



**Bow Horn Bay  
Volunteer Fire Department  
Review**

**Dave Mitchell and Associates Ltd.**

**April 2016**

## General Introduction

The review of the Bow Horn Bay Volunteer Fire Department (“BHBVFD” or the “Department”) was conducted on 7 December 2015. Fire Chief Steve Andersov and Deputy Chief Geoff MacIntosh were present during the review.

The Department’s fire hall is situated approximately 62 kilometres north of Nanaimo and the Department provides service to a portion of Electoral Area H of the Regional District of Nanaimo (the “RDN”). The BHBVFD has a complement of 23 members, two of whom function in support roles.

In addition to fire suppression duties, the Department provides First Medical Responder (“FMR”) services, attends motor vehicle incidents, conducts low angle rope rescue and will undertake wildland-urban interface suppression. Although they have recently started training in auto extrication, the Department currently relies on the Deep Bay Volunteer Fire Department to provide this service. Given its geographic location, the Department is well supported through the “District 69” mutual aid agreement with four other RDN departments, and the departments from Parksville, Qualicum Beach, Lantzville and Deep Bay.<sup>1</sup>

References below to the “main report” are to the main summary report on the RDN’s fire services, delivered concurrently with the audit reports on the individual departments.

## Fire Department Organizational Structure

The Department is organized as follows:

- Fire Chief
- Deputy Fire Chief
- Training Officer (2)
- Captains (3)

The Department has been established and is directly operated by a society called the “Bow Horn Bay Volunteer Fire Department” (the “Society”), which was incorporated under the *Society Act* (B.C.) on 19 August 2004. The operation of the Department is subject to oversight from Society’s Board.

The Fire Chief, in conjunction with Society Board Treasurer for financial matters, is primarily responsible for budgeting, forward planning and overall command and control of the Department. The Deputy Chief also assists in this process. Chief Andersov has been with the Department for 29 years, a good portion of which has been spent as an officer within the Department. The Deputy Fire Chief is primarily responsible for overall Department training in addition fulfilling more traditional administrative roles within the Department. There are two Training Officers who assist the Deputy Chief with training.

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<sup>1</sup> This mutual aid agreement is examined in greater detail in the main report.

Appointment to the position of Fire Chief within the BHBVFD has historically been on the basis of an election by the membership, followed by approval and confirmation by the Society Board. Traditionally, fire chiefs have held the position of Deputy Fire Chief prior to being elected. There are no written qualifications or proficiency requirements set for this role, nor is there a set time limit once an appointment occurs. Similarly, there are no prescribed minimum qualifications or proficiency requirements established for other officer positions within the Department. Promotion to all officer positions is determined by annual election and subject to approval by the Fire Chief. To-date, no election of an officer has ever been over-ruled by a Fire Chief. The matter of election of officers is discussed in greater in the main report.

The Department's officer structure appears strong and experienced albeit that several of the individual officers, while having many years in the fire service, are relatively new to the Department. The average years of service in the Department for officers, is 9.8 years.

Specific information on current officer training qualifications was provided. There are however no written prerequisites or qualifications for appointment/election as an officer. The Department would benefit from a more formal, documented officer training program outlining the required qualifications and prerequisites, which would assist both the Department and the members who aspire to become officers or seek promotion. This would also help ensure that, when promoted, officers are already trained to assume the position. (Note: Please see the recommendations in the Fire Department Training section of this report.)

## **Fire Department Training**

### General Comment (included in all Department reviews)

There are many commonalities in training issues facing the RDN's volunteer fire departments. The main report has a section that discusses the general issues that need to be addressed in relation to RDN's fire department training, and that section should be consulted in addition to the Department-specific comments set out below.

### Department-Specific Comments

As noted, the Deputy Fire Chief is primarily responsible for the Department's training and records, although the Training Officers and individual members also contribute by training members on subjects with which they have some expertise. An annual training schedule is routinely posted to advise all members on upcoming training.

The Consultants did not witness actual operational training of Department members and therefore have relied on training records as an indicator of the level of operational readiness of the Department to carry out its mandated emergency response activities. The Department provided training records and formal qualifications of its members for inspection. The Department uses a combination of electronic records and hardcopy, which, for the most part, are structured in a way that would permit an easy determination of an individual's level of training. We conducted a sampling of the records and the following comments are based on

those records reviewed, and discussions with the Fire Chief during the interview session. This report references the various service levels and other training requirements set out in the Playbook.<sup>2</sup> These issues are examined in greater detail in the main report.

