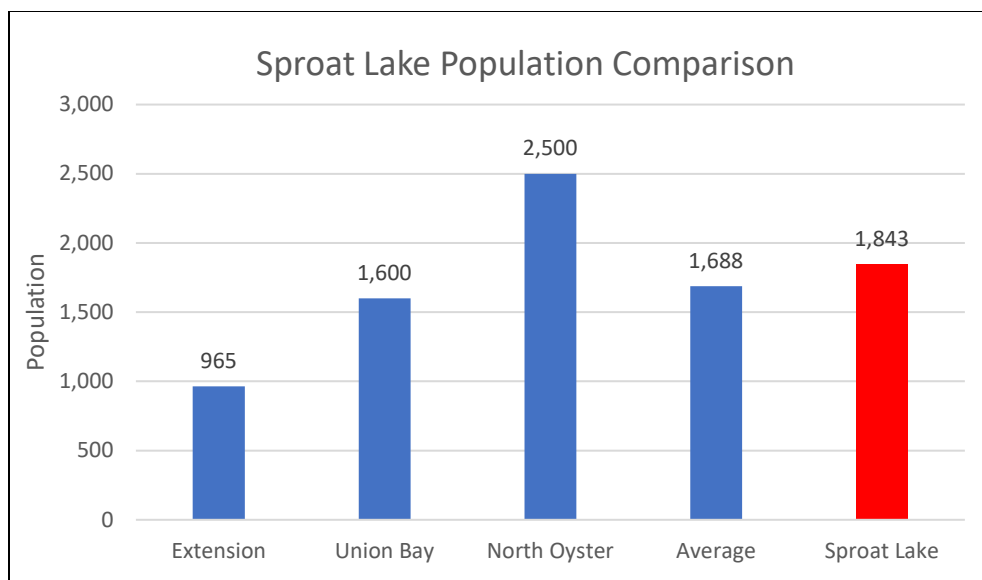


Figure 43: Sproat Lake Population Comparison

16.2 Response Areas

The fire protection response areas, inclusive of service agreements, is set out in Table 22. It should be noted that the service agreement response areas in several departments in each comparator regional district significantly raise the overall average.

Table 22: Fire Protection Response Areas

Regional District	Benchmark Department	Square Kilometers
Cowichan Valley	Honeymoon Bay	5
	Malahat	49
	Mesachie	12
	North Oyster	42
	Sahtlam	135
	Youbou	32
	Total	275.00
Comox Valley	Denman Island	50
	Fanny Bay	9
	Hornby Island	31
	Oyster River ¹²³	240.4
	Union Bay	15.08
	Total	345.48
Nanaimo	Bow Horn Bay	29.95
	Coombs-Hilliers	111.71

¹²³ Oyster River has three additional service areas that account for 174.4 square kilometres of its total area.

Regional District	Benchmark Department	Square Kilometers
	Dashwood	30.38
	Errington	60.83
	Extension	13.05
	Nanoose	118.73
	Total	364.65
	Benchmark Average	328.38
Alberni-Clayoquot	Bamfield	13.03
	Beaver Creek	24.08
	Sproat Lake	24.28
	Total	61.39

The three figures below depict response area comparisons for the ACRD Departments with comparable departments from each regional district.

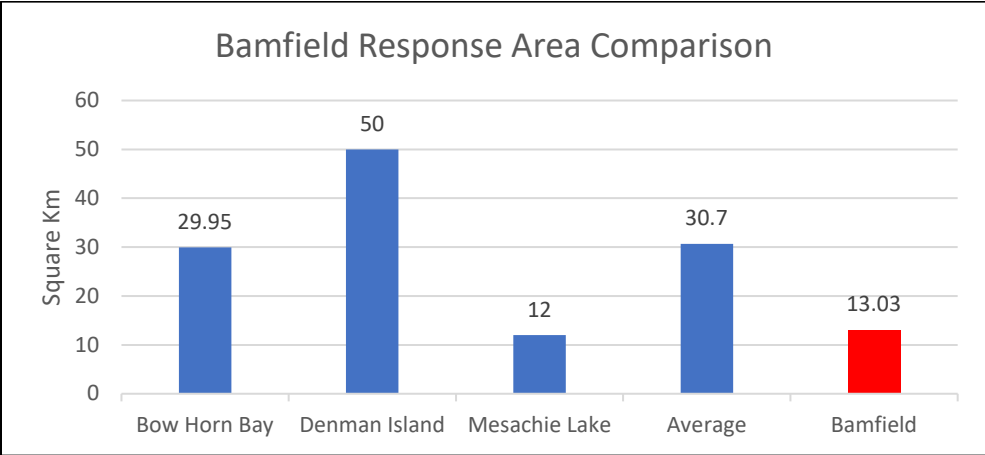


Figure 44: Bamfield Response Area Comparison

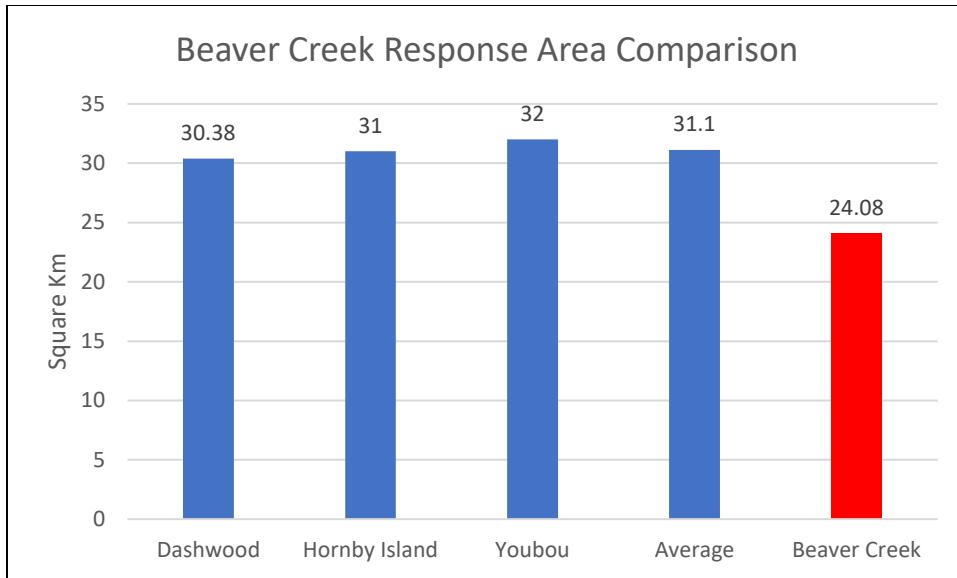


Figure 45: Beaver Creek Response Area Comparison

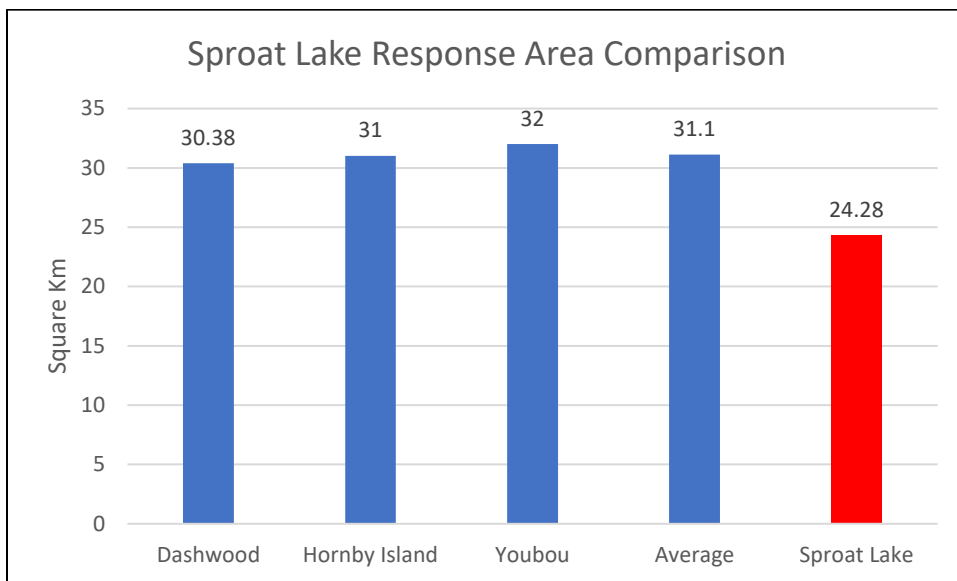


Figure 46: Sproat Lake Response Area Comparison

16.3 Type of Departments

In both the ACRD and the Cowichan Valley, all fire departments are administered by the regional district. In the Comox Valley Regional District there is one society-based fire department with the remaining four being regional district departments. In contrast, the Nanaimo Regional District has five (contracted) society-based fire departments and one regional district department.

16.4 Administrative Support

The three comparator regional districts all have a full-time fire service coordinator position and at least a part-time administrative support position to assist the coordinator. The ACRD has a 0.6 FTE as a fire service coordinator to provide support to its departments.

16.5 Level of Service

The identified levels of service across the benchmark regional districts were primarily exterior or interior with only two providing full service. The ACRD has one department in each of the three categories of service level.

Table 23: Levels of Service

Regional District	Benchmark Department	Level of Service
Cowichan Valley	Honeymoon Bay	Exterior
	Malahat	Interior
	Mesachie	Exterior
	North Oyster	Interior
	Sahtlam	Exterior
	Youbou	Exterior
Comox Valley	Denman Island	Interior
	Fanny Bay	Exterior
	Hornby Island	Interior
	Oyster River	Full
	Union Bay	Full
Nanaimo	Bow Horn Bay	Interior
	Coombs-Hilliers	Interior
	Dashwood	Interior
	Errington	Interior
	Extension	Exterior
	Nanoose	Interior
Alberni-Clayoquot	Bamfield	Exterior
	Beaver Creek	Full
	Sproat Lake	Interior

16.6 Fire Halls and Staffing

Twelve of the Departments have volunteer fire chiefs with the number of firefighters ranging from 14 to 35 (average: 22). Seven departments have full time (paid) fire chief positions with the number of firefighters in these Departments ranging from 19 to 75 (average: 36). There is one part-time (paid) fire chief with 39 firefighters. Table 24 indicates the status of the fire chief and the number of suppression firefighters in each department.

