MUNICIPALITY OF THE COUNTY OF RICHMOND

FIRE SERVICES REVIEW

Prepared by: Goudreault Associates

May 15, 2020

FINAL REPORT

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INTRODUCTION

The following report and recommendations are a result of review and research. This was made possible, in part, due to the efforts and guidance of numerous municipal staff, fire service personnel and industrial stakeholders.

Goudreault Associates would like to recognize and thank the following persons for their assistance.

Municipality of the County of Richmond

- Don Marchand, CAO,
- Chris Boudreau, Director of Public Works/Municipal Engineer
- Jason Martell, Director of Finance/Chief Financial Officer
- Carla Martell, Public Works, Department Administrator
- Raymond Ferguson, Fire Services Coordinator
- Harvey Martell, Building/Fire Inspector - Eastern District Planning Commission

Municipality of the County of Richmond Fire Chiefs

- Darryl Johnson, District 10, Volunteer Fire Department
- Douglas Morrison, Framboise-Fourchu Volunteer Fire Department
- Kelvin MacKay, Grand River Volunteer Fire Department
- Colin MacPherson, Loch Lomond Volunteer Fire Department
- Aaron Marchand, Louisdale Volunteer Fire Department
- Blair Stone, St. Peter's Volunteer Fire Department

Port Hawkesbury Volunteer Fire Department

- Curtis Doucette, Fire Chief

Point Tupper Industrial Stakeholders

- Paul Kehoe, Port Hawkesbury Paper
- Adam Adamson, Nova Scotia Power
- Bruce Woolridge, NuStar Energy
- Jerry Vorstenbosch, Cabot Gypsum

The information and data requested was significant, and GA greatly appreciated the effort and the information that was provided. If it were not for the effort of those consulted the resulting report and recommendations would not have been possible.

The Fire Services Review required the following;

Phase 1: Administrative and Organizational

This phase included a review role of Fire Services Coordinator; including benchmarking against best-practices of other similar positions within Nova Scotia and other jurisdictions. Recommendations were developed for the Fire Service Coordinator role.

Phase 2: Financial

This phase required a review of operating and capital expenditure processes and reporting. The ultimate aim of the analysis was to establish benchmarks for comparing the annual operating costs of the fire departments providing service in Richmond County. This phase of the study necessitated an examination of the present fire levy structure and revenues, and proposal of an alternate levy structures if necessary. The main focus of the fire levy analysis was to ensure that the individual fire departments are adequately funded to provide the required level of service as determined from time to time by the Municipality on behalf its constituents. The second part of this phase was to ensure those departments that provide fire service in economically stressed areas are funded to the level required to meet the needs and circumstances of that area.

Phase 3: Apparatus and Equipment

Phase three included assessment of the fire apparatus analyzing the current state of the various fire department vehicles and determining future capital replacement needs

Additionally, this review phase mandated assessing the need for dry hydrants.

Phase 4: Point Tupper Shared Fire Delivery Services

The Municipality of the County of Richmond and the Town of Port Hawkesbury wish to perform a review of this shared service in an effort to establish a long-term agreement satisfactory to both parties.

- Review risks and current response capabilities in the Point Tupper area to determine service needs, including equipment that may be required to complement existing industry firefighting capabilities.
- Review shared service models in other jurisdictions for the purpose of recommending an approach for the Point Tupper area, including an appropriate cost-sharing structure for the provision of such services.

The following report is an accumulation of local and national information measured against current legislation, best-practices, recognized standards and guidelines.

The report and its recommendations will achieve the overall objective of meeting the needs of the tasks outlined in the Request for Proposal.

EXECUTIVE SUMMARY

Municipal concerns appear to center around a few issues; accountability and transparency for the use of municipal funds, adherence to municipal purchasing and spending practices, fiscal economy, funding adequacy, and county-wide cooperation to improve effectiveness and efficiency.

The goal of the fire service should be to safely provide the appropriate and sustainable level of service to the community served; the community knowing and understanding the limitations of the level of service being provided. This must be done with operational effectiveness and cost efficiency; also having due regard for the safety and wellbeing of the firefighters.

This review encompassed four major areas of study;

- ✓ Administrative and Organizational (Fire Services Coordinator Review)
- ✓ Financial
- ✓ Apparatus, Stations, and Equipment
- ✓ Point Tupper Shared Fire Delivery Services

Methodology

The Review included several approaches to obtaining a picture of the current service. These included;

- stakeholder meetings and interviews,
- the completion by fire chiefs of survey forms/charts,
- the completion of data worksheets,
- reviews of previous reports,
- the study of provincial acts and regulations,
- a review of current municipal and fire department funding policies,
- identification of applicable organizational/governance standards,
- identification of applicable standards, guidelines and related best-practices.

During the Review, data validity was a concern, and fact checking was a major component of ensuring that conclusions and recommendations were based on correct information. Only limited

data was provided by the Client, through a stakeholder process, and through solicited data queries. The Client was responsible under the terms of the contract to provide the needed data. It became apparent fairly early on as the study progressed that not all requested data existed or was to be made available. Conclusions were therefore reached that acknowledged some gaps in understanding.

A general finding from the review of the current fire services is that there are substantial silos between some of the fire departments in Richmond County. There appears to be no standardization of major or minor equipment purchases, including personal protective equipment, fire apparatus, tools, or supplies. Standards and service levels are not the same. Each fire department operates at arm's length and substantially independently from each other and from the municipal government.

Some of the fire departments are currently at jeopardy of not being able to continue delivering services in a sustainable manner. Funding appears to be inadequate for these departments and is apparently leading to significant gaps in meeting legislated mandates, and in meeting capability expectations for any municipal fire department. Major equipment, e.g. fire trucks, is very old and probably not suitable in reliability or capability to meet service demands.

As part of the organizational recommendation, Goudreault Associates (GA) has recommended centralized coordination of the fire departments and support to the fire chiefs; with the mandate of meeting fire service best-practices, legislated mandates, transparency and accountability to Council and to the public in the expenditure of taxpayer funds. A full-time Emergency Services Coordinator is recommended who will have the appropriate authority to meet this mandate.

GA has recommended a benchmark operating expenditures budget as a starting point going forward; focused on sustainable fire-emergency response services that meets best-practices and legislated mandates.

GA has recommended a 20-year fire vehicle and equipment capitalization plan that uses a standardized approach to specification, and leverages the power of county-wide purchasing performed by municipal staff; thereby achieving savings and improved efficiency, as well as

adherence to purchasing rules for the use of municipal funds. GA recommended that all purchasing of significant-cost items be done by the Municipality.

GA recommended that all fire prevention activities, and fire-safety education be assigned to the Emergency Services Coordinator to administer and manage county-wide. These are mandated services and require coordination, proper execution, and prioritizing in order to meet legislative mandates. For this purpose, GA has recommended that the Emergency Services Coordinator have the authority and responsibility to fulfill these duties.

There are many more recommendations and details in the accompanying report. If all recommendations are accepted and implemented, it is GA's opinion that the outcomes will be a more robust fire service; one that provides improved fire-emergency response services, that meets municipal mandates for accountability and transparency, and one that meets legislative mandates and fire industry best-practices.

As a report within this report, the results of the Point Tupper review of fire-emergency services, primarily to heavy-industry, were presented.

Eight service model options were presented that ranged through most of the realistic available possibilities. These included detailed discussion of pros and cons and issues associated with;

- Withdrawal of all fire-emergency services to Point Tupper,
- The establishment of new fire departments in Point Tupper, or in Evanston,
- Industry negotiation directly with a private or public service provider,
- Industry providing the service itself,
- Port Hawkesbury providing the services in a manner that met best-practices and standards,
- Port Hawkesbury providing the services in a manner that met best-practices and standards, and to include a larger response area in western Richmond County,
- Richmond to only provide fire-emergency services to non heavy-industry in Point Tupper.

Five service funding models that discussed means to determine a service agreement fee and/or method were also discussed that included;

- A fee based on the proportion of taxable assessments,

- Based upon a proportion of fire-emergency incidents,
- Based upon incremental actual costs recovery,
- The proper usage of annual costs,
- A fee based on standards and value components.

GA recommended a standards/value component fee-based agreement with Port Hawkesbury be negotiated that provides best-practices and capable fire-emergency response services into Point Tupper and western Richmond County.

Several other components of a properly structured agreement were recommended to protect the interests and concerns of both parties to the agreement and to ensure a stable agreement.

An extensive sets of appendices are provided that containing; legislation summaries, model by-laws and agreements, best-practice standards, detailed financial data, meta-data and municipal benchmark comparison data, and finally, a table of the major recommendations contained in the entire report.

DEFINITIONS

Aerial-device – Ladder	A mobile truck with a mounted hydraulically operated ladder.
Aerial-device – Platform	A mobile truck with a mounted hydraulically operated boom or ladder with an enclosed bucket platform device.
Automatic-Aid	Is apparatus and man-power from another fire department that always immediately responds (by written agreement) to structure fires or other specified types of incidents, to support the responsible fire department, without being specifically requested for that particular incident.
Fire Apparatus	As per NFPA-1901 *Standard for Automotive Fire Apparatus*; A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support the suppression of fires or mitigation of other hazardous situations.
First Line Apparatus	Fire vehicles that are ready to respond to any emergency either as a primary assignment or for a subsequent assignment. Opposite of Reserve Apparatus.
FUS	Fire Underwriters Surveys.
GPM or IGPM	Water flow rate measured in Imperial gallons per minute.
Rescue	Is a type of specialty firefighting apparatus. Where needed by community risks, they are primarily designed to carry the equipment necessary for technical rescue situations such as traffic collisions requiring vehicle extrication, building collapses, confined space rescue, rope rescues and swift water rescues. They carry an array of equipment such as the Jaws of life, wooden cribbing, generators, winches, hi-lift jacks, cutting torches, circular

	saws and other forms of heavy equipment that pumpers do not have space to carry.
USgpm	Water flow rate measured in USA gallons per minute (83.3% of IGPM).
IDLH	Immediately Dangerous to Life or Health; Occupational exposure to atmospheres that have long been recognized as having the potential to adversely affect the lives and health of workers. For firefighters, smoke from a fire is an IDLH atmosphere, as well is exposure to chemicals.
Initial Attack Apparatus	Aka (Quick Attack) Fire apparatus with a fire pump of at least 250 gpm (1000 L/min) capacity, small water tank, and hose body whose primary purpose is to initiate a fire suppression attack on structural, vehicular, or vegetation fires, and to support associated fire department operations.
MEMC	Municipal Emergency Management Coordinator, as appointed under the County's Emergency Management Plan.
MFR	Medical First Responder program sponsored by the Province of Nova Scotia's Emergency Health Services, provided by trained local fire fighters.
Mutual-aid	Fire Underwriters define Mutual-aid as anything requested after a unit arrives on scene, that is needed during the fire or and is not part of the first alarm assignment, or outside aid. NFPA 1201 Standard for Providing Fire and Emergency Services to the Public, 2015 Edition defines mutual-aid as a reciprocal assistance by emergency services under a prearranged plan.
NFPA	National Fire Protection Association

Pumper	Is a vehicle that is primarily designed to carry hose, a small water tank, some cases a foam tank, a chassis mounted fire pump, some cases a foam pump, miscellaneous tools, ladders, and manpower. Primary role is fire attack and extinguishment.
Pumper-Tanker	Similar in capability to a pumper other than the water tank capacity is larger than 800 imperial gallons of water, typically 1,500-3,000 gallons.
Relay	The method of moving fire water over long distances employing fire pumpers and large diameter hose.
Reserve Apparatus	A fire apparatus retained as a backup apparatus and used to replace a primary (front-line) apparatus when the primary apparatus is out of service.
Second Line Apparatus	Fire vehicles that are ready to respond to any emergency in support of a first line apparatus, or to a simultaneous incident.
Shuttle	A method of transporting water to a fire scene from a water source, employing pumps and mobile water supply fire apparatus.
Special Services Vehicles	Provides support services at emergency scenes; could be rescue, command, hazardous material, air supply, electrical generation, floodlighting, support equipment, and personnel. Rescue vehicles may be classified such if they meet NFPA-1901 requirements.
Tanker	Mobile Water Supply; similar water carrying capability as a pumper-tanker but without chassis mounted main firefighting pump (but might have a small “booster pump”) does not carry the range or amount of equipment that a pumper must carry.
ULC	Underwriters Laboratory of Canada

STAKEHOLDERS AND CONSULTATIONS

To facilitate the collection of data, relative to the study objectives, all fire chiefs were issued an Excel workbook specifying the needed information. In addition to the workbook, a questionnaire was issued to all fire chiefs. Unfortunately, there were no returns for the requested workbook data and only a thirty (30) percent questionnaire return.

Individual follow up meetings were requested with all fire chiefs. The intended purpose for the meetings was to provide the fire chiefs an opportunity to express their vision of their fire service and to identify challenges. Three fire chiefs took advantage of the meeting opportunity. In a further effort to obtain required data and related information, phone calls were made to all fire chiefs; although two fire chiefs did not participate. Limited information was obtained this way.

Individual meetings were held with the four major Point Tupper heavy-industry stakeholders; Nova Scotia Power, Cabot Gypsum, Port Hawkesbury Paper, and NuStar Energy.

A meeting with the Fire Chief of Port Hawkesbury also occurred.

Challenges

A review of existing fire services, such as this study, is very heavily dependent upon data. Data is required to analyze key elements of an organization's performance, challenges, and successes, and to help identify the community's risks profile and demands for services. The better the data quality and quantity, the more likely is the consultant's conclusions to be appropriate and accurate. The timely availability of data is also important, as study timelines are finite.

Expert analysis of data can lead to insights and recommendations that have the potential to improve service delivery, efficiency, and firefighter safety. It can also contribute, (for the benefit of the Municipality, Council and the public) to recommendations aimed at improved transparency and accountability. Data analysis can identify service gaps and over-servicing; if and where they occur.

In this study, (as with many similar ones), data completeness, and even the existence of needed data, has all been challenges. In many cases the data (or access to the data) was just not there. As a result, this report's conclusions relies more heavily on best-practices, and standards, along with our professional insights, than we might otherwise have expected.

The dearth of relevant data produced challenges in meeting anticipated completion dates for the study. The requirement for follow-up of incomplete or missing data consumed considerable unplanned time.

Consultations

As part of GA's analysis and conclusion/recommendation development process, GA consulted a number of authoritative sources in relation to current best-practices, government policy, legislative interpretation, and opinion.

Some those consulted were;

- ✓ Office of the Provincial Fire Marshal
- ✓ Department of Municipal Affairs Policy Group
- ✓ Various Regional Fire Services Coordinators from across the province

Related to the Point Tupper portion of our fire service review, the following documents were reviewed for potential guidance on a benchmark shared services agreement;

- ✓ Shared Fire Service Agreement, Town of Taber, Municipal District of Taber and the Village of Barnwell, Saskatchewan
- ✓ Fire Service Agreement, Lumsden, Saskatchewan
- ✓ Fire Services Agreement, Town of Hinton and Yellowhead County, Alberta
- ✓ Fire Services Agreement Rural Municipality of Hillsdale No.440 Saskatchewan

MUNICIPAL AUTHORITY

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The Municipality of the County of Richmond stated in the Richmond Integrated Community Sustainability Plan (ICSP)[1] that: "*The Municipality is committed to working with these departments to ensure their manpower, training and equipment requirements are adequate to protect residents of Richmond County*." The County also moved a related and "*ongoing*" action item: "*ACTION: The Municipality will continue to work with and support the operation of the various volunteer fire departments in Richmond County*" with the action item champion being the corporate CAO.

The County also recognized the fundamental function and nature of the fire service in Richmond County when the ICSP acknowledged that: "*Large fires or other incidents are often attended to by members of multiple departments. These fire departments are often also designated as first responders in medical emergencies, as, due to travel times, their members can often arrive on a scene before an ambulance.*"

One of the most important challenges for elected officials is ensuring adequate fire service delivery and that the individual fire departments are adequately funded to provide the required level of service to its constituents.

Funding of a fire department is often determined by the economic circumstances of individual rate-payer areas within a municipal boundary, including such issues as property assessment values, financial demographics, perceived fire protection needs, and political influence.

There is the possibility of inequity of funding where fire departments that are well funded protect the status quo. While on the other hand, fire departments in other areas are not adequately funded and cannot meet the needs and circumstances of that area. In Richmond County, there are some community fire departments that are currently experiencing inadequate funding, and others that are well funded. The fire departments, as well as the different areas of the County, are in funding and fire service silos. These silos are not facilitating the delivery of an adequate and universal

[1] *Richmond Integrated Community Sustainability Plan (ICSP) – Final Submission*, adopted by resolution of Council March 29, 2010

level of fire services to all County residents, nor are all county residents paying the same amount for the fire services they do receive.

Municipal Council and municipal administration are required to be transparent and accountable to the electorate for all municipal transactions. In the provision of fire services, Richmond has opted to acquire fire emergency response services by accepting services being delivered by registered societies (a.k.a. volunteer fire departments). This arrangement is permitted and facilitated by the Municipal Government Act (MGA).[2]

The Municipality substantially funds these volunteer fire departments, who also obtain a minority of funding through other sources, primarily fund-raising. About 90% of the fire departments funding comes from MOCR. Municipalities have requirements for the provision of public funds to non-municipal; i.e. third-party organizations. These requirements are primarily for transparency, accountability, and some service delivery oversight. Effectively, the individual registered volunteer fire departments are in a contractual relationship with the Municipality (and thereby with residents), and the Municipality's requirements in these and similar regards must be met for this relationship to continue in a mutually beneficial manner.

[2] See the Appendices for more information on the Municipal Government Act (MGA), starting on **page 226** of this report.

REGISTRATIONS AND AGREEMENTS

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There are a number of agreements and contracts that should be executed between the Municipality and the volunteer fire departments providing fire emergency response in Richmond County.

In the language of the Municipal Government Act[3] (MGA) the fire departments are a "*a body corporate*" and in this case are incorporated under the *Societies Act*.[4] All of the fire departments providing services in Richmond County are so incorporated, except for the Port Hawkesbury fire department which is a municipal department.

The following is the verbatim incorporated names[5] of these fire departments (the acronym in brackets is our shorthand used in this report);

- Louisdale and District Voluntary Fire Department (LVFD)
- The St. Peters and District Volunteer Fire Department (SPVFD)
- Isle Madame Voluntary Fire Department (IMVFD)
- The L'Ardoise and District Volunteer Fire Dept. Association (LAVFD)
- Grand River Volunteer Fire Department (GRVFD)
- Framboise-Forchu Volunteer Fire Department (FFVFD)
- Loch Lomond Volunteer Fire Dept. (LLVFD)
- District 10 (East) Volunteer Fire Department (DTVFD)
- West Bay Road and District Voluntary Fire Department (WBRVFD)
- Town of Port Hawkesbury (PHVFD)

[3] Nova Scotia: *Municipal Government Act*. 1998, c. 18, s. 1. (as amended). See Appendix **Appendix I**: Provincial legislation for more details.

[4] Nova Scotia: *Societies Act*, R.S., c. 435, s. 1.

[5] As per the online Nova Scotia Registry of Joint Stock Companies. https://beta.novascotia.ca/search-business-or-non-profit-information-filed-registry-joint-stock-companies

Society Registrations

Legislative Requirements and Powers

The MGA provides municipalities the power to "…m*aintain and provide fire and emergency services by providing the service, assisting others to provide the service, working with others to provide the service or a combination of means.*" The MGA goes further by prescribing the method by which the Municipality must register a body corporate (volunteer fire department society) if the fire department requests it. The MGA restricts the Municipality from refusing to register a corporate body, unless certain conditions aren't met, as follows.

> "*(a) municipality is satisfied that the body corporate is capable of providing services it offers to provide;*
>
> *(b) body corporate carries liability insurance, as required by the Municipality;*
>
> *(c) body corporate does not provide the fire services for profit; and*
>
> *(d) municipality does not provide the same services for the same area.*"

To provide the Municipality with the ability to determine its needs, and to regulate the provision of the fire and emergency (fire-emergency) services provided by the volunteer fire department, the MGA allows the Municipality to withdraw a registration "*for cause*" and furthermore provides powers[6] to the Municipality to make policies[7] that <u>may</u> include;

> "*(a) requirements and procedures for registration;*
>
> *(b) personnel policies with respect to those members who are employees of the Municipality;*
>
> *(c) the manner of accounting to the council for the use of funds provided by the Municipality;*
>
> *(d) an annual meeting to report to the public respecting fire and emergency services;*
>
> *(e) such other matters as are necessary and expedient for the provision of emergency services in the Municipality."*

And furthermore;

> *"(3) The council may require proof of compliance with its policies before advancing any funds."*

[6] Reference MGA §296.

[7] Reference MGA §296.

These are important powers for municipalities since they permit oversight of fire services and facilitate meeting Council's and the public's expectations for fire protection.

Current Registrations

GA notes a few issues with current MGA required registration of fire departments in Richmond County.

It appears that not all of the corporate bodies that provide fire-emergency services within Richmond County are currently registered with MOCR, specifically; Isle Madame VFD, St. Peters VFD and the Port Hawkesbury VFD (i.e. The Town[8] of Port Hawkesbury).

In GA's opinion, the fire-emergency service providers who are currently not registered in Richmond County are operating there without legal authority and in violation[9] of the MGA. This also means that they are likely also operating without[10] the liability protections provided in the MGA.[11]

The MGA provides in §294(6) that; "*A municipality may grant or lend money to, or guarantee a loan for, a **registered fire department** for operating or capital purposes*" {***emphasis*** added}. This power is not specified for a fire department that is not registered.

The table on the following page summarizes the registration data included in the fire departments' registration documents, as filed with MOCR.

[8] The Port Hawkesbury VFD is a municipal fire department not a society fire department, so in that case the Town must be the registrant.

[9] MGA §294 (3); "*A fire department, including a fire department of a municipality, village or fire protection district, **shall** register in each municipality in which it provides emergency services.*"

[10] MGA §300, 301.

[11] https://www.amans.ca/other-resouces/691-registration-as-a-fire-service.html

TABLE: REGISTRATION DATA

Registered Richmond County Fire Service Providers (summary of data)

	Data from Registration Submissions to MOCR	Fire Department:	District 10	Fram/Forchu	Grand River	Isle Madame	L'Ardoise	Loch Lomond	Louisdale	Port Hawk'by	St. Peter's	West Bay Rd
	Service Categories	**Service Levels**				not registered				not registered	not registered	
1	Fire & Related Emergencies:	Structural			X		X	X	X			X
		Defensive	X	X			X					X
		N/A										
2	Medical Emergencies:	Reg. 1st Responder		X	X		X	X	X			X
		Medical Assistance	X		X							
		N/A										
3	Vehicle Rescue:	Technician					X					
		Operational			X		X					
		Awareness	X					X	X			X
		N/A		X								
4	Water Rescue:	Technician										
		Operational										
		Awareness			X			X				
		N/A	X	X			X		X			X
5	Ice Rescue:	Technician										
		Operational										
		Awareness			X			X				
		N/A	X	X			X		X			X
6	Structural/Excavation Collapse:	Technician					X					
		Operational										
		Awareness			X			X				
		N/A	X	X					X			X
7	High Angle Rescue:	Technician										
		Operational			X							
		Awareness										
		N/A	X	X			X	X	X			X
8	Hazardous Materials:	Technician										
		Operational										
		Awareness			X			X				X
		N/A	X	X			X		X			
9	Ground Search & Rescue:	Provider			X							
		Assistance	X		X		X	X	X			X
		N/A		X								
10	Other: Man made and natural disaster for which the service has the training,equipment and command system to undertake.		**No explanation what type of assistance provided**									
11	Are there limits on the level of service being provided		NO					NO				NO
12	Does the dept. have the equipment to perform services checked above		YES	YES	YES		YES	YES				YES
13	Does the dept. have the equipment to perform services checked above		YES	YES	YES		YES	YES				YES
	Signed & Dated by FD?		YES	YES	YES		YES	YES	YES			YES
	Signed and Dated by Municipality?		NO	NO	NO		NO	NO	NO			NO

If and when a new fire service agreement is negotiated for Point Tupper and area, between MOCR and the Town of Port Hawkesbury, it is a legislated requirement that the Town of Port Hawkesbury register as a service provider with MOCR.

The MGA is not specific on this, but the Provincial Fire Marshal requests that registrations be conducted on an annual basis; as recognition that some of the service delivery details can change from year-to-year. Annual registrations assist in maintaining information relative and current.

Registration is not, in and of itself, assurance that fire department can actually provide the services it is funded for, or that the delivery of these services will meet community expectations.

There are two fire departments (FFVFD, DTVFD) that indicate on their registrations that they only provide exterior fire operations; i.e. “Defensive.” The appendix attached to the registration form explains defensive as follows;

> *"**Structural Defensive:** means actions that are intended to control a fire by limiting its spread to a defined area, avoiding the commitment of personnel and equipment to dangerous areas. Defensive operations are generally performed from the exterior of structures and are based on determination that the risk to personnel exceeds the potential benefits of offensive actions."*

Defensive firefighting means that there will likely be no rescue attempt in the event a citizen needs rescuing from inside a burning structure if there is any risk to firefighters, nor will there be aggressive attempts to extinguish a fire by entering the structure to effect or complete extinguishment, nor will salvage of interior belongings be conducted during the fire.

If this is an accurate depiction of the fire suppression services that these two departments are trained and equipped to offer, the question becomes are the communities serviced by these departments aware of that? Is defensive level services acceptable to the local community constituents in those two fire department response areas? Was this information publicized to the public in these communities, and were the implications understood? Are the fire insurance companies aware of the level of service provided?

A defensive level of service is not consistent with the rest of Richmond County where the other five[12] fire departments are registered as "Structural" firefighting services. The appendix attached to the registration form explains structural as follows;

> *"**Structural Offensive**: means the activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, vehicles, vessels, or like properties that are involved in a fire or emergency situation. Departments should have firefighters trained to NFPA 1001, protective personal equipment, man-down alarms, an accountability system, adequate water supply, adequate pumping capacity and an incident command system."*

Ironically, the two defensive only fire departments are in an area of the County that pays the highest fire levy rate. However, at least one of them appears to be struggling financially. A defensive service level fire department should not require the same level of funding as a structural service level fire department; since the expense for equipment, PPE, and training is less.

[12] Three fire departments are not registered at all, so have not declared their service levels.

Recommendation 1: GA recommends that MOCR conduct a review of the registration process in Richmond County and amended it to reflect the current best-practice registration process and format.

Appendix II: Model Fire Service Registration Policy, starting on page **244**, contains a model registration policy[13] and format that shows current municipal best-practices in Nova Scotia.

The Need for Policy

As already mentioned, the Municipality has the powers to enact policy surrounding the provision of fire-emergency services within its borders. Such policy is part of the Municipality's obligation to the rate payers in the Municipality.

A municipal policy does currently exist (circa 1999) that sets out the basic conditions for registration of the volunteer fire departments in accordance with the minimum requirements of the MGA. In GA's opinion there is a need to revise and expand this policy to better define the expected relationship between the Municipality and the fire departments. Such revised policy should seek to achieve a number of objectives, including in the following areas;

- conditions for, and requirement for, annual registration
- consistency in service delivery across the region
- the financial relationship
- transparency and accountability
- the requirement for reports and information
- what constitutes cause for de-registration
- insurance requirements
- personnel policies including unacceptable actions and activities, disciplinary process
- procurement practices
- minimum training levels
- required service levels
- how notice will be given and received

[13] Provided by the NS Joint Municipal Fire Services Committee

- dispute resolution process
- ownership of capital equipment and facilities
- mutual-aid and automatic aid procedures and agreements
- protection of health and safety for personnel
- administrative processes
- other areas of concern to Council, administration, fire departments.

Currently, the registered fire departments (and the unregistered ones) that are providing services within the Municipality, despite being almost wholly municipally funded, appear to operate independently from the Municipality, and from each other, and with little or no municipal oversight.

Recommendation 2: GA recommends that MOCR update the existing Council registration policy and expand it to include the necessary tools for municipal administration and Council; to not only achieve delivery of adequate fire service throughout the Municipality but to also provide adequate municipal oversight. The policy should address at least the areas listed above.

Appendix VI: Samples of Council Fire Service Policies starting on **page 285** provides some examples of fire service policies currently in effect in various Nova Scotia Municipalities.

Fire Service Agreements

Consultation with the NS Department of Municipal Affairs, Policy, Planning and Advisory Services personnel and with the Office of the Fire Marshal, brought forward the conclusion that in addition to the registration of the volunteer fire departments (under the MGA requirements) that a service agreement should be executed between the fire departments and the Municipality.

This service agreement should seek to clarify and agree between the parties all of the expectations of both parties for the provision of the fire-emergency service specified in the registrations and would act as a vehicle to make clear the policies and expectations of Council in that regard.

A list of some of the objectives of the service agreement should be as described in **The Need for Policy** on **page 34** above. Also included could be procedural details for administrative processes.

Recommendation 3: GA recommends that in addition to the Fire Department Registration that municipal staff develop and implement a fire services delivery agreement between the Municipality and the individual fire department societies, to be approved by Council. Such an agreement is also recommended by the provincial fire marshal.

Beneficial Ownership Agreement

In addition to the service agreement and registration document, there is a need for a beneficial ownership agreement. The purpose of this agreement is to protect the municipal investment of public funds in assets that have residual value. Currently, the ownership of all assets that reside in the fire department are the sole property of the corporation, i.e. the fire department society and its shareholders. The municipality retains no rights.

In the unfortunate event that a fire department ceases, for any reason, to continue or be able to continue to provide fire-emergency services to Richmond County then it is highly likely that all assets would be liquidated and any proceedings thereby would revert to the shareholders (the department's members or officers of the corporation) or could be applied against any judgement or debts assigned to the fire department.

Under that scenario, the Municipality would then be in the position of having to re-establish a fire service in that area, while starting from ground-zero.

Under the terms of the Beneficial Ownership Agreement, the body corporate (i.e. the society fire departments) would be required to execute an agreement with MOCR that ensures the municipal investment of public funds into durable assets is protected by having ownership of those assets.

Appendix IX: Sample Beneficial Ownership Agreement starting on page **299** is a sample of one such agreement that retains some rights. It is a starting point for MOCR.

Recommendation 4: GA recommends that the ownership, and all associated rights thereto, of all capital asset purchases for fire protection and made by funds derived from MOCR, whether paid directly for the purchase of the asset by MOCR or provided to the fire department for their purchase of the asset, be retained and secured by agreement to the benefit of MOCR in proportion to the funds provided for the asset purchase

Mutual-aid Agreements

No fire department has the resources (equipment, manpower, or knowledge) to mitigate every possible incident to which it may be called to assist. In these exceptional circumstances, fire departments rely on assistance from their nearest appropriate emergency services to assist them. Such assistance is called mutual-aid. Often mutual-aid is used, de rigueur, for any serious incident, due to modest capabilities in the home fire department.

The basic premise of mutual-aid is that it is reciprocal. In that respect it is without cost, as in fees are not charged by the assisting fire department to the fire department being assisted. The assumption is that the assistance could very likely go in the opposite direction on another day, either directly or indirectly. It is ultimately neighbour helping neighbour.

On a larger scale, the MGA provides the Municipality the authority[14] to assist at "*fires, rescues or other emergencies occurring outside its boundaries,*" Such assistance is also known as mutual-aid. This power allows municipal fire departments to provide assistance; e.g. Port Hawkesbury VFD responding into Richmond County.

Providing assistance outside of municipal or fire department boundaries has issues of liability and responsibility attached. The MGA partly addresses[15] these issues by stipulating that assistance provided under a mutual-aid agreement between the parties involved (the assisting and the assisted) will enjoy the same liability protections for the assisting party as if they were a

[14] MGA §302.

[15] MGA §302.

registered service provider at the location of the incident. The protections are stipulated in §300 and §301 of the MGA.

These protections are a powerful incentive for fire departments and municipalities to be party to mutual-aid agreements. These mutual-aid agreements should be wide reaching in area, and encompass all jurisdictions where mutual-aid services might be provided.

Litigation against municipalities for the actions or omissions of their fire departments and emergency personnel is on the increase. Potential legal liabilities permeate every aspect of the fire service. Fire service delivery operations that present opportunities for risk are those operations surrounding inspections, emergency response and fire suppression activities.

For issues with regard to responsibility during mutual-aid, these are not addressed by the MGA. However, a properly developed mutual-aid agreement will address the multiple levels of responsibilities in detail. This is the second very important reason to develop and implement multi-lateral mutual-aid agreements.

Recommendation 5: GA recommends that MOCR develop and execute mutual-aid agreements with all surrounding municipalities and with fire-emergency service providers as recognized under the MGA. These agreements should address mutual-aid relationships; between municipalities (i.e. municipal to municipal), between municipalities and fire/emergency services providers (i.e. within and without the Municipality), and between fire/emergency service providers themselves (i.e. fire department to fire department). The best way to accomplish this is to develop a suitable multi-lateral mutual-aid agreement to which all parties are signatory.

Appendix III: Sample Fire Services Mutual-aid Agreement starting on page **260** contains a starting point for a suitable multi-lateral mutual-aid agreement.

It would appear that there are currently no fire service mutual-aid agreements between any entity in Richmond County. GA could find none through research and questioning of fire chiefs. When specifically requested, fire chiefs were unable to produce a copy of any fire service mutual-aid agreement. Please see our further commentary on this subject, starting on page **221** of this report.

EMERGNCY SERVICES COORDINATOR

EMERGENCY SERVICES COORDINATOR

Part of the fire services review included the review and evaluation of the role, responsibilities and accountabilities of MOCR's Fire Services Coordinator. GA's review included the roles and responsibilities of those similar positions elsewhere within the province; establishing a best-practice benchmark recommendation for the position in MOCR.

A.M.A.N.S. Review

In 2016 the Association of Municipal Administrators Nova Scotia commissioned a review of NS fire services. This review was undertaken by POMAX Consulting.[16] POMAX observed that "*Some municipalities in Nova Scotia have banded together to introduce the position of fire coordinator to assist communities in the administration of fire service delivery.*" In the communities with fire coordinators POMAX noted that "*Consultation participants indicated that* ***overall costs were reduced*** *by a combination of the rationalization of apparatus and equipment, and the delivery of specialized services.*" POMAX also reported that "*...the positions were of* ***significant assistance*** *in facilitating inter-agency coordination and cooperation.*" {***emphasis*** added}.

Currently there are eight Fire Service Coordinators within the province, including the Fire Service Coordinator for the Municipality of the County of Richmond. Many of the positions are full-time positions; MOCR's fire coordinator is not an employee but is paid a small stipend and his expenses are provided. The job descriptions differ amongst the various coordinator positions, but there is some commonality in certain aspects of each of their individual roles. Three of the positions also serve as their Region's Emergency Management Organization Coordinator.

OFM Survey

In 2017 The Office of the provincial Fire Marshal (OFM) conducted a Fire Service Coordinator Survey of the (then) seven fire coordinators in NS. Although the survey was largely technical in

[16] *Municipal Review of Fire Services in Nova Scotia*, April 2017. POMAX Consulting. Report starts on pdf page 15 at the following link. https://www.amans.ca/other-resouces/434-fire-services-report-final.html

focus, the OFM concluded, in part, that the fire coordinator position was established for different purposes and was effective, including the following points;

> *"The primary function of all FSCs is in an administrative capacity… Roles vary from one jurisdiction to another, but include: registration requirements under the MGA, procurement, recruitment/retention, accountability databases, fire prevention, communication, legal, general record keeping, tax payments, and resource and research services. In addition, all FSCs have implemented policies and programs designed to update record keeping, streamline service delivery and training, and ensure more regular equipment/infrastructure inspections and maintenance."*

Feedback from the current coordinators was included in the report;

> *"The FSCs have taken the administrative burden off local fire chiefs and allowed them to focus on the delivery of fire services. In addition, equipment inspections and training is carried out on a more consistent basis allowing firefighters to be better equipped and prepared to respond to fires. Across the board, FSCs have stated that the two biggest improvements since their positions inception are accountability and communication. Instead of having local fire departments operate individually, they now have all departments in their jurisdiction on the same page."*

MOCR Fire Service Coordinator's Role

The current MOCR Fire Service Coordinator position appears to be a casual/volunteer appointment, with its genesis in 2013. Minutes of the regular meeting of Council on April 22, 2013, show that Council provided direction to staff, as follows;

> *"Moved by Councillor MacNeil, seconded by Councillor Boucher that Council accept the recommendation of the Fire Protection Services Committee and that a Fire Services Coordinator position and/or duties be created or assigned to meet with individual Fire Departments and provide a detailed report to the Committee. Motion carried."*

The current roles and responsibilities appear to include chairing the Richmond County Fire Protection Services Steering Committee meetings. The coordinator also apparently attends provincial and regional fire service association meetings and shares information obtained from those meetings with the Richmond fire chiefs by means of the monthly steering committee meetings, and by posts on the MOCR website, Fire Departments page.[17] GA was not provided with a job description for this position, and it is unknown if it currently exists.

[17] http://www.richmondcounty.ca/fire-department.html

Fire Coordinator Benefits for Richmond

GA's fire services review has revealed a number of fire service issues that, in our opinion, should be addressed to improve the delivery of these services. Some of these issues are outside the scope of this study, as well as the ones that are within the scope. GA has not reported on issues outside the scope, except peripherally as appropriate. Regardless, all areas of concern with fire service delivery will need to be identified and addressed and will, in our opinion, require a centrally focused effort to appropriately address the issues and bring them to the Administration and Council as necessary.

Ideally, resolving service issues requires a champion; a strong central figure to organize and coordinate the solutions. Skills at diplomacy as well as strong technical skills in fire service delivery are needed. This individual needs to be creative, a team builder, and able to generate respect. Experience in policy and procedure development and the administration of the same will be required. Effective consultation and development of consensus amongst the various fire departments will be essential. The ability to report effectively to MOCR Administration and Council, and to take back direction will be essential. Budget development and administration skills will also be a big component of success. Finally, organizational and record keeping abilities will be essential to ensuring that legislated mandates and best-practices are followed; that ensure the fire departments are ready to respond to incidents in an effective and efficient manner with due regard to personnel safety and health.

With this position, an opportunity also exists to have a full-time fire-coordinator position; who is also responsible for municipal emergency management coordination (**MEMC**), and could also be the County liaison with the RCMP. There is natural connection between all these roles, and the fire services coordinator would be in a unique position to interchange knowledge through all these areas.

Value of Fire Coordination

GA anticipates a significant workload associated with the many activities that will be necessary to advance fire service delivery in Richmond. In addition, as suggested, this position could also

be required to address the need for a MEMC with Richmond's emergency management program. Both objectives are critical to the continued well being of the residents of Richmond County. GA is of the opinion that a full-time municipal employee is essential for the success of achieving fire-emergency program objectives and in ensuring that appropriate standards and best-practices are being met and maintained. It will be important that specific objectives be quickly achieved before opportunities are lost or service levels erode further. In GA's opinion, there is a lot of work to do in the fire services area.

GA cautions that the role of fire service coordinator could be a full-time position by itself due to the number of fire departments involved (i.e. 10). However, GA acknowledges that the additional role of MEMC would be a good fit. Often in business and government, justification is sought for additional roles and responsibilities to be added to the principal role. This can create a point of diminishing return for the position. Competing priorities can result in a loss of focus and effectiveness as envisioned secondary priorities come to the fore. This results in less time and energy spent on the primary objective, thus not meeting the demands or expectations originally intended.

For example, it has been suggested that the Fire Service Coordinator role become responsible for Bylaw enforcement. GA cautions, the coordinator and by-law roles have little in common and a very different skill set is required for each role. A building inspector, fire inspector, and bylaw role is a better fit. Additionally, the workload demand of bylaw enforcement is very significant as is the role of fire-coordinator. Together these are more than a single position.

Currently, Bylaw enforcement is the responsibility of the Eastern District Planning Commission, which is also responsible for Building and Fire Inspections. GA interviewed a Richmond inspector and was informed that they currently are collectively struggling with the work load.

Recommendation 6: GA recommends that a full-time Emergency Services Coordinator position be appointed with responsibilities for fire-service coordination, county emergency management coordinator, and police liaison. Such position to report to the CAO.

Appendix X: Emergency Services Coordinator starting on page **301** provides a sample job description and reporting relationship.

FIRE CHIEFS COORDINATING COMMITTEE

FIRE CHIEFS COORDINATING COMMITTEE

Currently there is established a *Richmond County Fire Protection Services Steering Committee* that includes representation by Council and by the volunteer fire departments. It is currently chaired by the fire-coordinator. GA received several comments by different fire chiefs that from their perspective the committee was not effective and accomplished little that they wanted accomplished.

In GA's opinion, the main difficulty with the structure of such committees is that they are not designed to be effective. This current committee consists of Council representatives, who are responsible for setting municipal policy, and fire chiefs who are responsible for operational activities. The fire chiefs are volunteers and not municipal employees. They are effectively contractors.

It is a basic principal of government that policy and operations are separate functions, for many reasons that are outside the scope of this study, not the least of which is liability. The bridge between operations and policy is the municipal administration. However, MOCR administration, usually the mechanism by which Council policy and direction is converted to operational action, is absent from this committee. In other words, there is no one on the committee responsible for converting ideas and requests into action.

Recommendation 7: GA recommends the establishment of a fire chiefs coordinating committee that is not a committee of Council. The committee should consist of the volunteer fire chiefs and responsible MOCR administrative staff who have responsibility to report, develop, and recommend action to MOCR executive administration, and thereby to Council as/if necessary and when appropriate. The MOCR staff on the committee must have the authority to bring back action and direction to the committee as appropriate. The key MOCR administrative staff representative on the committee should be the emergency services coordinator.

Appendix XI: Fire Chiefs Coordinating Committee Structure starting on page **306** for a model of the committee.