According to the Fire Chief, the Department currently trains toward operating as an Interior Operations Service Level department and assume to be declared as such in the future. A breakdown of the Playbook training competency requirements necessary to achieve and maintain a declaration of Interior Operations Service Level can be found in the main report. It needs to be emphasized, however, that the Playbook sets minimum qualification requirements for only a limited range of positions and functions within a fire department, based on the service level selected for that department. The Playbook is not a complete system:<sup>3</sup> there is a range of positions, duties and functions, essential to fire suppression and emergency service delivery, which are not covered in the current iteration of these standards. As such, the Playbook is only the starting position for determining the necessary qualifications, training and proficiency requirements needed to deliver fire and emergency response services safely and effectively. Each AHJ and fire department must establish training and other requirements for the positions, duties and functions not covered by the Playbook. This issue is considered further in the main report.

Upon a review of the Department's current training levels, eight members (one firefighter and seven officers) meet the minimum criteria required by the Playbook for Interior Operations with 10 additional members enrolled in either the NFPA 1001<sup>4</sup> or the BC Basic Firefighter program. Meeting the requirements of the BC Basic Firefighter Program will not meet the requirements of the Playbook for the Interior Operations Service Level, though bridging from that program to the Playbook's requirements is possible.<sup>5</sup>

The Playbook also identifies the minimum training competencies required for the role of a Team Leader which is defined in the Playbook as being the individual responsible for a specific crew's functions/activities in both exterior and interior operations. The current training records indicate that only the Fire Chief and Deputy Chief meet these requirements. The Fire Chief indicates that the remaining officers are currently enrolled in, or are intending to enroll in, the training required to bridge the gap between their existing proficiencies and those required under to be Team Leaders under the Playbook.

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<sup>2</sup> Office of the Fire Commissioner, *British Columbia Fire Service Minimum Training Standards: Structure Firefighters Competency and Training Playbook* (2<sup>nd</sup> ed., May 2015) (the "Playbook").

<sup>3</sup> The Playbook expressly recognizes this issue: see p. 13/20, where it notes that the Playbook is not an "all encompassing" program.

<sup>4</sup> National Fire Protection Association, *NFPA 1001: Standard for Fire Fighter Professional Qualifications* (2013 ed.).

<sup>5</sup> The BC Basic program was developed by the Justice Institute of BC under the previous Minister's Order on Training. Although based on NFPA 1001, it does not contain all of the elements now required by the Playbook.

Under the Playbook, the competencies/qualifications for a Company Fire Officer are the requirements of NFPA 1021 Fire Officer 1,<sup>6</sup> and those for the role of Team Leader are primarily drawn from the “Emergency Service Delivery” section of NFPA 1021 Fire Officer 1. Based on the training records provided:

- only two of the seven officers (the Chief and Deputy Chief) meet the Company Officer (NFPA 1021) competencies and qualifications identified in the Playbook; and
- those same two members are the only officers who meet the Team Leader competencies and qualification requirements.

As such, the Department is unable at this time to comply with the Team Leader requirements for either Interior or Exterior Operations. A gap analysis should be conducted for the other officers’ training, and a program developed to provide the required competencies.

The fire hall property is large enough to conduct multi-unit drills; in addition, the Department has several on-site training props one of which is a small (locally built) facility for live-fire exercises. This facility is used primarily to provide members with the opportunity to experience entry into smoke filled atmospheres and to get local experience with small fires. Formal live-fire exercises are conducted in either the Comox or Nanaimo training facilities with the use of third party trainers.

While we congratulate the Department for its initiative in this live-fire prop, we would recommend that the Department expand its written operational guidelines to deal with all aspects of providing local “live fire” training, to include the nature of the exercises and instruction to be provided and explicitly require adherence to the standards set out in NFPA 1403.<sup>7</sup> In the interim, the Department should confine itself to conducting exercises that are for the purposes of familiarizing members with SCBA usage and other similar activities that require only a smoke filled atmosphere and not the presence of actual “live fire”. Before recommencing any live fire exercises, the Department must develop and then train to appropriate written operational guidelines regarding live fire training. In addition, the Department must ensure that its members and officers are properly qualified to undertake this type of training and that the appropriate records are maintained.

The Department’s existing operational guidelines need considerable improvement. This situation is not uncommon for many volunteer (and career) departments in the province. Currently there are insufficient guidelines to cover many of the operational matters required for proper emergency responses, including all of the necessary aspects of conducting an interior attack (an issue also identified more generally in the main report). Absent such guidelines, the Fire Chief relies on officer judgment for determining whether or not to enter a fire-involved structure. Appropriate written operational guidelines, however, are a WorkSafe BC requirement

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<sup>6</sup> National Fire Protection Association, *NFPA 1001: Standard for Fire Officer Professional Qualifications* (2014 ed.).

<sup>7</sup> National Fire Protection Association, *NFPA 1403: Standards on Live Fire Training Evolutions* (2012 ed.).

and are necessary under best practices for the fire service. We would recommend that the Department, in consultation with the RDN and other area departments, undertake to develop the necessary guidelines as soon as possible.