Table 24: Benchmark Department Staffing

Regional District	Benchmark Department	Fire Chief	Suppression Firefighters
Cowichan Valley	Honeymoon Bay	Volunteer	14
	Malahat	Volunteer	21
	Mesachie	Volunteer	20
	North Oyster	Volunteer	26
	Sahtlam	Volunteer	18
	Youbou	Volunteer	25
Comox Valley	Denman Island	Part time	39
	Fanny Bay	Volunteer	18
	Hornby Island	Paid	23
	Oyster River	Paid	75
	Union Bay	Paid	31
Nanaimo	Bow Horn Bay	Paid	19
	Coombs-Hilliers	Paid	29
	Dashwood	Paid	46
	Errington	Paid	28
	Extension	Volunteer	25
	Nanoose	Volunteer	24
Alberni-Clayoquot	Bamfield	Volunteer	15
	Beaver Creek	Volunteer	28
	Sproat Lake	Volunteer	35

Nanaimo Regional District has three departments that operate with two firehalls and three with one firehall. The Cowichan Valley and Comox Valley regional district departments all operate with one firehall. The ACRD has two departments each with two firehalls and one department operating with one firehall. None of the comparator departments are career but there is a mix of composite and volunteer staffing models in use which is consistent with the ACRD staffing model. Table 25 illustrates the total population served, the number of career and volunteer/paid-on-call (“POC”) firefighters, along with the ratio of population per firefighter. The staffing figures are focussed on operational response personnel and exclude non-suppression positions such as prevention, mechanics and administrative support.

Table 25: Population/Firefighter

Regional District	Population	Career	POC	Total	Population/FF
Comox Valley	14,550	5	184	189	77
Cowichan Valley	12,904	0	124	124	104
Nanaimo	21,151	9	172	181	117
Average	16,202	4.7	160	165	98.2
Alberni-Clayoquot	4,990	0	79	79	63.2

16.7 Operating Budgets

The annual operating budgets for the previous and current year for each regional district department are shown in Table 26.

Table 26: Operating Budgets, 2020 and 2021

Regional District	Benchmark Department	2020 Budget	2021 Budget
Cowichan Valley	Honeymoon Bay	\$218,872	\$193,181
	Malahat	\$277,446	\$273,388
	Mesachie	\$88,777	\$72,030
	North Oyster	\$325,993	\$310,003
	Sahtlam	\$411,227	\$411,913
	Youbou	\$148,000	\$148,000
	Total	\$1,470,315	\$1,408,515
Comox Valley	Denman Island	\$129,700	\$132,600
	Fanny Bay	\$68,562	\$68,525
	Hornby Island	\$187,564	\$185,180
	Oyster River	\$281,475	\$293,126
	Union Bay	\$321,100	\$338,100
	Total	\$988,401	\$1,017,531
Nanaimo	Bow Horn Bay	\$341,800	\$400,925
	Coombs-Hilliers	\$386,240	\$399,433
	Dashwood	\$737,327	\$789,064
	Errington	\$743,422	\$829,403
	Extension	\$131,565	\$220,904
	Nanoose	\$617,686	\$611,435
	Total	\$2,958,040	\$3,251,164

Regional District	Benchmark Department	2020 Budget	2021 Budget
Alberni-Clayoquot	Bamfield	\$165,650	\$218,300
	Beaver Creek	\$404,300	\$430,550
	Sproat Lake	\$492,200	\$520,750
	Total	\$1,062,150	\$1,169,600

16.8 Apparatus

The number and type of apparatus in each department are driven in part by the type of incident responses. Overall, the ACRD has an appropriate set of apparatus with respect to both the benchmark departments and incident response requirements.

Table 27: Apparatus

Regional District	Engine	Aerial	Rescue	Bush	Tanker
Comox Valley	7	0	2	1	7
Cowichan Valley	9	0	7	2	5
Nanaimo	12	0	6	3	11
Average	9	0	5	2	8
Alberni-Clayoquot	8	0	3	0	4

16.9 Fire Prevention

The fire departments surveyed were not in municipalities and as such are not required to conduct fire inspections. As expected, the feedback confirmed that very few inspections are conducted. Although fire departments that are operating at the Interior or Full-Service level are required to have some preplans, generally the survey indicated the majority of departments had very few preplans completed or planned. The requirement for pre-incident plans produces workloads related to the provision of fire prevention services that most volunteer and composite departments are not resourced to effectively undertake.

16.10 Calls for Service

The total calls for service are found in Table 28 along with a breakdown into medical and non-emergency call types in order to identify the number of emergency responses of a non-medical nature. These data suggest that ACRD responds to 67% fewer total calls for service than the benchmark average while the number of emergency calls not including medical responses showed the ACRD with 72% fewer calls than the average.

Table 28: Department Responses by Incident Type, 2020

Regional District	Total Calls	Medical Responses	Non-Emergency	Total Emergency (non-FMR)
Comox Valley	662	168	161	333
Cowichan Valley	395	124	88	183
Nanaimo	936	216	204	516
Average	664	169	151	344
Alberni-Clayoquot	221	65	60	96

The change to response protocols due to COVID-19 resulted in a decline in medical calls for most departments in 2020.

16.11 Mutual / Automatic Aid and Service Agreements

The benchmark survey confirmed that almost all departments have one or more mutual aid agreements and most also had an automatic aid agreement. The use of mutual and automatic aid agreements is beneficial but each agreement creates administrative requirements to ensure the compatibility of OGs between departments and clear guidance on the scope and nature of responses. All agreements should also be reviewed with the respective fire departments at regular intervals to ensure they remain accurate and current.

16.12 Summary

The amount of administrative support required for fire departments is driven by regulatory requirements, operational needs and internal resource availability. The regulatory aspects include the need to keep adequate and complete records (training, maintenance, responses and reports). Operationally, there is a need to ensure the department has the right type of apparatus and equipment, along with the process work required to identify and replace them in a timely manner. For volunteer and POC departments there is usually a limited internal capacity to manage the administrative requirements that support the operations of the department due to the volunteer nature of their positions and competing time demands.

Appendix 1: Defined Terms and Acronyms

Term/Acronym	Definition
ACRD	Alberni-Clayoquot Regional District
AHJ	Authority Having Jurisdiction
AMP	Asset Management Plan
Auto Aid Agreement	Automatic Aid Agreement, 28 June 2017
Bamfield AMP	2021 Bamfield Volunteer Fire Department Asset Management Plan, Version 1
BCEHS	British Columbia Emergency Health Services
BCEMS	British Columbia Emergency Management System
BCEP	Bamfield Community Emergency Program
BC OCP	Beaver Creek Official Community Plan
BCVFD	Beaver Creek Volunteer Fire Department
Beaver Creek AMP	2021 Beaver Creek Asset Management Plan, Version 1
BFF	Basic Fire Flow
BOCP	Bamfield Official Community Plan
BVFD	Bamfield Volunteer Fire Department
Bylaw No. 24	<i>Bamfield Specified Area Establishment and Loan Authorization By-law No. 24, 1972</i>
Bylaw No. 788	<i>Alberni Valley Emergency Programs Extended Service Bylaw No.788</i>
Bylaw No. 856	<i>Sproat Lake Fire Protection Conversion and Establishment Bylaw No. 856, 1994</i>
Bylaw No. 4836	<i>City of Port Alberni Emergency Plan 2014, Bylaw No. 4836</i>
Bylaw No. E1052	<i>Beaver Creek Fire Protection Conversion and Establishment Bylaw No. E1052, 2009</i>
Bylaw No. E1060	<i>Bamfield Emergency Planning Service Establishment Bylaw No. E1060, 2019</i>
Bylaw No. PS 1002	<i>Beaver Creek First Responder Bylaw No. PS1002, 1998</i>
Bylaw No. PS 1006	<i>Alberni-Clayoquot Regional District Alberni Valley Emergency Plan Bylaw No. PS1006, 2014</i>
CAD	Computer Aided Dispatch
City	City of Port Alberni
CWPP	Community Wildfire Protection Plan

Term/Acronym	Definition
Departments	collectively Bamfield, Beaver Creek and Sproat Lake fire departments
DMA	Dave Mitchell & Associates Ltd.
DPG	Dwelling Protection Grade
EIM	Emergency Incident Management
EMA FR	Emergency Medical Assistant First Responder
EMA Regulations	<i>Emergency Medical Assistants Regulation</i> , BC Reg. 210/2010
EMBC	Emergency Management BC
EMO	Emergency Operations Centre
EMR	Emergency Medical Responder
EMRU	Emergency Medical Response Unit
EOC	Emergency Operations Centre
EPA	<i>Emergency Program Act</i> (B.C.)
EPC	Emergency Program Coordinator
ESS	Emergency Social Services
FMR	First Medical Responder
FF-I and FF-II	Firefighter I, Firefighter II
FO-I and FO-II	Fire Officer I, Fire Officer II
FUS	Fire Underwriters' Survey
Hazmat	Hazardous Materials
HFN	Hupacasath First Nation
HG	Huu-ay-aht Government
HRVA	Hazard, Risk and Vulnerability Assessment
IDLH	Immediately Dangerous to Life and Health
IGPM	Imperial Gallons Per Minute
ISO	Incident Safety Officer
JIBC	Justice Institute of BC
JPR	Job Performance Requirement
June Report	DMA, <i>Sproat Lake Fire Department: Fire Hall Assessment</i> (June 2021)
LAFC	Local Assistant to the Fire Commissioner
MA Agreement	Mutual Aid Agreement, 10 February 2012
MVI	Motor Vehicle Incident

Term/Acronym	Definition
NFPA	National Fire Protection Association
OFC	Office of the Fire Commissioner
OG	Operational Guideline
OH&S	Occupational Health and Safety
OH&S Regulation	<i>Occupational Health and Safety Regulation, B.C. Reg. 296/97</i>
Operational Criteria Bylaw	<i>Fire Department Operational Criteria Bylaw No. R1023, 2012</i>
PFPC	Public Fire Protection Classification
Playbook	Office of the Fire Commissioner, <i>British Columbia Fire Service Minimum Training Standards: Structure Firefighters Competency and Training Playbook</i> 2nd edition (May 2015)
POC	Paid-on-Call
PPE	Personal Protective Equipment
PSM	Protective Services Manager
RAP	Response Allocation Protocol
RFSM	Regional Fire Services Manager
Regional District	Alberni-Clayoquot Regional District
RIT	Rapid Intervention Team
RMS	Records Management System
SCBA	Self-Contained Breathing Apparatus
SL OCP	Sproat Lake Official Community Plan
SLVFD	Sproat Lake Volunteer Fire Department
STSS	Superior Tanker Shuttle Service
TO	Training Officer
VIERA	Vancouver Island Emergency Response Academy
WCA	<i>Workers Compensation Act (B.C.)</i>
WHMIS	Workplace Hazardous Materials Identification System

Appendix 2: NFPA Standards

The following is a list of the referenced NFPA Standards, the date of the current edition, and a brief description of the standard.¹²⁴

NFPA 472: *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2018

This standard shall identify the minimum levels of competence required by responders to emergencies involving hazardous materials/weapons of mass destruction (WMD).

