



ALBERNI-CLAYOQUOT
REGIONAL DISTRICT



Sproat Lake Volunteer Fire Department

Asset Management Plan
Version 1



DATE OF ADOPTION: MAY 27, 2020



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1 EXECUTIVE SUMMARY

1.1 Purpose of the Plan

The Sproat Lake Volunteer Fire Department (SLVFD) Asset Management Plan (AMP) is part of the ACRD Asset Management Program to facilitate informed decision-making and effective allocation of resources for infrastructure. The purpose of an AMP is to deliver sustainable, cost effective services to ACRD communities in a socially, economically, and environmentally responsible manner, while providing the Level of Service (LOS) agreed upon by the Board. Estimates and projections included in this AMP are derived using available information with updates and changes expected with the release of each new version. AMPs are intended to be living documents, reflective of current asset conditions and data.

1.2 Asset Description

The Sproat Lake Volunteer Fire Department assets include:

- Halls, parking lots, septic system, water pumps and generator
- Firefighting apparatuses equipment and electronics
- Self-Contained Breathing Apparatus (SCBA) equipment
- Dock

1.3 Levels of Service

The present funding levels are insufficient to continue to provide the existing services at current levels in the medium-term. The main service consequences will be more frequent service interruptions, hall closures, declines in service quality or loss of service.

1.4 Future Demand

The main demands for new services are created by:

- Growth rate
- Education programs
- Board of Directors and resident level of service expectations
- Legislative and industry regulations

These will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and mitigating failures.

1.5 Lifecycle Management Plan

Asset Management assists in conscious and calculated decisions for all assets covered in AMPs from acquisition, operation, maintenance, disposal and renewal or upgrade. During the course of an assets life, the replacement value is known along with an estimated date of replacement based on age and condition. Annual contributions required are calculated for each component in each service to

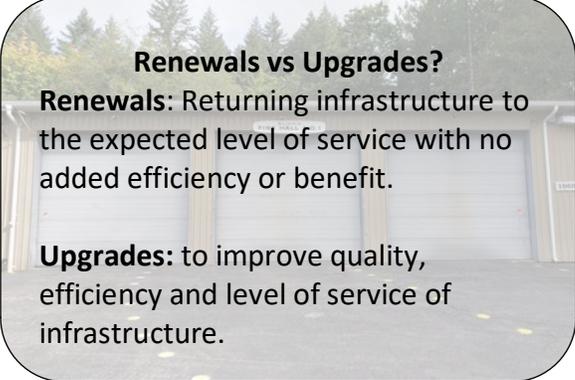


measure the funding gap between current and future levels of service in order to align funding and service expectations. The AM Program achieves responsible and reliable lifecycle management practices.

The Asset Management Coordinator has created the Sproat Lake Volunteer Fire Department AMP with the assistance of the Fire Chief, department members and operations staff. Asset Management systems will continue to be maintained once this position expires by ACRD staff. Estimated service life (ESL) and replacement cost of the infrastructure were determined using industry standards and requirements. The SLVFD Chief provided risk assessments and goals.

1.6 Financial Summary

The SLVFD assets have a total current replacement value of \$8.4 million in 2020 dollars. With an estimated inflation rate of 1.5% (CPI 10-year average), estimated future replacement costs are \$10.1 million for current infrastructure at the end of the components estimated service life. Not included in the estimates are projections for future demand and projected capital upgrades. Sproat Lake is currently struggling to maintain three halls and the community could potentially be served by less halls as a cost saving measure.



Renewals vs Upgrades?
Renewals: Returning infrastructure to the expected level of service with no added efficiency or benefit.
Upgrades: to improve quality, efficiency and level of service of infrastructure.

Sproat Lake has a total assessed converted value of \$106 million with a converted residential tax rate of \$0.461 to cover all fire department expenditures. In 2020, \$489,712 will be collected through property taxation. The current funding levels are not adequate to support the desired level of service and maintain compliance with the regulations in the medium term. Large expenditures such as a new hall or fire apparatus aren't within the current financial means of SLVFD. Without adequate requisition levels, debt may need to be used to maintain levels of service in the future. Renewal of assets will occur in cycles based on asset life, legislative renewal requirements and according to their condition and use. The Fire Underwriters Survey (FUS) also dictates the replacement of key firefighting apparatuses based on asset age.