FIRE APPARATUS

FIRE APPARATUS

The Request for Proposal asked for a review of the state of the departments fire apparatus and ancillary firefighting equipment and fire stations. To accomplish this task an Excel worksheet, with the requested and required information, was submitted to all fire departments to complete. The worksheet asked a number of questions relating to year of truck, pump size, water tank size, etc. In total, ten questions for each vehicle were asked to be addressed. In addition, the worksheet requested information on their minor capital equipment such as; amount and size of fire hose, self-contained breathing apparatus, ladders, portable pumps, suction hoses, firefighting nozzles, and etc. Unfortunately, none of the worksheets were returned.

GA did manage to speak with a number of Richmond County Fire Chiefs in obtaining some fire apparatus information, in lieu of the requested worksheet. However, little specific data was obtained.

Fire stations analysis was to be based upon the data provided by the individual departments; such as age, general condition, and space requirements for all of their functions. This information would have been compared with industry standards.

GA was able to obtain some fire station information by speaking with some of the Fire Chiefs by means of a telephone survey, in lieu of the requested worksheet. However, no specific data was obtained.

The missing information required GA to conduct extensive searching (primarily online) with other sources in an attempt to collect some of the required data in order for any pertinent conclusions to be possible.

What follows is a table of the information that was obtained or deduced from multiple sources, some likely more reliable than others. It is believed to be generally accurate, although GA can express no warranty that that is so.

TABLE: FIRE APPARATUS DATA

RICHMOND COUNTY, NS: FIRE APPARATUS — Information from various sources NOT NECESSARILLY CORRECT OR COMPLETE

									PUMP			TANK	FOAM			LADDERS
Assigned Station	Vehicle Type	New or Used	NFPA/ULC standards at the time of PURCHASE ?	Remarks	Chassis; make and model	Chassis: Date of Manufacture (from information plate)	FD Actual Purchase Date	Body; manufacturer	ULC certified? (must have a ULC plate on the pump panel)	Pump rated Capacity at 150 psi (from ULC plate)	Date Pump was last tested/passed (meeting NFPA-1911)	Water Tank Size	Class A Foam Tank Size	Class B Foam Tank Size	Date Foam System last tested/passed (meeting NFPA-1911)	Date ladder last tested (Meeting NFPA-1932 in-service testing)
station ID			Yes/No	free-form	name	mmm/yyyy		name	YES/NO	IGPM	dd/mmm/yyyy	Imperial Gal	Imperial Gal	Imperial Gal	dd/mmm/yyyy	dd/mmm/yyyy
St. Peters	**Pumper**	NEW	Yes		Western Star	2017	2017	Metalfab	Yes	1,050	Annually	1,000	20.0	NA	Annually	Bi Annually
St. Peters	Utility (non-NFPA)	NEW	NA		Ford F-250	2006	2006		NA	NA	NA	NA	NA	NA	NA	N/A
St. Peters	**Pumper**	NEW	Yes		Chev C70	1987	1987	Thibault	Yes	840	Annually	1,000	NA	NA	NA	Bi Annually
St. Peters	**Mobile water supply**	NEW	Yes		Freightliner FL80	1996	1996	Fort Garry	Yes	1,050	Annually	2,000	NA	NA	NA	Bi Annually
St. Peters	Rescue (non-NFPA)	NEW	NA		Freightliner FL70	2003	2003	Lantz	NA	NA	NA	NA	NA	NA	NA	unk
Framboise	**Pumper**	USED	No	used from Coxheath FD	IHC 4900	1992	2014	Carl Thibault	No	1,050	Never	1,000	NA	NA	NA	Never
Framboise	Utility (non-NFPA)	USED	NA	Donated not outfitted nor in service	GMC Sierra	2010	2019	GMC Sierra	NA	NA	NA	NA	NA	NA	NA	unk
Forchu	**Mobile water supply**	USED	No	Purchased from Scotchtown FD	GMC Top Kick	1991	2014	G.M. MacDonald	No	250	Never	1,500	NA	NA	NA	Never
Isle Madame	**Pumper**	NEW			Freightluiner M2106	2006	2006	Metalfab	unknown	1,050	unknown	2,000	30.0	unk	unk	unk
Isle Madame	Rescue (non-NFPA)	NEW			Freightliner M2106	2006	2006	Metalfab	N/A	N/A	N/A	NA	NA	NA	NA	unk
Isle Madame	**Mobile water supply**	NEW			Freightliner M2106	2012	2012	Metalfab	unknown	420	unknown	1,500	unk	unk	unk	unk
Louisdale	**Pumper**	NEW	Yes		Freightliner M2106	2008	2008	Metalfab	Yes	1,050	Annually	800	20.0	NA	Annually	Annually
Louisdale	**Mobile water supply**	NEW	Yes		Freightliner M2106	2016	2016	Metalfab	Yes	1,500	Annually	2,500	NA	NA	NA	Annually
Louisdale	Rescue (non-NFPA)	NEW	NA		Freightliner M2	2004	2004	Lantz	NA	NA	NA	NA	NA	NA	NA	NA
West Bay Rd	**Mobile water supply**	NEW	Yes		Freightliner FL80	2003	2003	Metalfab	Yes	420	Annually	1,250	NA	NA	NA	Annually
West Bay Rd	Rescue (non-NFPA)	NEW	NA		Ford F-350	2008	2008	Lantz	NA	NA	NA	NA	NA	NA	NA	NA
West Bay Rd	**Pumper**	NEW	Yes		GMC Top Kick	1992	1992	Metalfab	Yes	1,050	Annually	1,000	NA	NA	NA	Annually
L'Ardoise	**Initial attack**	NEW	unk		Ford F-550	2012	2012	Lantz	unknown	420	unknown	500	yes	unk	unk	unk
L'Ardoise	**Mobile water supply**	NEW	yes		Freightliner 108SD	2018	2018	Lantz	Yes	1,050	unknown	3,000	25.0	unk	unk	unk
L'Ardoise	Rescue (non-NFPA)	NEW	unk		Chev C4500	2004	2004	Lantz	N/A	N/A	N/A	NA	NA	NA	NA	unk
L'Ardoise	**Mobile water supply**	unk	unk		GMC Top Kick	unk	unk	unknown	unknown	unknown	unknown	unknown	unk	unk	unk	unk
District 10	**Pumper**	USED	No	used - pump rebuilt & tested 2018	Duplex/Simon	1985	ex Maryland USA	Pirsch	No	1,200	10-Jul-1905	1,000	NA	NA	NA	Never
District 10	**Mobile water supply**	unk	unk		International S	1987	unk	Mulgrave Machine Shop	No	portable	never	1,200	N/A	N/A	N/A	unk
Loch Lomond	**Mobile water supply**	USED	No	Lrg electric start Pump installed on tail gate to fill pump 4" piping, 1 - 2.5" discharge	Ford F800	1987	2014	Metalfab	No	portable	never	2,200	NA	NA	NA	No Ladders
Loch Lomond	**Pumper**	USED	No	Purchased from Shag Harbur FD	Ford F700	1987	1997	Metalfab	Yes	840	Annually	1,400	NA	NA	NA	Never
Loch Lomond	Utility (non-NFPA)	USED	NA	Purchased from Private Owner	Dodge Durango	1987	2010	N/A	NA	NA	NA	NA	NA	NA	NA	No Ladders
Grand River	Rescue (non-NFPA)	USED	NA	Was an ambulance Purchased from Florida	Freightliner FL60	2001	unk	La Farge	NA	NA	NA	NA	NA	NA	NA	NA
Grand River	**Mobile water supply**	USED	No	Was a 1950s unit; new Cab/Chassis 1990 old CAF unit	Chevrolet Bison	1990	unk	Fruehauf	No	625	Never	3,200	NA	NA	NA	Never
Grand River	Utility (non-NFPA)	USED	NA	Carries some adders and 250 gal tote of water no ref to a pump	GMC 3500	1992	unk	GMC 3500	NA	NA	NA	NA	NA	NA	NA	Never
Port Hawkesbury	**Pumper**	NEW	Yes		Freightliner	2002	2002	Superior	Yes	1,500	Annually	1,000	40.0	40.0	unk	Annually
Port Hawkesbury	Utility (non-NFPA)	NEW	NA		Ford E Cube Van	1993	1993	unknown	NA	NA	NA	NA	NA	NA	NA	No Ladders
Port Hawkesbury	**Pumper**	NEW	Yes		Freightliner FL80	1998	1998	Superior	Yes	1,250	Annually	500	20.0	20.0	unk	Annually
Port Hawkesbury	**Aerial Platform**	USED	No	US built, pump and aerial serivce tested prior to purchase in Alabama. Not ULC certified.	Pierce 6700 Quantum	2014	2019	Pierce	No	1,665	unknown	300 usgal	NA	NA	NA	unknown

FIRE UNDERWRITER SURVEYS (FUS) APPARATUS REPLACEMENT GUIDE

To assist fire services and municipalities in determining when to replace fire apparatus (beyond the obvious), FUS developed a guide as to when fire apparatus of a certain age should be replaced with new. This guide is based upon the assumption that all apparatus is purchased new and fully compliant with the applicable fire apparatus standards CAN/ULC-S515, Standard for Automobile Fire Fighting Apparatus and NFPA 1901 Standard for Automotive Fire Apparatus.

FUS Fire Apparatus Service Schedules

As part of the Insurance Grading Schedule FUS has a number of recommendations for fire apparatus replacement based upon community size and make up, as per the following table.

TABLE: FUS SERVICE SCHEDULE FOR FIRE APPARATUS

Table 1 Service Schedule for Fire Apparatus for Fire Insurance Grading Purposes

Apparatus Age	Major Cities [3]	Medium Sized Cities [4]	Small Communities [5] and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2nd Line Duty	First Line Duty
20 – 25 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve [2]*	No Credit in Grading *or* *2nd Line Duty [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.*

FUS Apparatus Testing Requirements

Note 1 in the previous table references testing. The following table expands on this need.

TABLE: FUS FREQUENCY OF FIRE APPARATUS TESTS

Table 2 Frequency of Listed Fire Apparatus Acceptance and Service Tests

	Frequency of Test					
	@ Time of Purchase New or Used	**Annual Basis**	**@ 15 Years**	**@ 20 Years** ***See Note 4***	**20 to 25 Years (annually)**	**After Extensive Repairs** ***See Note 5***
Recommended For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	Service Test	Acceptance Test	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Required For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	No Test Required	No Test Required	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Factor in FUS Grading	Yes	Yes	Yes	Yes	Yes	Yes
Required By Listing Agency	Acceptance Test	No	No	No	N/A	Acceptance Test
Required By NFPA ***See Note 6***	Acceptance Test	Annual Service Test	Annual Service Test	Annual Service Test	Annual Service Test	Service Test

Note 1: See: 'Service Tests for Used or Rebuilt Fire Apparatus' for description of applicable tests
Note 2: Acceptance Tests consist of 60 minute capacity and 30 minute pressure tests
Note 3: Service Tests consist of 20 minute capacity test and 10 minute pressure test in addition to other listed tests
Note 4: Apparatus exceeding 20 years of age may not be considered to be eligible for insurance grading purposes regardless of testing. Application must be made in writing to Fire Underwriters Survey for an extension of the grade-able life of the apparatus.
Note 5: Testing after extensive repairs should occur regardless of apparatus age within reason.
Note 6: Acceptance Tests: See NFPA 1901, Standard for Automotive Fire Apparatus
Service Tests: See NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus, Article 5.1

FUS does provide Insurance Grading Recognition of used or modified (or rebuilt) apparatus subject to the following tests. (i.e. ULC certification testing). FUS states[18] that; "*Full adherence with the following specified tests is recommended when purchasing used apparatus.*"

- Weight and Load Balance Test
- Road Tests
  - Acceleration Test
  - Braking Test
- Pump Performance Test
  - Hydrostatic Test
  - Priming and Suction Capability Test
    - Vacuum Test
    - Suction Capability Test
- Pump Performance
  - Capacity Test
  - Pressure Test

[18] *Service Tests for Used of Modified Fire Apparatus*, Fire Underwriters Survey c/o SCM Opta Information Intelligence.

FUS Acceptance Program for Older Fire Apparatus

TABLE: RICHMOND FIRE DEPARTMENTS FLEET AGE, IN YEARS

Total Fleet Avg. Age	Firefighting Units Avg. Age (P, WS, P-T, IA)	Pumper Avg. Age	Water Supply Avg. Age	P-T Avg. Age	Rescue Avg. Age	Utility Avg. Age
22	22	25	30	11	16	25

FUS states that apparatus exceeding twenty (20) years may not be considered to be eligible for insurance grading purposes, regardless of testing. Application must be made in writing to the FUS for an extension for gradable-life of the apparatus. *(Note: FUS do not use Rescues or Utility vehicles in their grading evaluation)*

The application to FUS to request acceptance of older fire apparatus requires a response to all the following questions.

TABLE: FUS INDICATORS OF APPARATUS RELIABILITY

Part A – Indicators of Apparatus Reliability
Please provide the following information on the apparatus history.
1. *Has the apparatus ever been out of service for mechanical failure reasons?*
2. *If yes, how many days has the apparatus been out of service in the last 3 years? (provide documentation)*
3. *Is regular preventive maintenance performed on the apparatus?*
4. *If yes, please provide the maintenance history with the completed form submission.*
5. *Is preventative maintenance conducted in the community?*
6. *How many days has the apparatus been out of service for preventative maintenance in the last 3 years? (provide documentation)*
7. *Is the apparatus maintained by a certified Emergency Vehicle Technician? (provide maintenance history for last 3 years).*
8. *Is the apparatus maintained in accordance with all manufacturer specifications?*
9. *Is the apparatus maintained in accordance with NFPA 1911?*
10. *Are annual Service Tests performed on the apparatus?*
11. *If yes, please provide the last 3 Service Tests results with the completed form submission.*
12. *Are full Pump Acceptance Tests performed on the apparatus at least every 5 years?*
13. *If yes, please provide the last full Pump Acceptance Test results with the completed form submission.*
14. *Is the apparatus thoroughly reviewed for criteria which may render the apparatus (or parts) "out of service" as per NFPA 1911, Chapter 6?*
15. *If yes, please provide the results of the last full review of "out of service" criteria completed form submission.*
16. *In what year will this apparatus be replaced?*
17. *For Mobile Water Supply Apparatus please submit signed documentation that the apparatus meets the requirements of a Mobile Water Supply Apparatus (including Water Tank) as defined by ULC-S515.*

TABLE: RICHMOND FIRE DEPARTMENT APPARATUS PHOTOS

Department	Type	Age	Image
DTVFD	Pumper (P)	35	
DTVFD	Mobile Water Supply (WS)	33	No Image Available
FFVFD (Forchu)	Mobile Water Supply (WS)	29	
FFVFD (Framboise)	Pumper (P)	28	
GRVFD	Rescue (R)	19	

Department	Type	Age	Image
GRVFD	Mobile Water Supply (WS)	70/30	
GRVFD	Utility (U)	28	
IMVFD	Pumper-Tanker (P-T)	14	
IMVFD	Pumper-Tanker (P-T)	8	

Department	Type	Age	Image
IMVFD	Rescue (R)	14	
LAVFD	Initial Attack (IA)	8	
LAVFD	Pumper-Tanker (P-T)	2	
LAVFD	Rescue (R)	16	
LAVFD	Mobile Water Supply (WS)	??	No Image Available

Department	Type	Age	Image
LLVFD	Mobile Water Supply (WS)	33	
LLVFD	Pumper	33	
LLVFD	Utility	33?	
LVFD	Rescue (R)	16	

Department	Type	Age	Image
LVFD	Mobile Water Supply (WS)	4	
LVFD	Pumper (P)	12	
SPVFD	Pumper (P)	3	
SPVFD	Pumper (P)	33	See Image Above
SPVFD	Mobile Water Supply (WS)	34	See Image Above
SPVFD	Rescue (R)	17	See Image Above
SPVFD	Utility (U)	14	See Image Above

Department	Type	Age	Image
WBRVFD	Mobile Water Supply (WS)	17	
WBRVFD	Pumper (P)	28	
WBRVFD	Rescue (R)	12	

ULC Certification

In Canada, all firefighting apparatus are required to be ULC listed as part of the FUS grading criteria. In addition, the ULC listing guarantees the purchaser that the acquired fire apparatus meets all of the performance criteria of CAN/ULC-S515.[19] It is normal practice for fire departments in Canada to specify and purchase fire trucks that meet both CAN/ULC-S515 and NFPA-1901.[20] The NFPA standard is reviewed and updated more frequently than the ULC standard so tends to be more current.

CAN/ULC S515 does not apply to so called rescue or utility vehicles. However, NFPA-1901 does contain requirements for Special Service vehicles (i.e. rescues and utility vehicles). To be considered compliant, all applicable sections of Chapter 10 and applicable sections of Chapter 15 of the Standard must be met. These requirements address fundamental safety and performance aspects of these vehicles.

In Richmond County, of the total fleet of firefighting apparatus (Pumpers, Initial Attack Units, Water Supply, and Pumper-Tankers) it appears from our information that only 53% are ULC certified. Four apparatus were not included in the percentage calculations as it was unknown if the units were ULC listed or not.

Whereas the current fleet contains a fair number of used apparatus, it is important for fire departments and other purchasers of used and/or refurbished fire apparatus to be aware of the requirements to upgrade acquired fire apparatus. Most importantly, any fire apparatus (used or otherwise) is required to be CAN/ULC-S515 certified if it is to be recognized for insurance rating purposes. In GA's opinion, it is not good value to purchase fire apparatus that has not, or cannot, be certified. Such apparatus is less likely to be adequate, safe, or reliable.

[19] CAN/ULC-S515, *Standard for Automobile Fire Fighting Apparatus*, Canadian-Underwriters Laboratories of Canada.

[20] National Fire Protection Association, NFPA-1901, *Standard for Automobile Fire Apparatus*.

NFPA Upgrading to Fire Apparatus.

There are a number of NFPA standards that apply to fire apparatus, as follows;

- For purchasing of new fire apparatus, and as an upgrade reference standard; NFPA-1901, *Standard for Automobile Fire Apparatus*,
- For the maintenance of in-service fire apparatus; NFPA-1911**,** *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles,*
- For major maintenance on in-service fire apparatus, to the point where the serviceable life is increased; NFPA-1912, *Standard for Fire Apparatus Refurbishing*.

Any apparatus that requires refurbishing due to serious breakdown, accident, used purchase, or desire to modernize should be upgraded in accordance with NFPA-1912. All NFPA standards are considered by peers and the courts as best-practices. Some are incorporated into legislation, particularly those related to personal protective equipment.

The provisions of this standard advise that a detailed specification for the refurbishment be written to ensure that all components are addressed to meet the standard. There are two basic options in the standard. Refurbish the fire apparatus to completely meet current edition NFPA-1901 requirements (i.e. a Level I refurbishment) or ensure that all new or upgraded components meets the current edition NFPA-1901 requirements (i.e. a Level II refurbishment).

Appendix D of the NFPA-1912 standard states;

> *"D.3 Upgrading Fire Apparatus. Any apparatus, whether in first-line or reserve service, should be upgraded in accordance with NFPA 1912, as necessary to ensure that the following features are included at a minimum:*
>
> *(1) Seat belts with seat belt warning systems are available for every seat and are new or in serviceable condition.*
>
> *(2) Warning lights meet or exceed the current standard.*
>
> *(3) Reflective striping meets or exceeds the current standard.*
>
> *(4) Slip resistance of walking surfaces and handrails meets the current standard.*
>
> *(5) A low-voltage electrical system load manager is installed if the total connected load exceeds the alternator output.*
>
> *(6) The alternator output is capable of meeting the total continuous load on the low voltage electrical system.*
>
> *(7) Where the gross vehicle weight rating (GVWR) is 36,000 lb (16,000 kg) or more, an auxiliary braking system is installed and operating correctly.*

> *(8) Ground and step lighting meet or exceed the current standard.*
>
> *(9) Noise levels in the driving and crew compartment(s) meet the current standard, or appropriate hearing protection is provided.*
>
> *(10) All horns and sirens are relocated to a position as low and as far forward as possible.*
>
> *(11) Signs are present stating that no riding is allowed on open areas.*
>
> *(12) A pump shift indicator system is present and working properly for vehicles equipped with an automatic chassis transmission.*
>
> *(13) For vehicles equipped with electronic or electric engine throttle controls, an interlock system is present and working properly to prevent engine speed advancement at the operator's panel, unless either the chassis transmission is in neutral with the parking brake engaged, or the parking brake is engaged, the fire pump is engaged, and the chassis transmission is in pumping gear.*
>
> *(14) All loose equipment in the driving and crew areas is securely mounted in accordance with the current standard.*"

Effectively then, NFPA-1912 is stating that in-service fire apparatus that is purchased new, or used, should be kept up-to-date for critical safety and performance features. In GA's opinion, with a fire apparatus fleet as old as is the case in Richmond County, the fleet should be evaluated in detail to determine if best-practices have been adhered to.

Decision; Refurbish or Replace Fire Apparatus

Municipalities and fire departments should carefully evaluate the relative cost vs. benefit of refurbishing/updating in-service fire apparatus, or the cost of purchasing used fire apparatus; as compared to the lifetime cost, functionality, safety, and expected service life of a new fire apparatus. This evaluation applies to existing in-service fire apparatus, or fire apparatus that is being purchased used from another fire department or as a repurposed chassis and components.

NFPA-1912, Annex D, probably sums up the issues best where it comments on the relative value of refurbishment vs purchasing, as follows;

> *"D.5 Refurbishing or Replacing Fire Apparatus. Fire department administrators and fire chiefs should exercise special care when evaluating the cost of refurbishing or updating an apparatus versus the cost of a new fire apparatus. Apparatus that are refurbished should comply with the requirements of NFPA 1912. A thorough cost-benefit analysis of the value of upgrading or refurbishing a fire apparatus should be conducted. In many instances, it will be found that refurbishing costs will greatly exceed the current value of similar apparatus.*

Some of the factors to evaluate when determining whether to refurbish or replace a fire apparatus include the following:

(1) What is the true condition of the existing apparatus? Has it been in a major accident, or has something else happened to it that would make spending significant money on it ill advised?

(2) What advancements in design, safety, and technology have improved the efficiency and safety of personnel?

(3) Does the current apparatus meet the program needs of the area it is serving? Is it designed for the way the fire department operates today and is expected to operate in the foreseeable future, or is it functionally obsolete? Can it carry everything that is needed to do the job without being overloaded?

(4) If the apparatus is refurbished, will it provide the level of safety and operational capability of a new fire apparatus? It should be kept in mind that in many cases, refurbishing does not mean increasing the GVWR, so it is not possible to add a larger water tank or additional foam agent tanks, or to plan to carry massive amounts of additional equipment. Enclosing personnel riding areas might add enough weight to the chassis that existing equipment loads need to be reduced to avoid overloading the chassis.

(5) What is the anticipated cost per year to operate the apparatus if it were refurbished? What would the cost per year be for a new apparatus? Insurance costs, downtime costs, maintenance costs, depreciation, reliability, and the safety of the users and the public all have to be considered. At what rate are those costs rising each year? Are parts still readily available for all the components on the apparatus? A refurbished 15-year-old apparatus still has 15-year-old parts in it. How long can the fire department operate without the apparatus if it suddenly needed major repairs?

(6) Is there a current trade-in value that will not be there tomorrow? Most apparatus over 12 years old have little trade-in value. Are there creative financing plans or leasing options that can provide a new fire apparatus for little more than the cost of refurbishing or maintaining an older apparatus?

D.6 Conclusion. A fire apparatus is an emergency vehicle that must be relied on to transport fire fighters safely to and from an incident and to operate reliably and properly to support the mission of the fire department. A piece of fire apparatus that breaks down at any time during an emergency operation not only compromises the success of the operation but might jeopardize the safety of the fire fighters relying on that apparatus to support their role in the operation. An old, worn out, or poorly maintained fire apparatus has no role in providing emergency services to a community."

Fleet Recommendations

Recommendations that are financial in implication are contained within the chapter **Financial Analysis and Benchmark Budget** starting on page **87** of this report.

Recommendation 8: GA recommends that all MOCR purchased fire apparatus be standardized in specification in order to speed the acquisition process and obtain better pricing. This should include a standard chassis, standard pump size and make/model, standard features and capability, and a standard body configuration.

Such standardizations will also reduce maintenance costs, improve interoperability between fire departments at incidents, and improve training efficiency across the County, and reduce liability for the Municipality.

Recommendation 9: GA recommends that all fire apparatus when purchased new should[21] be specified, constructed, tested, and accepted in conformance with the requirements of the latest edition of NFA-1901.[22] And CAN/ULC-S515.

Relevant to Richmond County this NFPA standard has a number of categories of fire apparatus that includes Pumper, Initial Attack, Mobile Water Supply (Tanker), Aerial, and Special Service (rescue trucks). Fire apparatus equipped with a fire pump must be tested and certified to the requirements of ULC-S515 to be recognized for insurance grading purposes (i.e. meeting FUS rating requirements).

Recommendation 10: GA recommends that only one qualified and experienced fire apparatus maintenance service provider do all the NFPA component servicing on all fire fleet vehicles, in every fire department. This provider must have mobile servicing capability and should perform such services inside Richmond County.

Recommendation 11: GA recommends that only one qualified and experienced fire apparatus testing and inspection service provider do all the NFPA and FUS stipulated, in-service and acceptance level testing and inspection of fire apparatus. This provider must have mobile testing and inspection capabilities and should perform these services inside Richmond County.

[21] As required by NFPA-1500; *Standard on Fire Department Occupational Safety and Health Program*, which is the base document for "*The Nova Scotia Fire Services Occupational Health and Safety Reference Guide*," 2003. The guide states "This reference guide contains minimum requirements for a fire-service related occupational health and safety practice." It was developed through a committee of NS career and volunteer fire services, the Fire Marshal's office and Environment and Labour OH&S division.

[22] Fire apparatus that do not meet NFPA-1901 standards are inherently unsuitable for the purpose since they will not likely incorporate the necessary safety, reliability, and functionality, of design and components. Fire apparatus not meeting NFPA or ULC are not recognized by the insurance industry (FUS) as fire apparatus.

Recommendation 12: GA recommends that only a certified Emergency Vehicle Technician should be servicing, inspecting, and testing all fire apparatus. This includes the pump, pump transmission, all pump ancillary systems, emergency warning systems, electrical power systems, and all other components specified in NFPA-1901.

Recommendation 13: GA recommends that annual, semi-annual, monthly, and daily (weekly); inspections, maintenance, and testing be done in accordance with the NFPA/ULC/FUS standards, and with provincial pre-trip[23] safety inspection guidelines.

Recommendation 14: GA recommends that a single vehicle maintenance service be contracted to provide cab and chassis servicing of all fire apparatus in all fire departments in Richmond County. This service provider should have mobile servicing capability so that fire apparatus are out-of-service for the minimum amount of time, by performing (where possible) basic maintenance services at the nearest suitable fire station. The service provider should also have access to a shop where heavier work can be performed. Speciality work should be sent to the nearest suitable service provider.

Recommendation 15: GA recommends that complete servicing, inspection, testing, and maintenance records be securely kept, for every fire apparatus, for the life of the fire apparatus. Such records should be subject to regular evaluation to determine (in advance) trends and evidence of need for rebuilding, preventative maintenance, or possible predictable service failure.

Recommendation 16: GA recommends that the purchasing, testing, inspection, maintenance, and retirement of; bunker gear, SCBA, fire hose, rescue rope and harness, life safety rope and harness, ground ladders, and flashlights be done in accordance with all requirements of NS occupational health safety and safety legislation,[24] for all affected equipment, in all fire departments.

[23] *Commercial Vehicle Trip Inspection and Records*, N.S. Reg. 223/90; exempts emergency vehicles from the requirements of a pre-trip inspection. However, best-practices require a form of this type of inspection be done. For volunteer fire departments a policy of doing such inspections at least once a week and after every trip will meet best-practices, and is a very wise policy.

Incidents with fire apparatus, particularly old fire apparatus, have a high ratio of causation due to mechanical failures, particularly brakes deficiency, that would be caught in a properly done pre-trip inspection regime.

[24] Nova Scotia Occupational Safety General Regulations, N.S. Reg. 44/99; §191 - 194, 195, 197, 198 – 199, 200, and 202.

Recommendation 17: GA recommends annual quantitative fit-testing[25] of all persons who will be required to wear SCBA or medical mask on an annual basis, in conformance to NS occupational health and safety legislation.[26] Since not all firefighters will be able to wear breathing protection for various reasons; those firefighters who are not fit-tested and therefore not qualified to wear SCBA or medical masks should not be permitted to operate in IDLH atmospheres.

Recommendation 18: GA recommends that MOCR adopt a Policy of Council that sets a fire apparatus replacement schedule. The following schedule should be adopted for the purposes of determining fire apparatus suitability for continued service and as a budget planning tool for future fire apparatus replacement.

TABLE: RECOMMENDED SERVICE LENGTH FOR FIRE APPARATUS

Type	Condition	Max Age	Service
Pumper, Tanker	Purchased to NFPA-1901 standard, certified and periodically tested in accordance with FUS/ULC	20 years	First-line duty
Pumper, Tanker	Purchased to NFPA-1901 standard, certified and periodically tested in accordance with FUS/ULC	25 years	Reserve use
Aerial/Quint	Purchased to NFPA-1901 standard, certified and periodically tested in accordance with FUS/ULC	20 years	First-line duty
Aerial/Quint	Purchased to NFPA-1901 standard, certified and periodically tested in accordance with FUS/ULC	25 years	Reserve use
Rescue, Support	Purchased to appropriate portions of NFPA-1901 standard	25 years	First-line duty
Rescue, Support	Purchased to appropriate portions of NFPA-1901 standard	30 years	Reserve use
Utility vehicles	Light duty chassis	15 years	First-line duty
Utility vehicles	Light duty chassis	20 years	Reserve use
All other	RTV, rescue boat, trailers, etc.	condition	First-line duty

Recommendation 19: GA recommends that two older (no longer first-line) pumpers or pumper-tankers be kept serviceable/operational as maintenance reserves. The purpose of reserves is to be able to, on short notice, temporarily replace apparatus that are out of service for a day or more. They will also remain available for use at major incidents. They should be placed and maintained in suitable fire stations.

[25] Fit-testing costs are contained in the *Administration* group of the *Other Operational Expenses* category, coming up later in this report.

[26] *Occupational Safety General Regulations*, N.S. Reg. 44/99; §196.

Recommendation 20: GA recommends that in fire departments where there is only one fire apparatus in the station that is, or should be, equipped with a chassis mounted major water pump, that that apparatus should be a pumper-tanker. That apparatus should meet all the requirements stipulated in NFPA-1901 both for a pumper and for a mobile water supply apparatus, and it should be provided with suitable equipment to perform the roles of both a pumper and a mobile water supply apparatus (i.e. a pumper-tanker).

FIRE STATIONS

FIRE STATIONS

As part of this study's scope, fire stations were to be evaluated based upon the data provided by the Client and/or its agents. The analysis of the data was to determine age, general condition, and space requirement for all the functions required to support fire department operations. GA would then do a comparison to industry standards.[27] Fire Chiefs were expected to complete data worksheets provided to them, detailing specific fire hall information. Unfortunately, none of these requests for data were apparently completed or returned to GA.

The following discussion and information reflects the limited fire station data provided to GA by some individual Fire Chiefs via telephone interviews, and through GA's own research. Actual site inspections, and analysis of each individual station in comparison to standards, were not conducted.

Building Requirements

It should be noted that the requirements for fire stations to be classified as post-disaster buildings is not new. It was introduced in 1999 and enacted in the National Building Code of Canada in 2005. There is no retroactive requirement for existing fire stations. However, any major upgrades (e.g. adding an extension) made to a station may trigger the requirement to construct to post-disaster building requirements, depending upon the nature and extent of any fire station upgrade. Post-disaster building designation will significantly add to the per-square-foot costs of fire stations, vis à vis other similar but not fire station buildings.

The average age of the eight fire stations for which GA was able to obtain some information (based upon their original construction date) is 40 years. St. Peters station had a major renovation in 2008 at a cost of $700,000. GA does not know if the renovations met post-disaster building requirements, or indeed included the feature requirements of NFPA-1500 or NFPA-1581.

[27] These standards include;

- NFPA-1500; Standard on Fire Department Occupational Safety and Health Program (which includes numerous fire station Health and Safety design requirements),
- NFPA-1581 Standard on Fire Department Infection Control Program, and
- National Building Code of Canada requirements for Post-disaster buildings (ref Division A, §1.4.1.2).

As a result of the minimal and inadequate technical information that GA was able to obtain, no informed opinion as to the suitability or serviceability of the fire stations is possible. Anecdotally, given the age of the stations, and from the brief conversations with some of the fire chiefs, GA is of the opinion that it is unlikely that the fire stations meet the current industry standards noted above.

Fire Underwriter Surveys also have design standards for fire stations, in particular, floor space requirements per apparatus type. For example, a fire apparatus with an overall length of 35 feet, requires 1,000 square feet of space per unit. A tandem-axle unit would require 1,400 square feet per unit.

Recommendation 21: GA recommends that a suitable engineering firm be contracted to perform a building condition audit and standards audit of all fire stations.

Fire Station Inventory

LOUISDALE FIRE HALL

RR#1 Hwy 4 Louisdale, NS, B0E 1V0

The Louisdale fire hall was constructed in the late sixty's or early seventies. Approximately fifteen years ago renovations were carried out on the station's second level. Cost and type of renovation is unknown. Approximately ten years ago renovations were carried out in the hall's truck bays; costs are unknown.

ST. PETERS FIRE HALL

22 Toulouse St. St. Peter's, NS, B0E 3B0

The St. Peters hall was constructed in 1982 and underwent a major renovation in the year 2007/2008 at a cost of $700,000.

ISLE MADAME FIRE HALL

5125 Fleur-de-Lis Trail, Arichat, NS, B0E 1A0

No information was provided.

However, it is understood that there have been recent alterations and upgrades to the fire hall.

GRAND RIVER FIRE HALL

P.O. Box 37. Grand River, NS, B0E 1M0

This station was built in 1988; an expansion to the existing community hall was created to allow for the fire station. No alterations to date.

WEST BAY ROAD FIRE HALL

644 Cenotaph Rd, West Bay Road, NS, B0E 3L0

The West Bay Road Station was constructed in 1977 and an extension was added in 1980. Hall renovations to the truck bay and kitchen areas began during August 1999.

L'ARDOISE FIRE HALL

P.O. Box 24 L'Ardoise, NS, B0E 1W0

No information was provided.

Framboise Fire Hall (FFVFD)

46 Stirling Rd. Framboise, NS, B2J 1B9

This facility was built in 1977. In 2014 windows, doors and siding were added to the fire hall. Then in 2018, roof, soffit and facia were all replaced.

No Picture Available

Fourchu Fire Hall (FFVFD)

~9430 St. Peters-Forchu Rd, Forchu, NS

This particular station was built in 1991/92 and in 2017 had its roof replaced along with new insulation and chipboard walls.

Loch Lomond Fire Hall

1177 Passage Rd. Loch Lomond, NS, B2E 1C4

The Loch Lomond station was built in 1981, there was an addition added in 2012 and a new roof in 2019.

District 10 Fire Hall

RR #1 Red Islands, 14799 Hwy. #4. St. Peter's, NS, B0E 3B0

This station was constructed in 1976. The station's roof was replaced at some point but is unknown as to the exact year.

Fire Station Design and Associated Construction Costs

There are a number of questions that need to be addressed in determining the cost of a new fire station. The first and most important question is the needed size of the new station. The size will be dependant upon a number of factors. Fire stations are predominantly built with a 50 to 70-year life span. Therefore, it is important to determine service level needs, number of and type of emergency vehicles; not only for today but into the future.

Richmond County is experiencing a reduction in population. The 2016 StatsCan Census indicated a 3.5% drop since 2011, with 27.7% of the population being 65 years and over; the population median age of 52.7 years. This equates to a shrinking and aging population. Moving forward there is a possibility that the focus for emergency services will trend towards more medical emergencies rather than being fire related. This revelation may impact on the type, design and sizing of emergency fire units to address future needs, thereby impacting fire stations.

Other issues for fire station construction is location and size of building lot required; not just for the facility itself but for parking and other facility exterior requirements. Fire stations, especially rural ones, are usually not just fire stations. They can be multi-role facilities.

The role of the proposed fire station also impacts on station design and size, property location and size, and will impact construction and operations costs. Will the station function as the department's main fire hall or a substation, will the hall serve as a community reception center during disasters, will it serve as an Emergency Operations Center during such events? Will there be a training /meeting hall within the station, will it have kitchen facilities, will there be offices?

The Nova Scotia Occupational Health and Safety Reference Guide[28] states that; "*The base document used for this guide is NFPA 1500 Standard on Fire Department Occupational Safety and Health Program.*" NFPA-1500[29] is the best-practice benchmark for fire station health and

[28] *Nova Scotia Fire Services Occupational Health and Safety Reference Guide*, 25/04/2003, Developed and published by Nova Scotia Environment and Labour.

Preamble: "*This Occupational Health and Safety Reference Guide, developed for the fire service of Nova Scotia is recommended to be considered a minimum standard for safe operations. It in no way is intended to restrict authorities having jurisdiction or individual fire service providers from exceeding the requirements set out in this guide.*"

[29] National Fire Protection Association, NFPA-1500, *Standard on Fire Department Occupational Safety and Health Program*.

safety. It makes reference to multiple other standards, as appropriate, since it is a broad-spectrum document; for example, one key reference standard is NFPA-1581.[30]

Some of specific fire station requirements from NFPA-1500 include;

- ✓ The requirement for separate storage spaces in the fire station. Bunker gear can no longer be stored on the apparatus floor.
- ✓ Equipment and repair rooms cannot be part of the apparatus floor.
- ✓ Storage of any type cannot use part of the apparatus floor.
- ✓ There must be separation between contaminated and uncontaminated spaces.
- ✓ Facilities are required for disinfection, cleaning and storage.
- ✓ If bunker gear is cleaned in the station there must be a washer, dryer, and inspection/maintenance area.
- ✓ Fire stations must be sprinklered.
- ✓ Vehicle exhaust emissions must be captured to prevent exposure to personnel.

Fire station design requires the work of an architect with experience in this field. Fire stations are somewhat unique.

Construction Costs

Building fire stations includes so called hard and soft costs. Hard costs are those related to the physical construction of the asset. Soft costs are those other essential activities that are not as obvious, but are equally essential.

Soft costs can be difficult to anticipate and budget. The less that is known about the location and site conditions at the beginning of a project process, the more uncertain will the soft costs be.

Fire station costs could include some or all of the following that might not be included in initial estimates of costs;[31]

- Land and related costs (e.g. real estate fees)
- Land surveys

[30] National Fire Protection Association, NFPA-1581, *Standard on Fire Department Infection Control Program*.

[31] Modified original list from the Altus Group.

- Legal fees, closing costs
- Site services outside the property (e.g. turning lanes on the highway)
- Environmental assessments, tests, and reports
- Environmental abatement
- Architectural and engineering fees
- Bidding, evaluation, and contract award
- Construction management and scheduling
- Speciality design consultants
- Interest charges and lenders' fees
- Permits and development charges
- Special equipment and furnishings
- Property taxes
- Municipal fees
- Rezoning costs
- Public meetings and notices
- Contingencies
- Construction insurance and bond costs
- Special equipment and furnishings
- And etc.

Hard costs are easier to estimate unless there are unusual circumstances about the site selection that was not included in the original vision and cost estimates. According to the Altus Group[32] (as of Q3, 2018 data), Halifax public sector, Fire/EMS station, hard construction cost were between $250 and $315 per square foot.

GA is aware of recent builds and construction quotes for three-bay (approximately 5,500 sq. feet) volunteer fire stations in Nova Scotia and P.E.I. These projects were in the $1.5 million range and did not include land or soft costs.

[32] The Altus Group, 2019 Canadian Cost Guide, https://www.altusgroup.com/services/reports/canadian-cost-guide-2019/

Sample Fire Station Estimate

As mentioned at the beginning of this chapter, the first item in building a fire station is to do a needs analysis to determine the size and features. Other costs will be driven by this analysis. The following exercise demonstrates this process, and assumes a basic 1-1/2 bay fire hall that is intended to house a tandem-axle Pumper-Tanker and a Utility vehicle. Such a fire station might be located in Framboise. Below in table format is a space and cost calculator.

For the exercise, pick and choose the rooms and space required for the intended station. Included in this exercise is spaces that are now required by Building Code and best-practices, intended to protect the health and safety of firefighters and others who might enter or use the facility.

Once the total floor space requirements are identified, then the total floor space is multiplied by the Altus 2019 Canadian Cost Guide, referencing the Halifax construction cost range average for fire stations at approximately $282.50 per square foot. It should be noted that the Altus cost data is based on the average of several projects and is also the average cost of the entire building. Different areas of the building will have different square foot costs. Occupant areas are more expensive than garage spaces, for example. Volunteer fire stations are cheaper than career fire stations; the occupant areas are usually smaller in volunteer stations unless a meeting hall is included.

This exercise will not provide a total cost as the table only represents hard costs. This exercise is only a guide and is not a substitute for a professional cost estimate, nor does it include all-in costs; it is only intended as an exhibit.