The Fire Chief reports weekly training sessions are well attended with approximately 12-15 members present each week. Attendance is recorded and although there are no minimum numbers of training sessions a member must attend each year, frequent absenteeism is addressed when necessary. In addition, the Department will grant longer term leave of absence for a valid reason rather than have the member leave the organization altogether.

The Department's training program is based on the requirements of the NFPA 1001 standard. The written exams and practical skills evaluations are primarily conducted through the Justice Institute of BC's FF-I and FF-II program. This program is based on NFPA 1001, and its successful completion complies with the Playbook requirements for Exterior and Interior Operations Service Level Firefighters. However, it should be noted that the Department also utilizes the "BC Basic Firefighter Program." Although this program was derived from NFPA 1001, it does not cover all subject areas required by the Playbook. As such, completion of this program does not meet all of the Playbook's requirements for the Exterior Operations Service Level.

In the Consultants' view, the Department's needs to review its approach to conducting interior attack and rescue operations. The current training levels of the members and officers, and the absence of written operational guidelines covering aggressive fire operations significantly increases the risks in undertaking an interior attack. Aggressive interior operations, such as fire attacks and primary searches, require firefighters to enter an extremely hazardous environment. These types of operations significantly increase the potential for adverse fire events such as flashover, smoke explosion or backdraft, and expose firefighters to a variety of other hazards. As such, they pose the most significant risk to firefighters in fire suppression operations. A line of duty death or serious injury is a risk that all fire departments must seek to mitigate. In the case of the Department, in the event of a line of duty injury or death, the potential for liability is significant, a risk that is potentially increased by the lack of operational guidelines and the current levels of firefighter and fire officer training.

The nature of modern construction techniques has amplified the risks faced by firefighters. Lightweight construction components and contents made of composites, synthetics and other unusual fuels, cause fires to burn hotter, faster and with less predictability, creating a much more volatile fire environment than that of the past. Although firefighters are now better equipped, the fires today pose a greater risk than those faced in the 1970s and 1980s. Having recognized this, the fire service in general is now placing a much greater emphasis on firefighter safety, with particular focus on interior operations, and seeking to manage the degree of risk to which firefighters are exposed. Unless the situation presents firefighters with an immediate life safety issue (a saveable life), in general firefighters should not be subjected to the high degree of risk involved in aggressive interior operations to save a structure and its contents. With a good understanding of the appropriate strategies and tactics that should be implemented, and

with the correct levels of training to achieve these, structure fires can be effectively suppressed using a safer, exterior, defensive mode of operations that materially reduces risks to firefighters.

Given the high degree of risk presented when firefighters engage in aggressive interior operations, we would recommend that, until written operational guidelines are in place dealing with offensive interior operations, and the gaps in training filled, the Department confine itself to conducting exterior or defensive attacks on structure fires. Before recommencing interior attacks, the Department must develop, and the Department must train to, relevant written operational guidelines covering aggressive, offensive interior operations. In addition, the Department must ensure that its members and officers are properly qualified to meet the WorkSafe BC requirements. For interior attacks, as a minimum, firefighters need to meet or exceed the Playbook qualifications for Interior Operations Service Level Firefighter, which include job performance requirements pertaining to Live Fire Exterior, as well as those of NFPA 1407 RIT training.<sup>8</sup> In addition, officers and others that assume the role of team leaders must have the same minimum qualifications required for the firefighter function, as well as those of a Team Leader as identified in the Playbook. For further information and comments regarding the training and qualifications for firefighters, team leaders, and live fire training, please refer to the main report.

The issue of appropriate training levels also needs to be considered along with the obligation to ensure that workers are properly trained for their duties and supervised while performing them. With the Playbook stipulating only a minimum level of required training for select positions, the goal 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 accomplish this, the Department should also ensure that all firefighter activities are always supervised by a suitably trained team leader and/or fire officer. As with firefighters, fire officers MUST adhere to the limits of their actual training.

As stated earlier, the Department's officer structure appears reasonably well qualified, with most officers having many years of experience. However, in an effort to ensure that the Department as a whole can move to the next level of long term success, it is important that the it establish the required fire officer proficiencies and competencies consistent with the requirements of the Playbook and relevant NFPA standards. For existing officers, some of these qualifications may need to be developed through additional training and education. Formal standards should be implemented as soon as possible to maintain and improve the officers' abilities to fulfil their roles at the various fire officer levels. It is also acknowledged that to achieve these requirements, there will need to be a balance between required time invested to learn these skills versus the amount learned and the impact on the members' overall time commitment. Once established, it is important that all members are made aware of the criteria for and the expectations of each position so they understand what is required for promotion.

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<sup>8</sup> National Fire Protection Association, *NFPA 1407: Standard for Training Fire Service Rapid Intervention Crews* (2015 ed.).