Based on the FUS regulations for first line response apparatus, a Fire Engine to be located at Hall #1 was scheduled for replacement in 2020 at the estimated cost of \$675,000. Due to lack of available reserve account funding, this replacement is not currently in the Financial Plan. A second new fire apparatus is also required in 2028 to stay in compliance with First and Second Line apparatus maximum age restrictions. Due to financial constraints, based on current funding levels, the Fire Chief estimates the next apparatus purchase will be in another 8 years. The department will apply for exceptions with the FUS until a truck can be purchased.



1.7 Asset Management Practices

Assets are managed using a combination of Firehall.net, Microsoft Office and Vadim. Registries and AMPs will be reviewed and updated on an annual basis prior to the release of the following version.

1.8 Monitoring and Improvement Plan

At the end of this AMP there will be an Improvement Plan intended to improve Asset Management practices within Sproat Lake Volunteer Fire Department and the Asset Management Program as a whole. Generally included in Improvement Plans are suggested changes or additions to documented inspections and condition assessments, monitoring of asset-specific operational and maintenance procedures and giving present risks a numerical rating in order to measure mitigation success.

2 INTRODUCTION

2.1 Background

This AMP encompasses all Sproat Lake Volunteer Fire Department assets, including fleet. The purpose of the plan is to facilitate the strategic management of the system infrastructure and the services provided by it, giving guidance on new and existing infrastructure to maximize use of financial resources long term, reduce risk and provide a prioritized view for service continuity and improvements over a 20-year planning period and beyond.

The ACRD AM Program follows the advice of the Asset Management BC Framework; Plans are designed to be living documents that change with the organization to reflect progress made while continuously striving for sustainable service delivery. Consideration of community priorities and an understanding of trade-offs between resources and desired services is the foundation of sound AM practices.





The AMBC Roadmap guides organizations through basic, intermediate and advanced Asset Management Practices. It is the goal of the ACRD to achieve a basic to intermediate level of understanding.

This AMP should be read in the context of the ACRD's Asset Management Policy and Strategy. The Sproat Lake Volunteer Fire Department AMP is a living document and will develop with AM practices and with the influence of the following corporate documents:

- Annual strategic priorities
- Short-term and long-term financial plans
- Maintenance policies and industry regulations
- Grant applications and funding

Asset Management Plans are designed for several reasons. First, to guide Fire Chiefs, Management and the Board in planning and decision-making. Second, to aid in the creation of short term and long term financial plans as well as operational plans. Last, to spark community engagement for the service.

As the ACRD moves through the AM program, knowledge and understanding of the AM program increases and it is expected that this plan will evolve further, solidifying assumptions made and filling in any present information gaps where further research or information is required.

2.2 Asset Inventory

The Sproat Lake Volunteer Fire Department consists of many components including:

- Fire Trucks including pickup trucks
- Fire Halls including septic and water systems
- Larger or Specialized Electronics
- SCBA Equipment
- Rescue Equipment
- Storage containers

Current replacement costs were estimated by the Fire Chief and Asset Management Coordinator using historical costs. Unit costs include all installation and remediation activities. Remaining useful life estimates were based on installation dates and expected service life based on knowledge and experience.

Any land associated with the SLVFD is not included in this AMP as there are currently no future plans for expansion, revival or rejuvenation of the current land. This version of the plan is assuming that SLVFD continues operations with the current 3-Hall model. The purchase of land may need to occur in the future if the Board decided to construct a new hall in an optimum response radius location.



2.3 Emergency Preparedness

The SLVFD does not have an Emergency Preparedness Program but has recently formed a committee that has been tasked with creating a Program. Future versions of this Plan will include necessary information and protocols from the Emergency Preparedness Program.

2.4 Levels of Service

Levels of Service (LOS) are defined using two terms, customer levels of service and technical levels of service.

Customer LOS: measure how the resident receives the service and measure of value provided.

Technical LOS: technical measures of performance relating to the resources of service activities to achieving the desired outcomes and demonstrate effective performance.

- Operations – ongoing activities, day-to-day operations
- Maintenance – activities enabling an asset to provide service for its planned life
- Renewal – activities that return the service capability to near original capacity
- Upgrade – activities that provide a higher level of service

For the purposes of this report, customer’s LOS expectations are set upon the annual adoption of the financial plan and strategic priorities as it is a reflection of the values, policies, and priorities of the Board of Directors with input from committees and public engagement sessions. Because residents’ expectation of a Fire Department is quite simple, for the purposes of this AMP, only Technical LOS have been included.

The current and expected Technical Levels of Service detailed in Table 2.1 shows the expected levels of service based on resource levels in the current financial plan. Organizational objective measures are measures of fact related to the service delivery outcome.