TABLE: SAMPLE ESTIMATE OF FIRE STATION COST

Room/Area	Square Feet Required	No. of Rooms/Area	Total Sq. Ft Required	Cost Per Room/Area
Apparatus Bay Single-Axle (e.g. pumper)	1,000	0	0	0
Apparatus Bay Tandem-Axle (e.g. tanker)	1,400	1	1400	395,500
Utility vehicle with trailer	1,000	0	0	0
Utility vehicle only	500	1	500	141,250
Workshop	150	1	150	42,375

Room/Area	Square Feet Required	No. of Rooms/Area	Total Sq. Ft Required	Cost Per Room/Area
Air Compressor room/SCBA Cylinder Storage	450	0	0	0
Bunker gear room	225	1	225	63,563
Hose storage and work room	120	1	120	33,900
Office	144	1	144	40,680
Training/Meeting room, small	600	1	600	169,500
Training/Meeting room, large	2,500	0	0	0
Kitchen, large, commercial (fund raisers etc.)	400	0	0	0
Kitchenette	40	1	40	11,300
Washroom/Shower, Unisex	200	1	200	56,500
Mechanical room (heating, HVAC, etc.	100	1	100	28,250
Laundry room	100	0	0	0
Gross clean-up room (contaminated room)	36	1	36	10,170
Janitor closet	36	1	36	10,170
General storage, small	60	1	60	16,950
General storage, large	600	0	0	0
Medical supplies storage, lock-up	60	1	60	16,950
Other	0	0	0	0
Totals:	9,721	14	3,671	$1,037,058

If the fire department wanted to replace the utility vehicle with a pumper, this would require increasing the utility vehicle bay to 1,000 square feet, an increase of 500 square feet which increases the hard cost by approximately $141,250. For a new total of approximately $1,178,308, which represents an increase of 13.6%.

Conclusion

Volunteer fire stations are typically a multiuse facility in most communities. They can be called on for many associated uses such as; fund raising, hosting of public meetings, firefighter training, emergency reception centers, and of course to house fire-emergency vehicles and equipment.

Changes to the National Building Code (circa 2005) require fire stations to be designated as Post-disaster buildings and they must therefore be built stronger, and are expected to be of higher

quality, such that they will still be standing and performing their function, even when everything else around them is not.

Current best-practices health and safety requirements for fire stations has also increased in recent years. In Nova Scotia, mandatory WCB coverage for volunteers starts in 2020, and has grown out of the recognition by the province of presumptive cancer and other diseases for firefighters. There is an assumption, for some, that these are only affecting the career firefighters, but this is erroneous as volunteer firefighters are now also included in this recognition. One of the sources of firefighter related disease is fire station design and facilities, or more properly, lack thereof. Firefighters are exposed to toxins and pathogens at almost every incident and therefore must be properly protected, have proper procedures, and must have adequate facilities to ensure that they can mitigate this exposure, and avoid bringing it home to their families. Adequate fire station facilities must be present for these process to be effective.

Health, safety, and disaster ready concerns will cause fire station costs to exceed those of a simpler building to some significant degree. As more is learned about risks to firefighters, authorities having jurisdiction at the provincial and national level can be expected to increase fire station design, construction, and facility requirements; and thereby costs. Fire stations are currently cheaper to build than they will be in the future.

In the Building Code there is the opportunity to exempt some designated buildings from the post-disaster designation. It is not intended that fire stations fall into this category. In GA's correspondence with the NS Fire Marshal, he has affirmed his position that fire stations, career or volunteer should be "Post Disaster Ready".

Recommendation 22: GA recommends that planning and construction of new stations should be done with the assistance of professionals that have fire station design experience and are familiar with the NFPA health and safety requirements and other best practices for fire stations.

RURAL WATER SUPPLY INFRASTRUCTURE

RURAL WATER SUPPLY INFRASTRUCTURE

Goudreault Associates were asked to determine the need for Dry Hydrants; aka rural water supplies. Rural water supplies are used to provide a source of firefighting water in areas where there is no public water supply and fire hydrants. Rural-like water sources can also be significantly useful where there are fire hydrants (i.e. during very large fires); where the public water supply is not able to cope with required flow rates or total water demands.

National Building Code Requirements

The National Building Code[33] requires that; "*Every building shall be provided with an adequate water supply for firefighting. (See Note A-3.2.5.7.(1).)*" The intent of this sentence is further clarified in the referenced appendix sentence, as follows: {***emphasis** added*}

> A-3.2.5.7.(1) Water Supply. The intent of Sentence 3.2.5.7.(1) is that an adequate water supply for firefighting be readily available and of sufficient volume and pressure to enable emergency response personnel to control fire growth so as to enable the safe evacuation of occupants and the conduct of search and rescue operations, prevent the fire from spreading to adjacent buildings, and provide a limited measure of property protection.
>
> The water supply requirements for buildings containing internal fire suppression systems, including sprinkler systems and standpipe systems, are contained in specific standards referenced in the Code. Compliance with the referenced standard, including any variations made by this Code, is deemed to satisfy the intent of Sentence 3.2.5.7.(1). However, it will be necessary to verify that an adequate source of water is available at the building site to meet the required quantities and pressures.
>
> For a building with no internal fire suppression system, the determination of the minimum requirements applicable to the water supply for firefighting is relevant mainly to building sites not serviced by municipal water supply systems. For building sites serviced by municipal water supply systems, where the water supply duration is not a concern, water supply flow rates at minimum pressures is the main focus of this provision. However, where municipal water supply capacities are limited, it may be necessary for buildings to have supplemental water supplies on site or readily available.
>
> The sources of water supply for firefighting purposes may be natural or developed. ***Natural sources may include ponds, lakes, rivers, streams, bays, creeks, and springs***. Developed sources may include aboveground tanks, elevated gravity tanks, cisterns, swimming pools, wells, reservoirs, aqueducts, artesian wells, tankers, hydrants served by a public or private water system, and canals. Consideration should be given to ensuring that water sources will be accessible to fire department equipment under all climatic conditions.
>
> The volume of on-site water supply is dependent on the building size, construction, occupancy, exposure and environmental impact potential, and should be sufficient to allow at least 30 minutes of fire department hose stream use.

[33] *National Building Code of Canada 2015*, issued by the Canadian Commission on Building and Fire Codes, National Research Council of Canada, 2015 edition. Ref Division B, §§3.2.5.7.

Dry Hydrants

Dry hydrants are ideal for those areas that do not have a municipal water system with fire hydrants, nor allow direct fire apparatus access to water supplies. Properly designed and sited dry hydrants are superior to basic water drafting operations for the following reasons;

- ✓ Competent water sources are pre-identified
- ✓ Water supply capacity (flow and quantity) is known
- ✓ Year-around access, all weather approach, ice free
- ✓ Minimum manpower needed to implement use
- ✓ Room to manoeuvre fire apparatus at the site
- ✓ Water shuttle distances can be reduced with proper siting and adequate numbers

The implementation of dry hydrants is not without the need for planning, field work, development of agreements, construction, maintenance and testing, and of course costs. For any one of these reasons, adequate numbers of dry hydrants may not be implemented.

An online training course[34] on rural water supply, and available through NFPA, has some useful comments on dry hydrants that GA agrees with, as follows;

> *"Dry Hydrant Advantages*
>
> *Knowing about a quantity of available water in area streams, ponds and cisterns gives an advantage to a fire department only if the water is readily accessible. Soft or obstructed ground certainly limits access. Or, the needed water may be located so far away from where it is needed that a fire department's ability to do its job of fire control is impaired.*
>
> *Mobile water supply vehicles can move water from distant sources, but the critical factor is whether or not the fire department can maintain an uninterrupted supply of a predictable rate of water at the fire scene.*
>
> *Installation of dry hydrants into numerous nearby and developed water supplies eliminates the inefficiency and complexity of long-distance water shuttle operations. This arrangement also allows access to water sources from a roadway instead of having to work on soft ground immediately adjacent to the pond or stream."*

[34] The National Wildland/Urban Interface Initiative. https://www.nfpa.org/assets/gallery/firewise/operationWater/references_2.htm

Richmond County Dry Hydrants

Although there are a number of rural water sources established, the number maybe insufficient to provide adequate coverage for all risk areas of the Municipality. GA has not done a survey of the County to find all dry hydrants. Information on rural water sources was requested from the fire chiefs, but not provided. As a consequence, GA can only make recommendations based on best-practices and experience.

Dry Hydrant Considerations

Establishing rural water supplies, in particular dry hydrants, can produce savings in the community. There is a possibility of a drop in fire insurance rates if sustained, adequate, water flows can be established quickly. Fire departments could reduce per incident fuel and equipment costs due to shorter transportation distances and lower operational demands.

As stated in the recommendation, the installation of dry hydrants should be in compliance with NFPA 1142. All dry hydrant systems should be designed and constructed to provide a minimum flow of 3,800 L/min when being drafted by fire apparatus, no matter the water level or time of year. A higher flow capability is advantageous and may be needed for specific occupancy risks.

Planning for dry hydrants involves several considerations and should be coordinated with all affected agencies and private concerns. NFPA's *Organizing for Fire and Rescue Services*[35] offers the following considerations;

- Current and future population and building trends.
- Property values protected.
- Potential for loss.
- Fire history of the area protected.
- Current water supply systems.
- Other potential water sources.
- Cost of project.

[35] *Organizing for Fire and Rescue Services, A Special Edition of the Fire Protection Handbook*, Chapter 26, *Alternate Water Supplies*, National Fire Protection Association (NFPA), 2003.

- Equipment and personnel of the local fire department.
- Training needs of the fire department.
- Other specific factors of local concern.

Dry Hydrant Locations

Fire Underwriter Survey[36] recognizes approved alternative water supplies (i.e. not municipal hydrant systems) for properties if the water supply point is within 2.5 km by road for commercial risks and 5 km by road for residential risks. Essentially, this means that dry-hydrants or static drafting locations should be available within those distances to most if not all properties in the Municipality, according to their type of property. It also requires that all static water sources be equipped with a dry-hydrant.

Dry hydrants shall be located so that they are accessible under all weather conditions. This could involve the following considerations;

- Proper site drainage
- A minimum of 3 ft (0.9144 m) of clear, unobstructed space needs to be provided around the dry hydrant connection point.
- The dry hydrant system and access to the site needs to be developed in a manner that allows the fire department pumper to connect to the hydrant using not more than 20 ft (6 m) of hard suction hose.
- The dry hydrant should be located a minimum of 100 ft (30 m) from any structure.
- Roads providing a means of access to any dry hydrant water supply should be constructed and maintained in accordance with the following:
    - Roadways should have a minimum clear width of 12 ft (3.7 m) for each lane of travel (e.g. if there will be oncoming traffic, e.g. tankers).
    - Turns should be constructed with a minimum radius of 100 ft (30.5 m) to the centerline.
    - The maximum sustained grade should not exceed 8 percent.
    - Turnarounds should be designed with a minimum diameter of 120 ft (36.5 m) or larger (expected responding fire apparatus needs must be identified).

[36] Fire Underwriters Survey, *Alternative Water Supplies for Public Fire Protection, an Informative Reference Guide for use in Insurance Grading*

- Roadway load-carrying capacity should be adequate to carry the maximum vehicle load expected.
- Roads should be suitable for all-weather use.

Water Supply

The water supply source for the dry hydrant must provide the required and expected quantity of water flow and capacity (volume), on a year-round basis.

Useful water depth is a consideration, at all times of the year and in all conditions (i.e. drought, flood, tide). The minimum expected water level should never be less than two feet above the dry hydrant strainer inlet or there will be loss of suction, reduced water flow, water hammer, and fire pump damage as air is ingested through a vortex. For very high-volume hydrants, two feet may not be sufficient. Minimum water levels may also need to be higher if the water source is expected to freeze in winter. Add one to two feet for ice coverage.

Water volume is also a consideration. Cisterns may be a viable source of water if they are sufficiently large. As noted in the section **National Building Code Requirements** on page **80**, calculations should be made on water flow and volume requirements, but for water source sizing this should occur for the largest target fire risk (i.e. building, etc.) for which that water source is expected to provide protection. The NBC says there should be at least a 30-minute supply of water in the water source. That time premise is based on firefighting demand sufficient for rescue or escape from a building. It does not necessarily provide adequate water volume for extended firefighting or exposure protection needs. In short, larger sources are better than smaller ones.

Recommendation 23: GA recommends that dry-hydrants be installed and maintained at rural water supply points within the County as follows.

- Dry hydrants should be established within 5 kilometers by road to all communities and clusters of residential housing, and within 2.5 kilometers to all commercial risks.
- Dry-hydrants should be developed in accordance with the requirements of NFPA-1142[37]
- All dry hydrants and other static water supplies should be maintained in accordance with the requirements of NFPA-1142.

[37] National Fire Protection Association, NFPA-1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*.

Recommendation 24: GA recommends that good records of all dry-hydrant maintenance, inspections, and testing should be kept as protection against liability, for reference, and pre-planning purposes.

NFPA-1142 requires that dry-hydrants be inspected and maintained at least quarterly and flow tested at least annually, and that records be kept as protection against liability, for reference, and pre-planning purposes.

Recommendation 25: GA recommends that all dry-hydrants established on private property be accompanied by an executed agreement defining rights, duties, and liabilities.

FINANCIAL ANALYSIS AND BENCHMARK BUDGET

FINANCIAL ANALYSIS AND BENCHMARK BUDGET

CURRENT ANNUAL OPERATING BUDGETS

As part of this study's financial review of current fire department budgets (capital and operating), GA was asked to establish a benchmark comparator for future operational and capital budgets. For this purpose, GA examined the MOCR and ten individual fire department financial statements for the years 2014/15 through to 2019/20; i.e. for 6 budget years.

One of the major challenges for GA in this process was related to deciphering the information and thereafter casting them into a comparable format. No two fire departments' financial statements/budgets followed the same format and, often, fire departments were not themselves consistent year over year. In some cases financial statements were absent or incomplete. This lack of complete or consistent information is a significant reason that GA decided to examine 6-years of financial information in lieu of a more normal 3-4 years. Where data was missing, estimates based on prior or succeeding years was used to fill in the gaps.

The information obtained from the approximately 70 financial statements examined was extracted and placed within a consistent format, to create a simulated line-by-line budget comparison. In almost every case, the financial information contained in the fire department statements was not detailed. Usually the presented items contained rolled-up numbers without significant explanation of the components that might constitute the total. Assumptions and intuition were therefore necessary to assign costs into comparable categories (i.e. budget lines).

Financial comparison across departments, and for multiple years, is a valuable analytic tool that can identify where there are potential expenditure anomalies and will assist in identifying cost trends. It is also useful to determine if certain necessary activities are occurring or are being properly funded.

FIXED VS VARIABLE COSTS

For fire services, like any operation-oriented service, costs are of two main components; i.e. fixed and variable.

Fixed costs include items like; debt servicing, equipment purchases, staffing, training, and other costs that reoccur on a regular basis. These costs can remain relatively consistent regardless of the incident activity levels of the fire department. They are based on maintaining the established capacity of the fire department. There are almost always opportunities to reduce fixed costs, and most cost cutting initiatives are and should be aimed at fixed costs.

Variable costs include items like; fuel for the vehicles and motorized equipment, some equipment maintenance, wear & tear related depreciation (or destruction), and expendables such as meals and medical gloves. Variable costs change in accordance with the activity levels of the fire department.

Generally speaking, it is difficult to establish cost cutting initiatives on variable costs. Such initiatives, if attempted, tend to directly affect service levels and can create hazardous conditions for responders. For example; an initiative to reduce the use of firefighting foam can reduce the costs of foam purchases, but will definitely increase the extinguishment time and effort required at incidents where foam use is indicated. It may also generate a secondary incident where firefighters have to re-respond to the original incident to deal with a rekindle; and it is likely that the firefighting foam will then be used, to avoid having to return a third time.

One real potential for cost savings on variable costs is to ensure that purchases of materials and equipment are good value. Often this means purchasing good quality materials to start with, as well as doing group purchasing.

Based on our experience, GA offers the following specific example to further illustrate this point. In the early 2000's most American fire hose makers decided to source their fire hose production offshore, abandoning domestic production. This reduced their manufacturing costs substantially, although customers did not necessarily see these savings. Shortly thereafter, it became quickly noticeable that fire hose was not as durable as it had been and was being damaged (and no longer serviceable) at a much faster rate, sometimes at the first fire. An investigation into alternatives discovered a Canadian made hose that was marginally more expensive (about 5%) but was extremely durable, and also offered better performance characteristics. This hose was

subsequently purchased as the fire department standard, and the annual cost of fire hose replacement decreased.

Annual Operations Budget Analysis

Current fire department financial statements that were analysed as part of this study included accounts for the following fire departments;

- District 10 (DTVFD),
- Framboise-Forchu (FFVFD) which operates two fire stations,
- Grand River (GRVFD),
- Isle Madame (IMVFD),
- L'Ardoise (LAVFD),
- Loch Lomond (LLVFD),
- Louisdale (LVFD),
- St. Peters (SPVFD),
- West Bay Road (WBRVFD), and
- Port Hawkesbury (PHVFD).

The Chapel Island (Potloteck) fire department was not included because there is no MOCR municipal funding provided for that department. GA was not provided with their financial information. It is GA's understanding that, aside from potential mutual-aid responses, Potloteck does not provide fire protection into areas of MOCR.

The source for all financial statements was MOCR, except PHVFD which was sourced from the Town's website.

Revenue, MOCR

The following table shows MOCR's revenue and expenditure side of providing fire protection services, in the years indicated.

TABLE: REVENUE/EXPENSES REPORTED BY MOCR

Municipality of RICHMOND COUNTY Financial Reports/Budget	coloured cells are budgeted amounts, clear are actuals						4-Year Total	4-Year AVG	3-Year AVG	2-Year AVG	TREND
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020					(Annual TOT)
REVENUE											
Isle Madame Area Rate	167,885	174,828	179,098	185,414	189,029	199,500	753,041	188,260	191,314	194,265	
Rev./Louisdale Fire Dept (WBRVFD)	150,529	154,926	156,088	161,308	163,372	175,000	655,768	163,942	166,560	169,186	
Dist. 7, 8 & 9 Fire Dept	152,251	157,026	159,233	162,452	165,539	175,500	662,724	165,681	167,830	170,520	
L'Ardoise Fire Dept	78,096	79,576	81,069	83,498	85,726	90,000	340,293	85,073	86,408	87,863	
Dist. # 10 Fire Dept	43,343	54,638	57,610	59,747	62,668	66,500	246,525	61,631	62,972	64,584	
Grand River - Fire Dept	25,067	25,912	27,050	28,307	28,372	29,000	112,729	28,182	28,560	28,686	
Framboise/Forchu Fire Levy	21,111	20,846	20,661	20,345	20,686	21,000	82,692	20,673	20,677	20,843	
Loch Lomond - Fire Dept.	21,959	23,357	24,226	24,761	25,229	32,500	106,716	26,679	27,497	28,865	
TOTAL INCOME FROM FIRE LEVIES:	$ 660,241	$ 691,109	$ 705,035	$ 725,832	$ 740,621	$ 789,000	3,651,597	730,319	751,818	764,811	
EXPENSES	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020					
Fire Protection, Fire Services											
Fire Services Coordinator Expenses/Memberships	0	0	0	0	0	9,000	9,000	2,250	3,000	4,500	
Fire Services Contract for Point Tupper (Louisdale)	0	25,000	25,000	25,000	25,000	0	75,000	18,750	16,667	12,500	
Fire Services Contract for Point Tupper (Port Hawkesbury)	25,000					49,645					
Services Provided to Fire Departments											
Interest on Loans	9,324	3,968	2,686	11,833	11,788	11,800	38,107	9,527	11,807	11,794	
Workers Compensation Premiums	12,701	6,228	6,001	3,279	3,553	3,600	16,433	4,108	3,477	3,577	
VFIS AD&D Premiums (JP Financial)	0	10,083	10,087	10,234	13,136	13,000	46,457	11,614	12,123	13,068	
Insurance Premiums (Gallagher)	0	56,545	58,992	59,435	60,012	60,000	238,439	59,610	59,816	60,006	
Insurance Premiums (MacCoy)	846	0	0	0	0	0	0	0	0	0	
Levy Disbursemounts (minus costs above)	637,370	614,285	627,269	641,052	652,132	700,600	2,621,053	655,263	664,595	676,366	
TOTAL MORC Fire Service Expenditures:	$ 685,241	$ 716,109	$ 730,035	$ 750,832	$ 765,621	$ 847,645	3,810,242	762,048	788,033	806,633	
ANNUAL SURPLUS/(DEFICIT) to Fire Levy:	(-25,000)	(-25,000)	(-25,000)	(-25,000)	(-25,000)	(-58,645)					

The table section titled **REVENUE** lists the revenues generated and collected by MOCR based on the various fire protection levies. The revenue line descriptions in the above table were taken from MOCR budget statements. The West Bay Road VFD is included as part of the Louisdale assessment area. "*Dist. 7, 8, & 9*" is the St. Peters VFD.

The following table shows the current levy rates. The rate is calculated per $100 of eligible assessment. Also shown is the principal corresponding fire department to the Ward.

TABLE: FIRE DEPARTMENT AREA RATES[38]

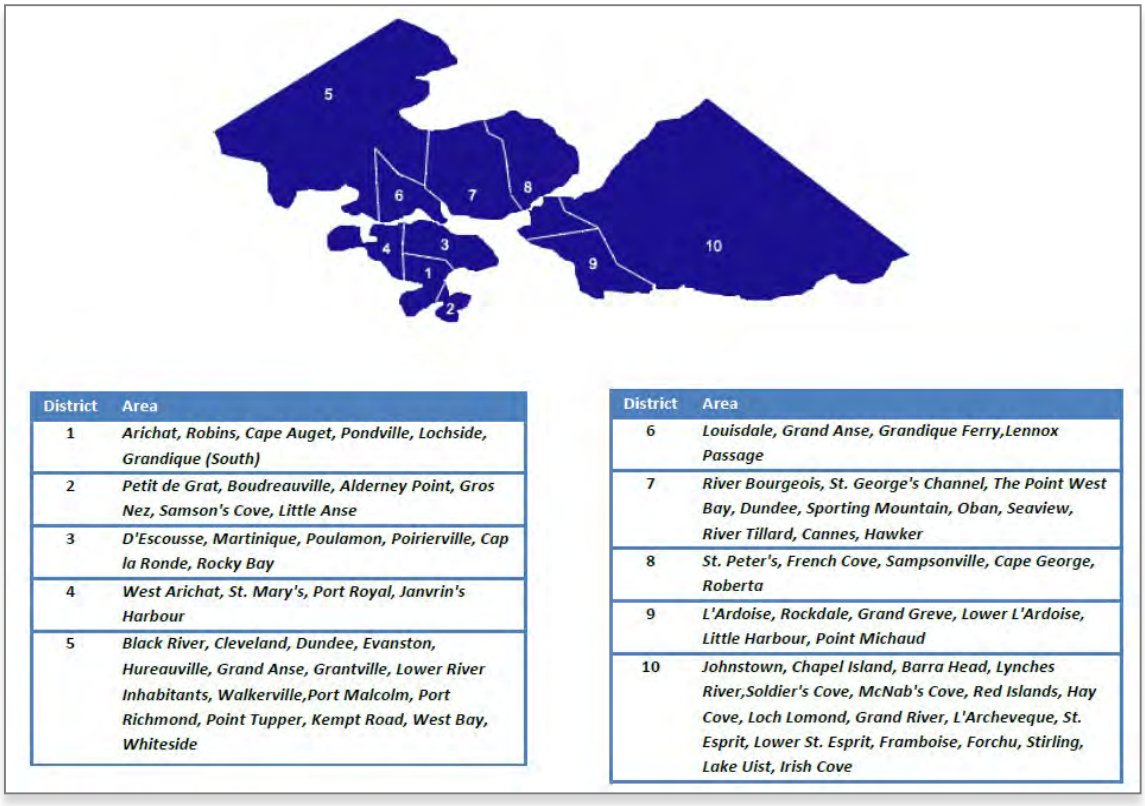
Fire Department Providing Service	"**District #**" (Wards)	**Rate**
Isle Madame Volunteer Fire Dept.	1-Arichat	$0.11
Isle Madame Volunteer Fire Dept.	2-Petit de Grat	$0.11
Isle Madame Volunteer Fire Dept.	3-D'Escousse	$0.11
Isle Madame Volunteer Fire Dept.	4-West Arichat	$0.11
West Bay Road & District Volunteer Fire Dept.	5-Cleveland	$0.10
Louisdale Volunteer Fire Dept.	6-Louisdale	$0.10
St. Peters Volunteer Fire Dept.	7-River Bourgeous	$0.10
Louisdale Volunteer Fire Dept.	Black River Road	$0.10

[38] http://www.richmondcounty.ca/tax-office.html

Fire Department Providing Service	"**District #**" (Wards)	**Rate**
St. Peters Volunteer Fire Dept.	8-St. Peters	$0.09
L'Ardoise Volunteer Fire Dept.	9-L'Ardoise	$0.16
District #10 Volunteer Fire Dept.	10-Framboise-Forchu (Johnstown/Soldiers Cove)	$0.15
Loch Lomond Volunteer Fire Dept.	10-Framboise-Forchu (Loch Lomond)	$0.15
Framboise-Forchu Volunteer Fire Dept.	10-Framboise-Forchu (Framboise/Forchu)	$0.15
Grand River Volunteer Fire Department	10-Framboise-Forchu (Grand River)	$0.15

The "wards" in the above chart (and in the MOCR budget statements) refer to former ward districts as shown in the following graphic;

MAP: FORMER MUNICIPAL WARDS AND COMMUNITIES[39]



District	Area
1	*Arichat, Robins, Cape Auget, Pondville, Lochside, Grandique (South)*
2	*Petit de Grat, Boudreauville, Alderney Point, Gros Nez, Samson's Cove, Little Anse*
3	*D'Escousse, Martinique, Poulamon, Poirierville, Cap la Ronde, Rocky Bay*
4	*West Arichat, St. Mary's, Port Royal, Janvrin's Harbour*
5	*Black River, Cleveland, Dundee, Evanston, Hureauville, Grand Anse, Grantville, Lower River Inhabitants, Walkerville,Port Malcolm, Port Richmond, Point Tupper, Kempt Road, West Bay, Whiteside*

District	Area
6	*Louisdale, Grand Anse, Grandique Ferry,Lennox Passage*
7	*River Bourgeois, St. George's Channel, The Point West Bay, Dundee, Sporting Mountain, Oban, Seaview, River Tillard, Cannes, Hawker*
8	*St. Peter's, French Cove, Sampsonville, Cape George, Roberta*
9	*L'Ardoise, Rockdale, Grand Greve, Lower L'Ardoise, Little Harbour, Point Michaud*
10	*Johnstown, Chapel Island, Barra Head, Lynches River,Soldier's Cove, McNab's Cove, Red Islands, Hay Cove, Loch Lomond, Grand River, L'Archeveque, St. Esprit, Lower St. Esprit, Framboise, Forchu, Stirling, Lake Uist, Irish Cove*

Going back to the MOCR Revenue/Expense table on page **90**; the section titled **EXPENSES** lists the expenditures that MOCR has reported being made for fire protection services.

[39] Graphic from; Municipality of the County of Richmond Municipal Climate Action Plan, Université Sainte-Anne, Marine Research Centre, Aleasha (Boudreau) David and Michelle Theriault, 2013

- Line 19 is the reimbursement for the current fire services coordinator.
- Line 20 is funds that were paid to Louisdale VFD for emergency response services into Point Tupper; over the budget years 2015/16 → 2017/18.
- Line 21 is funds paid to the Town of Port Hawkesbury for emergency response services into Point Tupper. GA understands that a similar payment was made for many years prior to 2015/16 budget. The higher amount in the 2019/20 column is for the current one-year contract.
- Lines 24 → 28 are the costs of services that Richmond either provides or sources and pays for on behalf of the various fire departments. Not every fire department uses all of these services every year. Costs are recovered from the fire levy (see Line 29).
- Line 29 is the balance of the revenue generated through the fire protection levies, and is paid to the fire departments.

MOCR reports the disbursing of more funds than are collected through the fire levies. It appears that the contracts for fire protection in Point Tupper are extra to the fire protection levies, as are the fire-coordinator costs.

Fire Department Districts

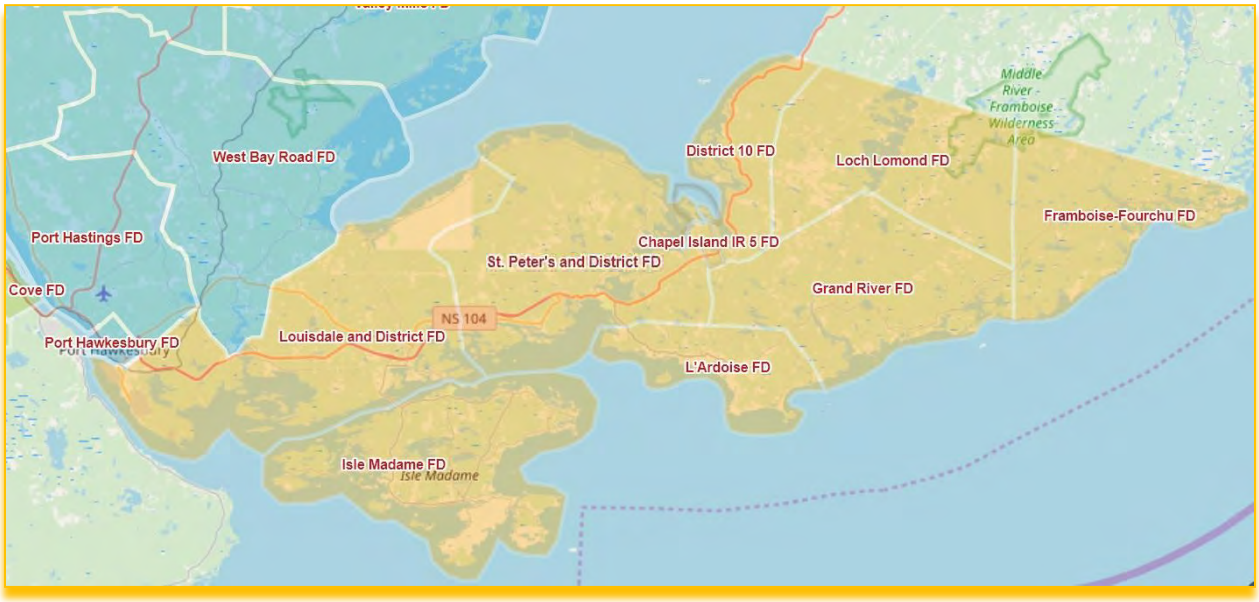
It is helpful to understand the areas (fire districts) serviced by each fire department before entering a discussion on fire department revenues and expenses. The fire department service districts do not appear to closely align with any political districts on the Richmond County map. It is therefore suspected that the area fire rates may not perfectly align with the corresponding fire district either.

The following map snapshot was sourced from an interactive map found on the Eastern District Planning Commission website.[40] The buff coloured area is Richmond County. The eight MOCR fire districts are shown, defined by the light-coloured lines that show the fire district boundaries. The corresponding VFD is labeled.

The turquoise coloured area is Inverness County, including the Town of Port Hawkesbury. The interactive map allows the user to zoom in; to see details that do not show on the large overview that we have provided here. It is a great tool.

[40] http://edpc.maps.arcgis.com/apps/webappviewer/index.html?id=db45536aaa51434bb21e54a7872a6847

MAP: RICHMOND COUNTY FIRE DISTRICTS



The Chapel Island fire district consists of only the First Nations property on the reserve. The Chapel Island fire district effectively makes the boundary between the SPVFD and the DTVFD, as shown in the accompanying snapshot. The GRVFD district also meets there.

MAP: POTLOTECK (CHAPEL ISLAND) FIRE DISTRICT

The Lennox Channel between Isle Madame and Cape Breton Island forms the boundary between the IMVFD and the LVFD.

Although there are fire stations in both Framboise and in Forchu, they are managed as one department and there isn't a distinct fire district boundary between them.

GA believes that the LLVFD also provides protection into the area of CBRM immediately to the north of the County boundary, although this is not shown on the map. CBRM pays for this service.

Of particular interest is the area in Richmond County that is included in the West Bay Road VFD fire district. That area is shown turquoise in the overview map although it is in Richmond County

and should be buff. The following map snapshot shows this area in better detail. The red dash-dot outlines on the map are the fire district boundaries. The dashed black line shows the location of the Inverness-Richmond County boundary, where it crosses the WBRVFD fire district. The area to the south of the line is in Richmond County. At MacIntyre Lake; the Port Hastings (Inverness), West Bay Road (Inverness) and Louisdale (Richmond) fire districts come together.

MAP: WEST BAY ROAD VFD FIRE DISTRICT

Revenue, Fire Departments[41]

The following table shows the tabulated totals for revenue sources reported by the fire departments; over the years shown. The Port Hawkesbury fire department is not included in these totals.

The revenues are grouped by category, as demonstrated by colour highlights (explained on lines 24-26). Municipal sourced revenues are uncoloured. Green are non-municipal sources. Dark and

[41] Compiled individual fire department financial information is contained in **Appendix XII: Financial Data**, starting on page **310**.

light browns are fundraising and donations. A summary section totals the income sources by category.

									6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG	TREND
1	SUMMARY, AS REPORTED BY MOCR REGISTERED FIRE DEPARTMENTS (except Port Hawkesbury)													
2			2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020						(Year TOT)
3		REVENUE	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Budget)						
4		CONTRIBUTION - Richmond County Area Rate	558,971	715,849	634,705	675,202	654,242	684,500	653,912	672,900	662,162	671,315	669,371	
5		CONTRIBUTION - Services - Richmond County	22,777	76,824	77,766	84,781	88,489	85,950	72,764	82,762	84,246	86,407	87,220	
6		CONTRIBUTION - Inverness County Area Rate	56,397	62,225	63,246	55,000	35,976	55,000	54,641	54,290	52,306	48,659	45,488	
7		CONTRIBUTION - GRANT - Inverness County	6,107	3,084	3,145	2,500	2,347	2,300	3,247	2,675	2,573	2,382	2,324	
8		CONTRIBUTION - GRANT - CBRM	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
9		FUNDRAISING (NET CONTRIBUTION)	64,192	51,146	77,126	45,776	38,275	38,000	52,419	50,064	49,794	40,684	38,137	
10		DONATIONS	34,424	14,548	9,262	7,303	37,712	2,000	17,542	14,165	14,069	15,672	19,856	
11		BORROWING	0	0	330,000	518,920	322,654	0	195,262	234,315	292,893	280,525	161,327	
12		PROVINCIAL - GRANT	1,606	4,064	0	2,422	20,335	0	4,738	5,364	5,689	7,586	10,168	
13		DNR Fees	592	1,573	0	0	0	0	361	315	0	0	0	
14		OTHER GRANT - One Time	0	1,025	0	0	0	0	171	205	0	0	0	
15		Firefighters 50% co-pay; off-duty AD&D benefit	0	0	0	0	0	0	0	0	0	0	0	
16		DUES, Membership Fees	853	807	90	90	140	120	350	249	110	117	130	
17		RESERVE FUNDS (Capital)	0	0	0	0	0	0	0	0	0	0	0	
18		INTEREST EARNINGS	410	252	265	472	29,248	400	5,174	6,127	7,596	10,040	14,824	
19		CARRY-OVER FROM PRIOR YEARS	0	17,317	27,487	0	0	0	7,467	8,961	6,872	0	0	
20		HST/GST Rebate	8,436	32,748	7,171	77,869	75,996	43,200	40,903	47,397	51,059	65,688	59,598	
21		OTHER	8,814	1,000	1,725	395	738	0	2,112	772	715	378	369	
22		TOTAL INCOME:	$ 764,580	$ 983,461	$ 1,232,988	$ 1,471,728	$ 1,307,151	$ 912,470	$1,112,063	$1,181,560	$1,231,084	$1,230,450	$1,109,811	
23														
24	Income	NON-Municipal Sources Funding:	2.7%	4.2%	0.8%	5.5%	9.7%	4.8%	4.6%	5.0%	5.2%	6.7%	7.2%	
25	Sources	Donations: % Revenue:	4.5%	1.5%	0.8%	0.5%	2.9%	0.2%	1.7%	1.2%	1.1%	1.2%	1.6%	
26		Fundraised: % Revenue:	8.4%	5.2%	6.3%	3.1%	2.9%	4.2%	5.0%	4.3%	4.1%	3.4%	3.5%	

TABLE: REVENUE REPORTED BY FIRE DEPARTMENTS:

The fire departments reported revenue from various sources. The following explains GA's understanding of these:

- Line 4 is revenue the fire departments reported receiving from MOCR. Fire department accounting practices affect what fiscal year the municipal revenue is reported. Revenues are net of the Levy minus costs incurred by the Municipality in Line 5. The $25k annual grant reported by MOCR over the years 2015 → 2018, and provided to the LVFD for fire services to Point Tupper was not specifically reported in LVFD financial statements, and does not appear to be in these revenues.
- Line 5 is the offsetting credit for the costs incurred by the Municipality in providing the services shown on Lines 24 → 28 in the **Table: Revenue/Expenses Reported by MOCR** on page **90**.
- Line 6 is revenue that the West Bay Road fire department (WBRVFD) reported receiving from Inverness County. The WBRVFD is based in Inverness County. They also received funds from MOCR for fire services in Richmond County.[42]

[42] GA was not provided and was unable to obtain detailed fire department incident statistics for any fire department or for any year. GA did receive incident number totals only, for only one year (2018). GA was also unable to obtain the ratio of Richmond/Inverness incidents in the WBRVFD fire district, with the exception of 2014. In 2014 WBRVFD reported to MOCR as part of their financial submission that they attended 29 incidents with 7 being in Richmond County (i.e. 24%).

From the Property Valuation Services Corporation's online database, GA was able to extract the ratio between the counties of residential plus commercial properties in the WBRVFD fire district (2019 data). This information showed that 28.33% of the WBRVFD's fire district properties were in Richmond, and therefore it is likely that a similar proportion of the 50 WBRVFD incidents in 2018 were in Richmond County, to wit: 14 incidents. This seems to correspond, proportionally, pretty well with the 2014 information reported by WBRVDF.

- Line 7 is revenue that WBRVFD reported receiving in grants from Inverness County, over and above the area rate funds. GA did not investigate the rational behind these grants.
- Line 8 is revenue that LLVFD reported receiving from CBRM. It is presumed that LLVFD provides fire protection for some properties in the Enon area of CBRM, where LLVFD is the closest fire department.
- Line 9 shows the net contribution of fundraising by the fire departments that do this activity. Isle Madame and District 10 fire departments did not report fund raising income. Fund raising will be discussed separately starting on page **97**.
- Line 10 is funds contributed by donations. Not all fire departments reported donations, and it appears that they are not a reliable or predictable source of income. Some donations are substantial and likely represent bequests.
- Line 11 is funds obtained by borrowing for capital projects, e.g. to purchase fire apparatus. The values shown are borrowing by LAVFD in 2017 and 2018, and by the SPVFD in 2016. LLVFD borrowed funds in 2017 for fire hall improvements. Sources for borrowing have been; through the Municipality, from banks, and from NSPC. Similar sized offsetting capital expenditures were reported as having occurred in the same years.
- Line 12 is funds obtained through a successful application to the provincial Emergency Services Provider[43] Fund. DTVFD, GRVFD, LAVFD, and LLVFD have reported revenue from this source. A fire department is only eligible to apply for this maximum $25k grant once every three years. Acceptance is not guaranteed.
- Line 13 is reimbursements received from the provincial Department of Natural Resources – Lands and Forestry, presumable for assistance at a wildland-fire.
- Line 17 is funds withdrawn from capital reserve savings accounts in preparation for a major capital purchase. Oddly, no fire department reported this as a sources of revenue, although this appears to have been done. For example, in 2017 LAVFD borrowed $495k and made a $550k fire apparatus purchase, and in 2016 SPVFD borrowed $330k and made a $527k fire apparatus purchase, etc.
- Line 19 is surplus funds brought into the current year from savings in prior years.

One of the challenges discovered when doing the financial comparisons is that the fire departments do not report funds received from MOCR fully in the same fiscal year as does the Municipality. For some fire departments, MOCR provides progress payments if requested and there are other re/payments for loans and advances mixed in as well.

[43] https://beta.novascotia.ca/sites/default/files/documents/1-1448/emergency-services-provider-fund-espf-criteria-en.pdf

The fire departments also do not report (at all) the value (revenue nor expense side) of the services provided by/through MOCR (Line 5). Also, LVFD does not appear to have reported as revenue the $100k funds received for fire protection in Point Tupper.

With the exception of the $100k provided to LVFD, the following table shows the aggregate of funds reported as received by the fire departments in comparison to that provided by MOCR. The annual totals do not include the services received by the fire departments; provided by/through MOCR.[44]

The table below represents the nine volunteer fire department providing services in MOCR and does not include the contract with Port Hawkesbury.

TABLE: ANNUAL FUNDS RECEIVED AND ADVANCED; COMPARISON

Year	FD Reported	MOCR Reported	Difference
2014-2015	558,971	637,370	78,399
2015-2016	715,849	614,285	- 101,564
2016-2017	634,705	627,269	- 7,436
2017-2018	675,202	641,052	- 34,150
2018-2019	654,242	652,132	- 2,110
Total:	**$ 3,238,969**	**$ 3,172,108**	**-$ 66,862**

FIRE DEPARTMENT FUND RAISING

All fire departments, with the exception of IMVFD and DTVFD, do annual fundraising. Fundraising results are variable, but a 6-year average shows that they collectively account for approximately 5.0% of annual revenues. It appears that the contribution as an annual percentage of revenues and the actual amounts are trending downwards. Referring to the table on page **95**, this declining trend is shown on Lines 9 and 26.

[44] The difference between the annual levy revenue and the amount shown in the MOCR column in the table is the value of the services provided by/through MOCR.

Fund raising encompasses a variety of activities; including hall rentals, dances, suppers/breakfasts, 50/50 draws, souvenir sales, weddings, hosting clubs, Bingo, and canteens. Not all activities make money; some net to a loss. The revenue table on page **95** shows the net revenues. Where possible, GA has subtracted from the reported gross revenues the associated costs, as stated in the fire departments' financial statements.

There are also other costs that eat into the net benefit of fund raising; that are not identified in fire department financial statements. Heat and power for fire/meeting halls and fuel for vehicles (etc.) expended in fund raising is not identifiable in the financial statements. These fund-raising costs are therefore obscured in the overall costs of operating the fire department.

However, for two fire departments in particular, fund raising appears to be essential to their continued operation.