**Recommendation:** The Department not undertake aggressive, offensive interior operations on structure fires until it has met the next two recommendations.

**Recommendation:** The RD, in consultation with the Fire Chiefs, should develop written operational guidelines dealing with all fire ground operations, including offensive interior attacks. The written operational guidelines for interior operations, among other things, should specify the minimum levels of training and qualification for fire attack and primary search teams involved in such operations.

**Recommendation:** The RD, in consultation with the Fire Chiefs, should develop officer qualifications and prerequisites for all positions. Once developed, existing officers should be offered the opportunity to receive the training needed to ensure they fulfil the requirements (with an emphasis first on ensuring that they are fully qualified for all operational fire ground responsibilities). All members within the Department interested in future promotion should be offered the opportunity to take part in the training.

## Fire Department Records

In the main report, the section on “Records” provides a general overview of what records must be maintained to be compliant with WorkSafe BC, and what records should be maintained for good business practices.

The Department’s training records are maintained in a combination of electronic and hardcopy format. For the past three years, the Department has been using a software program called “IamResponding.” Although this program is primarily a web-based response notification program, it also:

- enables departments to track member availability and responses to emergency incidents; and
- provides a limited records management feature which the Department has adopted to record and store its training records.

Hard copy records (external training certifications, driver abstracts, etc.) along with a personal folder for each member are also maintained by the Department. A sample review of both the electronic and hardcopy records of several members verified that the Department is currently maintaining adequate training records and is meeting its mandated requirements. Historic records (those created prior to the 2012 implementation of IamResponding) are slowly being entered into the program with the expectation of eventually having all training records in one format, backed up by hardcopy files.



The Department should be congratulated for its commitment to utilizing existing software and for maintaining good training records. This is an area where many volunteer and career departments face significant challenges. We would suggest, however, that the Department ensure that it always maintains a current back-up of all its electronic training records.

## **Fire Hall Facilities**

The BHBVFD fire hall was built in 1980 and is approximately 4,500 sq. ft. The original building had two apparatus bays; three more have been added. The fire hall, although old, is in generally in good condition. The Fire Chief reports that the building does not currently house all of the equipment and that they are presently required to store some apparatus off-site. In addition, there is not a lot of storage space within the building. Replacement of the hall is anticipated in the RDN's 10-year capital plan for 2022, at an estimated cost of approximately \$3.0 million.

The general area room is used as the training room and is now too small for the Department's training needs. As well, larger social functions, such as the annual dinner and Christmas party, are now held at off-site rental locations.

A homebuilt vehicle exhaust extraction system has been installed in the apparatus bays (designed and constructed by the Fire Chief). According to the Chief, the system works well but has never been tested to determine its effectiveness. An effective exhaust system is required to prevent noxious and carcinogenic fumes remaining in the fire hall after the vehicles have exited or entered the building and been turned off. Section 31.32 of the *Occupational Health and Safety Regulation* requires that fire departments install effective venting for exhaust gases, unless it can be established that vehicle fumes are below a mandated level. BHBVFD should consider having WorkSafe BC (or an external testing agency) conduct air quality testing to determine the effectiveness of its existing venting system.

The majority of fire hall maintenance is done by the Fire Chief with major repairs being contracted out. Regular cleaning is provided by a local contractor.

In addition to serving as the fire hall, the building is used as a local CPR training site. The Fire Chief indicated he has offered use of the building to the local ESS group but as of the date of this report, they are not using it. Insurance coverage for groups using the building has not been an issue they have dealt with in the past.

According to the Fire Chief, the fire hall is centrally located within the fire protection district located on the north side of the highway but he feels they need an additional fire hall on the south side to provide better coverage to that area. The areas in question (Spider Lake and Horn Lake) consist of approximately 150 and 300 homes respectively and, according to the Chief, are in excess of a 20-minute response time from the main station. The areas in question do not have a water supply other than a 3,000 gallon water tank the Department has installed.

## Fire Apparatus and Equipment

The chart below identifies the fire apparatus currently in use by the Department:

Type	Manufacturer	Date of Manufacture	Pumping Capacity gpm	Tank Capacity (gals)	NFPA Compliant	ULC Compliant
Pumper	Rosenbauer/Freightliner	2011	1034	998	Yes	ND212139
Pumper	Superior/Pierce	1991	1050	800	CSA	3463 C
Mini Pumper/Rescue	Anderson/Freightliner	1995	250	400	n/a	n/a
Interface Tender	Freightliner	2000	Pump & Roll 105	1500	No	No
Tender	Freightliner	1998	2 portables	1500	n/a	
Med - Rescue	Crestline/Ford	1995				
Command Veh.	Ford E-450	2005				
Duty-Officer	Chev K-3500	1995				

The Department currently has adequate fire apparatus to meet the Fire Underwriters' ("FUS") requirements and to provide its mandated services. Apparatus maintenance is provided by Bayline Industries of Parksville and annual pump testing is contracted out to ProFire. The general condition of the apparatus appeared good and maintenance records including recent pump tests were available for inspection. The 1991 Superior/Pierce will no longer be accredited by FUS towards the Department's pumping capacity,<sup>9</sup> but according to the Fire Chief, is still serviceable.