Truck 41 – Due for Replacement in 2028





Table 2.1 - Technical Levels of Service

Service	Service Objective	Objective Measure	Current Performance	Desired Outcome
Operations \$309,200 2020 Budget	Safe and reliable equipment and equipment training to facilitate prompt fire response times	Firefighters are trained to use and regularly exercise equipment during practice times to ensure proper function at fire scenes	Truck checks performed weekly Small equipment is inspected monthly and hoses annually or if a problem is suspected Weekly visual checks on all major equipment	All equipment aside from hoses inspected and tested on a weekly basis with a record of condition assessment Hose tester available for efficiency with annual tests
Maintenance No specific Maintenance Budget	Reliable, consistent fire services without interruption or delay of service	Regular maintenance and condition assessments	Regular annual inspections on major equipment Inspections are documented per NFPA standards	Up to date condition assessments and maintenance record database to be used in future AMPs
Renewal No Renewal Budget	Fire Service assets meet needs to provide quality services to customers	Renewals are performed where required, without sacrifice to quality when upgrade is a more suitable option Equipment and apparatuses are safe and in good running order	Seismic upgrades have been performed on the Halls Renovations and repairs are reactive	Renewals are proactive rather than reactive Aging equipment is renewed before it fails
Upgrade/ New \$84,000 2020 Budget	Newer fire apparatus at the First and Second Line response positions for reliable service delivery	Fire apparatuses are kept in compliance with the Fire Underwriters Survey guidelines	Purchased a new Fire Apparatus in 2019 Currently due for another new Fire Apparatus; however, another truck will not be budgeted for another 8 years SLVFD is required to apply for exception with FUS for Truck #47	All fire apparatus are budgeted and replaced within the timeline specified by the Fire Underwriters Survey

It is important to monitor the service levels provided regularly as these will change as regulations and expectations change. The current performance is influenced by work efficiencies, technology, and Fire Underwriters Survey regulations that will change over time. Review and establishment of the agreed position that achieves the best balance between service, risk and cost is essential.



2.5 Required Replacements

The Fire Underwriters Survey (FUS) dictates replacement schedules for fire apparatuses. Table 2.2 shows the guidelines for First Line, Second Line, and Reserve. Based on population, Sproat Lake is designated as a Medium Size community and as such is required to adhere to these guidelines to retain recognition. One consequence in the loss of recognition would result in a large spike in residential fire insurance rates. During discussion with the Regional Director at the FUS, it was mentioned that many small communities are having financial difficulty maintaining these standards given the increasing cost to build a fire apparatus (fire engine) and the current tax bases. While First and Second Line have a max age on the chart, apparatuses can be up to 25 years old in these positions. In addition, only one apparatus per department can be applied to have an age exception applied; only special circumstances will allow for two apparatuses being considered for exception. Due to SLVFD having SSTS Tanker Accreditation, the maximum apparatus age is reduced to 20 years, rather than 25, causing additional financial strain on the department. Leniency for these rules may change in the future but for the purposes of this AMP, a maximum apparatus age of 20 was applied in order to determine replacement dates and contribution levels.

In 2019, SLVFD purchased their newest fire engine, Truck 49, and it is currently stationed at Hall #3. Apparatus age requirements from FUS apply to individual Halls, not the Department as a whole. Both Hall #1 and Hall #2 are going to require new fire engines within 1 and 8 years, respectively. Costs for fire engines increase year over year, far faster than most items subject to inflation. While Truck 49 cost approximately \$560,000, it is likely that purchasing the same truck today would cost over \$600,000. It is very difficult to accurately forecast the future cost of apparatuses as market prices continuously grow. For the purposes of this plan, costs are estimated with the most recent data available. It is recommended that future fire apparatus replacements have a contingency of at least 20% for budgetary purposes. Truck 47 is currently 20 years old and was scheduled to be replaced in 2020 and Truck 41 in 2028. The Fire Chief noted that due to financial constraints, the next budgeted replacement is for Truck 41 in 8 years. SLVFD cannot apply for exemption with FUS for Truck 47 while having SSTS accreditation.