- For LLVFD it appears that fundraising contributed over 15% of their revenue, averaged over the past three years, and is increasing slightly in contribution and amounts.
- For GRVFD it appears that fundraising contributed almost 30% of their revenue, averaged over the past three years, and is, on average, increasing in proportion if not reliably in amount.

Expenditures, Fire Departments

PRO-RATING WEST BAY ROAD VFD

Including the entire WBRVFD annual expenditure amounts in the evaluation of the costs of providing fire services in Richmond County could distort the conclusions. The WBRVFD is actually an Inverness County fire department and receives the majority of its funding from Inverness, and presumably spends the proportionate amount on providing services in Inverness. The WBRVFD expenditures need to be proportioned between Inverness and Richmond for a clearer picture of Richmond County service expenditures.

It is difficult to precisely untangle all of the revenues and expenditures of the WBRVFD from their entire operation. However for our purposes, looking at the ratio of revenue amounts directly provided by MOCR and by the Municipality of the County of Inverness (MOCI) provides a tool. Calculating the proportion of revenue originating with MOCR and MOCI results in the following ratios;

TABLE: RATIO WBRVFD COUNTY FUNDING

	2014	2015	2016	2017	2018	2019	Overall
MOCR/(MOCR+MOCI)	0.2%	35.2%	38.2%	31.3%	51.9%	31.5%	**32.9%**

The year/year variability in fire department reporting of revenues means that the overall ratio over the entire six years shown in the table is the most reliable estimate of a consistent funding ratio.

As a means to proportion the WBRVFD expenditures arising only from providing fire services to Richmond County, the ratio of 32.9% was applied to all WBRVFD expenditures. All the following discussions, unless stated otherwise, have been adjusted to include the prorated WBRVFD expenditures.

EXPENDITURE ROLL-UP

On the next page, the **Table: Expenditures, Fire Departments** shows a roll-up (consolidation) of total expenses over a six-year period, as reported by all fire departments (except for Port

Hawkesbury). As mentioned previously, every fire department organized their financial statements in their own unique manner. GA has extracted all the reported financial information and inserted it into a standardized format to facilitate understanding and compiling. The table that follows is in the GA standardized format.

GA has broken-down fire departments' reported annual expenses into a number of different categories, as follows;

- Firefighting Operations; containing three groups with detailed budget lines,
- Other Operational Expenses; containing four groups with detailed budget lines,
- Long Term Debt Payments, and
- Capital Expenditures.

Detailed budget lines are not shown below because in most cases it was not possible to extract these from the limited details in the fire departments' financial information. Instead, the expenditures are consolidated at the group level, to the best of our interpretation.

TABLE: EXPENDITURES, FIRE DEPARTMENTS

SUMMARY, AS REPORTED BY MOCR REGISTERED FIRE DEPARTMENTS (except Port Hawkesbury) (prorated for WBRVFD)	2014-2015 (Actuals)	2015-2016 (Actuals)	2016-2017 (Actuals)	2017-2018 (Actuals)	2018-2019 (Actuals)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG	TREND (Year TOT)
REVENUE												
TOTAL INCOME:	$ 698,090	$ 911,122	$ 1,163,095	$ 1,411,546	$ 1,230,081	$ 851,817	$ 1,044,292	$ 1,113,532	$ 1,164,135	$ 1,164,481	$ 1,040,949	
EXPENSES	2014-2015 (Actuals)	2015-2016 (Actuals)	2016-2017 (Actuals)	2017-2018 (Actuals)	2018-2019 (Actuals)	2019-2020 (Budget)						
FIREFIGHTING OPERATIONS:												
APPARATUS:	43,186	33,856	69,170	44,445	63,816	56,414	51,815	53,540	58,461	54,892	60,115	
EQUIPMENT:	25,497	20,676	5,187	14,057	27,227	4,137	16,130	14,257	12,652	15,141	15,682	
COMMUNICATIONS:	18,700	11,874	15,241	27,705	19,486	19,688	18,782	18,799	20,530	22,293	19,587	
TOTAL Firefighting Operations:	87,384	66,406	89,598	86,207	110,529	80,239	86,727	86,596	91,643	92,325	95,384	
OTHER OPERATIONAL EXPENSES:												
TRAINING:	9,038	10,237	9,523	16,110	13,254	15,888	12,342	13,002	13,694	15,084	14,571	
FIRE STATION / HALL:	117,847	117,395	104,275	138,157	129,599	94,590	116,977	116,803	116,655	120,782	112,095	
ADMINISTRATION:	121,898	183,170	175,397	180,106	226,967	203,062	181,767	193,740	196,383	203,378	215,014	
MINOR CAPITAL:	14,440	59,101	55,064	93,130	100,734	96,164	69,772	80,839	86,273	96,676	98,449	
TOTAL Other Operational Expenses:	263,223	369,904	344,258	427,503	470,554	409,705	380,858	404,385	413,005	435,921	440,129	
LONG-TERM DEBT PAYMENTS:												
TOTAL Long Term Debt:	112,656	14,055	11,923	104,555	232,129	235,500	118,470	119,632	146,027	190,728	233,815	
TOTAL FIRE SERVICE OPERATIONAL EXPENSES:	$ 463,263	$ 450,364	$ 445,778	$ 618,266	$ 813,212	$ 725,444	586,055	610,613	650,675	718,974	769,328	
CAPITAL EXPENDITURES												
TOTAL Capital Expenditures:	$ 111,482	$ 108,404	$ 575,409	$ 644,128	$ 346,936	$ 58,300	307,443	346,635	406,193	349,788	202,618	
TOTAL CAPITAL AND OPERATIONAL EXPENDITURES:	$ 574,746	$558,768	$1,021,187	$1,262,394	$1,160,148	$783,744	893,498	957,248	1,056,868	1,068,762	971,946	
TOTAL OPERATING SURPLUS/(DEFICIT):	123,345	352,353	141,908	149,152	69,933	68,073	150,794	156,284	107,267	95,720	69,003	

FIREFIGHTING OPERATIONS

Firefighting operations includes the cost of maintaining all the major equipment that the fire department needs to deliver its fire-emergency services to the public. Included is the trucks (fire

apparatus), the equipment on the trucks, equipment used for personnel protection, medical services equipment, communications equipment and dispatch services, and equipment in the fire station associated with service delivery (e.g. spare hose).

Equipment/fire apparatus inspection, testing, and maintenance is often done by third party service providers and must meet numerous standards, some of which are contained in NS and national legislation. There are three identified groups in this category, as follows:

- Line 36 shows the total expenditures for the inspection, testing, maintenance, and repair of fire apparatus (trucks) as well as their annual fuel costs. This includes every vehicle the fire departments operate.
- Line 41 shows the expenditures for inspection, maintenance, testing, and repair of firefighting and rescue equipment; including breathing apparatus, personal protective equipment (PPE), ladders, hose, extrication gear, and many other items of equipment.
- Line 46 shows the costs of dispatching services, and radio and pager maintenance.
- Line 48 shows the overall expenditures in the Firefighting Operations category. This category is showing a slight upward trend in actual expenditures over the six years of data that was compiled for this study. This is best revealed by examining the multi-year averages on Line 48, in the right-side analysis columns of the table.

OTHER OPERATIONAL EXPENSES

This category includes all remaining expenditures for operating the fire departments, with the exclusion of debt servicing and capital expenditures. Overall, actual expenditures in this category also shows an upward trend over the past six years. This is best revealed by examining the analysis columns on Line 96.

The category is divided into the following groups; Training, Fire Station, Administration and minor capital.

- Line 56 shows the expenditures on training for firefighting and medical response. Training captures the costs of training firefighters in accordance with the fire department's training plan and should meet the standards agreed in each fire department's registration documents signed with MOCR. Included are travel, meal, and training materials costs (e.g. manuals).

  Some training is third-party provided. All MOCR fire departments deliver medical assistance services and there is a cost to initially train and periodically recertify firefighters to the Medical First Responder (MFR) standard. This is required so that they can respond with Emergency Health Services (EHS-paramedics) to medical

emergencies in their jurisdictions This is part of a province-wide MFR program and is a requirement.

The Nova Scotia Firefighters School (NSFS) in Waverley (HRM) is the main resource in NS for the provision of qualified training in numerous subjects relating to firefighting and rescue operations. Many of their programs are geared towards providing certification level instruction. The NSFS also has a field extension component that will deliver training locally in support of locally sourced training.

- Line 67 shows expenditures to maintain and operate the fire station and meeting hall (if any). Costs include utilities (power, fuel, water/waste), general maintenance of building, grounds, equipment, and small improvements.
- Line 90 shows the costs associated with salaries/honouraria, benefits, insurances, radio licensing and leasing, telephone, office supplies, memberships and subscriptions, society costs, fire prevention and public events, and gifts to third parties.

  Only the Isle Madame VFD provides its members with honouraria. The following table shows these reported payments:

2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
$ 14,170	$ 13,633	$ 14,170	$ 14,315	$ 15,985	Unk.

- Line 94, called minor capital, shows the cost of equipment purchases. This includes PPE (bunker gear), breathing apparatus, ladders, hose, and the many other needed items. Please see **Minor Capital** starting on page **126** for a fuller discussion on this expense category.

LONG-TERM DEBT PAYMENTS

- Line 102 shows the expenditures to repay borrowing for the purchase of major capital equipment and fire station major repairs/improvements. Below is a table that provides more detail of this category.

TABLE: LONG-TERM DEBT PAYMENTS

28	EXPENSES	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020						
29		(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Budget)						
97													
98	LONG-TERM DEBT PAYMENTS:												
99	Principle	0	0	0	0	125,199	125,000	41,700	50,040	62,550	83,400	125,100	
100	Interest	13,082	10,087	9,237	5,579	22,538	22,500	13,837	13,988	14,964	16,872	22,519	
101	Long Term Debt - other	99,574	3,968	2,686	98,976	84,392	88,000	62,933	55,604	68,513	90,456	86,196	
102	TOTAL Long Term Debt:	112,656	14,055	11,923	104,555	232,129	235,500	118,470	119,632	146,027	190,728	233,815	

TOTAL OPERATIONAL EXPENSES

Line 104 is the total annual expenditures, for all items above that line, i.e. for firefighting operations, other operational expenses, and for long-term debt servicing. This is the total for the eight[45] MOCR fire departments plus the prorated expenses of the WBRVFD.

TABLE: TOTAL OPERATIONAL EXPENSES

	EXPENSES	2014-2015 (Actuals)	2015-2016 (Actuals)	2016-2017 (Actuals)	2017-2018 (Actuals)	2018-2019 (Actuals)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG	TREND (Year TOT)
103													
104	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:	$ 463,263	$ 450,364	$ 445,778	$ 618,266	$ 813,212	$ 725,444	586,055	610,613	650,675	718,974	769,328	

CAPITAL EXPENDITURES

Capital expenditures include expenditures on major capital projects in the given year. These projects are most usually the replacement of fire apparatus (i.e. fire trucks), and sometimes renovations to the fire station or meeting hall.

This category also includes contributions to a capital reserve account set aside for a future capital project purchase. The fire departments do not use the term reserve account but instead variously call this accumulation of funds; *capital cost allowance*, *transfer to truck replacement fund*, *amortization*, and *depreciation*.

- Line 111 contains the sum of the two types of transactions, as shown in more detail in the following table.

TABLE: CAPITAL EXPENDITURES

	EXPENSES	2014-2015 (Actuals)	2015-2016 (Actuals)	2016-2017 (Actuals)	2017-2018 (Actuals)	2018-2019 (Actuals)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG	TREND (Year TOT)
107													
108	CAPITAL EXPENDITURES												
109	Capital expense current year	0	0	526,794	575,805	291,400	0	232,333	278,800	348,500	289,068	145,700	
110	Contribution To Capital Reserves	111,482	108,404	48,615	68,323	55,536	58,300	75,110	67,836	57,694	60,720	56,918	
111	TOTAL Capital Expenditures:	$ 111,482	$ 108,404	$ 575,409	$ 644,128	$ 346,936	$ 58,300	307,443	346,635	406,193	349,788	202,618	

In the past few years capital projects included the following;

- 2016; fire apparatus purchased by SPVFD ($526,794),
- 2017 and 2018; fire apparatus purchases by LAVFD ($841,400 total), and
- 2017; LLVFD installed new heat pumps ($25,805).

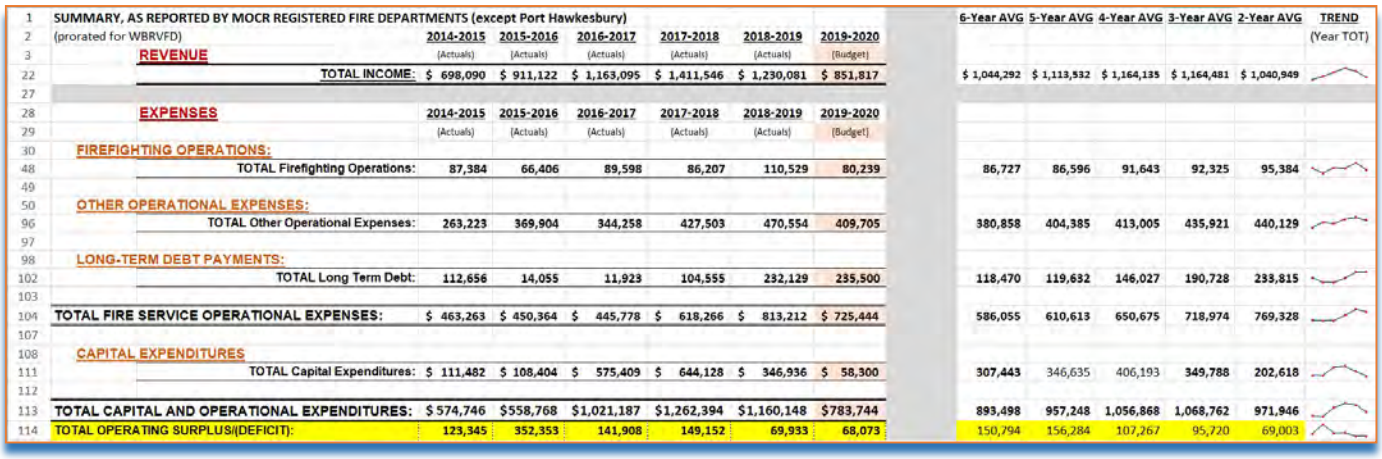
[45] The eight MOCR fire departments are; Dist. #10, Framboise-Forchu, Grand River, Isle Madame, L'Ardoise, Loch Lomond, Louisdale, and St. Peters,

All of these purchases were financed through a combination of loans and own reserve funds.

ANNUAL EXPENDITURE TOTALS

The total of all expenditures for providing fire services in Richmond County includes expenditures on operational needs, debt servicing, and on capital projects. As a reminder, WBRVFD is prorated for Richmond County's proportion of services.

TABLE: TOTAL EXPENDITURES



	SUMMARY, AS REPORTED BY MOCR REGISTERED FIRE DEPARTMENTS (except Port Hawkesbury)							6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG	TREND
2	(prorated for WBRVFD)	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020						(Year TOT)
3	REVENUE	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Budget)						
22	TOTAL INCOME:	$ 698,090	$ 911,122	$ 1,163,095	$ 1,411,546	$ 1,230,081	$ 851,817	$ 1,044,292	$ 1,113,532	$ 1,164,135	$ 1,164,481	$ 1,040,949	
27													
28	EXPENSES	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020						
29		(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Budget)						
30	FIREFIGHTING OPERATIONS:												
48	TOTAL Firefighting Operations:	87,384	66,406	89,598	86,207	110,529	80,239	86,727	86,596	91,643	92,325	95,384	
49													
50	OTHER OPERATIONAL EXPENSES:												
96	TOTAL Other Operational Expenses:	263,223	369,904	344,258	427,503	470,554	409,705	380,858	404,385	413,005	435,921	440,129	
97													
98	LONG-TERM DEBT PAYMENTS:												
102	TOTAL Long Term Debt:	112,656	14,055	11,923	104,555	232,129	235,500	118,470	119,632	146,027	190,728	233,815	
103													
104	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:	$ 463,263	$ 450,364	$ 445,778	$ 618,266	$ 813,212	$ 725,444	586,055	610,613	650,675	718,974	769,328	
107													
108	CAPITAL EXPENDITURES												
111	TOTAL Capital Expenditures:	$ 111,482	$ 108,404	$ 575,409	$ 644,128	$ 346,936	$ 58,300	307,443	346,635	406,193	349,788	202,618	
112													
113	TOTAL CAPITAL AND OPERATIONAL EXPENDITURES:	$ 574,746	$558,768	$1,021,187	$1,262,394	$1,160,148	$783,744	893,498	957,248	1,056,868	1,068,762	971,946	
114	TOTAL OPERATING SURPLUS/(DEFICIT):	123,345	352,353	141,908	149,152	69,933	68,073	150,794	156,284	107,267	95,720	69,003	

- Line 113 shows the total expenditures in all categories.
- Line 114 shows the total operating surplus/deficit of revenue over expenditures based on the reported revenues and expenditures in the fire departments' financial statements. Based on these financial statements there is an average aggregate surplus in excess of $100k annually, but this is declining and is not the whole story.

Excess Revenues

Various fire departments reported that they had revenues in excess of normal annual operating expense needs and were able to contribute to an account held for future project purposes, or expend funds on discretionary purchases.

Others had excess revenues but did not state that these funds were to be used for future projects; i.e. they were not recorded in the financial statements as being set aside for a purpose, but were only reported as a surplus.

Some departments, who earmarked funds for reserves, based their reserve contribution amounts on a calculation of the depreciated value of their major equipment. This approach guided them in how much to put aside, however would only accumulate the value of a past purchase and not reflect the escalating costs of fire apparatus. Therefor these funds alone are not likely to be sufficient for future purchases.

Despite there being an overall surplus (summed across all the nine fire departments), not all fire departments individually saw an overall surplus over the six years that were studied. Some appear to operate with no surplus and in some years have shown deficits. The following table illustrates the overall situation. Again, based on the fire department financial statements[46] we see the following. The year 2019-2020 is based on budgeted or estimated values.

TABLE: OPERATING SURPLUS/DEFICIT, FULL OPERATING COSTS

Operating Surplus/Deficit (Full Costs)	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTALS
District #10 VFD	2,149	3,328	737	14,076	4,811	(-950)	24,152
Framboise-Forchu VFD	3,690	19,189	(-6,058)	(-15,409)	5,590	4,840	11,842
Grand River VFD	(-12,919)	4,851	2,000	3,053	2,741	0	(-274)
Isle Madame VFD	85,066	90,540	115,447	106,742	97,308	131,170	626,273
L'Ardoise VFD	0	0	45,267	(-1,150)	(-89,182)	(-90,177)	(-135,243)
Loch Lomond VFD	1,863	(-4,096)	(-3,453)	3,094	(-13,033)	(-8,034)	(-23,660)
Louisdale VFD	90,725	111,952	106,814	46,127	28,667	27,250	411,535
St. Peters VFD	(-36,338)	110,357	(-129,641)	(-9,231)	(-968)	0	(-65,821)
West Bay Road VFD	9,635	13,905	5,123	3,234	18,918	5,145	55,960
totals:	143,871	350,025	136,237	150,537	54,851	69,244	**904,764**

In the above table, the sudden change in LAVFD's normal surplus situation, starting in budget year 2018-2019, is related to a large increase in debt payments, higher HST payments from large expenditures, and higher than normal Minor Capital expenditures. These appear to be associated with the large capital purchases in 2017 and 2018 ($841,400).

To make these purchases, LAVFD took on $495,000 of debt in 2017 and then another $322,654 in 2018 (total: $817,654). Debt servicing costs in 2018/19 (only the first year for repayment) were $144,321. The continuing effect from these purchases will likely be felt for several years.

[46] For the budget year 2019-2020, at least four fire departments did not provide financial statements or budget estimate documents to MOCR; for these departments GA extrapolated revenues and expenses.

Also, the figures for WBRVFD are prorated at 32.9% of their fire department total amounts.

LLVFD, which appears to always be operating on limited revenues, took on $23,920 in debt in 2017 for energy efficiency improvements to the fire hall. It appears that they attempted to reduce operational expenses in 2018 and 2019 where possible, but still had loan repayments in both those years, which affected their bottom line significantly.

The above table is based on the fire department financial statements and includes funds received from borrowing, funds expended on major capital purchases, debt servicing costs, and funds voluntarily committed to reserves. If we adjust for all that discretionary[47] activity; by removing borrowing revenue, removing capital expenditures, removing debt servicing costs, and removing contributions to reserve accounts; then the remaining balance of funds will more closely reflect the base operating costs of the fire departments. The adjusted table then looks more like the following example.

TABLE: OPERATING SURPLUS/DEFICIT, ADJUSTED TO BASE OPERATING COSTS

Operating Surplus/Deficit (Adjusted to Base Costs)	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTALS
District #10 VFD	8,800	7,913	3,993	16,393	6,463	10,850	54,413
Framboise-Forchu VFD	7,098	19,401	(-6,058)	(-15,409)	5,590	4,840	15,462
Grand River VFD	7,081	29,851	13,000	9,053	8,390	7,500	74,875
Isle Madame VFD	97,365	99,388	123,414	112,569	101,650	134,470	668,856
L'Ardoise VFD	79,013	80,226	45,267	84,850	23,885	54,023	367,264
Loch Lomond VFD	1,863	(-4,096)	(-3,453)	4,979	(-1,500)	6,966	4,758
Louisdale VFD	102,604	115,540	145,129	107,765	76,902	66,250	614,190
St. Peters VFD	54,551	110,357	67,153	56,865	70,965	73,000	432,891
West Bay Road VFD	9,635	13,905	5,123	3,234	18,918	5,145	
totals:	368,010	472,484	393,569	380,300	311,263	363,044	**2,232,709**

In the above table, it appears that LLVFD, closely followed by FFVFD, are operating with no effective surplus of funds.[48] They are very likely struggling to maintain their current levels of service. GA notes that the current levels of service may not be adequate nor sustainable in these

[47] Fire departments also spend on Minor Capital purchases. GA has not considered these discretionary per se for this purpose and the table is not adjusted for these amounts. Also not accounted for is the HST impact on making Major Capital purchases. These create larger than normal HST expenditures in the year of purchase and can create larger refunds in the following year, thereby distorting the costs and revenues in the years of occurrence.

[48] L'Ardoise VFD shows a significant deficit in 2018-2019 that was precipitated by a significant capital purchase in that and the prior year (totaling $841k). This incurred HST expenses and borrowing expenses. They also made larger than usual Minor Capital expenditures, apparently for the outfitting of the two new fire apparatus with equipment.

fire departments or in the community. A serious vehicle breakdown could be too much for them to finance and result in a sudden withdrawal of service.

The totals at the bottom of each of the columns shows the excess of revenue over base expenditures; summed for all nine fire departments. If there was no responsibility for the fire departments to provide for capital expenditures, then the annual costs of operating each fire department would resemble the above adjusted table. For the past six years the average annual surplus of funding over revenue, in that base case, would be approximately $381,000.

BENCHMARK FOR FUTURE BUDGETS

Annual Operations Benchmark Budget

The following is the recommended benchmark operations budget, starting in year 2020. The same, but expanded, GA format has been used as was used in the analysis of current fire department budgets in section **Revenue, Fire Departments**, starting on page **94**. The benchmark budget is presented below in sections with discussion.

Revenues

Revenue from area rates, general revenues, own sources, fees for service, etc. have not been estimated. The municipality will need to make its own estimates for these sources as part of the annual budgeting process.

FEES FOR SERVICE

There is an opportunity for additional revenue generated from cost-recovery fees. These are not shown in the benchmark budget.

GA was not provided and could not source the data to analyze fire department responses to incidents on provincial highways that pass through MOCR. However, there is the opportunity to collect revenue from these responses. MOCR should consider this source of revenue if it appears to be significant.

Recommendation 26: GA recommends that MOCR implement service fees for reasonable cost recovery to highway responses.

Such fees are permitted by legislation. The Insurance[49] Act, §107B(7) states;

> *"For greater certainty, nothing in this Section prevents a fire department from making a claim for costs incurred in responding to a motor vehicle accident."*

[49] Nova Scotia, *Insurance Act*, R.S., c.231, s.1.

For example; in Ontario the province has a program to reimburse fire departments at a rate of $465.42/hour, per fire truck (maximum 3 trucks). Ontario fire departments can also opt out of the provincial program and charge drivers directly for higher actual costs. The insurance companies typically pay the fees for clients who are not residents of the Municipality in which the incident occurred.

In Newfoundland & Labrador, the Province reimburses fire departments for responses outside municipal boundaries. As stated in the Province's 2015/16 annual report,[50] they paid $65,050 for 133 incidents (average 489.10 per incident).

Recommendation 27: GA recommends that MOCR identify suitable services, and implement the appropriate by-laws and procedures for cost-recovery fees for these services.

The rationale for fees is that although the costs for basic fire-emergency services are paid by all residents through their property taxes/area rates, some services are only provided to a few residents and usually for their own benefit, not to the general welfare. An example is the application for a liquor license; which requires a fire inspection where the applicant is the main beneficiary of the license and the Municipality is essentially subsidizing this process.

It is GA's understanding that inspections relating to fire safety are performed by staff at the Eastern District Planning Commission. GA also believes that fees for fire inspection services, including requested inspections associated with liquor licenses and for other purposes, currently have no associated fee, and no funds are collected to offset the costs of this inspection service, or to provide a revenue stream for the Municipality to offset fire protection costs.

Under §49 of the *Municipal Government Act*,[51] the Municipality has the power to make policies for the setting of fees to be paid for inspections, permits, applications, approvals pursuant to a by-law or legislation. Also, under §79 of the *Act*, the Municipality has the power to prescribe charges for the provision of services.

[50] Fire and Emergency Services-Newfoundland and Labrador, 2015-16 Annual Report, page 16.

[51] Nova Scotia, Municipal Government Act. 1998, c. 18, s. 1

Some examples of eligible services where cost-recovery fees might be appropriate could include the following;

- Fire inspection of occupancy on request
- Liquor license inspection
- Inspection for occupancy load certificate
- Inspection of day-care centre
- Mobile food/beverage truck inspections
- Tent and special occasion inspections
- Response to provincial highways (non-residents)
- Inspection of trade shows and other special events
- Municipal open-air fire (burning) permits
- Fire extinguisher training
- Request for smoke or carbon monoxide alarm installation
- Request for report on a fire incident (usually related to an insurance claim)
- Request for assistance in review of plans and/or development consultation (hourly rate)
- Incurred extraordinary costs (which can be very significant) as a result of an incident (e.g. excavation/demolition equipment, security, fencing, investigation, damage to infrastructure, environmental abatement, and etc.); which costs are fully recoverable from the insurance company.
- Paid duty (e.g. standby for hot-work)
- False-alarm responses (preventable and excessive)

Recommendation 28: GA recommends that the Municipality pursue prosecution and seek fines for violations of the Fire Code, in accordance with the provisions in the *Fire Safety Act*.

It is GA's understanding that prosecution for violations of the Fire Code are seldom, if ever, pursued and fines are seldom, if ever, sought against offenders. Failure to seek prosecution when warranted causes repeat work for fire inspectors who must re-inspect properties that should have been compliant after the first failed inspection, let alone the continuing threat to the community. Failure to utilize all available enforcement tools can also create liability in the event of a catastrophe.

Prosecution can generate a modest revenue stream that can assist in offsetting the cost of inspection services. Repeat offenders draw valuable resources away from other properties that should be receiving attention.

Expenses

WEST BAY ROAD VFD

It is necessary to include the WBRVFD in the baseline budget, but that has complicated the budget's development since that fire department only provides a portion of its services into Richmond County. Similar to GA's evaluation of the historical budgets, a prorated approach has been taken with WBRVFD costs and revenues. This leads to the odd situation where estimates are based on the costs of maintaining fractions of whole pieces of equipment. This is further complicated by an incomplete understanding of the actual inventories of equipment, although GA's estimate assumptions are stated. MOCR accounting staff will eventually need to scale the proposed benchmark budget (as appropriate) when better information[52] becomes available from the fire departments.

The fractional costs of the WBRVFD are therefore included in the benchmark budget, based again on the proportion of funding that MOCR provides. In addition, the historical values shown for comparison are also based on prorated costs of WBRVFD.[53]

FIREFIGHTING OPERATIONS:

This category includes the same three groups as in the historical budget format; Apparatus, Equipment, and Communications. Some expansion to budget line details are included; to guide the fire departments and MOCR staff in identifying and positioning costs appropriately. The budget notes opposite each item briefly explain the calculation basis for the budget amount. Further explanation on selected budget line items follows each group table in this category.

[52] Detailed information was requested from each fire department pertaining to their activities, readiness, equipment inventories, and fire apparatus data. In a few instances some of the requested information was provided.

[53] http://westbayrd.nsfire.ca/page/17

Apparatus Group:

There are a number of requirements for the purchasing, modification, and care of fire apparatus.[54] The line costs shown in the baseline budget for this group are derived from a goal of meeting standards of maintenance, inspection and testing according to legislation and best-practices, for all major fire apparatus, in all fire departments in Richmond County.

At the end of each budget line is a "#" column where the estimated quantity of units is used to multiply through the unit costs to achieve the total in the baseline budget column. Costs can be scaled if these numbers are not correct. In some cases the numbers are not integers, which is a consequence of prorating the WBRVFD contribution.

TABLE: FIREFIGHTING OPERATIONS, APPARATUS

		Historic Fire Department Budgets			NEW				
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	#	EXPLANATION
	FIREFIGHTING OPERATIONS:								
	APPARATUS:								
	Annual Pump Inspection and Service	57,432	54,066	59,274	10,100			15.7	< assumed number of fire apparatus with pumps
	Annual Pump Performance Test				6,300			15.7	< assumed number of fire apparatus with pumps
	Annual Vehicle Maintenance and Repair				114,400			27.0	< assumed number of vehicles
	Annual Motor Vehicle Inspections				3,000			27.0	< assumed number of vehicles
	Fuel	1,029	826	841	15,700				basis; 360 calls, 40km avg, 45 liters/100km avg, plus training & idling (i.e. x 2), @ $1.20/liter
	Major Repairs	0	0	0	8,300			8.3	Planned and unplanned work
	Contractor travel and accommodation costs				2,500			3.9	< days onsite, plus travel costs and time
	Other				8,000				5% of above
	sub-total:	58,461	54,892	60,115	$ 168,300	109,839	188%		

All fire apparatus when purchased new should[55] be specified, constructed, tested, and accepted in conformance with the requirements of NFA-1901.[56] Relevant to Richmond County this standard has a number of NFPA categories of fire apparatus that includes Pumper, Initial Attack, Mobile Water Supply (Tanker), Aerial, and Special Service (rescue trucks). Fire apparatus equipped with

[54] NFPA-1901; *Standard for Automotive Fire Apparatus* defines fire apparatus as follows: **3.3.66 Fire Apparatus.** A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support the suppression of fires or mitigation of other hazardous situations. ULC-S515 is also an acceptable specification and construction standard, but is not as up-to-date with changing conditions.

[55] As required by NFPA-1500; *Standard on Fire Department Occupational Safety and Health Program*, which is the base document for "*The Nova Scotia Fire Services Occupational Health and Safety Reference Guide*," 2003. The guide states "This reference guide contains minimum requirements for a fire-service related occupational health and safety practice." It was developed through a committee of NS career and volunteer fire services, the Fire Marshal's office and Environment and Labour OH&S division.

[56] Fire apparatus that do not meet NFPA-1901 standards are inherently unsuitable for the purpose since they will not likely incorporate the necessary safety, reliability, and functionality, of design and components. Fire apparatus not meeting NFPA or ULC are not recognized by the insurance industry (FUS) as fire apparatus.

a fire pump must be tested and certified to the requirements of ULC-S515 to be recognized for insurance grading purposes (i.e. meeting FUS rating requirements).

All fire apparatus when purchased used should also meet the basic requirements of NFPA-1901 and be tested to confirm its condition.[57]

All fire apparatus requires annual inspection, service testing, and maintenance in accordance with the requirements of NFPA-1911.[58] In addition, all fire apparatus that is modified or refurbished should meet the requirements of NFPA-1912.[59] More information on this subject is presented in **Fire Apparatus**, starting on page **48** of this report.

GA did not have access to the majority of fire apparatus for a close inspection of their condition or suitability. GA was able to source (online) photographs of most fire apparatus and did question some fire chief by email and telephone on conditions and did thereby obtained some basic details. It is clear from these sources of information that many of the fire apparatus were not purchased or constructed to any recent (or at all) fire apparatus standards, many were purchased used, and many are not being maintained to meet these industry best-practice standards.

With reference to the above table;

- Line 28: Inspect and do maintenance on pumps and pump transmissions and auxiliary equipment on fire apparatus equipped with fire pumps. Costs are based on unit costs from the current fire apparatus inspection-maintenance-testing contractor that is currently servicing some fire apparatus in Richmond.
- Line 29: In-service testing of all fire apparatus equipped with fire pumps. Costs are based on unit costs from the same contractor who currently tests some Richmond fire apparatus.
- Line 30: Regular and preventative maintenance of all vehicles. These costs are the vehicle components of fire apparatus and do not include the maintenance-inspection-testing costs of the firefighting systems on the vehicle, which is covered by Line 28.
- Line 31: Required provincial motor vehicle inspections.

[57] Fire Underwriters Survey (FUS) bulletin, "*Insurance Grading Recognition of Used or Rebuilt Fire Apparatus*."

[58] NFPA-1911; *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles*.

[59] NFPA-1912; *Standard for Fire Apparatus Refurbishing*.

- Line 32: Fuel costs for all vehicles. These costs can be volatile due to fluctuations in fuel pricing and due to consumption. In a fire department with only a few annual incidents, a major incident that lasts for an extended period of time can have a substantial impact on budgeted annual fuel consumption. Such incidents are expected to occasionally occur, but are unpredictable in timing or extent.
- Line 33: Major repairs either planned or unplanned. With the collective number of vehicles in the fire departments, and the very old age of many of them, it should be expected there will be major repairs needed annually. A single pump rebuild could very easily cost $10k or more. Pump replacement is around $20k plus labour.

  The benchmark budgeted amount may be insufficient for the current fleet, unless apparatus are replaced soon. Furthermore, sufficient funds for the urgent and unplanned replacement of fire apparatus does not likely currently exist in the fire departments that are most likely to have a catastrophic failure of equipment. A prolonged and consequential loss of service can be expected.
- Line 34: Reimbursable costs incurred by the fire apparatus inspection-maintenance-testing contractor include travel and accommodations. There is the potential to offset some of this cost by coordination of servicing and testing all Richmond apparatus in the same trip and at only a few locations. Such coordination was assumed in determining benchmark costs.
- Line 35: Contingency amount based on a percentage of the other identified costs. Fire apparatus and vehicles are expensive to maintain, and unplanned service events and costs will occur annually. This is especially so with the advanced average age of the current fire apparatus fleet.

Based on information obtained by GA from a few fire chiefs, it seems apparent that not all current fire apparatus meet the purchasing or maintenance requirements noted above. In addition, not all fire apparatus are currently be inspected or tested as is required to meet best-practices, and more importantly to avoid loss of service, and incurring of liability. The level of current expenditures in this category vs. the estimated benchmark requirements that is based on verifiable unit costs tends to support the above conclusion.

Equipment Group:

There are a number of requirements for the purchasing and care of firefighting and rescue equipment. The benchmark costs shown in the baseline budget for this group are derived from a goal of meeting standards of maintenance, inspection and testing according to legislative requirements and best-practices; for all specified major fire equipment, in all fire departments.

At the end of each budget line is a "#" column where the estimated quantity of units is used to multiply through the unit costs to achieve the total in the baseline budget column. Costs can be scaled if these numbers are not correct. In some cases the numbers are not integers, which is a consequence of prorating the WBRVFD contribution.

TABLE: FIREFIGHTING OPERATIONS, EQUIPMENT

		Historic Fire Department Budgets			NEW				
24									
25	**EXPENSES**	4-Year AVG	3-Year AVG	2-Year AVG	**BASELINE**	+/- (4 yr avg)	+/-%	#	EXPLANATION
26	**FIREFIGHTING OPERATIONS:**								
37	**EQUIPMENT:**								
38	Annual SCBA Function Test and Inspection	155	152	151	5,900			74.3	< assumed number of SCBA pacs (NFPA minimum)
39	Contractor travel and accommodation costs				1,700			3.7	< days onsite, plus travel costs and time
40	Quinquennial SCBA air Bottle Inspection & Testing				2,900			144.2	< assumed number of SCBA air bottles (NFPA minimum)
41	Annual Ground Ladder Inspection and Testing				1,800			23.0	< assumed number of ground ladders (NFPA minimum)
42	Annual PPE Inspection and Testing, deep cleaning, repair				12,300			119.4	< assumed number of PPE for structural firefighting (75% of members), plus repair costs, plus travel charges
43	Annual Hose Inspection and Testing	2,614	2,587	2,773	3,700			245.9	< assumed 50' lengths of hose (NFPA-1901 minimum complement)
44	Annual Inspection and Maintenance of other equipment				4,200			8.3	Rescue and firefighting equipment
45	Shipping costs				1,200			8.3	Shipping equipment for service
46	Other	9,884	12,402	12,759	1,700				5% of above
47	**sub-total:**	**12,652**	**15,141**	**15,682**	$ 35,400	22,748	180%		

All eight MOCR fire departments and the prorated WBRVFD are included in these quantity and budget numbers.

- Line 38: Annually inspect, test, and adjust/repair every self-contained breathing apparatus (SCBA), in every fire department, in accordance with NFPA-1852.[60]

  NS occupational health and safety legislation[61] requires annual testing of all breathing equipment. It seems clear from historic expenditures and an interview with the service provider that not all SCBA equipment is being annually tested. A rigorous program is required to ensure compliance. Increased costs are anticipated in meeting the regulations.

  Actual quantity of SCBA were not provided to GA when requested. However, NFPA-1901 requires one SCBA for every seating position on fire apparatus. On that basis there should be at least the number of SCBA as shown.

- Line 39: Reimbursable costs incurred by the SCBA inspection-maintenance-testing contractor include travel and accommodations. There is the potential to offset some of this cost by coordination of servicing and testing all Richmond SCBA in the same trip and at only a few locations. Such coordination was assumed in determining benchmark costs.

- Line 40: Visually inspect, eddy current test, hydrostatic proof test, and requalify every SCBA air bottle in every fire department, at least once every five-years (i.e.

[60] NFPA-1832, *Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus (SCBA)*.

[61] *Occupational Safety General Regulations*, N.S. Reg. 44/99; §195.

quinquennial), as required by federal legislation.[62] It is illegal and unsafe to refill an expired air bottle.

Actual quantity of SCBA bottles were not provided to GA when requested. However, NFPA-1901 requires one spare SCBA bottle for every SCBA on fire apparatus. On that basis there should be at least the number of SCBA air bottles as shown.

- Line 41: Annually inspect and service-test every ground ladder,[63] in every fire department, in accordance with the requirements of NFPA-1932.[64]

  Actual quantities, types, and sizes of ground ladders were not provided to GA when requested. However, NFPA-1901 requires a minimum of three ladders on pumper fire apparatus and we noticed in researched photographs of vehicles that several others might also carried ground ladders. Some pumpers might carry too few. The benchmark budget is based on the assumed number of ground ladders shown.

- Line 42: Annual inspection, testing, deep cleaning, and repair of structural firefighting personal protective equipment (i.e. Bunker[65] Gear), in every fire department, in accordance with the requirements of NFPA-1851.[66]

  Costs are based on quoted costs by a mobile service provider who currently services some of the fire departments. The provider also charges a travel, accommodation, and setup cost per fire department.

  Actual quantities of Bunker Gear were not provided to GA when requested, nor were the number of firefighters in the various fire departments, nor the number of these firefighters who were considered active, trained, and able to perform structural firefighting duties. Certain assumptions were therefore made, in conjunction with some basic information obtained via telephone from some fire chiefs. The benchmark budget is based on the assumption that 75% of an assumed number of total firefighters are available for structural firefighting duties, and therefore each of these have bunker gear (i.e. the number of ensembles shown).

[62] CSA B339, currently 2018 edition, *Cylinders, Spheres, and Tubes for the Transportation of Dangerous Goods*. B339 is the standard that deals with hydrostatic pressure testing of SCBA air cylinders and is required under the federal *Transportation of Dangerous Goods Act*.

SCBA cylinders are required to be hydrostatically tested at least every 5 years. All aluminum or steel cylinders that pass have an unlimited service life. Composite cylinders manufactured prior to 2002 are required to be tested every 3 years, newer ones it's every 5 years. Composite cylinders have a 15-year maximum life-span.

[63] There are two basic categories of ladders used by the fire services. Aerial ladders are powered and mounted to a vehicle. Ground ladders are set on the ground and leaned against the structure. Ground ladders fall into many types (extension, roof, stay-pole, folding, combination, and etc.), but collectively all are called ground-ladders.

[64] National Fire Protection Association; NFPA-1932, *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*.

[65] Bunker Gear consists of an ensemble of protective trousers, coat, balaclava, helmet, boots, and gloves.

[66] National Fire Protection Association; NFPA-1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*.

- Line 43: Annual fire hose[67] inspection, service-test, and maintenance, in accordance with the requirements of NFPA-1962.[68]

  The cost to inspect and pressure test fire hose is based on an interview with a service provider. However, it is common that fire departments in other jurisdictions purchase an appropriate fire hose hydrostatic-tester and test their own hose.

  Actual quantity, size, and type of fire hose was not provided to GA when requested. However, NFPA-1901 requires minimum sizes and lengths of hose be provided on every fire apparatus; for example pumpers require at least 24, 50-foot lengths, of various size hose. Based on these minimum requirements GA assumed there should be at least the number of lengths of hose in the fire departments as shown. There could actually be considerably more since it is not uncommon to keep spare hose in the fire stations and on the apparatus.