Biennial ladder testing is contracted out to Profire; records were available for inspection and were up to date. Similarly, SCBA testing is contracted out to Rocky Mountain and conducted every year; records were available for inspection and were up to date. It should be noted that s. 31.37 of the *Occupational Health and Safety Regulation* requires that ground ladders be "used, tested and maintained" in accordance with NFPA 1932.<sup>10</sup> NFPA 1932 requires at least annual testing of ground ladders; it also establishes a regime for ladder inspections which also needs to be followed.<sup>11</sup>

According to the Fire Chief, the Department has adequate and appropriate apparatus and equipment to provide its mandated services – we concur with this opinion. The topic of

<sup>9</sup> FUS generally will not include in its assessment apparatus which is more than 20 years old. It is possible to extend the FUS-rated life of an engine to 25 years through application to FUS, and provision of the required annual servicing documents.

<sup>10</sup> National Fire Protection Association, *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders* (2015 ed.). The regulation actually refers to the 1989 edition of the standard, as WorkSafe BC has failed to update its references in Part 31 for decades. The common approach is to use the most recent edition of the relevant NFPA standard.

<sup>11</sup> See NFPA 1932, Chapter 6 and Chapter 7.

appropriate funding for replacement of apparatus and equipment is discussed in the budgets/financing section of this report.

(Please see Appendix 2 of the main report for detailed recommendations on equipment testing and records keeping.)

**Recommendation:** That the Department adopt and adhere to a policy of conducting annual ladder testing in accordance NFPA 1932.

## Fire Department Responses

Over the four-year period of 2012 to 2015, BHBVFD responded to a total of 421<sup>12</sup> incidents for an average of 105 per year. In addition to fire suppression duties, the Department provides low angle rope rescue, wildland-urban interface suppression, FMR, and attends motor vehicle incidents. It does not currently undertake vehicle extrication operations.

The Bow Horn fire protection area consists of primarily rural residential structures. In addition, their fire protection area includes a fish plant, gas station, strip mall, community hall and hardware store (which presents potential chemical hazards).

On average, a daytime (8:00 a.m. to 6:00 p.m.) emergency incident is attended by six to eight volunteers. In comparison, a similar nighttime incident (6:00 p.m. to 8:00 a.m.) will be attended by 12 to 15 volunteers. The lower daytime attendance is a common problem for many departments throughout the province, and in many respects, the turnout the Department is getting in the daytime is better than many comparable departments. BHBVFD's evening attendance during incidents is good and provides adequate staffing to appropriately deal with most incidents that the Department will encounter.

BHBVFD has signed mutual aid agreements with the Deep Bay, Dashwood and Qualicum departments. In addition, the Department is part of the "District 69" mutual aid agreement. The Fire Chief reports that when called upon, its mutual aid partners can provide adequate additional resources. It was noted that Deep Bay does not provide tender aid as they have a hydrant system and do not operate tenders. The Department is confident they have adequate apparatus, staffing and training to safely respond to most common emergency incidents that might occur within its fire protection area. The only exception to this is wildland-urban interface incidents within the fire service area, which would likely be beyond the Department's capability and require considerable mutual aid support and the assistance from the BC Wildfire Service.

The Department does not have a formal pre-fire planning program in place although they do conduct regular familiarization tours and do have members being trained to conduct fire inspections and pre-fire planning. It is recommended that a formal pre-fire planning program be implemented, which should include training all members accordingly. It should be noted that, under the Playbook, interior operations service level departments may only conduct interior

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<sup>12</sup> Note that the response data is that which has been supplied by the North Island 911 Corporation and may not include all responses.

operations in risks larger than a standard residential dwelling, if they have pre-planned that particular structure.

**Recommendation:** That the Department should develop comprehensive pre-fire plans, covering its principal or major risks to better prepare it to manage the situation with limited resources until such time as additional resources (mutual aid) can arrive at the incident.

## **Volunteer Recruitment and Retention**

The average age of members within the Department is estimated to be in their mid-forties. The average time of service for the officer group is 9.8 years and for the firefighters is about 2.5 years. The average yearly turnover of volunteers is estimated at five or six members per year. Given these numbers, the BHBVFD is considered a high turnover department and while it has a mature officer group, it has a relatively junior or inexperienced complement of firefighters. With an overall membership of 23 members (21 of whom are active and responding), the Department has been successful with its recruitment practices but has a turnover rate around 25% annually. We would suggest the Department seek to increase its membership by five or six members to ensure more continuity and guard against unexpected or unanticipated above average numbers of departures or retirements.