NFPA 1001: *Standard for Fire Fighter Professional Qualifications*, 2019

This standard identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters whose duties are primarily structural in nature.

NFPA 1002: *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017

This standard identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters and fire brigade personnel who drive and operate fire apparatus.

NFPA 1006: *Standard for Technical Rescue Personnel Professional Qualifications*, 2021

This standard identifies the minimum job performance requirements (JPRs) for fire service and other emergency response personnel who perform technical rescue operations.

NFPA 1021: *Standard for Fire Officer Professional Qualifications*, 2020

This standard identifies the minimum job performance requirements (JPRs) for fire officer.

NFPA 1031: *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*, 2014

This standard identifies the minimum job performance requirements (JPRs) for fire inspectors and plan examiners.

NFPA 1033: *Standard for Professional Qualifications for Fire Investigator*, 2014

This standard facilitates safe, accurate investigations by specifying the job performance requirements (JPRs) necessary to perform as a fire investigator in both the private and public sectors.

¹²⁴ Source: <https://www.nfpa.org/>

NFPA 1035: *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications, 2015*

This standard identifies the minimum job performance requirements (JPRs) for public fire and life safety educators, public information officers, youth firesetter intervention specialists, and youth firesetter program managers.

NFPA 1041: *Standard for Fire and Emergency Services Instructor Professional Qualifications, 2019*

This standard identifies the minimum job performance requirements (JPRs) for fire service instructors.

NFPA 1072: *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, 2017*

This Standard identifies the minimum job performance requirements (JPRs) for Hazardous Materials/Weapons of Mass Destruction emergency response personnel.

NFPA 1407: *Standard for Training Fire Service Rapid Intervention Crews, 2020*

This standard specifies the basic training procedures for fire service personnel to conduct fire fighter rapid intervention operations so as to promote fire fighter safety and survival.

NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Program, 2021*

This standard specifies the minimum requirements for an occupational safety and health program for fire departments or organizations that provide rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services.

NFPA 1521: *Standard for Fire Department Safety Officer Professional Qualifications, 2020*

This standard identifies the minimum job performance requirements (JPRs) necessary to perform the duties as a fire department health and safety officer and a fire department incident safety officer.

NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2020*

This standard specifies requirements for effective and efficient organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments to protect citizens and the occupational safety and health of fire department employees.

NFPA 1901: *Standard for Automotive Fire Apparatus, 2016*

This standard defines the requirements for new automotive fire apparatus and trailers designed to be used under emergency conditions to transport personnel and equipment and to support the suppression of fires and mitigation of other hazardous situations.

Appendix 3: ACRD Firefighter Qualifications

The firefighter qualifications adopted by the ACRD Board in October 2017 are shown below.

Rank	Helmet	Acct. Tag	AMA	Prerequisites	First Year	Second Year
Junior FF	Orange	Green	No	Complete Application Package	Completion of Exterior FF Program	
Recruit FF	Yellow	Green	No	Complete Application Package	Completion of Exterior FF Program	Begin Interior FF Program
Exterior FF	Yellow	Green	Yes	Completion of Exterior FF Program	ESTC S-100	Air Brakes Driver Training Begin Interior FF
Driver	Yellow	Green	Yes	Completion of all previous requirements	Pumps & Pumping	
Interior FF	Yellow with "Firefighter" Crescent Decal	Yellow	Yes	Completion of Interior FF Program & all previous requirements	RIT or START Training	Rope Rescue
Company Officer	Red	Red	Yes	Completion of all previous requirements 3 years of FD experience	Team Leader FSI 1	Begin Fire Officer 1 Program
Deputy Chief	White	White	Yes	Completion of all previous requirements 4 years of FD experience	Fire Officer 1 LAFC Risk Management Officer	Begin Fire Officer 2 FF Evaluator EOC Level 1
Fire Chief	White	White	Yes	Completion of all previous requirements 5 years of FD experience	EOC Level 2	Fire Officer 2

Exterior FF Requirements

- Emergency Scene Traffic NFPA 1001 5.3.3
- Safety & Communications NFPA 1001 5.1.1, 5.1.2, 5.2, 5.2.1, 5.2.2, 5.2.3, 5.3.2, 5.3.17, 5.3.18
- PPE and Self Contained Breathing Apparatus NFPA 1001 5.1.2, 5.2, 5.3, 5.3.1, 5.3.2, 5.5.1
- Ropes and Knots NFPA 1001 5.1.2, 5.3.20, 5.5.1
- Fire Streams, Hose and Appliances NFPA 1001 5.3.7, 5.3.8, 5.5.1, 5.5.2
- Ventilation NFPA 1001 5.3.11, 5.5.1
- Water Supply NFPA 1001 5.3.15, 5.5.1, 5.5.2
- Ladders NFPA 1001 5.3.6, 5.5.1
- Rehabilitation Area NFPA 1001 5.1.1, NFPA 1500, NFPA 1584
- Introduction to Basic Fire Behavior and Building Construction NFPA 220, NFPA 921, NFPA 10015.3.11, 5.3.12, 5.3.13 NFPA 5000
- Dangerous Goods or Hazmat Awareness *(from NFPA 472)*¹
- Gas & Electrical Safety for Firefighters *(supplied by a BC Utility utilizing an evaluation mechanism)*²
- Incident Command System 100 *(from BCERMS curriculum)*³

Exterior Operations Level fire service firefighters shall not enter any building, vehicle, dumpster or

Awareness Level

2. Can utilize any program, developed by a registered Gas or Electrical Utility within the Province of BC, which includes an evaluation instrument based upon current recommended practice
3. Can utilize any training provider, including internal, using certified training and evaluation based upon the BCERMS model
4. Can utilize any training provider, including internal, that meets the competencies of NFPA 1021 – Fire Officer Professional Qualifications
5. Requires a training program with subject matter covering areas such as strategies and tactics, fire ground command and emergency scene management

References

BC Fire Service Minimum Training Standards Playbook - BC Office of the Fire Commissioner

Appendix 4: Playbook Training Requirements

Structure Firefighters Competency and Training PLAYBOOK Second Edition: May 2015

References to NFPA Standards for:

Train the Trainer
Exterior Operations Firefighter
Interior Operations Firefighter
Full Service Operations Firefighter
Team Leader Exterior and Interior
Risk Management Officer
Company Fire Officer

Standards Referenced:

NFPA 220 Standard on Types of Building Construction
NFPA 921 Guide for Fire and Explosion Investigations
NFPA 1001 Standard for Fire Fighter Professional Qualifications
NFPA 1021 Standard for Fire Officer Professional Qualifications
NFPA 1041 Standard for Fire Service Instructor Professional Qualifications
NFPA 1407 Standard for Training Fire Service Rapid Intervention Crews
NFPA 1500 Standard on Occupational Safety and Health Program
NFPA 1584 Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises
NFPA 5000 Building Construction and Safety Code