Table 2.2 - Fire Underwriters Survey Fire Apparatus Age Guidelines

Apparatus Age	Major Cities ³	Medium Sized Cities ⁴ or Communities Where Risk is Significant	Small Communities ⁵ and Rural Centres
0 – 15 Years	First Line	First Line	First Line
16 – 20 Years	Reserve	2 nd Line	First Line
20 – 25 Years ¹	No Credit in Grading	No Credit in Grading or Reserve ²	No Credit in Grading or 2 nd Line ²
26 – 29 Years ¹	No Credit in Grading	No Credit in Grading or Reserve ²	No Credit in Grading or Reserve ²
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

¹ All listed fire apparatus 20 years of age and older are required to be service tested by recognized testing agency on an annual basis to be eligible for grading recognition. (NFPA 1071)

² Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.

³ Major Cities are defined as an incorporated or unincorporated community that has:

- a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND
- a total population of 100,000 or greater.

⁴ Medium Communities are defined as an incorporated or unincorporated community that has:

- a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR
- a total population of 1,000 or greater.

⁵ Small Communities are defined as an incorporated or unincorporated community that has:

- no populated areas with densities that exceed 200 people per square kilometre; AND
- does not have a total population in excess of 1,000.





SLVFD is unlike other volunteer fire departments under the ACRD umbrella because they maintain and operate three separate halls, all with their own FUS apparatus age requirements. FUS regulations are intended per Hall rather than per Department. This means that they must have a higher ratio of newer apparatuses in order to stay compliant versus other Departments in medium sized communities, such as Beaver Creek Volunteer Fire Department. As mentioned in the September 2011 *Report on the Sproat Lake Volunteer Fire Department*, the coverage for the three halls overlaps in many areas. It is recommended that SLVFD ceases operations out of one of the halls based on geographical location or construct a new hall in an optimum location and possibly operate only one of the current halls as a satellite hall. While this finding was based strictly on staffing, operations, maintenance and capital costs of the halls themselves, there is the added expense of keeping current with FUS apparatus age requirements for all three halls. Each hall is required to have a First Line apparatus and, in the event of a fire, the responding hall provides the First Line and the other halls provide their First Line trucks as Second Line, meaning FUS regulations on Second Line trucks aren't as relevant to SLVFD.

The ACRD entered into an agreement with the Ministry of Transportation and Infrastructure (MOTI) for a Right of Way on which Hall 2 on Faber Road is situated. If SLVFD were to reduce the number of halls, it is most likely based on geographical location and response radiuses that Hall 2 would become inactive. Due to the MOTI agreement, this would not allow us to access proceeds from the sale of the Hall and has therefore been omitted from the cost estimates. Table 3.2 shows three different scenarios with annual required cost estimates for the future of the SLVFD Halls. Scenario 2, in which Hall 2 would be closed and SLVFD reduced to a two hall Department is the least costly option while Scenario 1, the current status quo, is proving to be the most costly option. Per the report, no scenarios in which any Sproat Lake residents would lose fire coverage or ratings for insurance purposes have been included. On the contrary, as mentioned in the 2011 *Report on the Sproat Lake Volunteer Fire Department*, in some instances response times may even improve for houses within the Hall 2 radius if it were to be closed.





Table 2.3 – Future Hall & Apparatus Scenarios

Scenario 1: Status Quo				
	Required Annual Contribution - Hall	First Line Replacement Year per FUS	Required Annual Contribution - First Line	Total Required Annual Contribution
Hall 1 (Lakeshore)	5,331	2020	19,413	24,744
Hall 2 (Faber)	5,331	2028	21,737	27,069
Hall 3 (Hwy 4)	12,719	2039	25,606	38,325
	23,381		66,756	90,137
Scenario 2: Close Hall 2 (Faber)				
	Required Annual Contribution - Hall	First Line Replacement Year per FUS	Required Annual Contribution - First Line	Total Required Annual Contribution
Hall 1 (Lakeshore)	5,331	2020	19,413	24,744
Hall 2 (Faber)	-		-	-
Hall 3 (Hwy 4)	12,719	2039	25,606	38,325
	18,050		45,018	63,069
Scenario 3: Replace Halls 2 (Faber) & 3 (Hwy 4) with new Hall				
	Required Annual Contribution - Hall	First Line Replacement Year per FUS	Required Annual Contribution - First Line	Total Required Annual Contribution
New Hall	34,037	2039	25,606	59,643
Hall 1 (Lakeshore)	5,331	2020	19,413	24,744
Hall 2 (Faber)	-		-	-
Hall 3 (Hwy 4)	-		-	-
	39,368		45,018	84,386