- Line 44: Annual inspection and maintenance of other firefighting and rescue equipment which includes; firefighting appliances[69] (e.g. hose nozzles and adapters), rescue rope[70] and safety harness, forceable entry tools (e.g. axes, power saws, Haligan bars, jaws-of-life), ventilations fans, and many other types and classes of equipment.

  Actual quantity and type of firefighting and rescue equipment was not provided to GA when requested. The budget amount is a best guess, and could be higher if there are significant quantities of this equipment on hand. The number in the # column represents the prorated number of fire departments, used for calculation purposes.

NS occupational health safety and safety legislation[71] stipulates the standards to be met (as appropriate) for the purchasing, testing, inspection, maintenance, and retirement of; bunker gear, SCBA, rescue rope and harness, life safety rope and harness, fire hose, ground ladders, and flashlights.

It is GA's conclusion (based on the current level of expenditures vs the calculated need) that the requirements of the various NFPA standards (as required by best-practices, concern for firefighters health and safety, concern for service delivery reliability, and liability), and in accordance with provincial regulation, are not likely being met, by all fire departments, and for all appropriate equipment. Increased costs should be anticipated to do this properly.

[67] Fire hose comes in several common sizes; 1-1/2", 2-1/2", 4", and 5". It is also designed for various uses (e.g. forestry, attack, water supply) and has different characteristics and capabilities.

[68] National Fire Protection Association; NFPA-1962, *Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances*.

[69] Meeting the requirements of NFPA-1962.

[70] Meeting the requirements of National Fire Protection Association; NFPA-1962, *Standard on Life Safety Rope and Equipment for Emergency Services*.

[71] Nova Scotia Occupational Safety General Regulations, N.S. Reg. 44/99; § 191 - 194, 195, 197, 198 – 199, 200, and 202.

Communications Group:

This group includes all aspects of radio-based communications that the individual fire departments are directly responsible for.

At the end of each budget line is a "#" column where the estimated quantity of units is used to multiply through the unit costs to achieve the total in the baseline budget column. Costs can be scaled if these numbers are not correct. In some cases the numbers are not integers, which is a consequence of prorating the WBRVFD contribution.

		Historic Fire Department Budgets			NEW			
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/-(4 yr avg)	+/-%	#	EXPLANATION
	FIREFIGHTING OPERATIONS:								
	COMMUNICATIONS:								
	Dispatch Services	20,530	22,293	19,587	29,200			8.3	assumed average of $3500 per department, future contract
	Radio Testing, M & R	0	0	0	8,200			68.6	< assumed number of owned radios @ $120/radio)
	Pager Testing, M & R	0	0	0	3,200			159.2	< assumed number of pagers @ 10% pagers serviced/year)
	other				2,000				5% of above
	sub-total:	20,530	22,293	19,587	$ 42,600	22,070	108%		

TABLE: FIREFIGHTING OPERATIONS, COMMUNICATIONS

- Line 49: Dispatch service contract with a qualified provider. Dispatch services for all fire departments, except Loch Lomond, are provided by Canso Dispatch.[72] Loch Lomond is dispatched by CBRM. Dispatch communications (paging) occurs over radio equipment owned by the Strait Area Mutual-aid Association (SAMAA), for which all participating fire departments pay an annual subscription. The subscription costs appear in the Administration Group, further down this budget.
- Line 50: Service contract for mobile radios, base stations, and portable radios. GA is unclear on the numbers and types of radios being used by the fire departments and has built this budget item around the predominant use of the provincial trunked mobile radio (TMR) system with some VHF radios necessary for communicating with Canso Dispatch, pagers, and marine.

  TMR system access fees, and federal radio licensing fees appears in the Administration group further down in this budget.
- Line 51: Repair of pagers used to notify volunteer firefighters of incidents. It is GA's experience that typically 10% of the pager inventory will require repair annually. This proportion will increase as pager average age increases. A unit cost repair agreement is usually the most economically way to repair pagers, at $200 per repair.

[72] There is no record of Canso Dispatch being a registered company in Nova Scotia in the online *Registry of Joint Stock Companies*, at least not under that name.

Total, Firefighting Operations

The accumulated total of projected expenditures in this category are shown in the table below. The increase over the historical, most recent, four-year average is 169% ($154,657). This is a substantial increase and reflects meeting standards and legislation.

The benchmark budget is based on a series of assumptions on quantities and types of equipment, which may not be entirely accurate due to our inability to secure accurate information. However, in GA's experience our assumptions are probably not significantly in error. With such a large increase in the expenditure forecast, it is GA's conclusion that currently every fire department may not be meeting all of the industry benchmarks and legislated mandates. This budget benchmark is based on the fire departments doing so.

TABLE: FIREFIGHTING OPERATIONS, TOTAL

24		Historic Fire Department Budgets			NEW			
25	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	# EXPLANATION
26	FIREFIGHTING OPERATIONS:							
55	TOTAL Firefighting Operations:	91,643	92,325	95,384	$ 246,300	154,657	169%	

OTHER OPERATIONAL EXPENSES

This category includes the same four groups as in the historical budget format; Training, Fire Station/Hall, Administration, and Minor Capital. Some expansion to budget line details are included; to guide the fire departments and MOCR staff in identifying and positioning costs appropriately. The budget notes opposite each item briefly explain the calculation basis for the budget amount. Further explanation on selected budget line items follows each group table in this category.

Training Group:

Training is the backbone of preparedness and competency for any fire department. It is particularly critical in fire departments with low incident volumes, and with few working-fire incidents. The following table projects training costs at higher than historical, but still a very modest level.

TABLE: OTHER OPERATIONAL EXPENSES, TRAINING

		Historic Fire Department Budgets			NEW			
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	#	EXPLANATION
	OTHER OPERATIONAL EXPENSES:								
	TRAINING:								
	Fire School, General Training	12,431	13,669	13,257	8,300			8.3	Fire School Mobile Burn Unit $1,500; 16 students for 4-hours. Fire School accommodation $30/night, course fees
	Medical First Responder (MFR) Program	0	0	0	13,900			159.2	Assume 50% members are MFR: with 15% first time certified ($500/person, 40 hours), 33% recertified ($300/person recertification, 20 hours every 3 years).
	Seminars/Training Materials	0	0	0	3,300			8.3	Example: IFSTA "Essentials of Firefighting Ed 7" training manual is $113. All active firefighters need access to this manual
	Travel/Meals/Misc. Expenses	1,262	1,415	1,315	4,200			8.3	
	sub-total:	13,694	15,084	14,571	$ 29,700	16,006	117%		

- Line 59: Training in firefighting, rescue, and every other discipline to which a fire department might be expected to respond, except for medical assistance incidents. This line includes local fire station-based training and third-party training either regionally or at the provincial fire school in Waverley (HRM).
- Line 60: Training through the Red Cross or St. John Ambulance[73] to meet Medical First Responder (MFR) certification, and requalification. It is typical that in NS fire departments respond to more MFR incidents that anything else. The MFR program is run to subsidize the provision of EHS ambulance services; by having firefighters arrive earlier than ambulances, especially in rural areas.
- Line 61: Manuals and online or occasionally in person seminars are required to augment local knowledge needed for operations and training. This budget line is based on $400 per fire department.
- Line 62: Associated with local training events or travel to third part training events or seminars. This budget line is based on $500 per fire department.

The budgeted increase for training is 117%, yet GA considers the estimate to be very modest, representing only 2.5% of total operational expenditures. Access to training opportunities outside of the fire departments, that is not solely MFR related, is essential to broadening the knowledge pool, maintaining overall competency, and provide expected services; safely and effectively.

Fire Station – Fire Hall Group

The condition and suitability of fire stations and associated meeting halls is not known. This budget group is largely based on historic costs, as GA has interpreted them. The fire departments' financial statements did not contain much detail in this group; e.g. many fire departments did not differentiate fuel for trucks vs fuel for heating, others lumped everything

[73] https://stjohn.ab.ca/first-aid-cpr-courses/emergency-standard-and-advanced-first-aid-courses/

into "utilities." More detail should be obtained by MOCR if a better understanding of the actual cost of operating the fire stations is to be obtained.

TABLE: OTHER OPERATIONAL EXPENSES, FIRE STATION

		Historic Fire Department Budgets			NEW				
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	**BASELINE**	+/- (4 yr avg)	+/-%	#	**EXPLANATION**
	OTHER OPERATIONAL EXPENSES:								
	FIRE STATION / HALL:								
	Light & Power	34,207	34,486	34,834	35,000				Based on apparent historical costs
	Heating	10,587	10,421	11,034	11,000				Based on apparent historical costs
	Water and Sewer	961	949	961	1,000				Based on apparent historical costs
	General M & R	61,612	64,427	61,312	55,000				Current buildings, condition and needs are not known
	Renovations and Major Repairs	0	0	0	-				Current buildings, condition and needs are not known
	Emergency Equipment M&R (extinguishers, generator, etc.	267	223	77	2,500			8.3	
	Snow Removal/Grounds Keeping	0	0	0	5,000			8.3	Current buildings, condition and needs are not known
	Property Taxes	0	0	0					
	Other	9,021	10,276	3,877	5,500				5% of above
	sub-total:	116,655	120,782	112,095	$ 115,000	(-1,655)	-1%		

- Line 65: Electrical service to buildings. Some fire stations likely have some electrical heating.
- Line 66: Fuel costs for building heat. A negotiated corporate fuel contract should be able to reduce these costs.
- Line 67: Fire station in Louisdale and Isle Madame are connected to the public-municipal water systems. However, only Isle Madame had identified any costs for this service, as shown.
- Line 68: General maintenance and repair of unspecified systems or constructions associated with the fire station/hall.
- Line 69: Renovations and major repairs are usually handled through a capital project, so nothing is budgeted here. Any needs are unknown.
- Line 70: Inspection, repair, and recharging of fire detection systems, fire extinguishers, emergency lighting, exist signs, hood extinguishing systems, etc. This budget item is based on an estimate of $300 per fire department.
- Line 71: It is possible some of these costs already exist in Line 68 historical expenditures. A negotiated single provider contract or inclusion in public works duties might be a viable option for these needs if fire departments are currently paying for these services.
- Line 72: It is expected that the Municipality has waived property taxes so no value was estimated for this line.

Administration Group:

The administration group is a catchall for those services that could be provided as a group to all fire departments. It also includes some fixed soft costs. The following table is followed by a line explanation of all these expenditures.

TABLE: OTHER OPERATIONAL EXPENSES, ADMINISTRATION

		Historic Fire Department Budgets			NEW				
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	**BASELINE**	+/- (4 yr avg	+/-%	#	**EXPLANATION**
	OTHER OPERATIONAL EXPENSES:								
	ADMINISTRATION:								
	Salaries: Full-Time, Part-Time	2,299	1,496	1,596	50,000				Emergency Services Coordinator
	Benefits: Full-Time, Part-Time	0	0	0	12,000				24% of salary
	Volunteer Firefighter Honourarium	19,593	21,400	24,943	100,000				A county wide agreement is needed to determine an equitable and fair program
	Volunteer Benefits, Workers Compensation (manda	16,225	16,166	17,359	46,400			159.2	Volunteer WCB ($291.40/member provides $62K coverage)
	Volunteer Benefits AD&D benefit				19,200			8.3	$2,300/station provides $100k AD&D and medical reimbursement coverage
	Volunteer Benefits MFAP				3,800			159.2	$24/member provides mental health support and access to treatment
	Firefighter Respiratory Protection Fit Testing				6,600			119.4	< assumed number of authorized members for structural firefighting (75% of members)
	Telephone + internet	11,709	12,048	13,142	12,000			8.3	Based on $120/mo
	Industry Canada Radio Licenses	1,562	1,508	1,239	3,400			68.6	< assumed number of owned radios (TMR and VHF)
	Radio Lease (TMR access)	0	0	0	5,000			41.7	< assumed number of owned TMR radios (i.e. excess to seeded numbers) (billed through Bell Aliant)
	Office Supplies	2,455	2,543	2,564	2,000				Based on apparent historical costs
	Publications/Subscriptions	0	0	0	-				
	Memberships Professional Assn's	2,617	2,822	2,833	4,500			8.3	SAMAA ($500), FSANS ($40)
	Legal & Audit fees	2,614	2,652	2,838	2,650				Based on apparent historical costs
	Society Fees (NS-RJSC)	50	59	60	300			8.3	Each fire department must be registered, annual renewals are $31.15+HST
	Bank fee/Interest	269	176	218	1,000			8.3	Costs typically $10/mo. for chequing account
	Insurance: Liability/Fire/Theft/3rd Party	4,915	4,579	4,589	30,000				Based on apparent historical costs
	Insurance: Vehicles	94,932	98,333	97,711	70,000				
	Computers and Software	0	0	0	3,000			8.3	Each station requires a computer and printer, and replacement every 5 years
	Public Events	613	575	745	4,200			8.3	Annual volunteer firefighter recognition event
	Fire Prevention	0	0	0	4,200			8.3	Fire Prevention week open house
	HST/GST Paid	24,521	27,139	32,032	58,700				15% of expenditures for vehicles, buildings, training, equipment, communications, minor capital
	Donations, Gifts, Scholarships, etc.	1,315	1,394	1,732	-				
	Other	10,695	10,487	11,414	1,700			8.3	$200/ FD
	sub-total:	**196,383**	**203,378**	**215,014**	**$ 440,650**	244,267	124%		

- Line 76: Salary for the full-time Emergency Services Coordinator that GA is recommending.
- Line 77: Benefits associated with the coordinator.
- Line 78: Currently only Isle Madame is paying their volunteer firefighters an honourarium. Isle Madame does not have any significant revenue source other than the local fire levy, so this honourarium is funded directly by the tax-payer. It is the norm in most jurisdictions for volunteer firefighters to receive some form of recognition or compensation for expenses incurred in providing fire protection. MOCR may wish to devise a fair and equitable system of honourarium, that meets Canada Revenue Agency and legislated requirements, for all volunteer firefighters in Richmond County.
- Line 79: Nova Scotia announced[74] in October 2019 that amendments to the *Workers Compensation Act* would require municipalities to provide WCB protection for all volunteer firefighters in their jurisdiction.

  Historically, some of the fire departments in Richmond had sourced WCB coverage through MOCR. Others had not, and others had changed their position over the six years of this study.

[74] https://www.wcb.ns.ca/About-Us/News-Room/News/Amendments-Support-Volunteer-Firefighters-Oct-17-19.aspx

The baseline budget shows the estimate for WCB coverage based on the maximum level of coverage ($62k) selectable under the *Act*.

- Line 80: Accident and sickness coverage was historically selected by some fire departments, either in lieu of or in addition to WCB. The provider for these services has been VFIS.[75] The budget is based on a $100k maximum benefit coverage. Higher amounts are commonly taken by other fire departments, up to $250k.

  GA showed the historical combined costs for WCB and VFIS together on Line 79.

- Line 81: MFAP (member and family assistance program) supports volunteer firefighters and their families in dealing with mental health issues arising from being a firefighter.

  Budget costs for Lines 79 → 81 are based on assumptions as to the number of volunteer firefighters in Richmond, as shown in the # column of the benchmark budget.

- Line 82: NS occupational health and safety legislation[76] requires annual fit-testing[77] of all persons who will be required to wear this equipment. Not all fire departments are currently having their firefighters fit-tested, or are not doing so annually. Not all firefighters will be able to wear breathing protection, for various reasons, and should not be permitted to operate in IDLH atmospheres. The assumed overall number of firefighters available for fit testing is 75% of active members; i.e. the number shown.

- Line 83: Telephone and internet services assume that those services are available on the street at the fire station location. Higher costs may occur for remote locations that require wireless service.

- Line 84: Industry Canada requires the registration of all communications radios, and the paying of annual fees for the use of the radio spectrum. GA had requested details on radio types and numbers but these were not provided. It is also not clear who pays the licensing costs for the SAMAA dispatching radio network, so it is not included in the budget.

  The table below is the basis for this budget line.

[75] https://www.vfiscanada.com/

[76] *Occupational Safety General Regulations*, N.S. Reg. 44/99; §196.

[77] Fit-testing costs are contained in the *Administration* group of the *Other Operational Expenses* category, coming up later in this report.

TABLE: IC LICENSING COSTS

PROPOSED						
RADIO LICENSING + FEES			Industry Canada		TMR System	
Item	**Channels**	**Number**	**IC Fee**	**IC Costs**	**TMR Fee**	**TMR Costs**
			monthly	Annual	monthly	Total
Repeater VHF	2	0.00	$4.40	$ -		
Bases VHF (fire stations)	2	9.33	$4.40	$ 985		
Bases TMR owned	1	0.00	$4.40	$ -	$ 10.00	$ -
Mobile VHF (vehicles, boats)	1	1.00	$3.40	$ 41		
Portable VHF	1	16.60	$3.40	$ 677		
Mobile TMR seeded (8.3x5)	1	41.50	$ -	$ -	$ -	$ -
Mobile TMR owned (vehicles)	1	0.00	$3.40	$ -	$ 10.00	$ -
Portable TMR seeded (8.3x4)	1	33.20	$ -	$ -	$ -	$ -
Portable TMR owned	1	41.65	$3.40	$ 1,699	$ 10.00	$ 4,998
	# radios:	**143**	IC Total:	**$ 3,403**	TMR Total:	**$ 4,998**

- Line 85: The trunked mobile radio (TMR) system used by the fire departments is owned and operated by Bell Aliant. In other NS fire departments GA has noted that fees for the TMR system was billed through Aliant and can be lumped into the fire department's historical financial records as telephone costs, which appears to be the case for some of the fire departments in Richmond.

  The TMR system is partially paid by the province and partially paid by subscription fees. NS provided (a.k.a. seeded) up to 5 mobile radios and 4 portable radios free of all charges to each fire department. Fire departments may purchase additional radios themselves and then pay access fees of $10/mo. plus Industry Canada licensing fees. The above table shows the budget line basis for TMR fees.

- Line 88: The Strait Area Mutual-aid Association (SAMAA) provides access to the dispatching radio system and to a shared breathing air compressor[78] for refilling SCBA air bottles.

  The Fire Service Association of Nova Scotia[79] (FSANS) helps to guide fire department leadership to develop and maintain their fire service through a meeting of best-practices approach.

- Line 92, 93: Insurance for property and vehicles has partially been provided through MOCR as a cost recovered service. Some fire departments, for some of the six years studied, procured some of their insurance independently. The budget amount is shown split between fleet and property insurance policies, although GA did not have a breakdown of the actual ratio. Purchasing all insurance as group/fleet policies will continue to offer savings, especially with a consistent policy approach for all fire departments.

- Line 95: Fire departments will host an annual event (or two) to include the public and their families as a means of recognizing the contribution of volunteer firefighters, and

[78] Housed in the Port Hawkesbury fire station.

[79] https://www.fsans.ns.ca/about-fsans

the contribution/support of families, and of the community. These events can be key building blocks for success. The budget basis is $500 per fire department.

- Line 96: Fire prevention education is a strong tradition and need in the community. Fire departments will usually hold an annual open house or operate a door to door campaign to promote the installation of smoke alarms and the practice of exit drills in the home. These campaigns do save lives. The budget basis is $500 per fire department.
- Line 97: HST subject for refund application is calculated on expenses for vehicles, buildings, training services, equipment purchases, communications services, and minor capital purchases. This line amount will change in accordance with actual expenditures.

Recommendation 29: GA recommends that the following benefits be provided by the Municipality to all volunteer firefighters; Provincial Workers Compensation Benefits ($62k insured amount), VFIS Accident and Sickness coverage and disability coverage ($100k on-duty principal amount, disability weekly $700 maximum), VFIS MFAP (member and family assistance program for mental health). Discussion with the volunteer firefighters is recommended.

Recommendation 30: GA recommends that an insurance specialist be hired to review liability and comprehensive insurance policies and coverage options in order to prepare an RFP that obtains needed/desired coverage at best value. Self-insurance (i.e. deductible) risk assessments should be considered.

Minor Capital

Almost every fire departments' financial statements contains references to the purchase of equipment. Seldom is the reference clarified in what was purchased, however GA's experience is that fire departments need to replace broken or worn out firefighting and rescue equipment at a relatively predictable rate. Sometimes replacement needs are also driven by an unforeseen failure or loss, or the desire to achieve a higher level of capability.

This category includes the purchase of smaller semi-durable items used in firefighting and rescue; such as fire hose, firefighter protective clothing (bunker gear), self-contained breathing apparatus (SCBA) components, rescue rope, axes, pike poles, saws, radios, pagers, batteries, and many other similar items.

Collectively, the items listed above are relatively small in individual cost, reoccurring in need, and essential to service delivery. The need to purchase some of such items occurs annually and their life span is both predictable, typically less than 15 years (e.g. radio batteries last at most 4 years, bunker gear is 10 years, SCBA 15 years) but can also be volatile and destroyed unexpectedly (e.g. hose damaged at a fire).

A recent four-year average of all fire department expenditures, on this Minor Capital, totals an average of $86k annually. This average amount has been increasing slightly over the six years studied. GA had requested information on the fire departments current inventory of minor capital equipment, but it was not forthcoming. This would have permitted a definite opinion on the current condition, the need to immediately replace some equipment, and an estimate of ongoing costs to maintain service delivery.

Instead, GA has compiled best-practice information on the basic needs for minor capital equipment; based on meeting the NFPA-1901 standard for minimum equipment to be carried on fire apparatus. This list of equipment was then placed in a spreadsheet and expected service life and replacement costs were assigned.

The following table shows the result of this exercise. Details on the foundation spreadsheet will follow.

TABLE: MINOR CAPITAL TOTALS

24		Historic Fire Department Budgets			NEW				
25	**EXPENSES**	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	#	EXPLANATION
57	OTHER OPERATIONAL EXPENSES:								
101	**MINOR CAPITAL:**								
102	Fire/Rescue Equipment, PPE, Radios, Pagers	85,680	96,067	97,823	148,500				See details on Minor Capital worksheet
103	Uniforms	593	610	626	-				
104	**sub-total:**	86,273	**96,676**	**98,449**	$ 149,000	62,727	73%		See details on Minor Capital worksheet

- Line 102: The amount shown is the 20-year average of funding needs, in 2020 dollars.
- Line 103: Some fire departments purchase partial or full uniforms for some or all of their firefighters. These purchases could continue, where desired, from fundraising.

It is probable that some fire department exceed the minimum equipment inventory that is captured in the above estimate. There are also likely some of the fire departments that do not have the minimum equipment. This could be a service delivery threat.

Recommendation 31: GA recommends that MOCR have the fire departments provide a complete inventory of all minor capital equipment; and that this inventory be evaluated as sufficient, or not, to meet the service delivery commitment contained in the fire departments' registration documents with the Municipality.

Minor Capital Needs, Details of Recommendations

The following pages of tables list the many possible items of firefighting, rescue, and related, equipment that fire departments typically own and use for the provision of emergency services in their communities. Also shown is the overall annual estimated costs of replacing equipment, based on a schedule of average expected service-life for each item.

The tables are snapshots that show 10 years of projected spending, starting in the year 2020. The spreadsheet actually extends to 20 years, and the annual average expenditure projection is based on the 20-year average.

The following is an explanation of what is in this workbook,

- Column D is the equipment life-expectancy, in years.
- Column E is the inventory quantity of the particular equipment item, based in this case on the NFPA-1901 minimums.
- Column F is the estimated individual cost of each item. Pricing may vary from that noted, and often better pricing is available when obtaining quotations from competing

vendors for the same item, especially when group purchasing of standardized equipment; i.e. as a County-wide purchase.

- Column G is the recommended quantity that, on average, should be purchased annually for each item. It is largely based on the inventory divided by the service life.
- Under each year column is a number; opposite equipment items that have an inventory quantity in column E. These are the annual numbers of that item that GA proposes be purchased in that year. Some items are grouped in the same year, for example lines 53-56, because these items when purchased together form a system and will attract better pricing if purchased that way.

TABLE: MINOR CAPITAL WORKSHEET PAGE 1:

Annual Minor Capital Needs: (20-year projected)

	A	B	C	D	E	F	G	Annual Average cost (2020 - 2039): $ 148,527 2020 dollars									
																+/- vs avg: Surplus / (-Deficit)	
			ALL STATIONS, COUNTY-WIDE, ProRated for WBRVFD				+/- avg: >	$16,542	(-$10,003)	$8,132	(-$8,103)	$12,432	(-$20,103)	$20,132	(-$10,003)	$8,132	(-$13,903)
						Estimated YEAR 2020	Annual $:	131,985	158,530	140,395	156,630	136,095	168,630	128,395	158,530	140,395	162,430
	Class		Item	Life	INV #	Unit Cost	Ann'l QTY	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Respiratory:		SCBA Paks (Scott X3, 4.5, no bottle)	15	74	$ 6,500	5.0		10		10		10		10		10
2			SCBA Bottles (30 min, 4.5, carbon)	15	144	$ 1,600	9.6	10		20		20		20		20	
3			SCBA Masks (AV-3000HT spares)	15	82	$ 600	2.5	3		6		6		6		6	
4			PAPRs (for investigators)	7		$ 1,200											
5			Fit Tester (PortaCount)	15		$ 17,000											
6			Cascade Bottles	15													
7			PASS Alarms (not integrated)	15													
8			Air Pak upgrade Kits	15		$ 3,000											
9																	
10						Class Sub-TOTAL $:		17,800	65,000	35,600	65,000	35,600	65,000	35,600	65,000	35,600	65,000
11	Firefighting:		Ground Ladders, 40' (Duo-Safety)	25		$ 2,100											
12			Ground Ladders, 35'	25		$ 1,800											
13			Ground Ladders, 24'	25	7	$ 1,300	0.3		1			1			1		
14			Ground Ladders, 14'	25	8	$ 600	0.3		1			1			1		
15			1-1/2" hose (forestry, Mercedes Firebreak II)	10		$ 230											
16			1-3/4" hose (Kraken EXO, 50')	10	82	$ 330	8.2	9	8	9	8	9	8	9	8	9	8
17			2-1/2" hose (Kraken EXO, 50')	10	82	$ 460	8.2	9	8	9	8	9	8	9	8	9	8
18			3" hose	10													
19			4" hose (legacy)	10	82	$ 1,000	8.2	9	8	9	8	9	8	9	8	9	8
20			5" hose (Mercedes MegaFlo, 100')	15		$ 1,200											
21			Hard Suction Hose, 6"	25													
22			Hard Suction Hose, 5"	25	22		0.9										
23			Hard Suction Hose, 4"	25	21		0.8										
24			Hard Suction Hose, 2-1/2"	25													
25			Port-A-Tanks (3500 USAgal)	20	5	$ 3,000	0.3			1			1			1	
26			Drafting Equipment (misc.)	25													
27			Portable Pumps, Large (CET)	7	2	$ 7,500	0.3			1			1			1	
28			Portable Pumps, Small (wildland)	15	2	$ 5,000	0.1										
29			Portable Generators	20	5	$ 1,500	0.3			1			1			1	
30			Chain Saws	7		$ 3,000											
31			K-12 Saws	7		$ 3,000											
32			Forcible Entry Tools (misc.)	25													
33			Firefighting Nozzles	25	41	$ 975	1.6	3		3		3		3		3	
34			Hose Appliances	25													
35			Ventilation Fans	15		$ 5,600											
36			Firefighting Tools (misc.)	25		$ 600											
37			Thermal Imaging Cameras	7		$ 10,000											
38			Rechargeable Flash Lights	7	46	$ 50	6.6	6	7	6	7	6	7	6	7	6	7
39			Floodlights, portable	10		$ 900											
40			Electrical Equip. (misc.)	10													
41			Foam Application equipment	15													
42			Deck guns	30		$ 3,500											
43			TIC Battery	5		$ 200											
44																	
45						Class Sub-TOTAL $:		19,335	16,570	31,335	14,670	21,235	26,670	19,335	16,570	31,335	14,670

TABLE: MINOR CAPITAL WORKSHEET PAGE 2:

Annual Minor Capital Needs: (20-year projected)

Annual Average cost (2020 - 2039): $ 148,527 2020 dollars

ALL STATIONS, COUNTY-WIDE, ProRated for WBRVFD

+/- vs avg: Surplus / (-Deficit)

	Class	Item	Life	INV #	Estimated YEAR 2020 Unit Cost	Ann'l QTY	+/- avg: > Annual $:	$16,542 131,985	(-$10,003) 158,530	$8,132 140,395	(-$8,103) 156,630	$12,432 136,095	(-$20,103) 168,630	$20,132 128,395	(-$10,003) 158,530	$8,132 140,395	(-$13,903) 162,430
								2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
93	Haz-Mat:	Gas Detection (1 per station plus 1 spare)	7		$ 3,000												
94		Overpak Drums/Pails	15														
95		Decon Equipment	10														
96		Leak Kits	15														
97		Tents	10														
98																	
99		Class Sub-TOTAL $:						-	-	-	-	-	-	-	-	-	-
100	Communicati	Portable Radios (owned TMR, not incl seeded)	10	42	$ 3,500	4.2		4	5	4	5	4	5	4	5	4	5
101		Portable Radios (VHF, MARINE)	10	17	$ 1,500	1.7		2	2	2	2	2	2	2	2	2	2
102		Radio Batteries (portabe radios)	4	58	$ 100	14.6			30		30		30		30		30
103		Mobile Radios (owned TMR, not incl seeded)	25	0	$ 4,500												
104		Mobile Radios (VHF MARINE)	25	1	$ 900	0.0											
105		Base Radios (TMR, 1 per station)	25	0	$ 4,500												
106		Repeater Radios (VHF paging)	20		$ 10,000												
107		Radio Towers (small)	30		$ 75,000												
108		Pagers	7	159	$ 600	22.7		23	23	23	23	23	23	23	23	23	23
109		Fax Machines	7		$ 300												
110		Modems	5														
111		Routers	5														
112		Hubs, etc.	5														
113		Pager batteries	3	159	$ 30	53.1		54	54	54	54	54	54	54	54	54	54
114		Class Sub-TOTAL $:						29,420	32,920	29,420	32,920	29,420	32,920	29,420	32,920	29,420	32,920
115	Medical:	AEDs	5		$ 1,500												
116		Oxygen Equipment	5														
117		Backboards	25		$ 300												
118		Stokes Baskets (1 per aerial)	25		$ 1,000												
119		Medical **Equipment** (misc.)	5														
120																	
121		Class Sub-TOTAL $:						-	-	-	-	-	-	-	-	-	-
122	Station Equip	Shop Tools (misc.)	20														
123		Computers and Accessories	5		$ 2,500												
124		Furniture	25		$ 200												
125		Extractor/Washers for PPE (1 per station)	20		$ 15,000												
126		Bunker Gear Dryers (2 per station)	20		$ 2,500												
127		Pressure Washers	20		$ 500												
128		Hose Washers (one for Region)	20		$ 15,000			1									
129		Hose Testers (one for Region)	20		$ 5,000			1									
130		File Cabinets	30														
131		Flammable Liquids Cabinets	30														
132		Battery Chargers	15		$ 200												
133		Utility Air Compressors	15		$ 3,000												
134		Exhaust Extractor Misc.	10														
135																	
136		Class Sub-TOTAL $:						20,000									

TABLE: MINOR CAPITAL WORKSHEET, PAGE 3:

Annual Minor Capital Needs: (20-year projected)

Annual Average cost (2020 - 2039): $ 148,527 2020 dollars

ALL STATIONS, COUNTY-WIDE, ProRated for WBRVFD

+/- vs avg: Surplus / (-Deficit)

	Class	Item	Life	INV #	Estimated YEAR 2020 Unit Cost	Ann'l QTY	+/- avg: > Annual $:	$16,542 131,985	(-$10,003) 158,530	$8,132 140,395	(-$8,103) 156,630	$12,432 136,095	(-$20,103) 168,630	$20,132 128,395	(-$10,003) 158,530	$8,132 140,395	(-$13,903) 162,430
								2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
46	Rescue:	Hydraulic Power Unit	15														
47		Hydraulic Spreaders (edraulic)	20		$ 18,000												
48		Hydraulic Cutters (edraulic)	20		$ 15,500												
49		Hydraulic Ram (edraulic)	20		$ 11,000												
50		Hydraulic Combi-Tool (edraulic)	20		$ 16,000												
51		Hydraulic tools (misc.)	20														
52		Stabilization Struts (Rescue 42 kit)	20		$ 7,500												
53		Air Bags Large	20		$ 2,000												
54		Air Bags Small	20		$ 1,500												
55		Air Bag Controls	20		$ 1,500												
56		Air Bag Hoses	10														
57		Blocking/Cribbing (misc.)	25														
58		Hand Tools (misc.)	25		$ 500												
59		AutoEx Tools (misc.)	15		$ 500												
60		Rescue Rope (NFPA)	7		$ 400												
61		Utility Rope	7		$ 150												
62		Hi/Lo Angle Hardware (misc.)	10		$ 1,000												
63		Throw Bags	7		$ 80												
64		Inflatable Rescue Boat (Oceanid RDC)	10		$ 7,500												
65																	
66		Class Sub-TOTAL $:						-	-	-	-	-	-	-	-	-	-
67	PPE/Safety:	Bunker Gear (Coat/Pants)	10	119	$ 2,500	11.9		12	12	12	12	12	12	12	12	12	12
68		Bunker Gloves	7	119	$ 130	17.1		20	17	17	17	17	17	17	17	17	17
69		Bunker Boots	10	119	$ 300	11.9		13	12	12	12	12	12	12	12	12	12
70		Helmets, firefighting	10	119	$ 400	11.9		13	12	12	12	12	12	12	12	12	12
71		Balaclavas	7	119	$ 100	17.1		20	17	17	17	17	17	17	17	17	17
72		Wildland Coveralls	10		$ 400												
73		AutoEx Gloves	7		$ 90												
74		Chemical Suits Level A (encap for vapour, gas, mist, particles)	10		$ 1,900												
75		Chemical Suits Level B (encap, SCBA in or out, splash)	10		$ 800												
76		Chemical Suits Level C (splash, SCBA extr, box of 12)(for decon)	10	9	$ 200	4.0		4	4	4	4	4	4	4	4	4	4
77		HazMat Gloves (nitrile, box 12)(for firefighter and equipment decor	5	9	$ 30	8.0		8	8	8	8	8	8	8	8	8	8
78		HazMat Boots	5		$ 90												
79		Water Rescue Suits	10	4	$ 2,000	0.4						2					2
80		Water Rescue Helmets	10	4	$ 200	0.4						2					2
81		PFDs (rescue)	15	4	$ 500	0.3						2					2
82		Rescue Helmets	10	4	$ 200	0.4						2					2
83		Rescue 5-point Harness	10		$ 450												
84		Ladder Belts	10		$ 350												
85		Traffic Vests	10	66	$ 30	6.6		7	7	7	7	7	7	7	7	7	7
86		Traffic Control Equipment	10														
87		Traffic Cones (5 per NFPA vehicle to meet NFPA)	15	115	$ 60	7.7		8	8	8	8	8	8	8	8	8	8
88		Accountability Equipment	15		$ 300	0.3											
89		Incident Command (misc)	15		$ 1,500	0.3											
90																	
91																	
92		Class Sub-TOTAL $:						45,430	44,040	44,040	44,040	49,840	44,040	44,040	44,040	44,040	49,840

Recommendation 32: GA recommends that expenditures on minor capital equipment be increased from historic levels since they appear to be below sustainable service-requirements.

Recommendation 33: GA recommends that the need for the purchase of minor capital items be evaluated on the basis of the required inventory of items (e.g. how many 2½-inch fire hoses are needed) and each items' expected life-span with input from fire department actual experiences. Such an evaluation will reveal the actual needed replacement rate for all such items where replacement age is discretionary, i.e. not mandated. The above tables show that type of analysis.

One of the big benefits of this annual minor capital replacement concept, for management and Council, is it facilitates a steady budget contribution on an annual basis, and thereby avoids a substantial increase in one budget year (i.e. to address a critical shortfall in equipment) followed by a corresponding drop the following year; an undesirable cycle that can be avoided.

For a specific example of how large costs can suddenly appear; firefighter protective clothing (bunker gear) costs about $2,000 per firefighter and has a legislated maximum lifespan of 10 years, some components much less (e.g. gloves). There is a need to replace some of this every year to provide PPE for new firefighters, and to replace expired, damaged, or lost gear. Largely, this is a very dynamic challenge and difficult to accurately accomplish without a plan.

One possible (common, but not recommended) strategy in dealing with the need to replace bunker gear is to allow the demand for replacement/new PPE to build up over time as the current equipment is destroyed/ages. The need also builds up as new firefighters join and become competent to do firefighting.

In this last-minute strategy, the fire department will apply through the budget process for a substantial capital budget item to replace large portions or all of the components of the bunker gear sets that are needed. To replace all sets in a fire department would costs about $40K, and that is only one fire department. In MOCR there are 8.3 departments.

Such a request for funds would need to be approved as a first priority, otherwise the fire department would be out of service for fires. The consequences of this strategy, over time, is a

reduction in service delivery as bunker gear is retired, and/or there is an increase in risk to the firefighter as their PPE no longer does its job, and an incurred liability for injuries or service failure.

The better and recommended approach is to do standardized bunker gear purchasing, and to do it on a county-wide scale, using a multi-year blanket contract (minimum 5-7 years). In this way 10% of the bunker gear can be purchased annually, thus avoiding out of service incidents and also reducing sudden large capital demands. Some components will need to be replaced more frequently (e.g. gloves), but that can also be accomplished through blanket contract purchasing.

Recommendation 34: GA recommends that a number of bunker gear sets be purchased annually. Blanket purchasing contracts should be signed that permit the fire department to purchase/requisition annually, say over a 5 or 7-year period, estimated maximum/minimum numbers of firefighters' PPE components, at agreed prices. This strategy allows the fire department to quickly react to unplanned changes in the status of their critical PPE inventory and immediately take pre-approved action to address the need. It also smooths out large variations in the annual budgeting process.

The above recommended strategy of county-wide and standardized bilk purchases should be applied to all minor capital equipment in the fire department. The same needs and advantages would apply.

Recommendation 35: GA recommends that $149k (2020 dollars) be the target as a long-term plan for annual minor capital budgeting, until experience or an accurate inventory proves this is/not sufficient.

LONG TERM DEBT

The benchmark budget carries-forward an estimate of the existing debt servicing amounts. The details of the debts were not investigated, so it is not reported here when they will be cleared.

TABLE: LONG-TERM DEBT

		Historic Fire Department Budgets			NEW			
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	# EXPLANATION
LONG-TERM DEBT PAYMENTS:								
	Principle	62,550	83,400	125,100	85,000			Based on apparent historical costs
	Interest	14,964	16,872	22,519	20,000			Based on apparent historical costs
	Long Term Debt - other	68,513	90,456	86,196	80,000			Based on apparent historical costs
	TOTAL Long Term Debt:	**146,027**	**190,728**	**233,815**	$ 185,000	38,973	27%	

CAPITAL EXPENDITURES

The following table is the summary of recommendation on capital expenditures. As shown in the table, the recent four-year average of expenditures on major capital projects is $348,500; this amount has been declining. In part, this variability is due to the nature of capital projects; they do not necessarily reoccur annually.

TABLE: CAPITAL EXPENDITURES

		Historic Fire Department Budgets			NEW			
	EXPENSES	4-Year AVG	3-Year AVG	2-Year AVG	BASELINE	+/- (4 yr avg)	+/-%	# EXPLANATION
CAPITAL EXPENDITURES:								
	Capital expense current year	348,500	289,068	145,700	3,600,000			Backlog of fire apparatus in need of immediate replacement totals 8 major vehicles (pumpers and tankers)
	Contribution To Capital Reserves	57,694	60,720	56,918	170,000			This figure represents the average of capital commitment required, on average, for years **2021** through **2039** in 2020 dollars. Cost increases will require adjustment.
	TOTAL Capital Expenditures:	**406,193**	**349,788**	**202,618**	$ 3,770,000	3,363,807	828%	

Replacing Fire Trucks

Typically for any fire department, the significant recurring demand for capital monies is the purchase of fire apparatus. Once the requirement to have particular types of fire apparatus and other vehicles, and the number thereof is determined, it becomes possible to project into future years the capital funding demands for their replacement. This means, there is the opportunity to plan for the upcoming expenditures, to know fairly accurately what the costs will be, and to decide the funding strategy by which the capital demands will be met.

A brief discussion on fire apparatus replacement criteria and issues will assist with understanding GA's budget recommendations on this subject. That discussion follows.

A review of the current age of major fire department assets in Richmond shows a need to replace vehicles (fire apparatus) on a regular schedule that meets needs and best-practices. NFPA-1911[80] recommends;

> *"In the last 10 to 15 years, much progress has been made in upgrading functional capabilities and improving the safety features of fire apparatus. Apparatus more than 15 years old might include only a few of the safety upgrades required by the recent editions of the NFPA fire department apparatus standards … It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA-1912; and incorporate as many features as possible of the current fire apparatus standard (see Section D.3). This will ensure that, while the apparatus might not totally comply with the current editions of the automotive fire apparatus standards, many of the improvements and upgrades required by the current editions of the standards are available to the fire fighters who use the apparatus."*

NFPA-1911 goes on to say that the original purchase of good quality, with good ongoing maintenance, and periodic upgrading to keep pace with safety and function improvements, can extend apparatus serviceable life somewhat.

The other major arbiter of fire apparatus age and condition is the Fire Underwriters Survey (FUS). FUS conducts detailed surveys of municipal fire protection capabilities for the purposes of recommending fire protection grades to the insurance industry. FUS recommendations are highly regarded as a consistent yardstick for comparison to past and future capabilities in fire protection, and their conclusions (ratings) can affect fire insurance costs for individual property owners.

It is clear that both NFPA and FUS consider 15 years as the maximum front-line serviceable age of fire apparatus. However, FUS does recognize that low incident volumes, quality purchases, and good maintenance, proved by testing, can extend the front-line serviceable age to 20 years, followed by up to 5 years in reserve for smaller/rural communities. Front-line means that the

[80] National Fire Protection Association; NFPA-1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles, 2017 edition; Annex D.1

apparatus is relied on to be a mainstay for fire protection. Reserve means that it is not so relied on, but can periodically step into a front-line role when needed (e.g. as a maintenance spare).