According to the Fire Chief, the Department's recruitment drive, while not regularly scheduled, is an ongoing informal process that involves an annual open house, a door-to-door safety campaign in October, and occasional newspaper ads. In addition, as noted earlier the Department has recently considered re-implementing a junior fire fighter program which, if successful, will assist in providing a continuous supply of new members in the future. The Fire Chief, his officers and all members of the Department are to be congratulated for their ongoing commitment to providing fire service to the community of Bow Horn Bay.

The recruitment and retention of volunteers is one of the major issues facing volunteer departments in the province. The section on volunteer recruitment and retention found in the main report provides additional thoughts and ideas on the subject and may provide some insight and some useful approaches to assist in dealing with this matter.

## **Budgets and Financing**

The Fire Chief and Deputy Fire Chief, in consultation with Board Treasurer, develop the Department's draft budget. Once formulated in draft, the Treasurer along with other members of the society finalize the budget for presentation to the Society Board Members. Final approval of the budget rests with the RDN Board of Directors.

The 2015 approved budget was \$729,695 of which \$300,000 was loan proceeds, \$116,000 was drawn from the equipment reserve fund and \$3,637 was listed as "other". The actual tax requisition for 2015 was \$310,058. Of this amount, \$38,000 was slated for transfer back into

the equipment reserve fund. The Department reports they generally expend their annual budget although any small surplus is normally transferred to the equipment reserve fund.

The five-year plan indicates a need for a third tanker in 2017. This purchase is in anticipation of construction of the second fire hall (in the Horn Lake area). The Department has adopted a sound long-term approach in relation to budgeting and planning for the replacement of its major apparatus.

In addition to the tanker purchase noted above, the Department must ensure it establishes a plan for replacing the interface tanker (2000 Freightliner) and the 1998 Freightliner. While mobile water supply vehicles (tankers) are not subject to the same stringent replacement standards as pumper trucks, it is advisable to have a replacement plan in place for all fire apparatus.

The five-year plan covers the construction of a second fire hall (the Horn Lake area discussed previously). The plan, however, does not provide for the apparatus necessary to equip that fire hall. As the 1991 Superior/Pierce Pumper is already beyond its rateable age, the Department should anticipate having to acquire a new piece of apparatus for its second hall. It could consider acquiring a used apparatus; alternatively, it could move the 2011 Rosenbauer/Freightliner to the second hall and acquire a new pumper for the main hall.

## **Legal Structure and Bylaw Review**

The legal structure for the Department is fairly standard given the manner in which the fire service is operated in the RDN:

- (a) There is a local service area bylaw, under which the RDN is authorized to provide fire suppression and other emergency response services, and operate, or contract for, a fire department: *Bow Horn Bay Fire Protection Service Establishment Bylaw No. 1385, 2004* (the "Service Bylaw");
- (b) There is an operational bylaw which grants the Department the authority to respond to and manage incidents, and which addresses certain administrative matters: *Bow Horn Bay Volunteer Fire Department Operations Bylaw No. 1401, 2004* (the "Operational Bylaw");
- (c) There is a fire prevention bylaw (which is not typical for the RDN fire service areas) covering various matters such as open burning: *Bow Horn Bay Fire Protection Service Fire Regulation Bylaw No. 1402, 2004* (the "Fire Prevention Bylaw");
- (d) There is a service agreement (the "Service Agreement"), dated as of 23 November 2004, between the RDN and the Society relating to the provision of fire and emergency response services by the Department; and
- (e) There are the separate constitutional documents under which the Society itself is incorporated and operates. The constitutional documents of the Society have not been reviewed in detail.

The main report contains some suggestions and recommendations which, if adopted, would result to changes in the Operational Bylaw. It also contains some recommendations,

particularly in relation to the Playbook, which will impact the operational bylaws of all departments, as well as the Service Agreement. Those comments are not repeated here.

In reviewing the bylaws and agreements, nothing in this report should be construed as legal advice. The RDN and Society should review any issues identified in this report with legal counsel.

## Individual Bylaws

### Service Bylaw

The establishment of a local service area in the Bow Horn Bay region by the RDN is relatively recent. Prior to 2004, fire services were delivered through an improvement district. The Service Bylaw establishes a local service area in accordance with the requirements of the *Local Government Act* (B.C.). The service authorization language in section 1 permits the RDN to provide a broad-based service, covering fire protection and “emergency responses to other classes of emergency.” The RDN may provide the service directly or by “otherwise obtaining” it.