While Scenario 2 may seem like a clear choice, in 2017, the road connecting Pacific Rim Highway and McCoy Lake Road which is located on private property and was closed by the property owner after concerns were raised about a failing culvert and bridge. The MOTI had historically maintained the road even though it is privately owned. The closure of this road critically impacts the response time of Hall #3 and homes within its response radius. The ACRD is not aware of any negotiations or plans between the property owner and MOTI to re-open the road. This no longer allows SLVFD to close Hall #2 as it serves the homes impacted by the closure and they can no longer be served by the other halls. It is recommended that discussion takes place between the parties involved to develop a resolution. It is likely that contributing towards the capital renewal expenditures associated with the road in order for it to reopen, less the capital costs saved by deactivating Hall #2, will reduce the required annual contributions of the residents within SLVFD boundaries. A revision to the master plan may be required as a result of this road closure prior to long-term hall discussions.



3 CURRENT STATE OF SLVFD INFRASTRUCTURE

3.1 Inventory

Table 3.1 - Assets covered by this Plan

Asset Category	Quantity	2020 Replacement Value
Fire Halls	3	4,456,000
Training Site (misc. structures)	9	203,000
Dock at Hall #2	1	50,700
Large Electronics	4	37,500
Fencing	500m	13,200
Hydrants (Dry and Standard)	12	119,800
Fire Apparatuses	7	3,126,200
Paved Surfaces	4	65,000
Rescue Equipment	10	71,000
Water Reservoirs	4	20,300
SCBA Equipment	N/A	215,200
Water Treatment Equipment	2	10,200
Total		8,388,100

Assets that are part of operations and expensed at the time of purchase are not included in Table 3.1. Small equipment such as desktop computers, tablets, pagers, turnout gear, SCBA tanks, ladders, hoses, fittings and hand-held tools were not included in the asset listing as they did not meet the capitalization threshold. The Fire Chief estimated the current replacement cost of the SCBA equipment as a detailed inventory is not readily available. Identification of aging SCBA equipment is included as part of the Improvement Plan.

3.2 Replacement Costs and Dates

Asset management changes the financial focus from historical cost and annual amortization included in the ACRD's financial statements to estimated replacement value, estimated service life, and annual capital investment required.

Over half of the SLVFD assets are due for replacement within 10 years based on current replacement costs. Table 3.2 summarizes suggested infrastructure replacement dates and estimated costs by year until 2060. Based on asset age and expected service life, required renewals in 2020 approximately will make up over \$2.5 million in component replacements costs alone, stressing the need for a capital renewal plan now to meet future financial gaps. Collecting the recommended annual contribution from users shown in Table 3.2 of \$2.5 million, or a residential tax rate of \$2.478, will alleviate these spikes in capital, operational and maintenance costs. These amounts are intended as a financial depiction of the state of the assets and funding gap at SLVFD as the taxpayers in Sproat Lake could not