Train the Trainer	Competency Met
<p>NFPA 1041 4.2.1 – 4.2.4 / 4.3.2 – 4.3.3 / 4.4.1 – 4.4.4 / 4.5.1 – 4.5.3 and 4.5.5</p>	
<p>4.2.1 Definition of Duty. The management of basic resources and the records and reports essential to the instructional process.</p>	
<p>4.2.2 Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained. (A) Requisite Knowledge. Components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability. (B) Requisite Skills. None required.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.2.3 Prepare requests for resources, given training goals and current resources, so that the resources required to meet training goals are identified and documented. (A) Requisite Knowledge. Resource management, sources of instructional resources and equipment. (B) Requisite Skills. Training schedule completion.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.2.4 Schedule single instructional sessions, given a training assignment, department scheduling procedures, instructional resources, facilities and timeline for delivery, so that the specified sessions are delivered according to department procedure. (A) Requisite Knowledge. Departmental scheduling procedures and resource management. (B) Requisite Skills. Training schedule completion.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.3.2* Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified. (A) Requisite Knowledge. Recognition of student limitations and cultural diversity, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures. (B) Requisite Skills. Analysis of resources, facilities, and materials</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.3.3* Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved. (A)* Requisite Knowledge. Elements of a lesson plan, selection of instructional aids and methods, and organization of the learning environment. (B) Requisite Skills. Instructor preparation and organizational skills.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.4.1 Definition of Duty. The delivery of instructional sessions utilizing prepared course materials.</p>	
<p>4.4.2 Organize the classroom, laboratory, or outdoor learning environment, given a facility and an assignment, so that lighting, distractions, climate control or weather, noise control, seating, audiovisual equipment, teaching aids, and safety are considered. (A) Requisite Knowledge. Classroom management and safety, advantages and limitations of audiovisual equipment and teaching aids, classroom arrangement, and methods and techniques of instruction. (B) Requisite Skills. Use of instructional media and teaching aids.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.4.3 Present prepared lessons, given a prepared lesson plan that specifies the presentation method(s), so that the method(s) indicated in the plan are used and the stated objectives or learning outcomes are achieved, applicable safety standards and practices are followed, and risks are addressed. (A)* Requisite Knowledge. The laws and principles of learning, methods and techniques of instruction, lesson plan components and elements of the communication process, and lesson plan terminology and definitions; the impact of cultural differences on instructional delivery; safety rules, regulations, and practices; identification of training hazards; elements and limitations of distance learning; distance learning delivery methods; and the instructor’s role in distance learning. (B) Requisite Skills. Oral communication techniques, methods and techniques of instruction, and utilization of lesson plans in an instructional setting.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Train the Trainer	Competency Met
<p>4.4.4* Adjust presentation, given a lesson plan and changing circumstances in the class environment, so that class continuity and the objectives or learning outcomes are achieved. (A) Requisite Knowledge. Methods of dealing with changing circumstances. (B) Requisite Skills. None required</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.5.1* Definition of Duty. The administration and grading of student evaluation instruments.</p>	
<p>4.5.2 Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and evaluation procedures of the agency, so that bias or discrimination is eliminated the testing is conducted according to procedures, and the security of the materials is maintained. (A) Requisite Knowledge. Test administration, agency policies, laws and policies pertaining to discrimination during training and testing, methods for eliminating testing bias, laws affecting records and disclosure of training information, purposes of evaluation and testing, and performance skills evaluation. (B) Requisite Skills. Use of skills checklists and oral questioning techniques.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.5.3 Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured. (A) Requisite Knowledge. Grading methods, methods for eliminating bias during grading, and maintaining confidentiality of scores. (B) Requisite Skills. None required.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.5.5* Provide evaluation feedback to students, given evaluation data, so that the feedback is timely; specific enough for the student to make efforts to modify behavior; and objective, clear, and relevant; also include suggestions based on the data. (A) Requisite Knowledge. Reporting procedures and the interpretation of test results. (B) Requisite Skills. Communication skills and basic coaching.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>Emergency Scene Traffic NFPA 1001 5.3.3</p>	
<p>5.3.3* Establish and operate in work areas at emergency scenes, given protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards and downed electrical wires, an assignment, and SOPs, so that procedures are followed, protective equipment is worn, protected work areas are established as directed using traffic and scene control devices, and the fire fighter performs assigned tasks only in established, protected work areas. (A) Requisite Knowledge. Potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions; proper procedures for dismounting apparatus in traffic; procedures for safe operation at emergency scenes; and the protective equipment available for members’ safety on emergency scenes and work zone designations. (B) Requisite Skills. The ability to use personal protective clothing, deploy traffic and scene control devices, dismount apparatus, and operate in the protected work areas as directed.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Safety & Communications NFPA 1001 5.1.1, 5.1.2, 5.2, 5.2.1, 5.2.2, 5.2.3, 5.3.2, 5.3.17, 5.3.18</p>	
<p>5.1 General. For qualification at Level I, the fire fighter candidate shall meet the general knowledge requirements in 5.1.1; the general skill requirements in 5.1.2; the JPRs defined in Sections 5.2 through 5.5 of this standard; and the requirements defined in Chapter 5, Core Competencies for Operations Level Responders, and Section 6.6, Mission-Specific Competencies: Product Control, of NFPA 472, <i>Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents</i>.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.1.1 General Knowledge Requirements. The organization of the fire department; the role of the Fire Fighter I in the organization; the mission of fire service; the fire department’s standard operating procedures (SOPs) and rules and regulations as they apply to the Fire Fighter I; the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities; the role of other agencies as they relate to the fire department; aspects of the fire department’s member assistance program; the importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter; the critical aspects of NFPA1500, <i>Standard on Fire Department Occupational Safety and Health Program</i>.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.2 Fire Department Communications. This duty shall involve initiating responses, receiving telephone calls, and using fire department communications equipment to correctly relay verbal or written information, according to the JPRs in 5.2.1 through 5.2.4.</p>	
<p>5.2.1* Initiate the response to a reported emergency, given the report of an emergency, fire department SOPs, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is relayed promptly and accurately to the dispatch center. (A) Requisite Knowledge. Procedures for reporting an emergency; departmental SOPs for taking and receiving alarms, radio codes, or procedures; and information needs of dispatch center. (B) Requisite Skills. The ability to operate fire department communications equipment, relay information, and record information.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.2.2 Receive a telephone call, given a fire department phone, so that procedures for answering the phone are used and the caller’s information is relayed. (A) Requisite Knowledge. Fire department procedures for answering nonemergency telephone calls. (B) Requisite Skills. The ability to operate fire station telephone and intercom equipment.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>5.2.3 Transmit and receive messages via the fire department radio, given a fire department radio and operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.</p> <p>(A) Requisite Knowledge. Departmental radio procedures and etiquette for routine traffic, emergency traffic, and emergency evacuation signals.</p> <p>(B) Requisite Skills. The ability to operate radio equipment and discriminate between routine and emergency traffic.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.2* Respond on apparatus to an emergency scene, given personal protective clothing and other necessary personal protective equipment, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used.</p> <p>(A) Requisite Knowledge. Mounting and dismounting procedures for riding fire apparatus, hazards and ways to avoid hazards associated with riding apparatus, prohibited practices, and types of department personal protective equipment and the means for usage.</p> <p>(B) Requisite Skills. The ability to use each piece of provided safety equipment.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.17 Illuminate the emergency scene, given fire service electrical equipment and an assignment, so that designated areas are illuminated and all equipment is operated within the manufacturer’s listed safety precautions.</p> <p>(A) Requisite Knowledge. Safety principles and practices, power supply capacity and limitations, and light deployment methods. supply and lighting equipment, deploy cords and connectors, reset ground-fault interrupter (GFI) devices, and locate lights for best effect.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.18 Turn off building utilities, given tools and an assignment, so that the assignment is safely completed.</p> <p>(A) Requisite Knowledge. Properties, principles, and safety concerns for electricity, gas, and water systems; utility disconnect methods and associated dangers; and use of required safety equipment.</p> <p>(B) Requisite Skills. The ability to identify utility control devices, operate control valves or switches, and assess for related hazards.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>PPE and Self Contained Breathing Apparatus NFA 1001 5.1.2, 5.2, 5.3, 5.3.1, 5.3.2, 5.5.1</p>	
<p>5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.2 Fire Department Communications. This duty shall involve initiating responses, receiving telephone calls, and using fire department communications equipment to correctly relay verbal or written information, according to the JPRs in 5.2.1 through 5.2.4.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3 Fireground Operations. This duty shall involve performing activities necessary to ensure life safety, fire control, and property conservation, according to the JPRs in 5.3.1 through 5.3.20.</p>	
<p>5.3.1* Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other personal protective equipment, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion.</p> <p>(A) Requisite Knowledge. Conditions that require respiratory protection, uses and limitations of SCBA, components of SCBA, donning procedures, breathing techniques, indications for and emergency procedures used with SCBA, and physical requirements of the SCBA wearer.</p> <p>(B) Requisite Skills. The ability to control breathing, replace SCBA air cylinders, use SCBA to exit through restricted passages, initiate and complete emergency procedures in the event of SCBA failure or air depletion, and complete donning procedures.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>5.3.2* Respond on apparatus to an emergency scene, given personal protective clothing and other necessary personal protective equipment, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used.</p> <p>(A) Requisite Knowledge. Mounting and dismounting procedures for riding fire apparatus, hazards and ways to avoid hazards associated with riding apparatus, prohibited practices, and types of department personal protective equipment and the means for usage.</p> <p>(B) Requisite Skills. The ability to use each piece of provided safety equipment.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.</p> <p>(A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools.</p> <p>(B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Ropes and Knots</p> <p>NFPA 1001 5.1.2, 5.3.20, 5.5.1</p>	
<p>5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.20 Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and an assignment, so that the knots used are appropriate for hoisting tools securely and as directed.</p> <p>(A) Requisite Knowledge. Knot types and usage; the difference between life safety and utility rope; reasons for placing rope out of service; the types of knots to use for given tools, ropes, or situations; hoisting methods for tools and equipment; and using rope to support response activities.</p> <p>(B) Requisite Skills. The ability to hoist tools using specific knots based on the type of tool.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.</p> <p>(A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools.</p> <p>(B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>Fire Streams, Hose and Appliances NFPA 1001 5.3.7, 5.3.8, 5.5.1, 5.5.2</p>	
<p>5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished.</p> <p>(A) Requisite Knowledge. Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile.</p> <p>(B) Requisite Skills. The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments. in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved.</p> <p>(A) Requisite Knowledge. Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence.</p> <p>(B) Requisite Skills. The ability to recognize inherent hazards related to the material’s configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.</p> <p>(A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools.</p> <p>(B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.5.2 Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service.</p> <p>(A) Requisite Knowledge. Departmental procedures for noting a defective hose and removing it from service, cleaning methods, and hose rolls and loads.</p> <p>(B) Requisite Skills. The ability to clean different types of hose; operate hose washing and drying equipment; mark defective hose; and replace coupling gaskets, roll hose, and reload hose.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>Ventilation NFPA 1001 5.3.11, 5.5.1</p>	
<p>5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. (A) Requisite Knowledge. The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. (B) Requisite Skills. The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. (A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools. (B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Water Supply NFPA 1001 5.3.15, 5.5.1, 5.5.2</p>	
<p>5.3.15* Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed. (A) Requisite Knowledge. Loading and off-loading procedures for mobile water supply apparatus; fire hydrant operation; and suitable static water supply sources, procedures, and protocol for connecting to various water sources. (B) Requisite Skills. The ability to hand lay a supply hose, connect and place hard suction hose for drafting operations, deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them, make hydrant-to-pumper hose connections for forward and reverse lays, connect supply hose to a hydrant, and fully open and close the hydrant.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. (A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools. (B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.5.2 Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service. (A) Requisite Knowledge. Departmental procedures for noting a defective hose and removing it from service, cleaning methods, and hose rolls and loads. (B) Requisite Skills. The ability to clean different types of hose; operate hose washing and drying equipment; mark defective hose; and replace coupling gaskets, roll hose, and reload hose.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>Ladders NFFPA 1001 5.3.6, 5.5.1</p>	
<p>5.3.6* Set up ground ladders, given single and extension ladders, an assignment, and team members if needed, so that hazards are assessed, the ladder is stable, the angle is correct for climbing, extension ladders are extended to the necessary height with the fly locked, the top is placed against a reliable structural component, and the assignment is accomplished. (A) Requisite Knowledge. Parts of a ladder, hazards associated with setting up ladders, what constitutes a stable foundation for ladder placement, different angles for various tasks, safety limits to the degree of angulation, and what constitutes a reliable structural component for top placement. (B) Requisite Skills. The ability to carry ladders, raise ladders, extend ladders and lock flies, determine that a wall and roof will support the ladder, judge extension ladder height requirements, and place the ladder to avoid obvious hazards.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. (A) Requisite Knowledge. Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer’s or departmental guidelines for cleaning equipment and tools. (B) Requisite Skills. The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Rehabilitation Area (REHAB) NFFPA 1001 5.1.1, NFFPA 1500, NFFPA 1584</p>	
<p>5.1.1 General Knowledge Requirements. The organization of the fire department; the role of the Fire Fighter I in the organization; the mission of fire service; the fire department’s standard operating procedures (SOPs) and rules and regulations as they apply to the Fire Fighter I; the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities; the role of other agencies as they relate to the fire department; aspects of the fire department’s member assistance program; the importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter; the critical aspects of NFFPA1500, <i>Standard on Fire Department Occupational Safety and Health Program</i>.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>+ NFFPA 1500 Standard on Occupational Safety and Health Program</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>+ NFFPA 1584 Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Introduction to Basic Fire Behavior and Building Construction NFFPA 220, NFFPA 921, NFFPA 1001 5.3.11, 5.3.12, 5.3.13 NFFPA 5000</p>	
<p>5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. (A) Requisite Knowledge. The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. (B) Requisite Skills. The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Exterior Operations – Firefighter	Competency Met
<p>5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished.</p> <p>(A) Requisite Knowledge. The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation.</p> <p>(B) Requisite Skills. The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.13 Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished.</p> <p>(A) Requisite Knowledge. Types of fire attack lines and water application devices most effective for overhaul, water application methods for extinguishment that limit water damage, types of tools and methods used to expose hidden fire, dangers associated with overhaul, obvious signs of area of origin or signs of arson, and reasons for protection of fire scene.</p> <p>(B) Requisite Skills. The ability to deploy and operate an attack line; remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity; apply water for maximum effectiveness; expose and extinguish hidden fires in walls, ceilings, and subfloor spaces; recognize and preserve obvious signs of area of origin and arson; and evaluate for complete extinguishment.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>+ NFPA 220 Standard on Types of Building Construction</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>+ NFPA 921 Guide for Fire and Explosion Investigations</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>+ NFPA 5000 Building Construction and Safety Code</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Dangerous Goods or Hazmat Awareness (from NFPA 472)</p> <ul style="list-style-type: none"> • Can utilize any training provider, including internal, that meets the competencies of NFPA 472 – Awareness Level [Playbook: Page 16, note1] 	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Gas & Electrical Safety for Firefighters (supplied by a BC Utility utilizing an evaluation mechanism)</p> <ul style="list-style-type: none"> • Can utilize any program, developed by a registered Gas or Electrical Utility within the Province of BC, which includes an evaluation instrument based upon current recommended practice [Playbook: Page 16, note 2] 	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Incident Command System 100 (from BCERMS curriculum)</p> <ul style="list-style-type: none"> • Can utilize any training provider, including internal, using certified training and evaluation based upon the BCERMS model. [Playbook: Page 16, note 3] 	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Interior Operations – Firefighter	Competency Met
All of Exterior Operations Firefighter PLUS the following:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Organization, Safety and Communications NFPA 1001 5.2.4	
<p>5.2.4* Activate an emergency call for assistance, given vision obscured conditions, PPE, and department SOPs, so that the fire fighter can be located and rescued.</p> <p>(A) Requisite Knowledge. Personnel accountability systems, emergency communication procedures, and emergency evacuation methods.</p> <p>(B) Requisite Skills. The ability to initiate an emergency call for assistance in accordance with the AHJ’s procedures, the ability to use other methods of emergency calls for assistance.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>RIT Training – pertinent to jurisdictional hazards</p> <p>NFPA 1001 5.3.9 NFPA 1407, NFPA 1500</p>	
<p>5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members’ safety — including respiratory protection — is not compromised.</p> <p>(A) Requisite Knowledge. Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members’ roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection.</p> <p>(B)* Requisite Skills. The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
+ NFPA 1407 Standard for Training Fire Service Rapid Intervention Crews	Yes <input type="checkbox"/> No <input type="checkbox"/>
+ NFPA 1500 Standard on Fire Department Occupational Safety and Health Program	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>Self-Contained Breathing Apparatus</p> <p>NFPA 1001 5.3.1, 5.3.5, 5.3.9</p>	
<p>5.3.1* Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other personal protective equipment, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion.</p> <p>(A) Requisite Knowledge. Conditions that require respiratory protection, uses and limitations of SCBA, components of SCBA, donning procedures, breathing techniques, indications for and emergency procedures used with SCBA, and physical requirements of the SCBA wearer.</p> <p>(B) Requisite Skills. The ability to control breathing, replace SCBA air cylinders, use SCBA to exit through restricted passages, initiate and complete emergency procedures in the event of SCBA failure or air depletion, and complete donning procedures.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Interior Operations – Firefighter	Competency Met
<p>5.3.5* Exit a hazardous area as a team, given vision-obscured conditions, so that a safe haven is found before exhausting the air supply, others are not endangered, and the team integrity is maintained.</p> <p>(A) Requisite Knowledge. Personnel accountability systems, communication procedures, emergency evacuation methods, what constitutes a safe haven, elements that create or indicate a hazard, and emergency procedures for loss of air supply.</p> <p>(B) Requisite Skills. The ability to operate as a team member in vision-obscured conditions, locate and follow a guideline, conserve air supply, and evaluate areas for hazards and identify a safe haven.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members’ safety — including respiratory protection — is not compromised.</p> <p>(A) Requisite Knowledge. Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members’ roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection.</p> <p>(B)* Requisite Skills. The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Search and Rescue NFPA 1001 5.3.9</p>	
<p>5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members’ safety — including respiratory protection — is not compromised.</p> <p>(A) Requisite Knowledge. Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members’ roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection.</p> <p>(B)* Requisite Skills. The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Fire Behavior NFPA 1001</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Interior Operations – Firefighter	Competency Met
<p>Fire Extinguishers NFFPA 1001 5.3.16</p>	
<p>5.3.16* Extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers, so that the correct extinguisher is chosen, the fire is completely extinguished, and correct extinguisher-handling techniques are followed. (A) Requisite Knowledge. The classifications of fire; the types of, rating systems for, and risks associated with each class of fire; and the operating methods of and limitations of portable extinguishers. (B) Requisite Skills. The ability to operate portable fire extinguishers, approach fire with portable fire extinguishers, select an appropriate extinguisher based on the size and type of fire, and safely carry portable fire extinguishers.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Building Construction NFFPA 1001 5.3.11, 5.3.12</p>	
<p>5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. (A) Requisite Knowledge. The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. (B) Requisite Skills. The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished. (A) Requisite Knowledge. The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation. (B) Requisite Skills. The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Forcible Entry NFFPA 1001 5.3.4</p>	
<p>5.3.4* Force entry into a structure, given personal protective equipment, tools, and an assignment, so that the tools are used as designed, the barrier is removed, and the opening is in a safe condition and ready for entry. (A) Requisite Knowledge. Basic construction of typical doors, windows, and walls within the department’s community or service area; operation of doors, windows, and locks; and the dangers associated with forcing entry through doors, windows, and walls. (B) Requisite Skills. The ability to transport and operate hand and power tools and to force entry through doors, windows, and walls using assorted methods and tools.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Ventilation NFFPA 1001 5.3.12</p>	