The Service Bylaw established the boundaries for the local service area within which the Department operates.<sup>13</sup> The sole participating area for service is Electoral Area “H” and the maximum property tax rate which may be applied in connection with the service is the greater of \$162,500 or a property tax rate of \$1.076/\$1,000 of net taxable value of land and improvements.<sup>14</sup> The 2015 tax rate for residential properties in the service area was \$0.805/\$1,000 of assessed value.

Other than a minor typographical error in s. 5(b), no changes appear necessary for this bylaw.<sup>15</sup>

### Operational Bylaw

The Operational Bylaw is one of the fundamental constitutional documents which underpins the Department’s operational powers, mandate and administrative processes. As a starting point, it needs to be recognized that for local governments, fire departments are an optional service.<sup>16</sup> 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

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<sup>13</sup> Bylaw No. 1385, s. 2 and Schedule ‘A’.

<sup>14</sup> Bylaw No. 1385, ss. 3 and 5.

<sup>15</sup> There is a word missing in s. 5(b): it should read “[...] within the service **area** by a property tax [...]”. The highlighted word, “area” is missing in the original.

<sup>16</sup> The only exception to this is the City of Vancouver, which is required to maintain a fire department pursuant to the terms of the *Vancouver Charter* (B.C.).

district, is the boundaries of the local service area<sup>17</sup> – a fire department has no specific authority to act at or to respond to an incident. Care must be taken, therefore, to ensure that the 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 in a mutual or automatic aid agreement, under a fire service contract or in support of another emergency response agency, such as the BC Wildfire Service.

Similarly, there is no standard range of services defined for a fire department. A department is authorized to provide only those services which are stipulated in its bylaw. Given that fire departments are the only “all hazards” response agency available to 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.<sup>18</sup>

There are slight variations in the Operational Bylaw of the Department when compared with the bylaws of other RDN departments – a result of these bylaws being passed individually at different points in time. In the main report, we are recommending that the RDN utilize the approach prevalent in other jurisdictions, and adopt a single, uniform operational bylaw empowering the various RDN departments to operate at incidents, and providing for uniform administrative processes and definitions of mandate (including the Service Level, as required by the Playbook). Specific recommendations are made in the main report regarding the matters to be covered in such a “master” operational bylaw.

In relation to the Department’s Operational Bylaw, we would note as follows:

- The Society Board is required to appoint the Fire Chief, and to approve the appointments of both Members and officers (ss. 4, 5). It should be noted that s. 22 of the Service Agreement specifies that the appointment will be biennial. There is no requirement for the establishment of proficiency or other qualifications for holding any position in the Department.
- The provision dealing with the Department’s jurisdictional limits (section 6) is very limiting. The Department may only operate outside of its local service area if there is an express written contract, or with the “express authorization of the Regional District.” It is customary for there to be a series of circumstances enumerated where a department may respond extra-jurisdictionally, including:

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<sup>17</sup> For a fire service established by a municipality, the boundaries typically align with the municipal boundaries. The local service area for the BHBVFD was established under the Service Bylaw.

<sup>18</sup> There may also be a need for additional authorizations to provide some services – for example, providing “emergency health services”, as contemplated by the *Emergency Health Services Act* (B.C.), requires appropriate training and certification and an agreement with the Emergency Health Services Commission.

- In support of the BC Wildfire Service (which may request assistance from local fire departments under and in accordance with its operational guideline 1.06.01);<sup>19</sup>
  - Under a task authorization number from the Provincial Emergency Program;
  - In relation to a local or provincial declaration of emergency; and
  - In relation to an incident on or near the boundary of the service area, which, if left untended, may pose a threat to the service area. In the latter case, provided that such area is under the RDN's jurisdiction, the RDN may authorize the Department to operate at the scene of such an incident. Before entering any other jurisdiction (e.g., the boundaries of a municipality or another regional district), there needs to be an agreement in place permitting such a response to occur.
- Section 7 deals with operational guidelines. It currently requires “OGs” only for organizational and administrative matters. As noted above, this should be expanded to include operational matters, and specifically to cover the principal Department operations such as interior attacks, rescues and similar issues. In addition, the Society and Department should be required to maintain an occupational health and safety program which complies with the requirements of the *Workers Compensation Act* (B.C.), including the operation of a “joint committee” as contemplated by that statute.
  - Section 8 deals with incident command. It is generally preferable to require that the Department will establish operational guidelines specifying who is the incident commander at an emergency scene, and then empower that individual – the “Incident Commander” – to have operational control and direction of the Department’s resources at the incident.
  - Section 13 deals with powers to remove things or demolish structures at a “fire”: consideration should be given to whether the power can be broadened to include other incidents (e.g., a hazmat incident) where similar activities may prove necessary.
  - Section 15 permits the Department to cross over other properties to gain access to an incident. The word “adjacent” is perhaps too limiting: it may be necessary to cross over several properties to gain access, including ones that are not adjacent to the incident. The power also should be expanded to permit the Department to station on other properties in order to undertake emergency response activities (not just cross over or through).
  - Section 26 empowers the Department to commandeer privately owned equipment necessary to deal with an incident. It makes the Society’s Board responsible for setting

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<sup>19</sup> Given the Department's interface risk noted above, the timely response to a nearby brush or grass fire may be critically decisive in controlling such a fire.



remuneration rates for such actions. It would probably be preferable for the RDN to set such rates in a uniform fashion across all of its fire service areas.