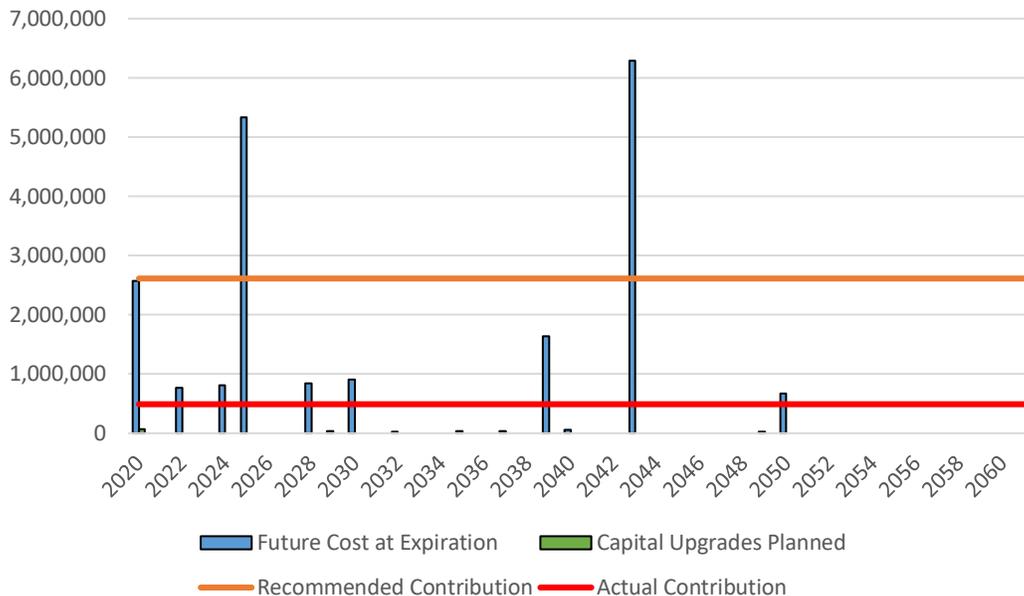


support such a large increase from the current residential tax rate of \$0.461. If it became possible to operate without Hall #2, excluding any proceeds from sales and assuming overall operating costs will be reduced by one third, the recommended annual contribution would be \$1.2 million or a residential tax rate of \$1.494. Contribution rates are at the discretion of the Board and the recommended contribution rates will fluctuate as contributions and demands change. Recommended residential tax rates included in this plan also include the 2020 budgeted operating and maintenance expenditures as the only revenue stream for SLVFD is through tax requisition.

It is recommended that halls that will be retained for the long term have consultants review the integrity of the structures and make any necessary improvements with consideration for the building’s age and expected service life. All three halls within SLVFD have received seismic upgrading and continue to receive maintenance works required; it should be noted, however, that every building’s lifespan is finite and after typical required upgrades the expected service life has been extended to 65 years, well beyond the 40-year amortization period applied to buildings within the ACRD. It is entirely possible that future upgrades will extend the service life beyond this timeframe but structural integrity will be questionable at such time. Qualicum Beach, for example, recently replaced their aging Fire Hall at 65 years old. Comparable seismic buildings of scale were used to determine the replacement cost of the halls based on the current square footage. Using an inflation rate of 1.5% and interest savings on reserve balances of 2%, the anticipated replacement dates and costs of the Halls is as follows:

- Hall 1 – expected replacement date based on age: 2025; future replacement cost: \$1.25 million
- Hall 2 – expected replacement date based on age: 2025; future replacement cost: \$1.25 million
- Hall 3 – expected replacement date based on age: 2043; future replacement cost: \$2.99 million

Table 3.2 - Projected Timing for Capital Renewal



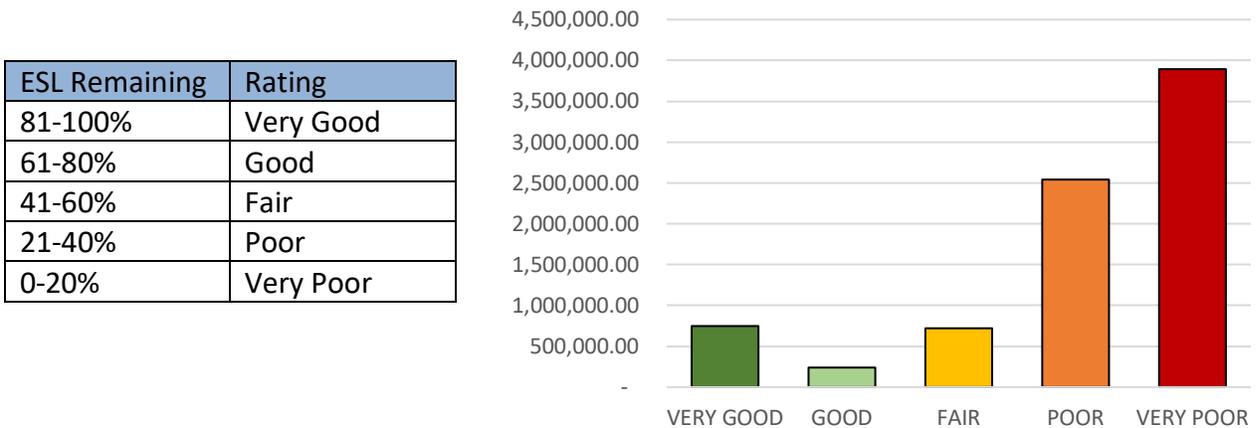


It is recommended that prior to any large capital projects on the existing halls that consideration is given to the cost-benefit of operating and maintaining three separate halls versus constructing one new hall and negotiating regained access to the closed private road.

3.3 Condition Assessments

Major apparatuses and equipment are visually inspected once a week and extensively inspected once a month. SLVFD owns a hose tester which greatly improves efficiencies for inspections. Equipment testing is performed to National Fire Protection Association (NFPA) Standard #1962 and recorded every year. In other ACRD systems, the condition rating is calculated along with the estimated service life remaining to determine the overall condition rating of the asset. Assigning condition assessment rankings on capital equipment is part of the Improvement Plan. For the purposes of this Plan, estimated remaining service life was the only basis for our condition assessments. Based on estimated service life alone, 48% of the SLVFD assets assessed have a very poor physical condition. Table 3.3 shows the current cost to replace assets based on the percentage of estimated useful service life remaining.