Interior Operations – Firefighter	Competency Met
<p>5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished.</p> <p>(A) Requisite Knowledge. The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation.</p> <p>(B) Requisite Skills. The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>Loss Control NFPA 1001 5.3.13, 5.3.14</p>	
<p>5.3.13 Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished.</p> <p>(A) Requisite Knowledge. Types of fire attack lines and water application devices most effective for overhaul, water application methods for extinguishment that limit water damage, types of tools and methods used to expose hidden fire, dangers associated with overhaul, obvious signs of area of origin or signs of arson, and reasons for protection of fire scene.</p> <p>(B) Requisite Skills. The ability to deploy and operate an attack line; remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity; apply water for maximum effectiveness; expose and extinguish hidden fires in walls, ceilings, and subfloor spaces; recognize and preserve obvious signs of area of origin and arson; and evaluate for complete extinguishment.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.14 Conserve property as a member of a team, given salvage tools and equipment and an assignment, so that the building and its contents are protected from further damage.</p> <p>(A) Requisite Knowledge. The purpose of property conservation and its value to the public, methods used to protect property, types of and uses for salvage covers, operations at properties protected with automatic sprinklers, how to stop the flow of water from an automatic sprinkler head, identification of the main control valve on an automatic sprinkler system, forcible entry issues related to salvage, and procedures for protecting possible areas of origin and potential evidence.</p> <p>(B) Requisite Skills. The ability to cluster furniture; deploy covering materials; roll and fold salvage covers for reuse; construct water chutes and catch-alls; remove water; cover building openings, including doors, windows, floor openings, and roof openings; separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination; stop the flow of water from a sprinkler with sprinkler wedges or stoppers; and operate a main control valve on an automatic sprinkler system.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Interior Operations – Firefighter	Competency Met
<p>Live Fire Exterior NFFPA 1001 5.3.7, 5.3.8, 5.3.10, 5.3.19</p>	
<p>5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. (A) Requisite Knowledge. Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile. (B) Requisite Skills. The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. (A) Requisite Knowledge. Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence. (B) Requisite Skills. The ability to recognize inherent hazards related to the material’s configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Interior Operations – Firefighter	Competency Met
<p>5.3.10* Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control.</p> <p>(A) Requisite Knowledge. Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire; observable results that a fire stream has been properly applied; dangerous building conditions created by fire; principles of exposure protection; potential longterm consequences of exposure to products of combustion; physical states of matter in which fuels are found; common types of accidents or injuries and their causes; and the application of each size and type of attack line, the role of the backup team in fire attack situations, attack and control techniques for grade level and above and below grade levels, and exposing hidden fires.</p> <p>(B) Requisite Skills. The ability to prevent water hammers when shutting down nozzles; open, close, and adjust nozzle flow and patterns; apply water using direct, indirect, and combination attacks; advance charged and uncharged 1 1/2 in. (38 mm) diameter or larger hose lines up ladders and up and down interior and exterior stairways; extend hose lines; replace burst hose sections; operate charged hose lines of 1 1/2 in. (38 mm) diameter or larger while secured to a ground ladder; couple and uncouple various handline connections; carry hose; attack fires at grade level and above and below grade levels; and locate and suppress interior wall and subfloor fires.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>5.3.19* Combat a ground cover fire operating as a member of a team, given protective clothing, SCBA (if needed), hose lines, extinguishers or hand tools, and an assignment, so that threats to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted, and the assignment is completed.</p> <p>(A) Requisite Knowledge. Types of ground cover fires, parts of ground cover fires, methods to contain or suppress, and safety principles and practices.</p> <p>(B) Requisite Skills. The ability to determine exposure threats based on fire spread potential, protect exposures, construct a fire line or extinguish with hand tools, maintain integrity of established fire lines, and suppress ground cover fires using water.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Full Service Operations – Firefighter	Competency Met
All of NFPA 1001 – FF2 Competencies (except Hazmat and Medical Response) and with the addition of:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Live Fire Exterior and Interior	Yes <input type="checkbox"/> No <input type="checkbox"/>
Hazmat Operations (NFPA core competencies plus 6.6.1.1.2)	Yes <input type="checkbox"/> No <input type="checkbox"/>
6.6.1.1.2 The operations level responder assigned to perform product control at hazardous materials/ WMD incidents shall be trained to meet all competencies at the awareness level (see Chapter 4), all core competencies at the operations level (see Chapter 5), all mission-specific competencies for personal protective equipment (see Section 6.2), and all competencies in this section.	Yes <input type="checkbox"/> No <input type="checkbox"/>