The caveat is that the fire apparatus must be well maintained and that it passes service testing annually. It is GA's understanding that, in particular, some of the oldest fire apparatus in Richmond County are not tested and their mechanical condition may be questionable. This lack may be a function of inadequate knowledge and is very likely a function of financial decisions and faulty assumptions.

Currently there appears to be in service in the fire departments of Richmond County the following numbers of fire apparatus and utility vehicles;

TABLE: CURRENT APPARATUS INVENTORY AND ASSIGNMENT

Station	Pumper	Tanker[81]	Aerial	Rescue	Utility	RTV	Boat
District 10 (DTVFD)	1	1	0	0			
Framboise-Forchu (FFVFD)	1	1♠	0	0	1		
Grand River (GRVFD)	0	1*	0	1	1		
Isle Madame (IMVFD)	1	1♠	0	1			
L'Ardoise (LAVFD)	1♦	1* + 1	0	1			
Loch Lomond (LLVFD)	1	1	0	0	1		
Louisdale (LVFD)	1	1*	0	1			
St. Peters (SPVFD)	1 + 1	1*	0	1	1		1
West Bay Road[82] (WBRVFD)	1	1♠	0	1			
Totals:	**9**	**10**	**0**	**6**	**4**	**?**	**1**

* Some current tankers have water pumps, equivalent to that of a recognized pumper
♠ Tanker with small booster pump, suitable for wildland fires only, not recognized as pumper
♦ Is an Initial Attack Unit, which is a small version of a pumper with limited capability

Many of the existing vehicles are long past their replacement need, both in age and likely condition. See **Fire Apparatus**, starting on page **48** for a more thorough discussion of fire apparatus needs.

[81] In NFPA parlance, this fire apparatus is called a Mobile Water Supply Apparatus.

[82] WBRVFD is an Inverness County fire department with about 25% of its incident volume in Richmond County.

In total, there appears to be eight vehicles that require immediate replacement based on their age. Prioritizing should be based on their condition and suitability. These eight are noted above by coloured highlight. Two more need to be retired and not replaced; these are in the DTVFD (after the pumper is replaced) and in the LAVFD (the second tanker). GA has not come to any conclusions on the serviceability or suitability of rescue or utility vehicles; non-essential for fire response.

An example of some of the concerns that GA has; Grand River VFD does not have a pumper. It has instead what appears to be a pumper-tanker; which is an acceptable solution if properly specified, properly equipped, and in good operating condition. A pumper-tanker must carry all the basic equipment that a pumper would carry, and be provided with a suitable chassis mounted water pump. The advantage is that in rural areas a pumper-tanker has a large water tank and is suitable for use in fire attack. It can also shuttle water for other fire departments when needed, if properly configured as a tanker.

Components of the GRVFD pumper-tanker are essentially 70 years old (1950s era), and they were remounted on a chassis that is now 30 years old. To compound this, the pump is barely of a size that qualifies as a pumper, and is half the capacity of what is now typically provided. It is GA's understanding that the pump (or truck) has never been tested to prove its condition or capacity. The community served by GRVFD appears to be at risk of a loss of service event. GA has concerns in other communities as well, but this line of investigation is outside the scope of this study.

Details of Major Capital Recommendations

On the next page is a snapshot of the recommended benchmark Major Capital budget projection for the years 2020-2039. The projections are based on the calculated needs for a scheduled renewal of the fire apparatus fleet. There may be other capital needs, such as fire station renovations or construction, but these were not brought to GA's attention and data requests on the subject were not returned, so such potential capital projects are not included here.

The total estimated capital project funds requirement for 2020, if every project was to proceed, is estimated at $3.6 million. The cash-flow for these capital expenditures would not all occur in the

budget year as some projects would carryover into 2021. Fire apparatus specification, tendering, purchasing, construction, and delivery typically takes 12-18 months.

The peak in 2020 is entirely a result of the pent-up need for fire apparatus replacement. After 2020, the annual average capital demand for fire apparatus is estimated at $170k, in 2020 dollars. This demand should be met by contributions to a fire apparatus reserve account.

GA has not included in the major capital estimate the cost or schedule for the replacement of rescue and utility trucks, or any other type of vehicle. Also not included is any contribution to capital projects for the WBRVFD.

TABLE: MAJOR CAPITAL BUDGET

Annual MAJOR Capital Needs: (20-year projected)

Recommendations - All Stations (except WBRVFD)

2020 dollars

20-yr AVG 338 $k

AVG '21+ 166 $k

TOTAL By Decade ($k):

Total 2020-2029:	$	4,500 $k
Total 2030-2039:	$	2,250 $k

<<< Annual Totals ($k) >>>

	Class	Station	New Item Description	Replacing Current	Remarks	Justification	Estimated (2020 $) Unit Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
								3,600	-	-	-	-	-	450	-	450	-	-	-	900	-	-	-	450	450	450	-
								0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	1	1	1	0
								2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
1	Apparatus	St. Peters	Standard Pumper	Pumper	Current pumper; 2017 Western Star/Metalfab 1050/1000	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000																		1		
2	Apparatus	St. Peters	Standard Pumper	Pumper	Current pumper; 1987 Chev C70/Thibault 840/1000	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status	$450,000	1																			
3	Apparatus	St. Peters	Standard Pumper-Tanker	Mobile Water Supply	Current pumper-tanker; 1996 Freight FL80/Fort Garry 1050/2000	- Apparatus well beyond end of expected 20 year service life - Only 1 year of expected reserve status	$450,000	1																			
4	Apparatus	Framboise	Standard Pumper-Tanker	Pumper	Current pumper; 1992 IHC4900/Thibault 1050/1000	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status - Pump not tested, not maintained to NFPA-1911.	$450,000	1																			
5	Apparatus	Forche	Standard Pumper-Tanker	Mobile Water Supply	Current tanker with booster pump; 1996 GMC TopKick/G.M.MacDonald 250/1500	- Apparatus well beyond end of expected 20 year service life - Only 1 year of expected reserve status - Pump not tested, not maintained to NFPA-1911.	$450,000	1																			
6	Apparatus	Isle Madame	Standard Pumper	Pumper	Current pumper; 2006 FreightM2/Metalfab 1050/2000	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000							1													
7	Apparatus	Isle Madame	Standard Pumper-Tanker	Mobile Water Supply	Current tanker with booster pump; 2012 FreightM2/Metalfab 420/1500	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000													1							
8	Apparatus	Louisdale	Standard Pumper	Pumper	Current pumper; 2006 FreightM2/Metalfab 1050/800	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000									1											
9	Apparatus	Louisdale	Standard Pumper-Tanker	Mobile Water Supply	Current pumper-tanker; 2016 FreightM2/Metalfab 1500/2500	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000																	1			
10	Apparatus	L'Ardoise	Standard Pumper	Initial Attack Unit	Current initial attack unit; 2012 Ford F550/Lantz 420/500	- A certified pumper is required to meet requirements for fire protection	$450,000													1							
11	Apparatus	L'Ardoise	Standard Pumper-Tanker	Mobile Water Supply	Current pumper-tanker; 2016 Freight 108SD/Lantz 1050/3000	- Apparatus at end of expected 20 year service life - Move to reserve status	$450,000																		1		
12	Apparatus	L'Ardoise	do not replace	Mobile Water Supply	Current tanker with ??? pump; 19?? GMC TopKick/G.M.MacDonald ????/????	- Apparatus well beyond end of expected 20 year service life Too old for reserve status - Retire	$0																				
13	Apparatus	District 10	Standard Pumper-Tanker	Pumper	Current pumper; 1985 DuplexSimon/Pirsch 1200/1000	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status	$450,000	1																			
14	Apparatus	District 10	do not replace	Mobile Water Supply	Current tanker; 1987 IHC/MulgraveMS 0/1200	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status - Retire	$0																				
15	Apparatus	Loch Lomond	Standard Pumper	Pumper	Current pumper; 1987 Ford F700/Metalfab 840/1400	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status	$450,000	1																			
16	Apparatus	Loch Lomond	Standard Pumper-Tanker	Mobile Water Supply	Current tanker; 1987 Ford F800/Metalfab 0/2200	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status	$450,000	1																			
17	Apparatus	Grand River	Standard Pumper-Tanker	Mobile Water Supply	Current pumper-tanker; 1990 Chev Bison/Fruehauf 625/3200	- Apparatus well beyond end of expected 20 year service life - Too old for reserve status - Pump not tested, not maintained to NFPA-1911.	$450,000	1																			

In the above table, the Remarks column contains what GA understands to be the particulars of the current fire apparatus. The key to understanding the remarks is demonstrated from this following example: "*Current pumper-tanker; 1996 Freight FL80/Fort Garry 1050/2000*"

Description	**Explanation**
Current pumper-tanker	Current fire apparatus is a pumper-tanker meaning it has a pump meeting minimum 620 gpm capacity and a water tank of at least 840 gal. and should carry all minimum equipment required on a pumper, and be configured for mobile water supply.
1996	Is the year of the chassis manufacture, and is usually close to the year the fire apparatus was assembled
Freight FL80	The chassis is a Freightliner, series FL80
/Fort Garry	Fort Gary assembled the fire apparatus and built the fire body
1050	Capacity of the fire pump in imperial gallons/minute (gpm)
/2000	Capacity of the water tank on the apparatus in imperial gallons (gal)

Fire Apparatus:

In priority order, the following table lists the recommended fire-fleet capital projects over the next 20 years (2002-2039). WBRVFD fire apparatus are not included.

Recommendation 36: GA recommends the following table of scheduled fire apparatus replacements.

TABLE: FIRE APPARATUS RECOMMENDED FIRST ROUND REPLACEMENTS, 2020-2039

Item	**Cost ($2020)**	**Budget Year**
Replace Grand River 1950/1990 pumper-tanker with standard pumper-tanker	450,000	2020
Replace District #10 1985 pumper with standard pumper-tanker	450,000	2020
Replace Loch Lomond 1987 pumper with standard pumper	450,000	2020
Replace Loch Lomond 1987 tanker with standard pumper-tanker	450,000	2020
Replace St. Peters 1987 pumper with standard pumper	450,000	2020
Replace Framboise 1992 pumper with standard pumper-tanker	450,000	2020
Replace Forchu 1996 tanker with standard pumper-tanker	450,000	2020
Replace St. Peters 1996 pumper-tanker with standard pumper-tanker	450,000	2020
Replace Isle Madame 2006 pumper with standard pumper	450,000	2026
Replace Louisdale 2008 pumper with standard pumper	450,000	2028
Replace L'Ardoise 2012 initial attack unit with standard pumper	450,000	2032

Item	Cost ($2020)	Budget Year
Replace Isle Madame 2012 tanker with standard pumper-tanker	450,000	2032
Replace Louisdale 2016 pumper-tanker with standard pumper-tanker	450,000	2036
Replace St. Peters 2017 pumper with standard pumper	450,000	2037
Replace L'Ardoise 2018 pumper-tanker with standard pumper-tanker	450,000	2038
Fire Apparatus 20-year Total:	**$6,750,000**	

Recommendation 37: GA recommends an annual contribution of approximately $170k to a fire capital reserve account to reduce the annual capital fluctuations in the fire department budgets to a minimal amount. Adequate reserve funds would greatly reduce the need to debenture these predictable capital costs, thereby reducing the overall cost of capital purchases. This amount will need to be adjusted over time with inflation of fire apparatus costs, and the value of the Canadian dollar.

BENCHMARK BUDGET 2020, ROLL-UP

The following roll-up includes the costs of all the benchmark budget categories, groups, and line items discussed in the preceding pages.

TABLE: BENCHMARK BUDGET ROLL-UP

			HISTORIC	NEW	$ INC/(DEC)	+/-
25	**EXPENSES**		4-Year AVG	BASELINE	+/- (4 yr avg)	%
26	**FIREFIGHTING OPERATIONS:**					
36	APPARATUS:	sub-total:	58,461	$ 168,300	109,839	188%
47	EQUIPMENT:	sub-total:	12,652	$ 35,400	22,748	180%
53	COMMUNICATIONS:	sub-total:	20,530	$ 42,600	22,070	108%
55		TOTAL Firefighting Operations:	91,643	$ 246,300	154,657	169%
57	**OTHER OPERATIONAL EXPENSES:**					
63	TRAINING:	sub-total:	13,694	$ 29,700	16,006	117%
74	FIRE STATION / HALL:	sub-total:	116,655	$ 115,000	(-1,655)	-1%
100	ADMINISTRATION:	sub-total:	196,383	$ 440,650	244,267	124%
104	MINOR CAPITAL:	sub-total:	86,273	$ 149,000	62,727	73%
106		TOTAL Other Operational Expenses:	413,005	$ 734,350	321,345	78%
108	**LONG-TERM DEBT PAYMENTS:**					
112		TOTAL Long Term Debt:	146,027	$ 185,000	38,973	27%
113						
114	**TOTAL FIRE SERVICE OPERATIONAL EXPENSES:**		650,675	$ 1,165,650	514,975	79%
115						
116	**CAPITAL EXPENDITURES:**					
119		TOTAL Capital Expenditures:	406,193	$ 3,770,000	3,363,807	828%
120						
121	**TOTAL PROJECTION / BUDGET / ESTIMATE**		1,056,868	$ 4,935,650	3,878,782	367%

Not including the projected Capital Expenditures, the recommended benchmark budget for operational expenditures shows an overall increase (projected) of $514,975, up 79% over the recent 4-year average. This increase is driven by the following items.

- Apparatus expenditures are expected to increase 188% ($109,839) because of the need to increase apparatus inspection, testing and maintenance to meet best-practice standards.
- Equipment servicing expenditures are projected to increase 188% ($22,748) because of the need to increase equipment inspections and testing to meet legislated requirements and best-practice standards.
- Communications expenditures are projected to increase 108% ($22,070) with the implementation of radio and pager maintenance contracts.

- Training expenditures are expected to increase 117% ($16,003) with the provision of more third-party training expenditures for other than MFR training.
- Administration expenditures are expected to increase 124% ($244,267) with the addition of a full-time Emergency Services Coordinator ($62,000), harmonized and expanded volunteer benefit coverage including required WCB coverage, accident and sickness benefits, and mental health benefits. Also included is an approximately $75k increase for a volunteer firefighter honourarium benefit for all firefighters.
- The costs for the annual purchase of minor capital equipment is projected to increase by 73% ($62,727). The projected costs are based on the minimum required equipment for fire apparatus as determined by NFPA-1901.

  This minor capital amount should very likely be higher once equipment inventories are actually known, and experiential life-spans of equipment in service in Richmond fire departments is known, and legislated mandatory life-spans are implemented.

Recommendation 38: GA recommends that Richmond County elect the highest WSIB protection, and provide firefighter accident, sickness and disability (AD&D) benefits, and MFAP benefits for all firefighters.

Comparison of Benchmark Budget to Current MOCR Expenditures

The development of the benchmark budget was based on known and assumed expenditures as required to meet best-practices and legislated mandates. Not all factors were known when the benchmark was developed, but all assumptions have been stated so that it is possible to extrapolate the costs of changes in assumptions.

The benchmark budget comparisons with historic expenditures is based on the fire departments' stated expenditures, taken from more than 50 annual financial statements, and averaged over the past four years.

What is not provided in the benchmark budget is a comparison to what MOCR is currently paying for fire protection services in Richmond County. The following table will attempt to show this.

TABLE: HISTORICAL EXPENDITURES AND BENCHMARK BUDGET VS MOCR LEVY REVENUES

Item	4-Year AVG	Benchmark	MOCR
Firefighting Operations	91,643	246,300	
Other Operational	413,005	734,350	
Debt Payments	146,027	185,000	
Sum (up)	$ 650,675	$ 1,162,650	$ 740,122
Surplus (Deficit) vs MOCR	89,447	(425,528)	

Fire Levy Rate Comparison

Recommendation 39: GA recommends that funding for the fire departments should come from the general taxation rate. The rational is that fire-emergency services benefits everyone in the county, and everyone should pay an equal amount.

Ironically, what is occurring currently is that in those jurisdictions that have the poorest fire protection services, the tightest budgets, and apparently inadequate funding; taxpayers are also paying the highest fire protection rates. These jurisdiction fire departments also appear to be struggling to maintain the level of service that they are able to provide, in major part likely due to inadequate budgets. Any weakness in any fire department affects the ultimate capability of every fire department in the County, and could negatively impact any, and therefore every taxpayer.

The following table shows the impact of a uniform fire levy across the entire county. It is based on the benchmark budget projections, and does not include the need for major capital expenditures.

TABLE: FIRE LEVY INCREASE IMPACT (BASIS: 2019/20 BUDGET)

Districts	Current Rate	Current Revenue	Revised Rate	Revised Revenue	
1-Arichat	$ 0.11	$ 199,500	$ 0.17	$ 308,318	
2-Petit de Grat	$ 0.11				
3-D'Escousse	$ 0.11				
4-West Arichat	$ 0.11				
5-Cleveland	$ 0.10	$ 26,186	$ 0.17	$ 44,516	
6-Louisdale	$ 0.10	$ 148,814	$ 0.17	$ 252,984	
7-River Bourgeous	$ 0.10	$ 175,500	$ 0.17	$ 298,350	
Black River Road	$ 0.10				
8-St. Peters	$ 0.09				
9-L'Ardoise	$ 0.16	$ 90,000	$ 0.17	$ 95,625	
10-Framboise-Forchu (Johnstown/Soldiers Cove)	$ 0.15	$ 66,500	$ 0.17	$ 75,367	
10-Framboise-Forchu (Loch Lomond)	$ 0.15	$ 32,500	$ 0.17	$ 36,833	
10-Framboise-Forchu (Framboise/Forchu)	$ 0.15	$ 21,000	$ 0.17	$ 23,800	
10-Framboise-Forchu (Grand River)	$ 0.15	$ 29,000	$ 0.17	$ 32,867	
NOTES:		**$ 789,000**		**$ 1,168,660**	$1,165,650
Current revenue basis is 2019/20 budget					Benchmark
Districts 1, 2, 3, 4 are combined					
Districts 7, 8 are combined					
Districts 6, Blk River Rd. are combined					

FINANCIAL RECOMMENDATIONS

Recommendation 40: GA recommends that Richmond County (MOCR) grant each of the fire departments sufficient funds that are adequate, on a case by case basis, to meet their annual operating expense needs, in a sustainable manner, and that meets the fire departments' commitment to service delivery contained in their annual fire department registration with MOCR. This funding to come from revenues from the general tax levy.

In GA's opinion some of the local fire area rates are unable to provide adequate funding for some fire departments. These fire departments are very likely to see continued erosion of their ability to maintain their service delivery standards to any level of community acceptability. They also need to make improvements that protect the lives and health of their firefighters, meet reliability expectations, and meet legislated and best-practices standards; and these improvements will require additional funds.

No single fire department is able to provide all the equipment, staffing and other resources necessary to respond to every incident, nor even to serious or long duration fires, or even simultaneous incidents. They all rely on the assistance of their neighbouring fire departments as appropriate. In that sense, every taxpayer in Richmond County participates in funding fire protection for all of Richmond County. If one fire department is weak, then they all are likewise weakened.

Recommendation 41: GA recommends that MOCR directly fund the expenditures associated with the purchase of major capital assets, specifically; the acquisition of pumper and pumper-tanker fire apparatus, as part of MOCR corporate capital acquisition plans. Such purchases should be separate from fire department operating expense needs.

Recommendation 42: GA recommends that the ownership, and all associated rights thereto, of all capital asset purchases for fire protection and made by funds derived from MOCR, whether paid directly for the purchase of the asset by MOCR or provided to the fire department for their purchase of the asset, be retained and secured by agreement to the benefit of MOCR in proportion to the funds provided for the asset purchase.

Recommendation 43: GA recommends that all fire departments be required to annually file with MOCR an audited financial statement of all revenues and expenses; in a standardized format that MOCR specifies. Such filings should be a condition on fire departments receiving any publicly funded; grants, services, or capital assets.

Recommendation 44: GA recommends that all fire departments be required to annually file with MOCR a report on incidents responded to, including type of incident, location of incident, benchmark times for the incident, and staffing at each incident. Such filings should be a condition on fire departments receiving any publicly funded; grants, services, or capital assets.

Recommendation 45: GA recommends that the Emergency Services Coordinator manage the purchasing of all minor capital equipment. With advice from the Fire Chiefs' Coordinating Committee he should set priorities on what equipment will be purchased that year. Funding for these purchases should be managed by MOCR directly.

Recommendation 46: GA recommends that the Emergency Services Coordinator have discretionary powers to make adjustments, within the approved minor capital annual budget, to determine the exact mix of minor capital purchases according to need. In this way, the fire departments will be able to more quickly reset priorities as unplanned needs arise (e.g. after a major fire incident), balanced with equipment expiry deadlines.

Recommendation 47: GA recommends that any surplus minor capital funds at the end of the fiscal year (if any) be placed into a revolving reserve account for the future purchase of minor capital equipment. This initiative will remove any pressure on the fire departments to spend all the available minor capital funds in a particular year, even if not immediately required by service needs in that particular year.

Recommendation 48: GA recommends that the surplus minor capital revolving reserve account have a set maximum amount of approximately $75,000. If in any given future year there is an unprecedented or emergency need to make minor capital purchases, and there are insufficient budgeted funds, a mechanism should be in place for the Emergency Services Coordinator to request Council to release additional funds to cover the need, such funds to be withdrawn from the reserve.

Recommendation 49: GA recommends that the Emergency Services Coordinator should manage the purchasing process. In this way municipal purchasing procedures will be followed, county-wide purchasing of standardized equipment will occur, and therefore best value for public funds should result.

Recommendation 50: GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for fire apparatus annual inspection, maintenance, and testing; for every piece of fire apparatus, in every fire department, where such service is indicated by NFPA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.

Recommendation 51: GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for firefighting, rescue, and personal protective equipment annual inspection, maintenance, and testing; for every piece of affected equipment, in every fire department, where such service is indicated by NFPA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.

Recommendation 52: GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for respirator fit-testing; for every eligible firefighter, in every fire department, to meet CSA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.

Recommendation 53: GA recommends that every fire department cooperatively participate in fire apparatus and equipment inspection and testing, as well as firefighter fit testing, that is coordinated by the Emergency Services Coordinator. Fire services effectiveness, efficiency, and the safety of firefighters and the public depends on these activities.

Recommendation 54: GA recommends that the annually funding grant provided to the West Bay Road volunteer fire department be in proportion to; the total value of property assessments in Richmond County that fall within the WBRVFD response boundary, divided by the sum of the total value of Richmond County and Inverness County

property assessments within the entire WBRVFD response boundary. Assessment values to be as determined by the Property Valuation Services Corporation (PVSC), and based on an average of the past two years of data.

It is GA's opinion that the grant to the WBRVFD is currently at or around 32.9% of the sum of WBRVFD's funding that is derived from both Richmond and Inverness counties. It is also GA's opinion that Richmond's proportion of assessments (as described above) between Inverness and Richmond counties is currently approximately 28%; and furthermore the proportion of incidents attended by WBRVFD is likely closer to 25% in a multi-year average.

Recommendation 55: GA recommends that MOCR develop a bylaw to set fees for service and the methods, penalties, and rights associated with setting and collecting such fees. Such fees are described in more detail starting on page 108 **in this report.**

PROVINCIAL ROLE IN FIRE DEPARTMENT FUNDING

Currently NS provides limited funding to emergency services providers through the Emergency Services Provider Fund[83] (ESPF). The ESPF's purpose is;

> *"The Emergency Services Provider Fund is a program intended to assist first responder organizations in Nova Scotia with the purchase of equipment used directly in response to a fire or emergency situation. The program will provide up to 75% of the total capital cost of a project, up to a maximum of $20,000."*

Several of the Richmond fire departments have received grants in the past. Organizations are only eligible to apply once every three years, and the cap is $20k per department in shared costs. Due to demand, the province has committed $1.4M to this program in 2019/20. The normal fund level is $500k.

Of note is the fact that the province seems to be aware there are issues in some fire services in Nova Scotia. In 2017, a Project Steering Committee comprised of representatives from the Union of Nova Scotia Municipalities, the Association of Municipal Administrators of Nova Scotia, the Fire Services Association of Nova Scotia and the Fire Marshal's Office instituted a study relating to the current affairs of the fire service within Nova Scotia.

Post this study, the Project Steering Committee made a number of recommendations, one of which was to strike a stakeholder committee to develop an action plan to address a Funding Model for the Fire Services of Nova Scotia. The Steering Committee is currently working with its partner stakeholders on addressing other issues, but the Committee chair, (Mr. Rod Nielson of Brookfield), advises in response to a question from GA; that the stakeholder committee dealing with the subject of Fire Service Funding Models will be addressed in the near future.

[83] https://beta.novascotia.ca/sites/default/files/documents/1-1448/emergency-services-provider-fund-espf-criteria-en.pdf

SUPPLEMENTARY COMMENT

REPORT SUPPLEMENTARY COMMENT

During the course of the fire services review there were a number of areas that GA is of the opinion that should be addressed. Although out of the scope for this study, and therefore treated obliquely, if at all, our due diligence requirements and concerns advances the obligation of GA to advise of these issues, even though the subject matter was not specifically requested to be reviewed as part of our agreement with MOCR. These areas of concern are relative to effective response, financial burdens and Municipal liabilities.

The three areas of concern include:

a) Fire and Emergency Dispatch Services,
b) Individual fire department mutual-aid agreements and
c) Automatic-aid.

Dispatch Services

During our attempts to collect data for this study, a normally critical portion of any fire service review, our several endeavors were unsuccessful. Some of the key information needed was related to incident raw data and/or statistics This data was refused to us on a privacy basis, which is in fact not relevant. This raises the concern that such data may, in fact, not be being collected, formatted, and analysed in any meaningful way.

The current dispatch services being provided to all (but one) Richmond fire departments is provided by Canso Dispatch Services; a privately owned company located in Port Hawkesbury. Canso Dispatch also provides fire dispatch services to the majority of other fire departments in the Strait area, including fire departments in Antigonish, Inverness, and Guysborough counties.

Loch Lomond fire department is dispatched by the CBRM Regional Communications Centre located in Sydney. CBRM provides this service to the Loch Lomond Volunteer Fire Department. LLVFD dispatch summaries were provided to GA by CBRM.

GA was unable to obtain written contracts for the fire dispatching services received from Canso Dispatch and provided to the fire departments. In a brief interview with the principal of Canso

Dispatch, GA was informed that there were no such contracts. The provision of services was on the basis of verbal arrangements only.

GA was further informed that there is no recording of communications, and only the briefest retention of data associated with the dispatch services.

GA has concerns about the current dispatch service meeting best-practices and recognized standards for the provision of fire-emergency dispatch services. Please refer to **Appendix IV: (FSANS) Fire Dispatch Minimum Standards** starting on page **267** and **Appendix V: Fire Dispatch Service Level Agreement** starting on page **279** for details of what standards and best-practices should be observed for fire dispatch services in Nova Scotia.

If the Municipality wishes to discuss this issue further, GA is amicable to do so.

Mutual-Aid Agreements

There are currently no existing written fire-emergency services mutual-aid agreements in Richmond County; not between the County and adjacent municipalities, nor between each of the individual fire departments providing fire-emergency services in the County.

This lack of agreements, or better yet a multi-lateral, multi-party agreement, is a liability issue not only for the individual fire departments but also potentially for the Municipality. This issue is discussed more fully starting on page **37** of this report.

There is, however, a municipal services mutual-aid agreement as part of corporate emergency planning provisions; called the "*Municipal Services Emergency Management Mutual-aid Agreement 2007*"

Signatories to this Mutual-aid Agreement include:

- Cape Breton Regional Municipality
- Municipality of the County of Antigonish
- Municipality of the County of Inverness
- Municipality of the County of Richmond
- Municipality of the County of Victoria
- Municipality of the County of Guysborough

- Municipal District of St. Mary's
- Town of Antigonish
- Town of Mulgrave
- Town of Port Hawkesbury
- Eskasoni First Nations
- Membertou First Nations

Section III of that agreement sets out Procedures for Requesting Assistance. To request aid from a neighbouring municipality, the requesting municipality must first declare a local state of emergency. The intent of the agreement is to supplement individual municipality capabilities in an emergency that impacts it.

Fire incidents, and the like, are colloquially called emergencies, but in the context of a municipal emergency (as above) they seldom are an emergency. However, often fire incidents (in particular) require assistance from other fire departments to assist the host fire department deal with the incident. Therefore, the use of an emergency declaration at the municipal level in order to procure, for example, the assistance of a single tanker, or a relief crew from a neighbouring community, makes the current municipal mutual-aid agreement a cumbersome tool and not suitable for day to day fire service operational needs. A fire service oriented mutual-aid agreement as specified in the MGA is required, one which does not require a declaration of a local state of emergency.

During GA's interviews and research, organizations and fire departments referred to the *"Strait Area Mutual-aid Association"* as their department's mutual-aid agreement. This association is a registered society and not an agreement. Documents provided were the association's Bylaws and Memorandum of Association. Neither document contained what is required for a fire department mutual-aid agreement.

After reviewing all of the available documents and after research on this subject matter, GA has concluded that there actually is no fire department mutual-aid agreement in existence. This lack places not only the Municipality, but also the fire department societies at risk and exposes them to avoidable liability, by failing to trigger the protections contained in the MGA.

Automatic-Aid

Recommendation 62: GA recommends that the Municipality include a multi-lateral automatic-aid provision in their service agreement with each of the society fire departments.

This provision will simplify utilizing the closest, appropriate, and adequate resources to incidents in all of the geographic area of the County, irrespective of registered protection area (a.k.a. fire districts). This will accomplish a number of things;

- ✓ Permit the development of County-wide Run-Cards designating pre-planned resource deployment for identified risks, anywhere in the County,
- ✓ Recognition that the services provided are not just within their fire response districts,
- ✓ Authority to provide appropriate resources wherever needed in accordance with the mantra of the closest appropriate resources should respond,
- ✓ Reinforce and facilitate the principal of resource dispatching and not just station dispatching,
- ✓ Generate closer working ties between departments,
- ✓ Help ensure that standardized guidelines and operating procedures prevail in the County,
- ✓ Assist with better statistics in that multiple resource allocations are not mutual-aid and can be coded for their actual nature.

APPENDICIES

APPENDIX I: PROVINCIAL LEGISLATION

The Municipal Government Act

The *Municipal Government Act* provides for the establishment and governance of fire protection within Municipalities. The main provisions are as follows;

2 The purpose of this Act is to

(a) give broad authority to councils, including broad authority to pass by-laws, and to respect their right to govern municipalities in whatever ways the councils consider appropriate within the jurisdiction given to them;

(b) enhance the ability of councils to respond to present and future issues in their municipalities; and (c) recognize the purposes of a municipality set out in Section 9A. 1998, c. 18, s. 2; 2019, c. 19, s. 1.

9A The purposes of a municipality are to

(a) provide good government;

(b) provide services, facilities and other things that, in the opinion of the council, are necessary or desirable for all or part of the Municipality; and

(c) develop and maintain safe and viable communities. 2019, c. 19, s. 2.

3 "Interpretation

In this Act

(o) "council" means the council of a municipality, except as otherwise defined in this Act;

(ac) "emergency services" means services related to the provision of emergency services, including fire services, emergency medical services, search and rescue, water rescue and assistance and protection for people and property in the event of disasters including, but not limited to, floods, hurricanes, motor vehicle accidents and chemical spills;

(af) "fire department" means an incorporated body that provides fire services and that may, at its option, provide one or more other emergency services, and includes a fire or emergency services department of a municipality, village, fire protection district or other body corporate;

(ah) "fire services" means services related to the prevention and suppression of fires;

293 *The Regional Municipality may maintain and provide fire and emergency services by providing the service, assisting others to provide the service, working with others to provide the service or a combination of means.*

Registration as fire department

294 (1) *A body corporate may apply to the Municipality for registration as a fire department.*

(2) *A municipality shall not refuse to register a body corporate that complies with this Act if the*

(a) municipality is satisfied that the body corporate is capable of providing the services it offers to provide;

(b) body corporate carries liability insurance, as required by the municipality;

(c) body corporate does not provide the fire services for profit; and

(d) municipality does not provide the same services for the same area.

(3) *A fire department, including a fire department of a municipality, village or fire protection district, shall register in each municipality in which it provides emergency services.*

(4) *A registered fire department shall provide the municipality with a list of specific emergency services it will endeavour to provide and the area in which the services will be provided.*

(5) *Registration continues in force until withdrawn by the municipality for cause or the fire department requests that the registration be revoked.*

(6) *A municipality may grant or lend money to, or guarantee a loan for, a registered fire department for operating or capital purposes.*

(7) *A municipality may grant or lend assets, without charge, to a registered fire department.*

(8) *Registration does not make a fire department an agent of a municipality.*

(9) *A registered fire department is not a municipal enterprise pursuant to the Municipal Finance Corporation Act.* *1998, c. 18, s. 294.*

The MGA provides the power to regulate all fire service providers through policy of Council, as follows;

> *Policies*
>
> *296 (1) The council may make policies respecting full-time, volunteer and composite fire departments and emergency service providers in the Municipality.*
>
> *(2) Policies for fire departments and emergency service providers may include*
>
> *(a) requirements and procedures for registration;*
>
> *(b) personnel policies with respect to those members who are employees of the Municipality;*
>
> *(c) the manner of accounting to the council for the use of funds provided by the Municipality;*
>
> *(d) an annual meeting to report to the public respecting fire and emergency services;*
>
> *(e) such other matters as are necessary and expedient for the provision of emergency services in the Municipality.*
>
> *(3) The council may require proof of compliance with its policies before advancing any funds.*

Sections 294 and 295 established the procedures for registering incorporated independent fire departments as well as other than firefighting emergency services, for example ice and water rescue. Such additional services require the acceptance of the Municipality, when certain specified conditions are satisfied.

Further powers were provided that gave the Municipality broad authority in the provision and regulation of fire services;

> *"Power to make by-laws*
>
> *172 (1) A council may make by-laws, for municipal purposes, respecting (a) the health, well being, safety and protection of persons; (b) the safety and protection of property;*
>
> *174 The council shall make decisions in the exercise of its powers and duties by resolution, by policy or by by-law.*
>
> *The council may exercise any of its powers and duties by resolution unless a policy or a by-law is required by an enactment.*

The MGA provides powers directly to firefighters to assist their activities. There is also contained in §308 an explicit duty;

> *"Powers where fire"*
>
> *297 (1) When any fire, rescue or emergency occurs, the fire chief or other officer in charge, and any person under the direction of that officer, shall endeavour to extinguish the fire and prevent it from spreading, conduct the rescue or deal with the emergency {emphasis added} and, for that purpose, may:*
>
> *(a) command the assistance of persons present and any inhabitant of the Municipality;*
>
> *(b) remove property from buildings on fire or in danger of fire;*
>
> *(c) take charge of property;*
>
> *(d) enter, break into or tear down any building;*
>
> *(e) exclude and remove persons and vehicles from the building or vicinity; and*
>
> *(f) generally, do all things necessary to respond to the emergency.*
>
> *(2) It is an offence to disobey any lawful order or command of the officer in charge.*
>
> *(3) Where a fire alarm is given or the officer in charge has reason to believe that a fire exists on any premises, the officer in charge and any person under the direction of that officer may enter or break into any building for the purpose of ascertaining whether a fire exists.*
>
> *(4) The officer in charge may direct that a building be pulled down or otherwise destroyed if, in the judgment of that officer, doing so will tend to contain a fire or protect the public from a dangerous condition.*
>
> *(5) A Municipality, a fire department, an emergency services provider and an officer in charge, and a person acting under the direction or authority of that officer, are not liable for an act done in the exercise of any of the powers conferred by this Section. 2008, c. 39, s. 308."*

As quoted above, §297 of *the MGA* said that there is a duty and thereby an expectation placed upon firefighters. This duty was described as: "…shall *endeavour* {emphasis added} to extinguish the fire and prevent it from spreading, conduct the rescue or deal with the emergency…" This duty also comes with some considerable powers and protections, thereby facilitating the firefighters in their endeavours, including §299 which made it an offense to interfere with firefighters and fire protection systems.

The MGA also provides some specific protection against liability;

> *"No Liability*
>
> *300 The Municipality, an employee of the Municipality, a member of the fire department of the Municipality, a registered fire department, a member of a registered fire department, a registered emergency services provider and a member of a registered emergency services provider are not liable for an act or omission in providing, or failing to provide, an emergency service, unless they are grossly negligent."*

Restriction on where action may or may not lie with respect to liability was provided in §301.

The MGA permits the Municipality to provide or to receive assistance from other municipalities;

> *"Mutual-aid*
>
> *302 (1) The Municipality may assist at fires, rescues or other emergencies occurring outside its boundaries.*
>
> **…**"

More general parts of *the MGA* provide the Municipality with powers to expend money[121] and levy taxes[122] for fire protection services and systems in the Municipality.

> *§65 The council may expend money required by the Municipality for*
>
> *(e) providing an emergency response system;*
>
> *(g) equipping and maintaining fire departments or emergency services providers;*
>
> *(h) honoraria and training expenses for volunteer firefighters and emergency services volunteers;*

[121] See §65 of the Municipal Government Act.

[122] See §74 of the Municipal Government Act.

The Fire Safety Act

The Fire Safety Act[123], 2002, c. 6, was enacted in early 2003 and primarily dealt with issues surrounding fire safety in buildings and public places. However, *the Fire Safety Act* had the potential to widely affect the delivery of fire services; primarily fire prevention but also fire suppression services.

Fire Marshal

The *Fire Safety Act* continued the office of the provincial Fire Marshal (**NSFM**). The NSFM was (and still is) the leading official/authority in fire protection in Nova Scotia. The NSFM was responsible for implementing and enforcing the provisions in the *Fire Safety Act*, and in §13(4) had authority over other acts;

> *"Personnel*
>
> *9 (1) Such persons as are necessary for the administration and enforcement of this Act and the regulations shall be appointed in accordance with the Civil Service Act, except where this Act provides otherwise.*
>
> *(2) The Minister124 shall designate from among those persons appointed pursuant to subsection (1), a*
>
> *Fire Marshal and one or more deputy fire marshals to perform the duties and functions, and exercise the powers and authorities, imposed or conferred upon them by this Act, the regulations and the Fire Code.*
>
> …"
>
> *"Powers and duties of Fire Marshal*
>
> *13 (1) The Fire Marshal may*
>
> *(a) promote, encourage and co-operate with any body or person interested in developing and promoting the principles and practices of fire prevention and the protection of life and property against fire, including promoting, encouraging and delivering public fire-safety education programs and training and supporting and assisting others to provide public fire-safety education programs and training;*
>
> *(b) advise persons or organizations interested in developing or promoting the principles and practices of fire suppression, fire prevention, fire-safety education, emergency services and related communication systems, and the delivery of those services and systems;*

[123] Chapter 6 of the acts of 2002, "An Act to Promote and Encourage Fire Safety," short title; *Fire Safety Act*.

[124] The Fire Safety Act; §3(y) ""Minister" means the Minister of Environment and Labour"

(c) investigate conditions under which fires occur;

(d) require such reports as the Fire Marshal deems necessary from persons authorized or required to inspect, investigate or examine;

(e) maintain in the Fire Marshal's office a statistical record of all fires reported to the Fire Marshal;

(f) collect and disseminate information with respect to fires in the Province;

(g) study methods of fire safety;

(h) make recommendations, including guidelines, respecting

(i) fire suppression, fire prevention, fire protection and the training of persons involved in the provision of these services as well as rescue and emergency services and the delivery of these services and matters related to any of them,

(ii) the establishment of fire departments and fire brigades,

(iii) the provision of adequate water supply, and

(iv) fire-hose couplings and connections for fire-fighting equipment.

(2) The Fire Marshal shall exercise such other powers and perform such duties as are assigned to the Fire Marshal

(a) pursuant to this Act, the regulations or the Fire Code; or

(b) by the Minister.

(3) The Fire Marshal shall submit, annually to the Minister in each year, a detailed report for the twelve months ending on March 31st, in such form as the Minister may prescribe.

(4) The Fire Marshal has the power and authority to enforce compliance with

(a) this Act, the regulations and the Fire Code; and

(b) all other Acts of the Province relating to the prevention and suppression of fires and all regulations and by-laws made thereunder, including any codes and enactments incorporated by reference therein."

Fire Marshal Authority over the Municipality of the County of Richmond

The powers granted to the NSFM give this official significant authority to direct municipal employees or fire services and their personnel in the execution of their duties particularly in the areas addressed by the *Fire Safety Act*. These areas are primarily related to fire code enforcement through inspection and related fire safety activities to be undertaken by the Municipality.

As quoted above, we note that §13(4)(b) in the *Fire Safety Act* permits the NSFM to "*enforce compliance*" with fire prevention *and* suppression[125] activities undertaken by the Municipality. For clarity, the NSFM's authority extends to legislation other than just *the Fire Safety Act*, which would include, for example, municipal by-laws insofar as they address fire safety concerns.

As quoted above, §13(1)(h) states that the NSFM also has the power to enact guidelines for all aspects of fire prevention and suppression activities, including the training of personnel. In this regard, the NSFM has wide discretionary power to affect the standard of care in providing fire services.

Municipal By-Laws Permitted

The municipality can, at its discretion, enhance its ability to regulate fire safety by enacting more by-laws, as follows;

> *"Municipal by-laws"*
>
> *5 (1) Subject to subsection (2), nothing in this Act prevents a municipality from making and enforcing by-laws relating to matters dealt with by this Act, the regulations or the Fire Code, including by-laws that impose or prescribe higher or more stringent standards or requirements than those provided for by this Act, the regulations or the Fire Code.*
>
> *(2) Where a by-law of a municipality conflicts with this Act, the regulations or the Fire Code, this Act, the regulations and the Fire Code prevail to the extent of the conflict. 2002, c. 6, s. 5."*

Local Assistant to the Fire Marshal

The *Fire Safety Act* permits the NSFM to appoint *Municipal* officials to assist in carrying out some of the powers assigned to the NSFM within the jurisdictional boundaries of *the Municipality*. As a practical measure, most municipalities would (and still) have one or several members of the fire department designated as a *Local Assistant to the Fire Marshal* assigned to fire safety duties.