Table 3.3 – Current Replacement Cost by Percentage of ESL Remaining



Training Site

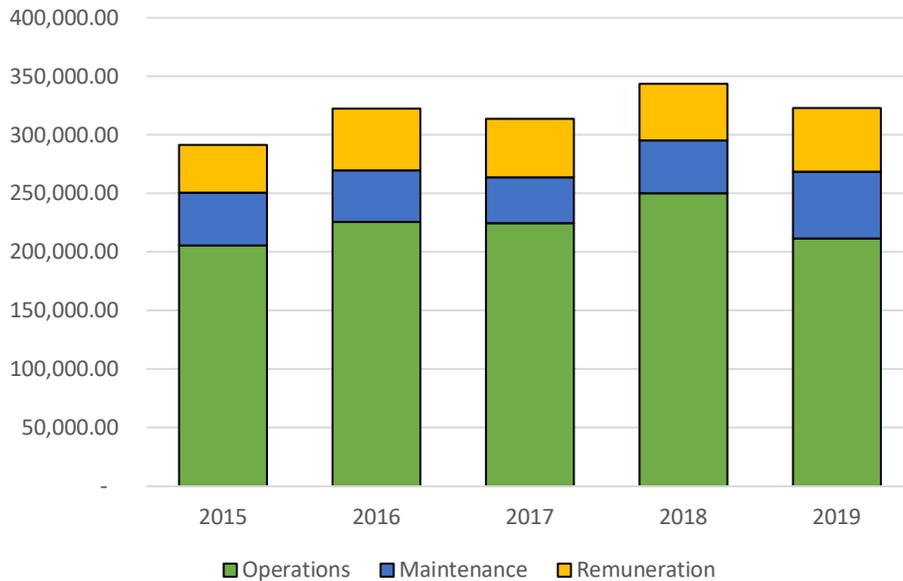




3.4 Current Operations and Maintenance Costs

A key function of Asset Management is to track maintenance costs separate from operations costs to identify areas that are requiring more repairs as an indication of failing infrastructure. Table 3.4 shows the trend in combined operations and maintenance costs since 2015.

Table 3.4 – Operations and Maintenance Cost Trends



Average operation and maintenance costs total \$318,194 per year, including remuneration. Contributions to capital reserves are not included in this graphic but are considered when prescribing contribution rates. Operations costs are associated with day-to-day expenses aimed at achieving levels of service goals while maintenance costs are associated with repairs and keeping equipment in good running order. Operation and maintenance costs associated with “Mabel”, the first apparatus owned by SLVFD, generally do not exceed \$200 annually.

3.5 Future Demands

Sproat Lake does not have fire hydrants distributed throughout the community and instead relies on a select number of hydrants installed near the 3 halls and tenders to transport water to where it is needed. SLVFD holds Superior Tanker Shuttle Service (STSS) Accreditation and Hydrant Status. The





Department also relies on the Automatic Mutual Aid agreement that has been signed with neighbouring Fire Departments with access to tenders. Sproat Lake has many seasonal and recreational homes with a large influx of visitors in the summer months and vacant homes in the winter months. There are approximately 2,000 residents that live in the Sproat Lake district year-round with more than 4,000 total residents in the summer months. The Department also serves the Great Central Lake area with similar occupancy trends as Sproat Lake, although a much smaller population. It is possible that demand will grow but there isn't currently any discussion surrounding the expansion of SLVFD boundaries. The seasonal population fluctuations in the community also make staffing the three halls a challenge. Future demands on the Department will be reviewed and handled as demands occur in the future after decisions have been made regarding the future of the current Halls. The current strain on the Department does not allow for any increase in demands.

3.6 Risk Management Plan

Risk management is a key objective set out in our Asset Management Policy. With acceptable Levels of Service in mind, we have adopted a risk management framework to assess and rank criticality of the ACRD's infrastructure assets. One of the outcomes of implementing risk management is the ability to prioritize required capital expenditures based on criticality for the SLVFD.

The goal in adopting a framework is to have a consistent accurate understanding of the state of the SLVFD's infrastructure. The framework includes a standardized grading system that is easily repeatable, enables comparison of the status of infrastructure condition over time and across municipalities for comparison. A risk matrix has been prepared and will be used for risk ratings throughout the ACRD. This matrix will also be used in conjunction with regular condition assessments to properly evaluate new and existing risks.