<p style="text-align: center;">Team Leader Exterior & Interior</p>	<p style="text-align: center;">Competency Met</p>
<ul style="list-style-type: none"> Can utilize any training provider, including internal, that meets the competencies of NFPA 1021 – Fire Officer Professional Qualifications [Playbook: Page 16, note 3] <p>Completion of the Operational Firefighter requirements for either the Exterior or Interior Service Level PLUS the following Competencies from NFPA 1021:</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Incident Command and Fire Attack NFPA 1021 4.1.1, 4.2.1, 4.2.2, 4.2.3</p>	
<p>4.1.1* General Prerequisite Knowledge. The organizational structure of the department; geographical configuration and characteristics of response districts; departmental operating procedures for administration, emergency operations, incident management system and safety; fundamentals of leadership; departmental budget process; information management and recordkeeping; the fire prevention and building safety codes and ordinances applicable to the jurisdiction; current trends, technologies, and socioeconomic and political factors that affect the fire service; cultural diversity; methods used by supervisors to obtain cooperation within a group of subordinates; the rights of management and members; agreements in force between the organization and members; generally accepted ethical practices, including a professional code of ethics; and policies and procedures regarding the operation of the department as they involve supervisors and members.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.2.1 Assign tasks or responsibilities to unit members, given an assignment at an emergency incident, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed. (A) Requisite Knowledge. Verbal communications during emergency incidents, techniques used to make assignments under stressful situations, and methods of confirming understanding. (B) Requisite Skills. The ability to condense instructions for frequently assigned unit tasks based on training and standard operating procedures.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.2.2 Assign tasks or responsibilities to unit members, given an assignment under nonemergency conditions at a station or other work location, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed. (A) Requisite Knowledge. Verbal communications under nonemergency situations, techniques used to make assignments under routine situations, and methods of confirming understanding. (B) Requisite Skills. The ability to issue instructions for frequently assigned unit tasks based on department policy.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.2.3 Direct unit members during a training evolution, given a company training evolution and training policies and procedures, so that the evolution is performed in accordance with safety plans, efficiently, and as directed. (A) Requisite Knowledge. Verbal communication techniques to facilitate learning. (B) Requisite Skills. The ability to distribute issue-guided directions to unit members during training evolutions.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>

<p style="text-align: center;">Team Leader Exterior & Interior</p>	<p style="text-align: center;">Competency Met</p>
<p>Pre-Incident Planning, Size-up and Incident Action Planning NFFPA 1021 4.5.2, 4.5.3, 4.6, 4.6.1, 4.6.2</p>	
<p>4.5.2 Identify construction, alarm, detection, and suppression features that contribute to or prevent the spread of fire, heat, and smoke throughout the building or from one building to another, given an occupancy, and the policies and forms of the AHJ so that a pre-incident plan for any of the following occupancies is developed: (1) Public assembly (2) Educational (3) Institutional (4) Residential (5) Business (6) Industrial (7) Manufacturing (8) Storage (9) Mercantile (10) Special properties (A) Requisite Knowledge. Fire behavior; building construction; inspection and incident reports; detection, alarm, and suppression systems; and applicable codes, ordinances, and standards. (B) Requisite Skills. The ability to use evaluative methods and to communicate orally and in writing.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.5.3 Secure an incident scene, given rope or barrier tape, so that unauthorized persons can recognize the perimeters of the scene and are kept from restricted areas, and all evidence or potential evidence is protected from damage or destruction. (A) Requisite Knowledge. Types of evidence, the importance of fire scene security, and evidence preservation. (B) Requisite Skills. The ability to establish perimeters at an incident scene.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.6* Emergency Service Delivery. This duty involves supervising emergency operations, conducting pre-incident planning, and deploying assigned resources in accordance with the local emergency plan and according to the following job performance requirements.</p>	
<p>4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. (A)* Requisite Knowledge. Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. (B)* Requisite Skills. The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. (A) Requisite Knowledge. Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. (B) Requisite Skills. The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Fire Ground Accountability NFFPA 1021 4.6.1, 4.6.2</p>	
<p>4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. (A)* Requisite Knowledge. Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. (B)* Requisite Skills. The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>

<p style="text-align: center;">Team Leader Exterior & Interior</p>	<p style="text-align: center;">Competency Met</p>
<p>4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. (A) Requisite Knowledge. Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. (B) Requisite Skills. The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Live Fire – Exterior (<i>Recommended for Exterior Operations</i>) NFPA 1001 5.3.7, 5.3.8, 5.3.10</p>	
<p>5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. (A) Requisite Knowledge. Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile. (B) Requisite Skills. The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. (A) Requisite Knowledge. Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence. (B) Requisite Skills. The ability to recognize inherent hazards related to the material's configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>

<p style="text-align: center;">Team Leader Exterior & Interior</p>	<p style="text-align: center;">Competency Met</p>
<p>5.3.10* Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control.</p> <p>(A) Requisite Knowledge. Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire; observable results that a fire stream has been properly applied; dangerous building conditions created by fire; principles of exposure protection; potential longterm consequences of exposure to products of combustion; physical states of matter in which fuels are found; common types of accidents or injuries and their causes; and the application of each size and type of attack line, the role of the backup team in fire attack situations, attack and control techniques for grade level and above and below grade levels, and exposing hidden fires.</p> <p>(B) Requisite Skills. The ability to prevent water hammers when shutting down nozzles; open, close, and adjust nozzle flow and patterns; apply water using direct, indirect, and combination attacks; advance charged and uncharged 1 1/2 in. (38 mm) diameter or larger hose lines up ladders and up and down interior and exterior stairways; extend hose lines; replace burst hose sections; operate charged hose lines of 1 1/2 in. (38 mm) diameter or larger while secured to a ground ladder; couple and uncouple various handline connections; carry hose; attack fires at grade level and above and below grade levels; and locate and suppress interior wall and subfloor fires.</p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Live Fire – Exterior & Interior <i>(Recommended for Interior Operations)</i></p>	<p style="text-align: center;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Risk Management Officer	Competency Met
Completion of the Team Leader requirements for the Exterior Operations level PLUS the following courses (1 from each area):	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p style="text-align: center;">EITHER</p> <p>Incident Action Planning NFPA 1021 4.6.1, 4.6.2</p> <ul style="list-style-type: none"> Requires a training program with subject matter covering areas such as strategies and tactics, fire ground command and emergency scene management [Playbook: Page 16, note 5] 	
<p>4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. (A)* Requisite Knowledge. Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. (B)* Requisite Skills. The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. (A) Requisite Knowledge. Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. (B) Requisite Skills. The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p style="text-align: center;">OR</p> <p>Incident Safety Officer NFPA 1521 6.1 – 6.7.2 (operational)</p>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>6.1 General Functions of the Incident Safety Officer.</p> <p>6.1.1* The incident safety officer (ISO) shall be integrated with the incident management system (IMS) as a command staff member, as specified in NFPA 1561, <i>Standard on Emergency Services Incident Management System</i>.</p> <p>6.1.2* Standard operating procedures (SOPs) shall define criteria for the response of a pre-designated incident safety officer.</p> <p>6.1.2.1 If the incident safety officer is designated by the incident commander, the fire department shall establish criteria for appointment based upon 6.1.1.</p> <p>6.1.3* The incident safety officer and assistant incident safety officer(s) shall be readily identifiable at the incident scene.</p> <p>6.1.4* Upon arrival or assignment as the incident safety officer at an incident, he or she shall obtain a situation-status briefing from the incident commander, that includes the incident action plan.</p> <p>6.1.5 The incident safety officer shall monitor the incident action plan, conditions, activities, and operations to determine whether they fall within the criteria as defined in the fire department's risk management plan.</p> <p>6.1.6 When the perceived risk(s) is not within the fire department's risk management criteria, the incident safety officer shall take action as outlined in Section 4.6.</p> <p>6.1.7 The incident safety officer shall monitor the incident scene and report to the incident commander the status of conditions, hazards, and risks.</p> <p>6.1.8 The incident safety officer shall ensure that the fire department's personnel accountability system is being utilized.</p> <p>6.1.9* The incident safety officer shall offer judgment to the incident commander on establishing control zones and no entry zones and ensure that established zones are communicated to all members present on the scene.</p>	