There also are a couple of minor typographical errors:

- in the definition of the term “Fire Chief”, the word “Volunteer” should be dropped (the defined term is “Fire Department”); and
- in section 27, at the end of the third line, it should read: “the provisions **of** this” rather than the “provisions or this”.

If individual operational bylaws are to be retained, each will also need to be updated to address Playbook issues, including the authority to enter premises to conduct pre-planning for interior attack operations.<sup>20</sup> We also recommend that language be included in these types of bylaws specifically noting that the service is provided by volunteers or paid-on-call firefighters, and that any particular incident response may be adversely affected by a poor or low turnout. The Department also should expressly be given the power to limit its emergency response activities in relation to any given incident, based on the crews, apparatus and equipment which have responded.

## **Service Agreements**

### (a) Main Service Agreement with the RDN

The Service Agreement is substantively in the same format as the form of agreement used with other RDN fire services. This form of agreement requires updating to address a number of issues, including Playbook matters. A discussion regarding this form of agreement and recommendations regarding its content are found in the main report.

### (b) Service Agreement with the Qualicum First Nation

The service agreement with the Qualicum First Nation (the “Band”) was made between the Band and the RD, and is dated as of 22 September 2011 (the “FN Agreement”). The FN Agreement has a one-year term, which automatically renews unless otherwise terminated by one of the parties.

The Society probably should have been a party to this agreement, so that it would more clearly be entitled (for example) to the exemption from liability under s. 4(3) and would have a direct right as a party to enjoy the indemnity in section 5. The reference to the Society in the definition of the term “Fire Chief” does not use the Society’s correct name.

The agreement has several section cross-reference errors – see:

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<sup>20</sup> The Department is not authorized (or required) to conduct fire inspections on commercial properties. If it is to have the option of conducting interior operations in risks larger than a standard residential dwelling, it will require the power to enter such risks for the purposes of undertaking pre-planning.

- s. 3(2) – which cross references to s. 5(1), rather than to s. 3(1);
- s. 6(1) – which cross references to s. 7, rather than to section 5; and
- s. 6(2) – which cross references to s. 8, rather than to section 6.

The FN Agreement should specifically note that the services are provided by volunteers and that the ability to deliver services at any incident may be adversely affected if turnout is low. Liability should not attach in such circumstances. The Band also should have certain obligations, including ensuring that access to each protected property or premises is maintained (e.g., road clearing in the winter, no blocked access routes, etc.), as well as appropriate house or premises numbering and street naming.

The FN Agreement should expressly identify (or, if necessary, limit) the services being provided. It also should have a provision which expressly grants the Department the power to operate on Band lands – the preferred formulation would be to have the Band agree that, in relation to any incident, the Department has the same powers to operate on Band lands as it does to operate in its usual fire service area.

We have provided to the RDN a format for a services agreement which it may wish to consider for use in connection with all of its service agreements, which is based on a model in use by some other local governments in the province. While the form of agreement provided may be more detailed than is required for this particular arrangement, it provides a useful precedent to follow regarding various issues such as the grant of powers to operate, the definition of the services provided and limitations on liability.

#### (c) Service Agreement with Fisheries and Oceans Canada

This agreement, dated as of 13 September 2011, between the RDN and Fisheries and Oceans Canada (“Fisheries”), is substantively similar to the form of agreement used with the Band. As such, many of the same comments apply:

- The Society also should be a party to the agreement;
- The services being provided should be more precisely defined;
- There should be express recognition (and corresponding limitations on liability) of the volunteer nature of the response provided; and
- There should be an express grant of powers from Fisheries to operate in relation to providing emergency response services.

There is only one cross-reference error – the last line in section 10 should read: “in accordance with Section 11 hereof” rather than “Section 10 hereof”. The reference to Fisheries as a party is unusual: it is more typical to see an agreement with a federal government department to have as a party “Her Majesty the Queen in right of Canada” as represented by the relevant minister.

## **Mutual Aid Agreements**

The Department is covered by a mutual aid agreement, dated 1 August 2010, which includes four other RDN departments, as well as departments from Parksville, Qualicum Beach, Lantzville and Deep Bay. As this agreement covers multiple RDN departments, it has been reviewed in the main report. The one item that the Department probably should note, is that the Society likely should be a separate party to this mutual aid agreement.