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks. Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the assessment process.



According to the SLVFD Fire Chief, the following are credible risks that could create a "High" risk rating at this time:

1. Structure fire at Hall or wildfire impacting Fire Department operations and response, causing further destruction
2. Lack of members to maintain minimum requirement levels at Halls
3. Loss of FUS or STSS Accreditation due to financial constrains and therefore an inability to maintain apparatus requirements
4. Major disaster or seismic event causing critical damage to halls, equipment and access bridges



The seismic upgrades performed on the halls are intended to make the structures more resistant to seismic activity, ground motion or soil failure. While this does mitigate some risks in the event of an earthquake, it will not be known unless an event occurs as to the success of the upgrades. The Alberni Valley is more likely to experience earthquakes than other regions due to the proximity to the Cascadia Subduction Zone and, therefore, all services within the ACRD are deemed to have some level of seismic risk.

4 ASSET MANAGEMENT IMPROVEMENT PLAN

4.1 Infrastructure Replacement Priority Ranking

Table 4.1 lists the components within the SLVFD in order of their required estimated replacement. This information can be used to aid in creating a Long-Term Financial Plan (LTFP) for this class of assets.

When budgeting for future projects, it is recommended that a 30% general contingency and a 30% allowance for construction, engineering, financial, legal and admin costs be added to total project costs. It is important to note the volatile prices of fire apparatuses. Many factors can change the costs of materials required for projects and while the actual costs may differ, only the most current and available costs are used.

Table 4.1 – Infrastructure Replacement Priority Ranking

Asset	Current Replacement Cost Estimate	Risk
Truck 47 replacement per FUS Guidelines	577,000	High
Replace water tanks for firefighting	20,300	High
Replacement Cost – High Risk	597,300	
Truck 48 cab and chassis replacement	200,000	Moderate
Hall #1 replacement	1,165,220	Moderate
Hall #2 replacement	1,165,220	Moderate
Replacement Cost – Moderate Risk	2,530,440	
Truck 43 cab and chassis replacement	200,000	Low
Truck 41 replacement per FUS guidelines	577,000	Low
Replace aging SCBA equipment	215,000	Low
Replacement Cost – Low Risk	992,000	
Total	4,119,740	

Not all assets at SLVFD have been included in this listing. Only those assets that have exceeded approximately half of their expected service lives or assets with poor condition ratings have been included.



Table 4.1 is intended as a guide for replacements based on ages and known conditions. Circumstances, grant funding availability, taxpayer funding availability, governing bodies priorities, levels of service and changes in fire service boundaries will all have influences on priority replacement. This listing will be updated during each revision of the AMP.

4.2 Improvement Plan

The tasks identified in the Table 4.2 are required to achieve the SLVFD asset management objectives, manage risks, and close the gap between current and targeted levels to achieve within the AMBC Road Map. The table also identifies the integration of these tasks into the organization as recommended by the AMBC Framework.

Table 4.2 – Improvement Plan

Task#	Task	Responsibility	Timeline
1	Implement a Department-wide numerical condition grading system to be used for projecting replacements for non-regulated assets	Fire Chief, Asset Management Coordinator	Summer 2020
2	Encourage discussion between MOTI and the private property owner to discuss the possible reopening of the road between Pacific Rim Highway and McCoy Lake Road	ACRD, SLVFD	Summer 2020
3	Aging equipment is identified and slated for replacement or renewal	SLVFD	Summer 2020
4	Regional asset identification system for specific assets to record expenses at the asset level, when appropriate	Asset Management Coordinator	Summer 2020
5	Separate budget line items for operations and maintenance costs	ACRD Finance Department	2021
6	Investigate and review any variations between physical asset counts and values and the asset registry where value is added	SLVFD	2021
7	Update and monitor asset specific operations and maintenance costs	Fire Chief, ACRD Finance Department	Ongoing
8	Update inventory for additions, disposals and changes in useful life	Fire Chief, Asset Management Coordinator	Ongoing
9	Identification of funding for capital projects	SLVFD, Asset Management Coordinator as applicable	Ongoing
10	Annually review Risk Framework for changes	Fire Chief, Asset Management Coordinator	Annually



11	Financial budgets for fire apparatus purchases align with Fire Underwriters Survey minimum guidelines	Fire Chief, Finance Department	2021
12	Review the 3-Hall model and begin discussions about the possibility of reducing the number of Halls servicing the area	Regional Fire Services Manager, Fire Chief, Finance Department	2021

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