Risk Management Officer	Competency Met
<p>6.1.10 The incident safety officer shall evaluate motor vehicle incident scene traffic hazards and apparatus placement and take appropriate actions to mitigate hazards as described in Section 8.7 of NFPA 1500, <i>Standard on Fire Department Occupational Safety and Health Program</i>.</p> <p>6.1.11 The incident safety officer shall monitor radio transmissions and stay alert to transmission barriers that could result in missed, unclear, or incomplete communication.</p> <p>6.1.12* The incident safety officer shall ensure that the incident commander establishes an incident scene rehabilitation tactical level management component during emergency operations.</p> <p>6.1.13* The incident safety officer shall communicate to the incident commander the need for assistant incident safety officers and/or technical specialists due to the need, size, complexity, or duration of the incident.</p> <p>6.1.14 The incident safety officer or assistant incident safety officer shall survey and evaluate the hazards associated with the designation of a landing zone and interface with helicopters.</p> <p>6.1.15* The incident safety officer shall recognize the potential need for critical incident stress interventions and notify the incident commander of this possibility.</p> <p>6.1.16 If the incident safety officer or an assistant safety officer needs to enter a hot zone or an environment that is immediately dangerous to life or health (IDLH), the incident safety officer or assistant safety officer shall be paired up with another member and check in with the entry control officer.</p>	
<p>6.2 Fire Suppression.</p> <p>6.2.1 The incident safety officer shall meet the provisions of Section 6.2 during fire suppression operations.</p> <p>6.2.2* The incident safety officer shall ensure that a rapid intervention team meeting the criteria in Chapter 8 of NFPA 1500, is available and ready for deployment.</p> <p>6.2.3 Where fire has involved a building(s) the incident safety officer shall advise the incident commander of hazards, collapse potential, and any fire extension in such building(s).</p> <p>6.2.4 The incident safety officer shall evaluate visible smoke and fire conditions and advise the incident commander, tactical level management component's (TLMC) officers, and company officers on the potential for flashover, backdraft, blow-up, or other events that could pose a threat to operating teams.</p> <p>6.2.5 The incident safety officer shall monitor the accessibility of entry and egress of structures and its effect on the safety of members conducting interior operations.</p>	
<p>6.3 Emergency Medical Service Operations.</p> <p>6.3.1 The incident safety officer shall meet the provisions of Section 6.3 during emergency medical service (EMS) operations.</p> <p>6.3.2 The incident safety officer shall ensure compliance with the department's infection control plan and NFPA 1581, <i>Standard on Fire Department Infection Control Program</i>, during emergency medical service operations.</p> <p>6.3.3 The incident safety officer shall ensure that incident scene rehabilitation and critical incident stress management are established as needed at emergency medical service operations, especially mass casualty incidents (MCIs).</p>	
<p>6.4 Technical Rescue.</p> <p>6.4.1 The incident safety officer shall meet the provisions of Section 6.4 during technical rescue operations.</p> <p>6.4.2* In cases where a designated incident safety officer does not meet the technician-level requirements of NFPA 1006, <i>Standard for Rescue Technician Professional Qualifications</i>, the incident commander shall appoint an assistant incident safety officer or a technical specialist who meets the technician-level requirements of NFPA 1006 to assist with incident safety officer functions.</p> <p>6.4.3 The incident safety officer shall attend strategic and tactical planning sessions and provide input on risk assessment and member safety.</p>	

Risk Management Officer	Competency Met
<p>6.4.4* The incident safety officer shall ensure that a safety briefing is conducted and that an incident action plan and an incident safety plan are developed and made available to all members on the scene.</p>	
<p>6.5 Hazardous Materials Operations.</p> <p>6.5.1 The incident safety officer shall meet the provisions of Section 6.5 during hazardous materials operations.</p> <p>6.5.2* In cases where a designated incident safety officer does not meet the technician-level requirements of NFPA 472, <i>Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents</i>, the incident commander shall appoint an assistant incident safety officer or a technical specialist who meets the technician-level requirements of NFPA 472 to assist with incident safety officer functions.</p> <p>6.5.3 The incident safety officer shall attend strategic and tactical planning sessions and provide input on risk assessment and member safety.</p> <p>6.5.4* The incident safety officer shall ensure that a safety briefing is conducted and that an incident action plan and an incident safety plan are developed and made available to all members on the scene.</p> <p>6.5.5 The incident safety officer shall ensure that control zones are clearly marked and communicated to all members.</p>	
<p>6.6 Accident Investigation and Review.</p> <p>6.6.1 Upon notification of a member injury, illness, or exposure, the incident safety officer shall immediately communicate this information to the incident commander to ensure that emergency medical care is provided.</p> <p>6.6.2 The incident safety officer shall initiate the accident investigation procedures as required by the fire department.</p> <p>6.6.3* In the event of a serious injury, fatality, or other potentially harmful occurrence to a member, the incident safety officer shall request assistance from the health and safety officer.</p>	
<p>6.7 Post-Incident Analysis.</p> <p>6.7.1* The incident safety officer shall prepare a written report for the post-incident analysis that includes pertinent information about the incident relating to health and safety issues.</p> <p>6.7.2* The incident safety officer shall participate in the post incident analysis.</p>	
<p style="text-align: center;">EITHER</p> <p>FCABC/LGMA: Effective Fire Service Administration</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p style="text-align: center;">OR</p> <p>Beyond Hoses and Helmets, or equivalent (<i>administrative</i>)</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Company Fire Officer	Competency Met
Fire Officer 1 (NFPA 1021 in its entirety)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Incident Command 200	Yes <input type="checkbox"/> No <input type="checkbox"/>
Fire Service Instructor 1 (NFPA 1041 Chapter 4)	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.1 General. 4.1.1 The Fire Service Instructor I shall meet the JPRs defined in Sections 4.2 through 4.5 of this standard.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.2 Program Management. 4.2.1 Definition of Duty. The management of basic resources and the records and reports essential to the instructional process.	
4.2.2 Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained. (A) Requisite Knowledge. Components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability. (B) Requisite Skills. None required.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.2.3 Prepare requests for resources, given training goals and current resources, so that the resources required to meet training goals are identified and documented. (A) Requisite Knowledge. Resource management, sources of instructional resources and equipment. (B) Requisite Skills. Oral and written communication, forms completion.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.2.4 Schedule single instructional sessions, given a training assignment, department scheduling procedures, instructional resources, facilities and timeline for delivery, so that the specified sessions are delivered according to department procedure. (A) Requisite Knowledge. Departmental scheduling procedures and resource management. (B) Requisite Skills. Training schedule completion.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.2.5 Complete training records and report forms, given policies and procedures and forms, so that required reports are accurate and submitted in accordance with the procedures. (A) Requisite Knowledge. Types of records and reports required, and policies and procedures for processing records and reports. (B) Requisite Skills. Basic report writing and record completion.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.3 Instructional Development. 4.3.1* Definition of Duty. The review and adaptation of prepared instructional materials.	
4.3.2* Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified. (A) Requisite Knowledge. Recognition of student limitations and cultural diversity, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures. (B) Requisite Skills. Analysis of resources, facilities, and materials.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.3.3* Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved. (A)* Requisite Knowledge. Elements of a lesson plan, selection of instructional aids and methods, and organization of the learning environment. (B) Requisite Skills. Instructor preparation and organizational skills.	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.4 Instructional Delivery. 4.4.1 Definition of Duty. The delivery of instructional sessions utilizing prepared course materials.	

Company Fire Officer	Competency Met
<p>4.4.2 Organize the classroom, laboratory, or outdoor learning environment, given a facility and an assignment, so that lighting, distractions, climate control or weather, noise control, seating, audiovisual equipment, teaching aids, and safety are considered.</p> <p>(A) Requisite Knowledge. Classroom management and safety, advantages and limitations of audiovisual equipment and teaching aids, classroom arrangement, and methods and techniques of instruction.</p> <p>(B) Requisite Skills. Use of instructional media and teaching aids</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.4.3 Present prepared lessons, given a prepared lesson plan that specifies the presentation method(s), so that the method (s) indicated in the plan are used and the stated objectives or learning outcomes are achieved, applicable safety standards and practices are followed, and risks are addressed.</p> <p>(A)* Requisite Knowledge. The laws and principles of learning, methods and techniques of instruction, lesson plan components and elements of the communication process, and lesson plan terminology and definitions; the impact of cultural differences on instructional delivery; safety rules, regulations, and practices; identification of training hazards; elements and limitations of distance learning; distance learning delivery methods; and the instructor's role in distance learning.</p> <p>(B) Requisite Skills. Oral communication techniques, methods and techniques of instruction, and utilization of lesson plans in an instructional setting.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.4.4* Adjust presentation, given a lesson plan and changing circumstances in the class environment, so that class continuity and the objectives or learning outcomes are achieved.</p> <p>(A) Requisite Knowledge. Methods of dealing with changing circumstances.</p> <p>(B) Requisite Skills. None required.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.4.5* Adjust to differences in learning styles, abilities, cultures, and behaviors, given the instructional environment, so that lesson objectives are accomplished, disruptive behavior is addressed, and a safe and positive learning environment is maintained.</p> <p>(A)* Requisite Knowledge. Motivation techniques, learning styles, types of learning disabilities and methods for dealing with them, and methods of dealing with disruptive and unsafe behavior.</p> <p>(B) Requisite Skills. Basic coaching and motivational techniques, correction of disruptive behaviors, and adaptation of lesson plans or materials to specific instructional situations.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.4.6 Operate audiovisual equipment and demonstration devices, given a learning environment and equipment, so that the equipment functions properly.</p> <p>(A) Requisite Knowledge. Components of audiovisual equipment.</p> <p>(B) Requisite Skills. Use of audiovisual equipment, cleaning, and field level maintenance.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.4.7 Utilize audiovisual materials, given prepared topical media and equipment, so that the intended objectives are clearly presented, transitions between media and other parts of the presentation are smooth, and media are returned to storage.</p> <p>(A) Requisite Knowledge. Media types, limitations, and selection criteria.</p> <p>(B) Requisite Skills. Transition techniques within and between media.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.5 Evaluation and Testing.</p>	
<p>4.5.1* Definition of Duty. The administration and grading of student evaluation instruments.</p>	
<p>4.5.2 Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and evaluation procedures of the agency, so that bias or discrimination is eliminated, the testing is conducted according to procedures, and the security of the materials is maintained.</p> <p>(A) Requisite Knowledge. Test administration, agency policies, laws and policies pertaining to discrimination during training and testing, methods for eliminating testing bias, laws affecting records and disclosure of training information, purposes of evaluation and testing, and performance skills evaluation.</p> <p>(B) Requisite Skills. Use of skills checklists and oral questioning techniques.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
<p>4.5.3 Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured.</p> <p>(A) Requisite Knowledge. Grading methods, methods for eliminating bias during grading, and maintaining confidentiality of scores.</p> <p>(B) Requisite Skills. None required.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Company Fire Officer	Competency Met
<p>4.5.4 Report test results, given a set of test answer sheets or skills checklists, a report form, and policies and procedures for reporting, so that the results are accurately recorded, the forms are forwarded according to procedure, and unusual circumstances are reported. (A) Requisite Knowledge. Reporting procedures and the interpretation of test results. (B) Requisite Skills. Communication skills and basic coaching.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.5.5* Provide evaluation feedback to students, given evaluation data, so that the feedback is timely; specific enough for the student to make efforts to modify behavior; and objective, clear, and relevant; also include suggestions based on the data. (A) Requisite Knowledge. Reporting procedures and the interpretation of test results. (B) Requisite Skills. Communication skills and basic coaching.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>Emergency Scene Management (4.6.1, 4.6.2)</p>	
<p>4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. (A)* Requisite Knowledge. Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. (B)* Requisite Skills. The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. (A) Requisite Knowledge. Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. (B) Requisite Skills. The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>

Appendix 5: Benchmark Survey Questionnaire

The survey which follows, was completed by the ACRD's three regional departments and the regional departments in the Nanaimo, Cowichan Valley and Comox Valley regional districts.