[125] The *Fire Safety Act* states in the Interpretation section that ""fire suppression" means an organized emergency response for controlling and extinguishing fires."

Usually (in addition to the fire chief), these persons were qualified members of the fire prevention division of a fire department. These officials took point position for this work in the Municipality and they needed to obey directions from the NSFM as well as their organizational superiors.

> *"Local Assistant to Fire Marshal"*
>
> *14(1) The Fire Marshal may appoint as a local assistant to the Fire Marshal a qualified fire chief or, with the consent of the fire chief, another qualified member of the fire chief's fire department.*
>
> *...*
>
> *(4) Local assistants to the Fire Marshal shall, within their territorial jurisdiction and, subject to the directions of the Fire Marshal, assist in administering this Act, the regulations and the Fire Code.*
>
> ..."

Fire Safety Inspections Required

The Fire Safety Act required municipalities to perform fire-safety inspections of properties, as follows;

> *Duties of a municipality*
>
> *19 (1) A municipality shall*
>
> *(a) establish a system of fire-safety inspections of land and premises situate within its jurisdiction, as required by the regulations, to provide for compliance with this Act, the regulations and the Fire Code;*
>
> *(b) appoint a municipal fire inspector who shall carry out the inspections; and*
>
> *(c) ensure that the Fire Marshal is notified, in writing, of the appointment of the municipal fire inspector and the revocation of any such appointment.*
>
> *(2) A municipality that is required to establish and conduct a system of inspections pursuant to subsection (1) shall ensure that*
>
> *(a) a record is made of every inspection undertaken by the Municipality;*
>
> *(b) the records are made available, on request, to the Fire Marshal or a deputy fire marshal; and*
>
> *(c) unless otherwise prescribed by the regulations, the records are kept for at least five years.*

Fire Safety Regulations, NS Reg 48/2003, states in §13 and §14 the municipal responsibilities for inspection of occupancies[126];

> *"Responsibility of municipality to inspect"*
>
> *13 ... a municipality must, within the specified time periods, inspect the following occupancies for compliance with the Act and these regulations:*
>
> *(a) within 12 months of the coming into force of these regulations, assembly occupancies (Group A) ...*
>
> *...*
>
> *14 (1) A municipality must inspect an assembly occupancy (Group A) once every 3 years after the inspection under Section 13.*
>
> *(2) A municipality must carry out a system of fire inspections on all buildings containing the following occupancies:*
>
> *(a) a residential occupancy (Group C) that has more than 3 units and is not regulated under the Homes for Special Care Act;*
>
> *(b) a business and personal services occupancy (Group D);*
>
> *(c) a mercantile occupancy (Group E); and*
>
> *(d) an industrial occupancy (Group F)."*

The Municipality has a duty to inspect certain occupancies on a regular basis, as noted above, for determining compliance to the *Fire Safety Act* and regulations and correcting any issues found. The responsibility for fire inspections within the Municipality of the County of Richmond has apparently been assigned to the Eastern District Planning Commission. GA did not see any formal designation of these duties.

[126] The Nova Scotia Building Code Act. R.S., c. 46, s. 1 defines in the Interpretation section; "2(n) "occupancy" or "class of occupancy" means the use or intended use of a building, as defined in the Building Code"

Note: In brief, despite there being multiple sub-classifications, each major classification contains; Group A is assembly (i.e. public gathering), Group B is institutional (e.g. jail, hospital), Group C is residential, Group D is business or personal service (e.g. bank, dental office), Group E is mercantile (e.g. department store, shops), and finally Group F is industrial. The Building Code defines the classifications and the Fire Code repeats the definitions.

Fire Code

The Fire Safety Act adopted into Nova Scotia law the National Fire Code of Canada[127] (NFC), with appropriate modifications. The NFC concerns itself with building fire safety, ensuring that provisions required by the National Building Code are maintained and operated properly.

Power to Enter

There is another significant provision in *the Fire Safety Act.* It is the extraordinary power (when justified) for the fire department to enter on lands or premises to save a life. It is important to note that these powers are not restricted to buildings.

> *"Emergency entry"*
>
> *28 (1) Where the Fire Marshal, a deputy fire marshal, a local assistant or a fire chief or other officer of a fire department in charge of directing fire-suppression activities has reasonable grounds to believe that a risk of fire poses an immediate threat to the life of a person, the fire official may, without a warrant and at any time, enter upon and inspect land or premises and may*
>
> *(a) call upon a police officer;*
>
> *(b) use such force as is necessary, to make the entry or exercise the powers authorized by this Section.*
>
> *(2) On an entry pursuant to subsection (1), a fire official may*
>
> *(a) remove persons from the land or premises;*
>
> *(b) order orally, or in writing, that no person, other than a person permitted by the fire official making the entry, shall be permitted to be, or be, present on the land or premises identified in the order until the fire official otherwise orders;*
>
> *(c) post a fire watch;*
>
> *…*
>
> *(h) do anything that the fire official reasonably believes is required to remove or reduce the threat to life.*
>
> *…"*

[127] From https://www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2015_national_fire_code.html "The National Fire Code of Canada 2015 (NFC), published by NRC and developed by the Canadian Commission on Building and Fire Codes, sets out the technical provisions regulating activities related to the construction, use or demolition of buildings and facilities, the condition of specific elements of buildings and facilities, and the design or construction of specific elements of facilities related to certain hazards as well as the protection measures for the current or intended use of buildings."

It is the powers contained in §28 of *the Fire Safety Act* that permitted firefighters, either themselves or through the police, to evacuate people who were in danger from a fire.

Fire Investigation

Under §32 of *the Fire Safety Act* it was required that the Municipality investigate fires, as follows;

> *"**32 (1)** Subject to subsections (4) and (5), the local assistant shall immediately, and in no case later than twenty-four hours following a fire, investigate, or cause to be investigated, the cause, origin and circumstances of every fire by which property has been destroyed or damaged that occurs within the Municipality or part thereof for which the person is a local assistant, unless otherwise directed by the Fire Marshal. {emphasis added}*
> *..."*

Local Assistants to the Fire Marshal have the power to take possession of a fire scene and conduct an investigation, involving the local police or Fire Marshal investigators when indicated, and report the results of the investigation to the Fire Marshal.

Forests Act

The Forests Act[128], RS., c. 179, s. 1, contains several provisions relating to fire protection. The province takes responsibility for the protection of forests in Nova Scotia, including from fire;

> *"Protection of forests*
>
> *21 (1) The Minister[129] shall undertake all measures which the Minister determines to be reasonable to provide for effective protection of the forests whether Crown lands, other land vested in the Crown or privately-owned land from various injurious agents, including fires, insects and diseases.*
>
> *(2) The Minister shall undertake programs to ensure that the capability to detect and suppress forest fires is enhanced.*
>
> *... "*
>
> *"Prevention and suppression of fires*
>
> *22 (1) Subject to subsection (2), the Minister has control over the prevention and suppression of fires in the woods[130].*
>
> *(2) Every city or incorporated town, and a regional municipality with respect to that area of the regional municipality that was a city or town immediately prior to the incorporation of the regional municipality, shall at its own expense take reasonable steps to extinguish fires in the woods within its boundaries and, where a conservation officer deems the action being taken is not adequate, the Minister may take reasonable steps to control and extinguish the fire.*
>
> *(3) Nothing in this Act imposes any obligation on the Minister to fight fires on any land or the Crown to pay compensation for any property destroyed or damaged by fire or as a result of fighting a fire. R.S., c. 179, s. 22; 1998, c. 18, s. 559."*

Section 21 of *the Forests Act* shows that the province is invested in the protection of crown and private forests from fire and will take all reasonable steps to protect the forests. Subsection 22(2) of the *Act* delegated fire protection within incorporated boundaries to municipalities. In the case of regional municipalities, the subsection says that this delegation only applied to the boundaries of the pre-existing incorporated components of the new regional municipality.

[128] Chapter 179 of the revised statutes of 1989, "An Act Respecting Forests," short title; the *Forests Act*.

[129] The *Forests Act;* §**3(o)** ""Minister" means the Minister of Lands and Forests"

[130] The *Forest Fire Protection Regulations*; §2(k) ""woods" means forest land and rock barren, brushland, dry marsh, bog or muskeg."

Subsection 22(2) further states that the Province may takeover firefighting activities within municipal boundaries if provincial conservation staff are not satisfied with the way the Municipality is fighting the fire.

The province has the power to restrict the lighting of fires in the woods and to restrict persons from entering the woods when the risk of fires was high enough to be of concern.

> ***"****Fire proclamation*
>
> *24 (1) Notwithstanding any other provision of this Act, the Minister may, whenever the Minister deems it necessary for the protection of woods, by proclamation, prohibit the setting of fires for any purpose in woods or within one thousand feet of woods in any part or parts of the Province during the period specified in the proclamation.*
>
> *(2) Where a proclamation is made pursuant to subsection (1), no person shall ignite or cause to be ignited a fire in the woods or within one thousand feet of woods in a part or parts of the Province during the period specified in the proclamation.*
>
> *..."*

> *"Restricted travel zone*
>
> *25 (1) Whenever deemed necessary for the protection of the woods, the Minister may at any time by proclamation set aside for any period of time a restricted travel zone in any area of woods upon which no person shall enter for the purpose of travelling, camping, fishing or picnicking, or any other purpose, without a travel permit.*
>
> *..."*

The *Forests Act* also had provisions for fire suppression and fire prevention, as follows;

> *"Fire fighting*
>
> *26 (1) For the purpose of controlling and extinguishing a fire in the woods, a conservation officer may requisition the use of any privately-owned equipment and encourage people to assist in extinguishing a fire.*
>
> *...*
>
> *(4) Every person who is aware that a fire has started and exists in any woods shall notify a conservation officer or the Department and any person who neglects or refuses to do so is guilty of an offence. R.S., c. 179, s. 26."*

> *"Fire prevention*

27 (1) No person who is in the woods or within one thousand feet of the woods during the fire season shall throw, drop or otherwise deposit any burning match, cigarette, cigar or smoking material, live coals, hot ashes or burning substance, or fail to extinguish any such thing.

(2) Where a person is permitted to ignite a fire pursuant to this Act, that person shall take every reasonable effort to prevent the fire from spreading and shall not leave the fire unattended until it is completely extinguished.

(3) No person shall ignite or cause to be ignited a fire on privately owned land without the permission of the owner or occupier except in an emergency situation for cooking or warmth or as a distress signal and only if the fire is made in a suitable place and precautions taken against the spreading of the fire.

...

(8) During the fire season, any person in charge of a group entering the woods for any purpose shall ensure that that person and any persons under that person's charge are fully informed of the provisions of this Act and the regulations pertaining to forest fire protection. R.S., c. 179, s. 27."

Forest Fire Protection Regulations

The regulations pertaining to fire protection arising from the Forests Act are the Forest Fire Protection Regulations,[131] (*Forest Fire Protection Regs*). These regulations set the "fire season" in the Regional Municipality and the appropriate restriction, as follows;

"3 (1) *The fire season for the counties of Yarmouth, Digby, Shelburne, Kings, Annapolis, Queens and Lunenburg shall be the period of time during each year from the first day of April to the fifteenth day of October, both dates inclusive.*

(2) *The fire season for all other counties in the Province shall be the period of time during each year from the fifteenth day of April to the fifteenth day of October, both dates inclusive.*

(3) *Except as provided in the Act, during the fire season as prescribed in subsections (1) and (2), no person shall set, start, kindle or maintain a fire in the woods or within one thousand feet of the woods without a valid permit to burn."*

[131] "*Forest Fire Protection Regulations* made under subsection 23(2) and Section 40 of the Forests Act, RSNS 1989, c. 179, NS Reg 55/87, NS Reg 167/2008," short title; *Forest Fire Protection Regulations*.

Summary of Duties and Powers, Provincial Legislation

The following is a summary of the related legal duties and discretionary powers of each responsible party as found in the various provincial legislation noted above in this appendix.

TABLE: SUMMARY OF DISCRETIONARY POWERS AND LEGAL DUTIES UNDER PROVINCIAL LEGISLATION

Party	Legislation	§	Type	Summary
Municipality	MGA	65	Power	Expend monies on fire protection
Municipality	MGA	74	Power	Raise monies
Municipality	MGA	174	Power	May make by-laws respecting fire prevention and fighting of fires
Municipality	MGA	293	Power	May maintain and provide fire & emergency services
Municipality	MGA	294 295	Power	May accept fire department registrations
Municipality	MGA	296	Power	May make policies for governance of fire and emergency service providers
Municipality, etc.	MGA	300	Protection	Protection against liability for powers
Municipality, etc.	MGA	300	Protection	No liability unless grossly negligent
Municipality	MGA	302	Power	May assist at fires, etc., outside municipality
Firefighters		297	Duty	Shall endeavour to extinguish fire, etc.
Firefighters		297	Power	Generally, may do all things necessary to respond to the emergency, etc.
Firefighters		297	Power	Right to enter break into building if fire suspected
Firefighters		297	Power	Destroy buildings to contain fire or protect public from danger
Province	Fire Safety Act	9	Duty	Shall appoint Fire Marshal and staff
Fire Marshal	Fire Safety Act	13(1)	Power	Promote, advise, investigate, direct, collect information, study, recommend, etc.
Fire Marshal	Fire Safety Act	13(2)	Duty	Duties as assigned by Minister
Fire Marshal	Fire Safety Act	13(3)	Duty	Submit annual report to Minister
Fire Marshal	Fire Safety Act	13(4)	Power	Enforce compliance Acts and Fire Code
Fire Marshal	Fire Safety Act	14(1)	Power	May appoint local assistant to the Fire Marshal, may require Fire Chief consent if local assistant is fire department employee

Party	Legislation	§	Type	Summary
Municipality	Fire Safety Act	5	Power	May make by-laws on matters in the Fire Safety Act, unless conflicts
Municipality	Fire Safety Act	13	Duty	Must inspect Group A premises during Act implementation schedule
Municipality	Fire Safety Act	14	Duty	Must inspect premises according to schedule
Municipality	Fire Safety Act	19	Duty	Appoint inspector, inspect land/premises for Act/Regulation compliance, keep records
Local Assistant (Firefighter)	Fire Safety Act	14(4)	Duty	Local assistant takes direction from Fire Marshal, assist in administering Act and Fire Code
Firefighter, Fire Marshal, etc.	Fire Safety Act	28(1)	Power	Entry without warrant in case of immediate threat to life of a person
Firefighter, Fire Marshal, etc.	Fire Safety Act	28(2)	Power	Remove persons, bar entry, do anything reasonably believes necessary to remove/reduce threat to life
Local Assistant (Firefighter), Fire Marshal	Fire Safety Act	32(1)	Duty	Immediately investigate fires for origin, cause and circumstances
Province	Forests Act	21(1)	Duty	Take all reasonable measures to protect forests from fire, injurious agents, etc.
Province	Forests Act	21(2)	Duty	Shall undertake programs to enhance detection and suppression forest fires
Province	Forests Act	22(1)	Power	Control over prevention and suppression fires in woods
Province	Forests Act	22(2)	Power	May take over firefighting inside municipal boundaries if deemed necessary
Province	Forests Act	22(3)	Protection	Not obligated to fight any fire on any land or pay compensation
Province	Forests Act	24(1)	Power	Proclaim the prohibition of setting fires in the woods for protection of woods
Province	Forests Act	24(3)	Duty	Notice of Proclamation shall be issued publicly
Province	Forests Act	25	Power	Proclamation to close the woods to persons
Province	Forests Act	26(1)	Power	Requisition assistance in fighting woods fires
Municipality	Forests Act	22(2)	Duty	Shall take reasonable steps within boundaries to extinguish woods fires (i.e. boundaries

Party	**Legislation**	**§**	**Type**	**Summary**
Public	Forests Act	26(4)	Duty	Must report any woods fire
Public	Forests Act	27	Duty	No person through act or carelessness shall start a fire in the woods or cause it to spread, etc.

APPENDIX II: MODEL FIRE SERVICE REGISTRATION POLICY

[Fire Department and Emergency Services Provider Registration Policy][132]

1. The **[Municipality]** shall register a Fire Department or Emergency Services Provider, with or without conditions, in accordance with Section 294 or Section 295 of the *Municipal Government Act*, as applicable, if:

   (1) The applicant is a body corporate (a society under the *Societies Act* of Nova Scotia, a company under the *Companies Act* of Nova Scotia, or a body corporate pursuant to other legislation);

   (2) The Municipality is satisfied that the applicant is capable of providing the services being offered, based upon the information provided in the application and upon other information received by the Municipality;

   (3) The applicant carries a minimum of **[$5,000,000]** in liability insurance for the vehicles it owns or operates and a minimum of **[$5,000,000]** in liability for insurance for claims brought against it for wrongful acts or omissions respecting the fire services and/or emergency services which it provides;

   (4) The applicant does not provide fire response and/or emergency services for profit;

   (5) The Municipality does not otherwise provide, assist or work with others toprovide the same services for the same coverage area unless the Municipality and two or more fire service and/or emergency service providers (one of which is the applicant) have expressly agreed to have overlapping primary service providers;

   (6) The applicant has completed and signed an application in the form provided bythe Municipality (Appendix A);

132 This model policy/format comes from the NS Joint Municipal Fire Services Committee.

(7) The applicant has provided a list of its active volunteers and their training record in a format acceptable to the Municipality;

(8) The applicant has provided a schedule of mutual-aid agreements with identification of approval details from the Municipality.

2. The CAO or their designate may approve the registration for the Fire Department or Emergency Services Provider to provide all of the services outlined in the application form, or may limit the services by making revisions to the application form. The Municipality may also include conditions to the approval.

3. The Municipality shall provide a copy of the approved and signed unamended or amended application form along with any conditions to the applicant, or if the application is not approved, shall notify the applicant accordingly.

4. Registration as a Fire Department or Emergency Services Provider is effective upon approval of the application by the CAO or their designate.

5. A registered Fire Department or Emergency Services Provider may provide the services outlined in its approved application, subject to any conditions imposed by the Municipality.

6. By no later than April 1 of each year, each registered Fire Department and Emergency Services Provider must apply to renew its registration by submitting a new application for registration in the form at Appendix A and providing the information required in paragraph 1 of this Policy. The CAO or their designate shall process the application in accordance with paragraphs 2 and 3 by no later than April 30.

7. If a registered Fire Department or Emergency Services Provider fails to apply to renew its registration as required by paragraph 6, its registration as a Fire Department or Emergency Services Provider shall be automatically be withdrawn for cause.

8. In the event an applicant is dissatisfied with a decision of the CAO or their designate to refuse a registration or a registration renewal, or to impose conditions or amendments upon the

registration, the applicant may appeal to Council by written notice to the Municipality's Clerk within 15 days of receiving notification under paragraph 3.

9. In addition to any other cause for revoking registration, non-compliance with any conditions of registration or with the terms of this Policy, or failure or inability to perform the services to the standards established pursuant to this Policy or otherwise mandated by Council or other regulatory authorities, shall be cause for revocation of registration as a Fire Department or Emergency Services Provider, or for imposing additional conditions upon the registration.

Appendix A:

[Insert Name Here]

Application for Registration as a

Primary Fire Response or

Emergency Services Provider

Applicant: _____

Contact Person & Phone #: _____

Address: _____

Incorporated body under: *Societies Act* OR *Companies Act* (circle one)

Registry of Joint Stock Companies Registration # _____

Registration Expiry Date: _____

Number of Department members: _____

Insurance Provider: _____

Insurance Policy Period: _____

Motor Vehicle Liability Limit: _____

General Liability Insurance Policy Limit (minimum 2 million): _____

Complete financial statements from the previous fiscal year are required as part of the Application for Registration.

Boundaries of Primary Service Territory: _____

Please indicate the service that the department will endeavor to provide by placing an X in the appropriate box. N/A denotes a service not being provided by the Applicant.

		Structural Offensive	Structural Offensive with Mutual-aid	Structural Defensive	N/A
1	Fire and Fire Related Emergenci	☐	☐	☐	☐

** Registration as Structural Offensive requires your department to have a minimum of four (4) firefighters trained Level 1 with Fire Control. Alternatively, you do have the option to register as Structural Offensive with Mutual-aid. Please indicate the names of those trained to this standard below. If more space is required, please use the back of this page.*

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

10 _____

Please indicate the level of service that the department is equipped and trained to perform, and will endeavor to provide by placing an X in the appropriate box. N/A denotes a service not being provided by the Applicant.

Applicants should be aware of NFPA 1670 Standards for Rescue and limit the service they provide to the qualification they possess relevant to the technical categories of Technician,

	Technician	Operational	Awareness	N/A
1. Vehicle Rescue	☐	☐	☐	☐
2. Water Rescue	☐	☐	☐	☐
3. Ice Rescue	☐	☐	☐	☐
4. Structural/Excavation Collapse	☐	☐	☐	☐
5. High Angle Rescue	☐	☐	☐	☐
6. Hazardous Materials	☐	☐	☐	☐
7. Other (1)	☐	☐	☐	☐
8. Other (2)	☐	☐	☐	☐
	Provider	**Assistance**		
9. Ground Search and Rescue	☐	☐		☐

10. Please indicate any other man-made and/or natural disasters for which your department has the training, equipment, and command system to undertake:

_____

11. Are there limits to the level of service that will be provided (for example, limited number of responders at certain times, lack of equipment, lack of qualifications) in respect to any of the services checked above? If so, please indicate what these are:

_____

_____

_____

_____

APPLICANT

As Chief of the _____

(Name of Department)

I have read and understand the Departments' role in the registration process and the "Definitions of Terms Used in the Registration Form" in Appendix B, attached.

I understand by signing this I am not committing my department to any guaranteed level of service or response. [As a volunteer organization there may be circumstances where inadequate response to an emergency may occur. We do actively participate in an automatic mutual-aid response, however, there is no assurance that mutual-aid response will be adequate.]

I declare that the information provided in response to this Application for Registration as a Primary Fire Response or Emergency Services Provider under the *Municipal Government Act* with the [Name of Municipality] is true to the best of my knowledge, information, and belief.

Date: _____

_____

Name of Chief – ***Please Print***

_____

Signature of Chief

MUNICIPALITY

Date of Approval of Registration Application: _____

_____

Name of Chief Administrative Officer (CAO) – ***Please Print***

_____

Signature of CAO or his or her designate

Please note: Explanation of the terminology used in this registration form is provided in the Information from the Office of the Fire Marshal included as Addendum "B" in the Guide Respecting Fire and Emergency Services in the *Municipal Government Act* Resource Binder, a copy of which is attached for your reference. To register, a department must be incorporated and hold any valid liability insurance that is required by municipal policy. The department must operate on a not-for-profit basis. The registration does not make the department an agent of the **[Municipality]**. This registration may be modified by notifying the Municipality thirty days in advance. The **[Municipality]** may revoke this registration for cause.

Appendix B:

Evaluation of Services Provided and Level of Service for Use with Application for Registration as a Fire Department or Emergency Services Provider under the Municipal Government Act

Spelling out the specific parameters of services to be provided allows the fire department to plan, staff, equip, train, and deploy members to perform these duties. It also gives the governing body an accounting of the costs of services and allows it to select those services they can afford to provide. Likewise, the governing body should identify services it cannot afford to provide and that it cannot register the department to deliver.

To assist the fire service and the municipal units, the Department of Municipal Affairs has developed a sample registration form that includes a check list for key services and level of abilities. The use of this form is not compulsory. Each municipality should develop its own registration process in accordance with the *Municipal Government Act.*

The Office of the Fire Marshal will not be evaluating fire departments; the registration process is between the Municipality and the fire department.

The industry standards most widely used and accepted for the fire service are from the National Fire Protection Association (NFPA). Standard 1500 for Firefighter Occupational Health and Safety is the cornerstone upon which each fire department attempts to meet a standard of safety. The key to this standard is that, “no activity is undertaken unless the benefit outweighs the risk.” There are sections such as physical fitness requirements and recruiting that may require a different approach by individual fire departments.

NFPA standards are updated on a 3-6-year frequency and it is recommended that the most recent version of any particular standard be used when referenced.

Definition of Terms Used in the Registration Form 1 to 3. Fire and Fire Related Emergencies:

Structural Offensive: means the activities of rescue, fire suppression, and property conservation **in** buildings, enclosed structures, vehicles, vessels, or like properties that are involved in a fire or emergency situation. Departments should have firefighters trained to NFPA 1001, protective personal equipment, man-down alarms, an accountability system, adequate water supply, adequate pumping capacity and an incident command system. Departments should also have the proper training and protective clothing for wild land fires in accordance with the Department of Natural Resources' provincial standard. Shipboard firefighting, if provided, should be carried out following the NFPA standard 1405 Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires. Protection of Aircraft at airports by volunteers, if provided, should be in accordance with Transport Canada guidelines.

Structural Defensive: means actions that are intended to control a fire by limiting its spread to a defined area, avoiding the commitment of personnel and equipment to dangerous areas. Defensive operations are generally performed from the exterior of structures and are based on determination that the risk to personnel exceeds the potential benefits of offensive actions.

Such determining factors may include, but not limited to, the extent of fire within the structure, existing water supply for fire load, number of trained personal on site and foremost, risk of personnel versus reward. Also, be advised that an attack strategy may change from defensive to offensive should any or all of the fore mentioned factors change. Fire departments without the ability to carry out structural firefighting may register as providing property protection through defensive strategies. Training for defensive fire operation personal is extensive but less rigorous than NFPA 1001 (a guideline is provided on the Fire Service Association of NS website). Rescue may be undertaken if the benefit warrants the risk. Departments should have proper training and protective clothing for wild land fires in accordance with the Department of Natural Resources' provincial standard.

N/A: means the department does not respond to these calls.

Structural Offensive with Mutual-aid: means that on its own, a fire department meets the requirements of Structural Defensive only and can meet the requirements of Structural Offensive with additional specific resources identified in through a Mutual-aid agreement. The expectation would be that upon arrival, such a department would conduct Defensive operations only and if required, could change to offensive once additional resources arrived on scene and were deployed.

4. Medical Emergencies: response to known medical emergencies.

Registered First Responder: means responders registered with the Department of Health through EHS first responder program and respond to medical calls or provide medical assistance at the scene of an incident.

Medical Assistance: means responders who have standard or emergency first aid and respond to medical emergencies or provide medical assistance at a response incident to that level only. Equipment includes a first aid kit.

5.to 9. The following terminology is used in respect to vehicle rescue, water rescue, ice rescue, structural/excavation collapse and high angle rescue:

These activities should be carried out in accordance with NFPA 1670 Standard for Rescue, 2017 edition or other comparable standard adopted by the municipal unit.

Generally, these terms mean:

Technician: First responders at the technician level are those persons who respond, as either initial call out or as a mutual-aid response to contain and control the incident. This level of service usually will provide a high degree of intervention.

Operations: First responders at the operations level are those persons who respond as the initial response to an incident for the purpose of protecting nearby persons, the environment, or property from the effects of the incident. First responders at the operations level are expected to respond in a defensive fashion to control, prevent a worsening of the incident and provide services within their capabilities.

Awareness: First responders at the awareness level are those persons who, in the course of their normal duties, could be the first on the scene of an emergency. First responders at the awareness level are expected to recognize the situation, call for trained personnel, secure the area and provide minimum intervention.

Refer to NFPA 1670 for specifics for each type of rescue.

10. **Hazardous Materials**: Response to chemical incidents.

All levels should be in accordance with NFPA 1072 Standard on Professional Competence of Responders to Hazardous Materials Incidents. Fuel spills such as oil, gas and diesel may be handled by all three levels if the spill is minor and stabilized. There is a wide range of service, from a domestic oil spill to an upset gasoline tanker. The important fact is knowing the departments limitations.

Technician: Hazardous materials technicians are those persons who respond to releases or potential releases of hazardous materials for the purpose of controlling the release. Hazardous materials technicians are expected to use specialized chemical protective clothing and specialized control equipment.

Operations: First responders at the operations level are expected to respond in a defensive fashion to control the release from a safe distance and keep it from spreading. (Note: Firefighters trained to the Level 1 standard are required to be trained to the Operations Level of Hazardous Awareness)

Awareness: First responders at the awareness level are those persons who, in the course of their normal duties, could be the first on the scene of an emergency involving hazardous materials. First responders at the awareness level are expected to recognize the presence of hazardous materials, protect themselves, call for trained personnel and secure the area.

11. **Ground Search and Rescue**: self-explanatory.

Provider: meets the Nova Scotia Emergency Management Office's provincial standard for SAR teams.[1]

Assistance: members are under the control of a SAR team.[2]

[1] EMO does not set standards for NG Ground Search and Rescue, the Red Cross, or any other volunteer organizations. It is the organization's decision to adhere to a standard if so desired. There is no legislative authority to impose anything on NS Ground Search and Rescue Teams.

NS GSAR is aspiring to meet the SARVAC CSA Z1620, Core competency standards for ground search and rescue operations: for Ground Search and Rescue (GSAR) in Canada.

[2] At present NS GSAR is tasked by an AHJ (Agency Having Jurisdiction), which is always the police for missing or lost persons. EMO NS does not have a legislative mandate for Search and Rescue. The Police under the *Missing Persons Act* have the legislative mandate and the responsibility. Some police agencies in Canada use police officers to search and some you volunteer teams such as GSAR. EMO NS continues to support NSGSAR administratively.

Fire Department and Emergency Services Provider Registration Policy - Editor's Annotations

Enabling Legislation

Municipal Government Act, R.S.N.S. 1998, c.18:

3 In this Act,

(ac) "emergency services" means services related to the provision of emergency services, including fire services, emergency medical services, search and rescue, water rescue and assistance and protection for people and property in the event of disasters including, but not limited to, floods, hurricanes, motor vehicle accidents and chemical spills;

(af) "fire department" means an incorporated body that provides fire services and that may, at its option, provide one or more other emergency services, and includes a fire or emergency services department of a municipality, village, fire protection district or other body corporate;

294 **(1)** A body corporate may apply to a municipality for registration as a fire department.

(2) A municipality shall not refuse to register a body corporate that complies with this Act if the

(a) municipality is satisfied that the body corporate is capable of providing the services it offers to provide;

(b) body corporate carries liability insurance, as required by the Municipality;

(c) body corporate does not provide the fire services for profit; and

(d) municipality does not provide the same services for the same area.

(3) A fire department, including a fire department of a municipality, village or fire protection district, shall register in each municipality in which it provides emergency services.

(4) A registered fire department shall provide the Municipality with a list of specific emergency services it will endeavour to provide and the area in which the services will be provided.

(5) Registration continues in force until withdrawn by the Municipality for cause or the fire department requests that the registration be revoked.

(6) A municipality may grant or lend money to, or guarantee a loan for, a registered fire department for operating or capital purposes.

(7) A municipality may grant or lend assets, without charge, to a registered fire department.

(8) Registration does not make a fire department an agent of a municipality.

(9) A registered fire department is not a municipal enterprise pursuant to the *Municipal Finance Corporation Act*.

295 (1) A body corporate may apply to a municipality for registration an emergency services provider to provide emergency services other than fire services.

(2) A municipality shall not refuse to register a body corporate that complies with this Act if the

(a) municipality is satisfied that the body corporate is capable of providing the services it has undertaken to provide;

(b) body corporate carries liability insurance, as required by the Municipality;

(c) body corporate does not provide the emergency services for profit; and

(d) municipality does not provide the same services for the same area.

(3) A body corporate that applies pursuant to subsection (1) shall register in each municipality in which it provides emergency services.

(4) A registered emergency services provider shall provide the Municipality with a list of specific emergency services it will endeavour to provide and the area in which the services will be provided.

(5) Registration continues in force until withdrawn by the Municipality for cause or the fire department requests that the registration be revoked.

(6) A municipality may grant or lend money to, or guarantee a loan for, a registered emergency services provider for operating or capital purposes.

(7) A municipality may grant or lend assets, without charge, to a registered emergency services provider.

(8) Registration does not make an emergency services provider an agent of a municipality.

(9) A registered emergency services provider is not a municipal enterprise pursuant to the *Municipal Finance Corporation Act*.

Important Notice

The reader is cautioned that editorial and drafting choices involve interpretation of the law. Municipal units should consult with their own legal advisors before relying upon, and applying to their own circumstances, the comments or drafts contained in this Manual.

Comment

- This Policy deals with municipal registration of bodies corporate as a fire department or emergency service provider.

- The *Municipal Government Act* s. 294(2) requires that a municipality register a body corporate as a fire department if the body corporate meets the requirements of the Act. Identical requirements are set out for emergency service providers by s. 295(2) of the Act. The Act requires that a body corporate:

  - be capable of providing the services it offers;
  - carry liability insurance;
  - that fire or emergency services be not-for-profit; and
  - not duplicate services provided by the Municipality in the same area.

  These requirements are incorporated into s. 1(2), (3), (4) and (5) of the model Policy. The municipality may set out minimum liability insurance requirements in s. 1(3) of this Policy.

- The Policy provides in s. 1(6) for the use of an application form. A model application form is included with the Policy as Appendix A.

- Section 6 of the Policy requires that a Service Provider register annually with the Municipality. Although annual registration is not a requirement of the Act, it is recommended as a best-practice. Annual registration helps to guarantee that the Municipality has the information necessary to make informed decisions with respect to the safety of firefighters and the public. However, annual registration requires more diligence by both the Municipality and Service Providers, so be sure the resources are in place to manage annual registrations.

- Section 8 of the Policy is designed to provide the body corporate with an avenue for appeal to Council should the CAO decide to refuse to register the body corporate as a fire department or as an emergency services provider.

The chapter # in the policy title bar should be replaced by each municipal unit with the chapter # it assigns to this Policy.

APPENDIX III: SAMPLE FIRE SERVICES MUTUAL-AID AGREEMENT

THIS MUTUAL-AID EMERGENCY RESPONSE AGREEMENT made this_____day of _____20XX, effective the first day of_____20XX.

BETWEEN: The Municipality of the County of Richmond, (herein referred to as the "Municipality")

- and -

XXXXX FIRE DEPARTMENT, a body corporate pursuant to the *Societies Act* of Nova Scotia, Registry ID:

- and -

XXXXX FIRE DEPARTMENT, a body corporate pursuant to the *Societies Act* of Nova Scotia, Registry ID:

- and -

XXXXX FIRE DEPARTMENT, a body corporate pursuant to the *Societies Act* of Nova Scotia, Registry ID:

And Etc. etc..

WHEREAS Fire Department are registered with the Municipality as primary fire response service providers under the *Municipal Government Act*, SNS 1998, c 18, to provide fire response service by providing the service, assisting others to provide the service, working with others, namely fire departments, to provide the service, or a combination of means;

AND WHEREAS a fire or emergency could affect any community in the Municipality to such a degree that the resources of a local volunteer fire department would be inadequate to cope with the situation;

AND WHEREAS the parties wish to make pre-arrangements for the quickest possible reaction in support of any Fire Department or community which may be affected or threatened by fire or emergency and require assistance;

NOW WITNESSETH that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the premises and mutual promises and covenants contained herein, the parties agree as follows:

Response to Call

1. Subject to the availability of emergency responders and equipment, the Fire Departments will respond to a call for assistance with such emergency responders and equipment as may be requested by any other Fire Department in a fire or emergency.

Chief's Authority – Responding Department

2. The Chief or the most senior officer of the Fire Department receiving a request for assistance shall have the sole discretion to determine what assistance can be given and what emergency responders and equipment can be made available, and shall have the right to request withdrawal of such assistance when and to the extent that, in his/her judgement, circumstances and his/her responsibilities require him/her to do so, and such request shall not be unreasonably refused by the Chief or the most senior officer of the Fire Department which requested the assistance.

   Additional protocols may be established which outline generally which departments will be dispatched in any particular call and how those protocols get established or changed once established which protocols must be agreed upon by the participating Fire Departments.

Request for Assistance

3. Any call for emergency responder assistance purporting to be made by any Fire Department shall constitute a request for such assistance pursuant to this agreement, and such calls for mutual-aid shall specify the type and extent of aid requested.

Line of Authority

4. At the fire or emergency scene, the assisting Fire Department shall remain under the direction of its Chief or the most senior officer at the emergency scene, who shall place himself at the disposal of the Chief or the most senior officer of the Fire Department requesting assistance.

Period of Assistance

5. For purposes of this agreement, the period of assistance shall be deemed to commence immediately upon receipt of the notification of the request for a response from the assisting Fire Department and end upon release or termination of duties, with the assisting Fire Department placed back in service, exclusive of any period during which its equipment may be immobilized at the emergency scene by reason of accident or mechanical breakdown and during which it may be prevented by mechanical defects or deficiencies in its equipment from useful employment in fighting the fire or responding to the emergency.

Mutual Assistance Reciprocal

6. All parties agree that mutual assistance at emergency scenes is reciprocal and that no demand

or claim will be made by any party against any other party for any damages, money or other compensation of any kind, other than for fuel costs for apparatus and other expendables such as foam agents and if of such duration requiring feeding and rehabilitation of response personnel.

No claims for Liability

7. No party shall have nor assert any claim against any other party for any loss, damage, or injury to persons or property of any kind attributable to the performance of this agreement.

Indemnity by Requesting Department

8. The Fire Department requesting assistance shall indemnify and save harmless any Fire Department rendering the assistance from and against any and every claim, cause of action or demand by a person not a party to this agreement that:
    a) is based on an event that occurs during a period of assistance as defined in paragraph 5, and,
    b) is attributable to or in any way connected with the performance by any party of its obligations under the agreement.

Chief – Expanded Meaning

9. In this agreement, the expression "Chief" shall mean, in the absence of such Officer, his/her designate, his/her Deputy or any other person discharging his/her duties or responsibilities for the time being.

Procedure for Termination

10.10.
    a) This agreement shall remain in force from the date first written above until it is terminated and may be terminated, with regard to the involvement of any specific Fire Department or Fire Departments, at any time by such Fire Department or Fire Departments upon giving to the Municipality written notice naming therein a date of at least three (3) months from the giving of such notice, upon which this agreement is to terminate, and on the date so named this agreement shall be at an end for that Fire Department or Fire Departments but otherwise shall remain in full force and effect with regard to the remaining Fire Departments and without prejudice to any right of any Fire Department arising hereunder prior to its termination. The same shall apply to *mutatis mutandis* to the Municipality.
    b) The Municipality shall upon receipt of such notice forthwith send a copy to all parties.

Responsibility of the Chiefs

11. The Chiefs of the Fire Departments shall be responsible for such mutual consultation and adoption of such measures as they deem expedient in order to familiarize the emergency responders of each Fire Department with the fire and emergency risks and the fire protection

or emergency facilities available to meet them in the area for which any other Fire Department is responsible.

Counterparts

12. This agreement may be executed in counter parts, and by faxed or scanned copies of the original, each of which counterpart or copy shall be deemed an original, but all of which shall together constitute one and same agreement.

IN WITNESSES WHEREOF this agreement has been executed and is effective as of the dates written above.

SIGNED, SEALED AND DELIVERED in the presence of:

For The Municipality of the County of Richmond

Per: Warden _____

Clerk _____

For the Fire Department, [NAME] _____

Per: _____

Name of Fire Chief (please print)

_____

Signature of Fire Chief

Per: _____

Name of Deputy Fire Chief (please print)

_____

Signature of Deputy Fire Chief

For the Fire Department, [NAME] _____

Per: _____

Name of Fire Chief (please print)

_____

Signature of Fire Chief

For the Fire Department, [NAME] _____

Per: _____

Name of Fire Chief (please print)

_____

Signature of Fire Chief

Etc. etc.

APPENDIX IV: (FSANS) FIRE DISPATCH MINIMUM STANDARDS

Fire Service Association of Nova Scotia

Nova Scotia Fire Dispatch Minimum Standards (2017)

July 14, 2017

Scope

This document sets out the minimum standards to which fire dispatch operations are expected to operate in the Province of Nova Scotia. The document is based on the National Fire Protection Association (NFPA) 1221, *Standards for the Installation, Maintenance and Use of Emergency Services Communications Systems*. Its establishment was lead by the Fire Service Association of Nova Scotia, with valuable input by Emergency Management Office Nova Scotia, the Office of the Fire Marshal, the Public Safety & Field Communications office of Department of Internal Services, fire officers and dispatch operators.

It is important to realize that this document reflects minimum acceptable standards for facilities, equipment, qualifications, training, and procedures and that many operations will easily exceed these minimum standards. Those that do not meet these standards should consider them as a guideline for demonstrating due diligence in their professional service delivery.

Structure

This document considers three broad components of successful fire dispatch operations: human resources (including management, staffing, training); facilities (including onsite and off-site infrastructure); and technology. Each of these components must be considered in relationship to the others and no one can be considered more important that any others. Each component is considered in a dedicated section of the standard followed by some general points that every operation of this nature must consider.

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Human Resources

A. Management

1) The overall facility shall be under the control of a responsible person, generally referred to as the Communications (Comm) Centre Manager.

2) The Comm Centre Manager shall be responsible for all matters associated with keeping the Comm Centre operational.

3) Every shift shall include a Supervisor or 'senior' dispatcher on duty.

4) The Comm Centre Manager shall ensure that all employees have appropriate security clearances; as a minimum a Criminal Records Check shall be required.

B. Staff Qualifications and Training

1) At minimum, Call Takers/Dispatchers shall have Province of Nova Scotia Grade XII General or equivalent, shall have a minimum of one (1) year experience in emergency incident communications pre-hire and shall be familiar with general fire service operations.

2) Call Takers/Dispatchers shall be in good health and free from physical and mental handicaps that affect their ability to efficiently handle the duties assigned with minimum of supervision and working within a team environment.