Alberni-Clayoquot Regional District

- Bamfield
- Beaver Creek
- Sproat Lake

Nanaimo Regional District

- Bow-Horn Bay
- Coombs-Hilliers
- Dashwood
- Errington
- Extension
- Nanoose

Cowichan Valley Regional District

- Honeymoon Bay Fire Rescue
- Malahat Fire Rescue
- Mesachie Lake Fire Rescue
- North Oyster Fire Rescue
- Sahtlam Fire Rescue
- Youbou Fire Rescue

Comox Valley Regional District

- Hornby Island Fire Rescue department.
- Denman Island Fire Rescue department.
- Fanny Bay Volunteer Fire Department.
- Oyster River Fire Rescue department.
- Union Bay Fire Rescue Department

DEPARTMENT: <i>insert name</i> REGIONAL DISTRICT: <i>insert name</i>			
Type of Department: RD administered or society (contracted)			
RD Staff Support provided to the Fire Department	Full time	Part time	
Coordinator			
Administration			
Declared Level of Service under the Playbook: Exterior, Interior or Full Service			
Declaration done via policy or bylaw			
Total Population Served by the Fire Department			
Size of primary fire protection response area		square kilometres	
Size of <u>additional</u> area covered under service agreements		square kilometres	
Number of fire halls			
Department authorized strength - total number of firefighters at all ranks			
<i>(Following sections) Only include "active responding firefighters". For # of positions: Indicate positions even if vacant. Do not include "acting" positions. (For Training Officer(s): include under the rank held)</i>			
Number of chief officers:	Full time	Volunteer/POC	
Chief			
Deputy Chief			
Assistant Chief			
Number of Support Staff (Administration)	Full time	Part time	Volunteer
Number of Officers:	Full time	Volunteer/POC	
Captains			
Lieutenants			
Explanatory note (if needed)			
Number of Firefighters (Suppression only)	Full time	Volunteer/POC	
Number of suppression firefighters assigned to respond from each hall (include Chief Officers)			

DEPARTMENT: <i>insert name</i> REGIONAL DISTRICT: <i>insert name</i>	
Career staff shift schedules (days per week/hours per day)	
Duty Crew Model (if yes; describe # and composition of crew / coverage schedule) and any remuneration	
Which Specialty Services are provided and to what training level (Awareness, Operations, Technician)	
HazMat	
Low Angle Rescue	
High Angle Rescue	
Swift Water Rescue	
Auto Extrication	
Confined Spaced	
Other (please describe	
Fire Prevention:	
Fire investigations are done by: FD or RD	
Fire Inspections done by FD: average number annually	
Fire Inspections done by RD staff: average number annually	
LAFD appointments: FD, RD staff or both	
Preplans: Done by FD or RD staff	
Number of preplans created	
Number of preplans still required	
Updates done by FD or RD staff	
Annual Operating budgets:	
2018 (actual)	
2019 (actual)	
2020 (actual)	
2021 (approved)	

DEPARTMENT: <i>insert name</i> REGIONAL DISTRICT: <i>insert name</i>	
Paid on Call (remuneration) budget 2021	
Association funding 2021 (if funded by RD)	
Is fundraising done to support department operations? If yes; average amount raised annually	
Annual Training budget for 2021	
Apparatus:	Number of each type:
Engines	
Aerials	
Rescues	
Bush Trucks	
Tankers	
Hazmat	
Other	
Total number of all calls for service in 2020	
Within the <i>total number of all calls</i> provide a breakdown of:	
Number of fires by dispatch type:	
Structure	
Alarms ringing – no fire	
Vehicle	
Brush	
Other	
Number of Non-Emergency Calls: (e.g. burning complaints, assist public, etc.)	
Number of Medical Responses	
Fire Underwriters' Survey (most recent):	
Date completed	
DPG Rating	
PFPC Rating	

DEPARTMENT: <i>insert name</i> REGIONAL DISTRICT: <i>insert name</i>	
Agreements - <i>please provide the name of the partner community AND, for aid agreements, the type of Department (POC/Volunteer or Career)</i>	Details
Mutual Aid	
Automatic Aid	
Service (including First Nations)	

Appendix 6: Consultant Backgrounds

Dave Mitchell

Dave Mitchell retired as Division Chief, Communications in 1998 from Vancouver Fire & Rescue Services following a career spanning 32 years. During this time, he was responsible for managing the emergency call taking and dispatch for the Vancouver and Whistler Fire Departments. In 1998, Dave was hired by E-Comm, Emergency Communications BC as its first Director of Operations. In this role he was a member of the founding senior management team and was responsible for the transition of the Regional 9-1-1 Control Centre staff from the Vancouver Police Department to its current location at 3301 East Pender in June 1999.

He left E-Comm in June 2000 to work as a consultant, and since that time has managed the development of corporate, strategic and operational plans for a number of clients. As principal of DMA, Dave participates on all projects undertaken by the company either as the lead consultant or by providing his expertise at an advisory or support level.

Dave holds a Bachelor of Arts Degree (Geography) from Simon Fraser University in addition to a diploma from their Executive Management Development Program. He is past Chair of the Board of Directors of the Vancouver General Hospital and University of British Columbia Hospital Foundation, is currently Chair of the Justice Institute of British Columbia Foundation, and a member of the Fire Chiefs' Association of British Columbia, and the Canadian Association of Management Consultants.

Gordon Anderson

Gordon Anderson retired in 2019 with 29 years in the fire service, serving for the last five as the British Columbia Fire Commissioner. In this role, he was the senior fire authority for the Province providing advice to government and supporting local government fire services, as well as dealing with fire service issues at the national level.

During this time he implemented a new Structure Firefighter Training Standard (the Playbook), modernized and expanded the wildland interface Structure Protection Program in partnership with the BC Wildfire Service and the Fire Chiefs' Association of BC and, with extensive stakeholder input, successfully developed and passed new provincial legislation to repeal and replace the current Fire Services Act (implementation pending).

Prior to joining the Office of the Fire Commissioner, he spent 13 years with volunteer fire departments, five years with the Victoria City Police and 22 years in Esquimalt Fire Rescue (a combination police/fire public safety department) where he rose through the ranks to finish his last six years as Deputy Fire Chief. He has extensive experience as a career department Chief Training Officer and 12 years as a contract instructor for the Justice Institute of BC's firefighter training program and all four levels of the Fire Officer Certificate Program.

Gord has a Bachelor of Arts degree from the University of Victoria and NFPA Fire Officer Level 4 certification; in 2018 he earned a Bachelor of Public Safety Administration degree. He also

holds certification as an Executive Chief Fire Officer and is a Fellow at the Institution of Fire Engineers (United Kingdom). He is past-President of the Council of Canadian Fire Marshals and Fire Commissioners as well as having served on the governance board of the Canadian Public Safety Operations Organization.

Jim Cook

Jim Cook is an experienced professional with over 38 years of experience in the fire service. He has extensive knowledge and experience with budgets, labour relations, fire operations, strategic planning, executive leadership, project management, community engagement, and organizational change. Jim began his career in the New Westminster Fire Department. He was promoted to the position of Deputy Chief in 2001. In 2008, Jim was appointed to the position of Fire Chief in West Vancouver where he worked to improve the mutual and automatic aid agreements in the region including with Lions Bay. His work there also included transitioning the department to the E-Comm Wide Area Radio System. During his career, Jim has worked on several committees and boards including the BC Municipal Pension Plan, BC Investment Management Corporation, Vancouver Hospital Foundation, BC Fire & Life Safety Education Program, First Responder Program and the BC Fire Chiefs Association. He is also a past-President of the Greater Vancouver Fire Chiefs Association.

Wayne Humphry

Wayne has over 40 years' experience with the BC fire service. He retired in 2009 from Vancouver Fire/Rescue after a career spanning 31 years. During this time, Wayne served in fire suppression, rising to the rank of Battalion Chief. He also worked extensively with Vancouver Fire's training division as an instructor and Division Chief between 1996 and 2009. Based on his work in both roles he has extensive experience in fire rescue emergency operations, specialty teams, logistical planning and budgeting, training and development, facilitation, and project creation and management. In addition to his work with Vancouver Fire he has been an instructor at the Justice Institute of BC, at UBC's Sauder School of Business as well as for Capilano University.

Wayne has developed and delivered in-house Firefighter and Fire Officer Development seminars, including ProBoard certified programs, for various career and volunteer/paid-on-call fire departments throughout BC, Alberta, Manitoba, and the Northwest Territories. His training expertise includes Firefighter I & II, Fire Officer Level 1, 2 and 3 programs – Emergency Incident Management (BCEMS/ICS, Command Post and EOC operations, fire behavior, strategies and tactics); Incident Safety Officer; Rapid Intervention Teams; Fire Service Instructor; and Live Fire Exercises Levels 1, 2 & 3. Wayne was also a Fire and Rescue Services Subject Matter Expert for the JI's Critical Incident Simulation Centre's program development for multi-agency, multi-jurisdictional incident management training.

Ian MacDonald

Ian MacDonald is a retired corporate securities lawyer who practiced international corporate law in Canada and the United Kingdom. Ian was a partner with a major Toronto firm in the 1990s,

and moved to England in 1997, where he became the managing partner of a specialist litigation and intellectual property practice. He retired from active practice in 2004.

Ian has worked with Dave Mitchell & Associates since 2007 and has participated in almost all the major fire and emergency service projects since that time. He assists with the analysis of the legal and governance structures affecting fire and emergency services, ranging from establishment and operational bylaws to WorkSafe issues.