3) Call Takers/Dispatchers shall possess excellent oral and writing skills.

4) Call Takers/Dispatchers shall be suited to the role, including being able to remain calm and take decisive action during emergencies.

5) Call Takers/Dispatchers shall be able to remain alert during periods of inactivity and when performing tasks of a repetitive nature.

6) Call Takers/Dispatchers must be able to type at a rate of 25 words per minute with accuracy of 75 per cent.

7) Call Takers/Dispatchers shall have a working knowledge of the Dispatch Equipment and the Standard Operating Procedures used in the operation of the Comm Centre. Where such equipment is installed and used, Call Takers/ Dispatchers shall have a working knowledge of the Nova Scotia 9-1-1 Emergency Telephone Answering Equipment.

8) One to two months on-the-job training shall be provided to Trainee Call Taker/ Dispatchers, depending upon general communications and community knowledge pre-hire. During this period the Trainee shall become familiar with all existing Standard Operating Procedures/Guidelines.

9) Trainee Call Taker/Dispatchers shall successfully complete a Call Takers/ Dispatchers training program recognized by APCO or other authority.

10) Trainee Call Taker/Dispatchers must be supervised at all times by a senior Call Taker/Dispatcher and shall not be left alone in the Comm Centre.

11) Complete and accurate records of all training received by each employee, including operational training on existing and any new installations, procedures or methods shall be maintained.

12) Call Takers/Dispatchers shall have access to information regarding the location of roads and streets and important structures such as hospitals, schools and other areas with high concentrations of people or hazardous goods within the jurisdiction of operation and the Call Takers/Dispatchers are responsible for knowing how to access this information.

C. Staffing Level

1) The number of Call Takers/Dispatchers on duty shall be determined by the following limits:

i. Ninety-five percent of emergency calls shall be answered within 15 seconds and 99 percent of emergency calls shall be answered with 40 seconds.

ii. Ninety-five percent of emergency dispatching shall be completed with 60 seconds.

2) General Operating Guidelines

a. In a facility providing service to multiple jurisdictions or independent agencies, each agency shall establish minimum acceptable performance standards for its requirements within the consolidated minimum performance standards provided in this document. Individualized or unique protocols and procedures shall be avoided unless a compelling reason can be presented for exceptions. Each 'client' agency shall enter into a contract with the Comm Centre Management/owner to deliver service to the accepted standard.

b. Dispatch of mobile units in response to emergency calls shall be recorded. Records shall indicate units responding to all emergencies, time of acknowledgment by unit(s), time of arrival of first unit at the scene and time available for assignment.

c. If applicable, all emergency calls shall be answered and dispatched in the manner prescribed in the Nova Scotia 9-1-1 Standard Operating Procedures and in a manner suitable to the agency being dispatched.

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d. Complete and accurate records of all observations, circuit interruptions, fault reports and other anomalies shall be maintained.

Facilities

A. Physical Plant Requirements – Planned New Structures

1) Buildings to be used as Comm Centers are to meet the requirements of the current Nova Scotia Building Code Act (Building Code). Comm Centers shall not be located below grade, unless the structure has been specifically designed for such location.

2) Comm Centers shall be located in buildings approved for compliance by the local authority having jurisdiction (AHJ) and shall be occupied only after issuance of an Occupancy Permit.

3) Buildings shall not be situated on a flood plain where the operations floor elevation is below the predicted 100 year flood level.

4) Buildings to be used as Comm Centres shall not be located over main water lines or have main water lines passing through them.

5) All new buildings being constructed and intended for use as a Comm Centre shall be designed to achieve Post Disaster criteria pursuant to Part 4 – NBC.

6) A fire sprinkler system shall be installed throughout buildings housing Comm Centres and electrical panel location(s) if required by the Building Code.

7) In addition to any requirements of the Building Code, if the Comm Center is not a stand-alone structure, it shall be adequately protected from any adjacent suits or units by a fire separation having a fire-resistance rating not less than 1 hour.

8) The facility requires a current fire safety plan prominently posted. The fire safety plan must outline the procedures that staff must follow in the event of a fire involving electrical equipment and normal combustibles.

9) The workspace shall have a minimum of two five lb. CO_2 fire extinguishers located near exits.

10) Provisions shall be made for staff washroom and lunch areas to be directly accessible from the operations room.

11) Heating, ventilation and air-conditioning shall be provided in the Comm Centre in accordance with Part 6 – National Building Code (NBC). Provision shall be made for appropriate comfort levels for sedentary work activities in 24/7 operations. Heating, ventilation and air conditioning, if provided, shall be provided by systems with controls serving only the Comm Centre.

12) Appropriate seating and workstations shall be provided for the full staff compliment for each operating shift.

13) Entry to the Comm Centre shall be restricted to authorized persons only and controlled by the operations staff. An Entrance Log shall be employed:
   - ☐ All personnel who are not exempt must sign and time-stamp the log upon entry and upon leaving the Comm Centre;
   - ☐ Only persons conducting official business may be determined exempt by the Comm Centre Manager.

14) The Comm Centre shall be equipped with an automatic fire alarm system which shall be monitored at a remote location. An annunciator panel may be installed near the Comms workstation allowing staff to silence and-or acknowledge the sounding fire alarm.

B. Physical Plant Requirements – Existing Structures

1) Existing structures being used as a Comm Centre must comply with requirements of the National Fire Code Act (Fire Code) in terms of means and locations of access and egress points for the maximum number of occupants in the space. The local authority having jurisdiction can provide the information required to comply with the Code requirements.

2) In the event that an existing building being used as a Comm Centre is above the 50 years flood level but below the predicted 100 year flood level, there must be a fully redundant alternate location to which staff and essential equipment can be promptly relocated. In no case shall a Comm Centre be located in a facility where the floor is below the predicted 50 year flood level.

3) An existing building being used as a Comm Centre should be retro-fitted with a residential-type fire sprinkler system in areas occupied as a Comm Centre.

4) In addition to any requirements of the Building Code, the Comm Center shall be adequately protected from any adjacent suites or units by a fire separation having a fire-resistance rating not less than 1 hour.

5) The facility requires a current fire safety plan prominently posted. The fire safety plan must outline procedures that staff must follow in the event of a fire involving electrical equipment and normal combustibles.

6) The workspace shall have a minimum of two five lb. CO_2 fire extinguishers located near exits.

7) Where reasonably practicable, provisions shall be made for staff washroom and lunch areas to be directly accessible from the operations room.

8) Provision shall be made for appropriate comfort levels for sedentary work activities in 24/7 operations. Heating, ventilation and air conditioning, if provided, shall be provided by systems with controls serving only the Comm Centre.

9) Appropriate seating and workstations shall be provided for the full staff compliment for each operating shift.

10) Entry to the Comm Centre shall be restricted to authorized persons only and controlled by the operations staff. An Entrance Log shall be employed:

- ☐ All personnel who are not exempt must sign and time-stamp the log upon entry and upon leaving the Comm Centre;
- ☐ Only persons conducting official business may be determined exempt by the Comm Centre Manager.

11) If an automatic fire alarm system is in service in the facility it shall be monitored at a remote location. An annunciator panel may be installed near the Comms workstation allowing staff to silence and-or acknowledge the sounding fire alarm.

C. Electrical Systems Requirements

1) All electrical wiring and equipment shall be installed according to the requirements of the current Canadian Electrical Code (CEC).

2) All electrical equipment in the facility shall be approved for, and used only for, its intended application.

3) Transient voltage surge protection shall be provided between the incoming electrical service for the building and the power panel feeding the dispatch operations equipment.

4) The electrical design shall be performed by a Professional Engineer or where a facility exists it shall be reviewed by a Professional Engineer to ensure it complies with all the electrical requirements of this standard.

5) Reference to any code, standard or regulations shall be the most recent edition that is in force at the time of design or review.

D. Electrical Power Supply Sources

1) The Comm Centre shall be powered by a primary source of power from the electric utility and an emergency (back-up generator) source of power; both shall be adequately sized to operate all equipment associated with the proper operation of the Centre on a continual basis. The emergency source of power (back-up generator) shall consist of an engine driven generator complete with automatic start and fully automatic transfer switch and a storage battery having a minimum capacity to crank the engine at -35 degrees C.

2) The generator shall have sufficient capacity to operate the following, but not limited to:

a. Comm Centre phone equipment
b. Dispatch communications equipment
c. Operational lighting
d. Fire alarm and fire protection systems (fire pump if applicable)
e. Recharging of the generator battery system
f. Generator fuel transfer pump (if applicable)
g. Sump pumps (if applicable)
h. Security system (if applicable)
i. Heating, Ventilation, and Air Conditioning
j. Limited kitchen equipment (microwave oven, refrigerator)

3) The complete emergency power system shall meet the installation, monitoring, performance and operational requirements of CSA C282-00- Emergency Electrical Power Supply for Buildings. If applicable, wiring from the generator to the fire pump shall be fire rated.

4) Fuel for the generator shall be stored in accordance with the applicable codes, standards and regulations. Sufficient fuel must be stored on site to allow for twenty-four (24) hours of continuous operation of the generator to supply full power to all necessary loads.

5) Where the possibility exists that during a transfer of power or upon initial loss of power a necessary system may lose essential information or may shutdown and cannot be restored until power restores, these systems shall be supplied with an uninterruptible power supply (UPS) to operate the system for at least two (2) hours.

6) The Comm Centre shall be equipped with emergency lighting that shall immediately illuminate the entire Centre upon failure of the primary source of power. The emergency lighting shall be capable of providing sufficient lighting to permit continuation of all operations until the primary source of power is restored or until emergency source of power supplies stable power. The National Building Code requires a minimum 20 minutes duration, and 2 hours in main electrical rooms where the transfer switch is located.

Technology

A. Commercial telephone system

1) There shall be at least one (1) unlisted telephone line located at the Comm Centre; the number of lines depends upon the population served by the Comm Centre.

2) A non-emergency telephone number listing for each emergency service provider being dispatched shall be recorded in their local white pages directory. Telephone number listings for each emergency service provider agency shall be recorded in the on-site documentation.

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3) If the call answering and emergency dispatching personnel are not located in a common facility, there shall be at least two independent circuits provided between the call answering and emergency dispatching personnel.

4) If the Comm Centre monitors private automatic alarm systems, they shall route through to a separate number and shall not use the 9-1-1 Emergency Telephone System.

B. Dispatching systems

1) When the emergency notification system equipment is used for non-emergency communications for various agencies, the Dispatchers shall not action calls of a routine nature (IE. Pager Test) when the routine call may interfere with the full and proper processing of any emergency call.

2) Unless the total quantity of emergency calls processed are less than 600 per year per Comm Centre, two (2) separate means of emergency notification shall be provided. A circuit terminating at a telephone instrument only is not considered as either of the two separate means of emergency notification.

3) At least one emergency notification method shall incorporate one of the following:

- ☐ A supervised wire circuit;
- ☐ A radio channel/talkgroup;
- ☐ A microwave and/or radio link supervised carrier channel;
- ☐ A polling or self-interrogating radio or microwave radio system.

4) The primary dispatch and call answering equipment must have full redundancy within the facility such that failure of one component does not necessitate relocation to the back-up facility.

C. Computer Aided Dispatch Systems

1) Where a Comm Centre uses Computer Aided Dispatch (CAD) it shall be configured to receive and process the Automatic Location Information (ALI) and the Automatic Number Identification (ANI) to the standards established by EMONS and the Enhanced 911 service provider.

2) In addition to the CAD system a manual backup system shall be provided and in a fully functioning state should failure of the CAD system occur.

3) When a CAD system is employed, it shall be dedicated solely to servicing public safety organizations.

4) A third-party text message (SMS or email) notification service may be offered/supported by the Comm Centre, however this is not considered to be a primary emergency notification method. Where feasible, such text message notification service will be fully integrated with any existing CAD system.

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D. Records and Recording

1) All emergency calls received, regardless of the source, shall be voice recorded and tabulated to indicate the date, time and source of the call.

2) All emergency calls dispatched shall be recorded and tabulated to indicate the date, time and agency notified in a paper or electronic format and filed for future reference by the agency of jurisdiction.

3) Acknowledgement by mobile units responding to emergency calls shall be recorded. Records shall indicate units responding to all emergencies, time of acknowledgment by unit(s), time of arrival of first unit at the scene and time available for new assignment.

4) Complete and accurate records of all fire alarm tests shall be maintained. Any failed test alarm shall be immediately reported to the agency of jurisdiction.

5) Complete and accurate records of all observations, circuit interruptions, fault reports and other anomalies shall be maintained with the following noted:

- ☐ Date and Time of observation;
- ☐ Name of Call Taker/Dispatcher;
- ☐ Note of any corrective action or test(s) performed by Call Taker/Dispatcher;
- ☐ Date and time Fault/Observation reported to Maintenance/Repair Organization;
- ☐ Date and time Maintenance/Repair Organization arrived on site;
- ☐ Date and time of Repair Completed;
- ☐ Description of work performed or fault corrected and name of servicing party.

E. Timing Equipment

1) The clock for the main voice record-keeping device in the Comm Centre shall be verified weekly to ensure synchronization with Universal Time Coordinated (UTC).

2) All equipment in the dispatch facility (computers, call answering and dispatch equipment etc.) with a clock shall be maintained within +/- 5 seconds of the main voice recording device.

General Requirements

A. Facility Overflow Capability

1) In the event that a fire dispatch facility becomes overwhelmed by the volume of incoming requests for service or is disabled by local circumstances (IE. inclement weather or catastrophic incident) to the extent that the operators or the telephone or radio equipment is unable to meet the service delivery standard specified in **Human Resources** part C., there shall be provisions for incoming calls to be rerouted to an alternate dispatch facility which has the appropriate staff, equipment, information and systems to allow dispatchers to undertake the duties

of the primary facility until the call volume returns to a level to allow the primary facility to resume full responsibility.

B. Backup Facility

1) Every Comm Centre providing emergency dispatch or notification services shall have a reliable, fully functional backup facility sufficiently geographically separated from the primary facility so as to minimize dependence on the same electrical distribution, sanitation and transportation infrastructure.

2) A backup facility shall be maintained in full standby mode such that dispatchers can be relocated to it on short notice and immediately resume full service to clientele.

3) The backup facility communications equipment shall be tested at least once a month. At least once every six months the backup facility shall be operated for one full shift.

C. Providing Service for Multiple Client Agencies

1) When a Comm Centre provides service for multiple client agencies, a universal protocol for dispatching fire services shall be developed through a consensus of clients and Comm Centre owner/manager. This protocol shall be clearly described and provided for use by the Comm Centre staff. Only in extenuating circumstances shall non-conforming protocols be used when dispatching fire services.

2) Although not a mandatory part of this standard, it is strongly recommended that Service Level Agreements (SLA) be signed between each of the client agencies and the Comm Centre. A model SLA is attached as Appendix A.

D. General Priority of Service

1) Any emergency which, in the judgment of the Dispatcher, is life threatening, shall take precedence over all other traffic.

2) Public Safety emergency communication shall take precedence over all other work or communication activities performed. Other work shall not interfere with the proper handling of emergency service calls.

E. Business Continuity-Succession Planning

1) The owner or manger of a Comm Centre providing emergency call taking, dispatching, or notification shall develop and maintain a business continuity plan to acknowledge the possibility of catastrophic events either physical or human.

2) The owner or manager of a Comm Centre shall develop and maintain a succession plan for continuation of service for a reasonable period of time in the event of a loss of any key personnel from the organization.

Fire Service Association of Nova Scotia
Fire Dispatch Standards

APPENDIX V: FIRE DISPATCH SERVICE LEVEL AGREEMENT

This Service Level Agreement between_____of the first part

(the service provider) and_____of the second part (the service purchaser), outlines the services to be provided by the service provider to the service purchaser and the agreed-upon fees to be paid by the service purchaser upon satisfactory delivery of the said service(s).

DEFINITIONS

The following definitions shall apply to terms used in this agreement:

Agreement: this agreement between the party of the first part and the party of the second part which may be amended from time to time in writing by mutual agreement of the parties and may include further Statements of Work attached hereto.

Automatic Alarm: an alarm which is automatically activated by intrusion, fire, or other cause in an alarmed building or property and sounds/displays at one or more remote locations.

Billing Invoice: An invoice issued by the party of the first part to the party of the second part in accordance with the schedule of payments agreed to in this agreement.

Business Day: the normal business day of the service provider shall be 09:00 to 17:00 from Monday to Friday inclusive, with the exception of statutory holidays. The normal business day of the service purchaser shall be from 09:00 to 17:00 from Monday to Friday; this does not apply to emergency services providers which typically are 'open for business' 24 hours/365 days/year.

Change Order Request: a written request from the service purchaser to amend the services provided by the service provider. A Change Order Request shall be duly issued by an authority of the party of the second part; the service provider shall respond to the Change Order Request in writing outlining an understanding of the changes requested, any implications to the provided

service, and the cost (initial capital and recurring) implications to the party of the second part. No Change shall be initiated by the party of the first part until the party of the second part acknowledges the written response and duly authorizes it to proceed.

Client: the client(s) of the service provider are the emergency services provider agencies (generally fire or police services) operated by the service purchaser (typically a municipality or government department).

Effective Date: the date(s) upon which this agreement, and any attachment hereto shall come into effect.

Incident: an occurrence to which a client of the service provider is requested to attend; an incident shall be deemed to include the response of the client personnel, their activities at the incident scene, and their return to station and full-service preparedness.

Personal Information: the service provider, the service purchaser, and the client(s) are governed by prevailing legislation and regulation regarding the protection of privacy and identity of individuals. To wit, a client shall not request, and the service provider shall not provide any information in a radio broadcast which connects the name and address or any other private, personal information of any individual requesting emergency services.

Service Levels: means the service objectives and availability standards to be met by the service provider in the course of providing the service.

Service Response: means the documented response capability of the client agencies served by the service provider; to wit, each client must provide a timely list of response capabilities and jurisdiction such as ice/water rescue, vehicle extrication, high angle rescue; and the actual response to an incident upon request.

Service Specification

1) The service provider shall provide the services as outlined herein on a continuous basis from the commencement of this agreement until its scheduled conclusion unless an agreement to extend or replace the agreement is executed by both parties.

a. The service provider shall answer in-coming calls on line(s) maintained by the service provider or the service purchaser (as mutually agreed) within 15 seconds of the initial ring-tone 95% of the time and within 40 seconds of the initial ring-tone 99% of the time. Failure to answer incoming calls within these time frames shall be deemed to be a breach of service by the service provider.

2) Each client agency shall provide protocol details to be used by the service provider to activate the devices issued to its personnel; to the extent reasonably practicable, the client agency shall adopt a single standard protocol being used by the service provider (IE. primary and secondary pages; number of repeat pages per incident; protocol for back-up in the event of no response). As well as the notification protocol, each client agency shall provide alternate (back-up) agency information in the event it is unable to respond or an equipment malfunction prevents it from being notified.
3) The service provider shall act on the incoming request for a service response within 60 seconds 95% of the time. This means the activation of pagers, telephone calls, or other devices provided to their personnel by the client according to the protocol established by the client. Failure to activate the appropriate notification equipment within this timeframe shall be deemed to be a breach of the service by the service provider.
4) The client agency(s) shall use the Trunked Mobile Radio System (TMR2) to acknowledge receipt of a notification of a request to respond within two (2) minutes of the initial broadcast of the notification.
    a. If the client agency has not acknowledged receipt of notification within two (2) minutes of the initial broadcast, the service provider shall rebroadcast the entire notification as if it were the initial broadcast.
    b. If the client agency has not acknowledged receipt of notification of a request to respond after an additional two (2) minutes (four minutes from the initial broadcast) the service provider shall refer to the alternate (back-up) client agency designated by the primary client agency and attempt to notify this client agency as per its stated protocol.
    c. After the alternate client agency has been notified, the service provider shall attempt one additional notification of the initial client agency.

d. The service provider shall have no further obligation to notify the initial client agency for this incident.

5) The client agency shall conduct all two-way radio communications with the service provider using the Trunked Mobile Radio System (TMR2) on the assigned dispatch talk-group, unless not reasonably practicable. The service provider has no obligation to monitor any other means of two-way radio communication with the client agency.
6) The client shall not request, and the service provider shall not provide any information in a radio broadcast which connects the name and address or any other private, personal information of any individual requesting emergency services.
7) The Service Provider hereby stipulates that they meet all requirements of the latest version of the FSANS Fire Dispatch Standards as published on the FSANS website, with the following specific exceptions: (list by Section number)

Service Fees and Penalties

The service provider shall issue an invoice to the service purchaser based on the following formula:

Population x *Rate* /12 for each month of service.

Population is the most recently published population of the service purchaser jurisdiction.

Rate is the per capita rate offered by the service provider to the service purchaser.

The product of these two numbers is divided by twelve (12) to reach a monthly recurring charge (MRC) for invoicing.

In the event that the service provider is found to be in breach of contract with respect to any one incident, the service purchaser shall be authorized to withhold a portion of the MRC equal to the percentage of incidents for which the service provider is in breach in any one monthly period. For further clarification, if the service provider answers 25 calls for service for a particular client

agency in a month and is in breach of contract for two of those calls for service, the ratio of withholding shall be 2/25 x the MRC.

EMERGENCY EVACUATION OF PRIMARY FACILITY

The service provider shall have a written protocol for staff to follow in the event that the primary facility becomes uninhabitable, essential public utility service to the facility is disrupted, or essential equipment owned by or operated by (regardless of ownership) the service provider is disabled. The alternate facility that staff will migrate to will be fully redundant with facilities and equipment to receive incoming calls for service and to broadcast notifications to the client agencies with no necessity for the client agencies to change their operating procedures for receiving or acknowledging calls except for a brief (less than two hours) transition period.

Failure of the service provider to provide the above protocol, facilities and equipment and maintain same in a 'hot standby' status shall be deemed to be a breach of contract.

Terms of Service Level Agreement

This Service Level Agreement shall come into force and effect at 00:00 hrs on

_____and will expire at 23:59 on _____

Date Date

unless otherwise terminated or extended by mutual agreement and exchange of written notification between the service provider and the service purchaser.

This Service Level Agreement is Hereby Executed

Between_____)

) Witnessed by

For the Service Provider on_____day of_____2018)

)

)

_____) _____

)

_____

And_____)

) Witnessed by

For the Service Purchaser on_____day of_____ 2018)

)

)

_____) _____

APPENDIX VI: SAMPLES OF COUNCIL FIRE SERVICE POLICIES

SAMPLES OF COUNCIL FIRE SERVICE POLICIES

What follows are samples of Municipal Fire Service policies currently in effect within the Province of Nova Scotia. (*Municipality names have been removed*). These are presented for illustrative purposes only. These presentations do not necessarily mean that GA endorses nor concurs with some of the policy content.

Governance and Oversight of Policy and Service

a) The Municipality shall determine levels and standards of services to be provided to its residents through the operating and capital funding approval process

b) The Chief Administrative Officer has oversight responsibility and will act as the liaison between the Municipality and the Registered Service Providers. The Chief Administrative Officer is responsible for monitoring and reporting upon the Municipality's receipt of services and standards to the level agreed to by all parties through the annual registration process, including the review of finances, call volume and method of responses, zone definition and service type definition, apparatus and equipment requirements, and other matters as they arise.

c) The Municipality shall establish a Fire Chiefs Advisory Committee, consisting of one representative from each Registered Service Provider, the CAO and if established the Fire Services and/or Emergency Coordinator. The purpose of the committee is to provide information and advice to Council on operational issues such as capital asset management, communications, planning, costs of service, impediments to efficient and effective service, and feedback on proposed amendments to this Policy, for consideration of Council.

d) Each Registered Service Provider is responsible to deliver the services to the minimum standards accepted, and to:
(i) Reasonably protect and preserve human life and property from fire, threat of fire and/or other emergency to the best of its ability;

(ii) Promote and encourage fire prevention;

(iii) Through mutual-aid agreements, support and assist other service providers

Volunteer Fire Department Financial Reporting

Annual operating funding as requested by local volunteer fire departments via tax levy, will be paid to volunteer fire departments based on the assessed value of property in the fire district served by the department. A Financial Statement reviewed by an accounting firm, accountant, etc. in reasonable detail, and acceptable to the Municipality, for the previous year must be submitted to the Municipality before any funds are advanced by the Municipality pursuant to an Area Rate. The Municipality reserves the right to require an independent Audit to be carried out at the expense of the Fire Department by an Auditor appointed pursuant to Section 42 of the Municipal Government act. The Municipality may choose to have a full financial audit from our annual appointed auditors, at the expense of the Municipality, if there is just cause for such an audit.

Funding is strictly to be used for the purposes for activities related to emergency responses, training, equipment, operation and maintenance of stations and equipment, insurance, loans, interest, and any other funds deemed necessary for the provision of a safe, prudent, and responsible fire service.

When submitting your financial statements, please fill out the provided forms. Statements not on these forms will not be accepted.

The Levy may be calculated in one of two ways:

1: a percentage on the dollar of the assessment value of the property, either Municipality suggested rate for the year or a rate agreed upon by a publicly advertised meeting of the fire department or

2: a uniform charge on each property assessment on the area. The method of levy shall be indicated at the time of the levy requested.

Volunteer Fire Department Participation

TERMS: Annual operating funding as requested by local volunteer fire departments via tax levy, will be paid to volunteer fire departments based on the assessed value of property in the fire district served by the department. Prior to the release of any funds, each fire department must provide a list of member/members who attend, with reasonable regularity, meetings of the Municipal Mutual-aid Association. These meetings will be scheduled from time to time unless otherwise scheduled by the Association.

Volunteer Fire Department Training

TERMS: Annual operating FUNDING as requested by local volunteer fire departments via tax levy, will be paid to volunteer fire departments based on the assessed value of property in the fire district served by the department. Prior to the release of any funds, a record of training taken by at least 2 members of the department for any aspect of fire service training, excluding medical first response training and first aid, from the Nova Scotia Fire School, or acceptable alternative from the previous year must be produced.

or

A signed record of 5 in house training sessions or non-Nova Scotia Fire School sessions with dates, names, topics covered, etc. from the previous year. These shall be signed by the chief (authority having jurisdiction), deputy chief, and two other fire fighters.

Financial Matters

a) Council, through the annual budgeting process, may provide capital and operating funding to Registered Service Providers following the submission of a budget request through the CAO who will review and forward to Council. Representatives from each Registered Service Provider shall attend budget meetings to inform Council of operational matters and answer questions regarding service response.

Registered Service Providers shall use all funds provided by the Municipality for services responsive to their registration as a service provider to the Municipality and not for other activities nor for services for other Municipalities except as authorized in writing by the CAO or Council.

Council may require proof of compliance with its policies before advancing any funds.

A budgetary allocation for funding shall be provisional in the event that the Registration process has not been completed as at the budget approval date.

b) Operating Budget – Operating budget submissions shall be submitted within the time frame set by the Municipality and on a form suitable to the Municipality and include, at minimum:

(i) The actual or projected actual operating expenditures of the current budget period, categorized as determined by the Municipality;

(ii) The current year budget;

(iii) The proposed budget request;

(iv) A description supporting any significant (greater than 5%) change from the prior year.

c) Operating deficits incurred at the end of a given year are to be included in the estimates of the next budget year unless otherwise provided for from reserves or other external sources.

d) Capital Budget – Each Service Provider will file capital apparatus and equipment schedules on a form acceptable to the Municipality. The Municipality's acceptance of the form is not agreement or approval of projected capital expenditures in future years but a document to be used for planning purposes.

Each Registered Service Provider will provide an annual update of the capital apparatus and equipment schedules as part of the budget process.

e) Emergency Funding – Council may provide funding outside of the annual budgeting process, upon request of the Registered Service Provider. Emergency funding normally would be considered only where the Registered Service Provider has experienced unexpected costs requiring immediate action by the Registered Service Provider.

A request for Emergency Funding must be made to the Chief Administrative Officer who will review the circumstances and make a recommendation to Council.

f) Reserve Funds – Council may establish reserve fund (s) for fire and emergency purposes such as for the capital cost of equipment or apparatus and training, as recommended by the Director of Finance and accepted by Council. The Municipality, Registered Service Providers or both may hold the reserved funds which:

(i) May be funded by operating surpluses or other funding sources, upon recommendation of the CAO and approval of Council.

(ii) Must be drawn down to offset operating deficits, as repayment in the current year, or else must be included in the budget estimates for the upcoming year.

(iii) May be used to fund the purchase of fire and emergency equipment or apparatus if the use of the reserve funds for that purpose is approved by the Municipality.

g) It is a policy of the Municipality to use the most cost-effective method of funding for capital equipment and apparatus purchases at the best value and lowest cost to the Municipality, and all Registered Service Providers are required to conform to that policy.

h) Council may, at its discretion grant or loan money or assets or guarantee loans for Registered Service Providers, subject to section 8(f) of this Policy.

i) Financial Statements – Each Registered Service Provider shall provide to a review engagement standard, independently reviewed financial statements for the period April 1st to March 31st, in keeping with the approved budget period by July 31st of the new fiscal year.

Registered Service Providers are encouraged to establish a fiscal year congruent with the Municipality, namely April 1st to March 31st.

Where the Municipality does require audited financial statements of a Service Provider, the Municipality shall pay the cost.

j) Funds received through volunteer efforts, donations, bequests or endowments (intended specifically for the furthering of incorporated purposes) are not subject to the Municipality's determination of operating or capital budgets.

Procurement Practices

Except to the extent of any written waiver from the Municipality, any Registered Service Provider receiving funding of $25,000 or higher from the Municipality for any single capital project must use a procurement practice which meets or exceeds those used by the Municipality. Service providers receiving funding agree to provide documentation of expenses or other financial information upon request.

Grants under the $25,000 threshold for any single capital project will be evaluated on a per application basis. If deemed necessary for the nature of the project, the Registered Service Provider may be required by the Municipality to meet the minimum procurement standards of the Municipality.

Training

The health and safety of volunteer Service Providers is very important to the Municipality. The Municipality will support minimum training levels for Active Volunteers, officers and chiefs to a qualified level and encourages training levels as outlined and amended from time to time by the Fire Services Association of Nova Scotia in conjunction with the Fire Marshall's Office of the Province of Nova Scotia. Registered Service Providers agree to train volunteers to this minimum level.

At no time will a Service Provider knowingly place a volunteer in a position for which he or she is not qualified or competent to act with an appropriate level of skill, fitness, training and judgement. The Municipality acknowledges the likelihood of fluctuations in training budgets due to attrition of volunteer members. Service Providers acknowledge that the annual funding levels in place at the time of adoption of this Policy includes sufficient funding for a volunteer attrition or turnover rate of 10%.

Service Levels

In this section, the Municipality sets out the minimum service level standards acceptable through the registration process for the specified activity and zone. Where the Municipality or a Registered Service Provider does not currently meet the minimum service standard, Council will endeavor to provide funding, as budgetary limitations allow, to bring the service up to the level adopted under this Policy and/or to create additional service for the Municipality.

General Service (or Operating) Guidelines

a) The Municipality and Registered Service Providers recognize the fundamental principle that each Registered Service Provider and volunteer will, to the best of their ability and judgment, refrain from undertaking any activity unless the benefit of the activity appears at the time to outweigh the risks of the activity, including any risks arising from deficiencies or limitations of trained personnel, command/management expertise and equipment available at the site.

b) The Municipality and Registered Service Providers acknowledge the operational response protocol to be used within the Municipality as the Incident Command System (ICS) which is a standard on site management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. Registered Service Providers agree to develop operational guidelines that allow for the safe and efficient operation of their own department during emergency and day to day operations which

complements the ICS. Once established, the authority to deviate from the established guidelines rests with the Incident Commander who is solely responsible for the results of the deviation.

c) The operational practices and guidelines established by each Registered Service Provider shall attempt to meet or exceed National Fire Protection Association (NFPA) standards, Maritime Fire Chiefs Association, the Office of the Fire Marshal, Provincial laws, and recognized firefighting and emergency response practices.

d) Alternatively, Registered Services Providers may choose to establish one uniform operational guideline to apply across the Municipality which shall meet the principles outlined in this Section.

Automatic Aid Protocols

CALL RESPONSE STANDARDS

The Municipality hereby adopts an automatic aid protocol based on closest available service provider to a call within a travel-distance of 3 km for commercial/industrial areas, 5 km to a primarily residential serviced areas and 8 km for un-serviced areas. Numbers and type of equipment called out will be based on the nature or type of call. The first Registered Service Provider to be called is the Registered Service Provider closest to the call, with the subsequent service providers called in order of closeness to the call location.

Automatic Aid protocols, as established by the Registered Service Providers, for the dispatching of additional resources outside of a Registered Service Provider's own department will be designed in the most efficient and effective manner for the service levels accepted by the Municipality and will consider availability of sufficient first responders to meet:

a) Service Delivery level and standard – Activation response-times for nature of emergency based on time of day, day of week, etc.

b) Specialized equipment and training outside of departments' registered service level.

c) Additional resources necessary to respond to expected or observed conditions including onsite, environmental and geography.

d) Ability of communications/dispatcher to meet protocol requirements.

PERSONAL PROTECTION EQUIPMENT

a) Following appropriate orientation, probationary period and training, each Active Volunteer will be outfitted with the appropriate Personal Protection Equipment sufficient for the duties for the services provided, and which will be replaced on an "as needed" basis.

b) Active Volunteers are responsible for the proper care and keeping of firefighting equipment provided to them until they retire or resign from the fire department.

APPARATUS RIGHT SIZING FOR THE REGION- LOCAL AVAILABILITY

The Municipality reserves the right to adopt a fire services capital asset management strategy for future needs of fire apparatus and operational support equipment which may be scheduled for replacement, in responding to and mitigating fire and emergency incidents. The development and adoption of a fire services capital asset management strategy will consider best-practices in fire protection which considers, for example:

- Operational performance
- Fire Service Delivery objectives
- Water Supply
- Automatic Aid, mutual-aid and service agreements
- Emergency call volumes and types of incidents
- Existing apparatus inventory

FACILITY/BUILDING

The Municipality will provide operating and capital funding for fire station costs proportionate to the support of services accepted by and delivered to the Municipality.

Disputes with Interpretation of this Policy

Any dispute, controversy or claim between the Municipality and a Registered Service Provider, or between two or more Registered Service Providers regarding the interpretation or application of this Policy will first be discussed between the parties in an effort to find an amicable solution.

If over a period of up to 60 days direct discussions between the parties the dispute is not resolved, it shall be the subject of mediation (if agreed to between the parties) and/or arbitration by a single Arbitrator, consensually selected or appointed by the Nova Scotia Supreme Court in the absence of consent, without right of appeal on questions of fact or law or mixed fact and law, with jurisdiction of the Arbitrator to determine procedural and jurisdictional issues and otherwise conforming with the *Commercial Arbitration Act* or successor legislation. By applying for Registration under Part X of the Municipal Government Act, and by the Municipality's Registration of a service provider, Service Providers and the Municipality mutually acknowledge that this clause constitutes an arbitration agreement precluding access to the Courts prior to Arbitration.

Morals Clause

Registered Service Providers and its members shall not commit any act or do anything which might reasonably be considered:

(i) to be immoral, deceptive, scandalous or obscene; or

(ii) (ii) to injure, tarnish, damage or otherwise negatively affect the reputation and goodwill associated with the Municipality.

Internal Disciplinary Matters

Registered Service Providers are responsible for dealing with disciplinary matters regarding their Active Volunteers and their officers. The Municipality shall not be a party to a dispute between a Registered Service Provider and its members or officers for discipline, seniority, promotion or entitlement to individual honorariums for volunteers, nor to any dispute between members or

between members and officers or between officers. Nor shall any funding provided by the Municipality be used by a Registered Service provider to hire legal counsel or other professionals to deal with such matters, except with the express written permission of the Municipality.

APPENDIX: VII: NFPA HEALTH & SAFETY

The National Fire Protection Association standards, offer requirements for station facilities, but do not offer space requirements, for example;

NFPA-1500: Standard on Fire Department Occupational Safety, Health, and Wellness Program

Chapter 10 Facility Safety

"10.1.2 Fire departments shall provide facilities for disinfecting, cleaning, and storage in accordance with NFPA-1581."

NFPA-1581: Standard on Fire Department Infection Control Program, Chapter 10 addresses Facility Safety

Chapter 5 Equipment Storage Areas, Cleaning Areas, Disinfecting Facilities, Disposal areas

"5.5 Equipment Storage Areas.

5.5.1 Emergency medical supplies and equipment stored in fire department facilities, other than those stored on vehicles, shall be stored in a dedicated, enclosed area to protect them from temperature degradation, contamination, and other physical damage.

5.5.4 Potentially Contaminated Personal Protective Equipment.

5.5.4.1 Potentially contaminated personal protective equipment shall be stored in a dedicated, well-ventilated area or room.

5.5.5 Contaminated Storage.

5.5.5.1 Areas or containers for the temporary storage of contaminated medical supplies or equipment prior to disinfection or disposal shall be separated physically from members in facilities or on vehicles."

APPENDIX VIII: GUIDE TO REFERENCE STANDARDS

	AGENCY	REFERENCE
1	Fire Underwriter Surveys	Dwelling Protection Guide
2	Fire Underwriter Surveys	Public Fire Protection Classification
3	Fire Underwriter Surveys	Table of Effective Response
4	Fire Underwriter Surveys	Technical Bulletin: Insurance Grading Recognition of Used or Rebuilt Fire Apparatus
5	Fire Underwriter Surveys	Technical Bulletin: Requirements for Aerial Apparatus
6	Fire Underwriter Surveys	Insurance Grading Recognition of Used or Rebuilt Apparatus
7	Fire Underwriter Surveys	Water Supply for Public Fire Protection
8	Municipality of the County of Richmond	Richmond Integrated Community Sustainability Plan (ICSP)
9	Municipality of the County of Richmond	Inter Municipal Memorandum of Understanding for the Provision of Fire Protection Services for the Residences and Businesses of Point Tupper, Richmond County.
10	Municipality of the County of Richmond	Municipal Services Emergency Management Mutual-aid Agreement 2007
11	Municipality of the County of Richmond	Municipality of the County of Richmond - Registration Policy (1999)
12	Municipality of the County of Richmond	Richmond County Profile 2016
13	National Building Code of Canada 2015	Article 3.2.5.7 Water Supply
14	National Fire Protection Association	NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
15	Fire Service Association of Nova Scotia	Dispatch Minimum Standards - 2017
16	Fire Service Association of Nova Scotia	Fire Dispatch Service Level Agreement
17	National Fire Protection Association	NFPA 1001: Standard for Fire Fighter Professional Qualifications
18	National Fire Protection Association	NFPA 1081: Standard for Facility Fire Brigade Member Professional Qualifications
19	National Fire Protection Association	NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting
20	National Fire Protection Association	NFPA 1201: Standard for Providing Fire and Emergency Services to the Public
21	National Fire Protection Association	NFPA 1300: Standard on Community Risk Assessment and Community Risk Reduction Plan Development
22	National Fire Protection Association	NFPA 1500: Standard on Fire Department Occupational Safety, Health, and Wellness Program

	AGENCY	**REFERENCE**
23	National Fire Protection Association	NFPA 1581: Standard on Fire Department Infection Control Program
24	National Fire Protection Association	NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments
25	National Fire Protection Association	NFPA 1901: Standard for Automotive Fire Apparatus
26	National Fire Protection Association	NFPA 1911: Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles
27	National Fire Protection Association	NFPA 1912: Standard for Fire Apparatus Refurbishing
28	National Fire Protection Association	NFPA 1932: Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders
29	Nova Scotia Joint Municipal Fire Services Committee	Model Fire Service Registration Policy
30	Nova Scotia Fire Safety Regulations	Section 51, of the Fire Safety Act, S.N.S 2002, c. 6, (effective January 14, 2020) NS Reg, 3/2020
31	Nova Scotia Municipal Governance Act	Chapter 18 of the Acts 1998 amended 2019. Part X Fire and Emergency Services § 293 - Municipal Role § 294 - Registration as a Fire Department § 296 - Policies § 300 - No Liability § 301 - When Action Lies § 302 – Mutual-aid
32	Office of the Ontario Fire Marshal	Matching Resource Deployment and Risk
33	Office of the Ontario Fire Marshal	Ontario Fire Marshal's Office, Operational Planning: An official Guide to Matching Resource Deployment and Risk, January 24, 2011.

APPENDIX IX: SAMPLE BENEFICIAL OWNERSHIP AGREEMENT

Beneficial Ownership Agreement

Between:

Municipality of the [redacted] ("the Municipality")

-and-

[redacted] & District Volunteer Fire Department ("Fire Service Provider")

Beneficial Ownership Agreement

Whereas the Municipality has funded operating expenses of the Fire Service Provider and capital expenses for the Fire Service Provider, including capital expenses for fire and/or other emergency services equipment ("Equipment") and plans to continue to do so as authorized from time to time by its Council;

Whereas in consideration of such funding, Fire Service Provider agrees to acknowledge beneficial ownership of equipment funded in the past, present or future by the Municipality as provided for herein;

NOW THEREFORE IT IS AGREED:

1. Fire Services Provider acknowledges that capital funding for Equipment has been and is being prospectively provided by the Municipality so that the Equipment will be available for use of the Fire Service Provider and other Fire Departments in providing fire and/or other emergency services to the Municipality.

2. Fire Services Provider acknowledges that while it shall continue to be the legal owner of the Equipment, the Municipality is a beneficial owner of all the Equipment owned by the Fire Services Provider in proportion to its funding contribution (if other municipal units or donors have or will contribute), notwithstanding that its use shall be under the control and direction of Fire Services Provider, and shall be maintained, insured and fitted-out by Fire Services Provider, for as long as Fire Services Provider uses it as a fire and/or other emergency services responder for the Municipality.

3. In the event that Fire Services Provider ceases for any reason to continue to provide fire and/or other emergency services for the Municipality, Fire Services Provider shall execute any documents reasonably requested by the Municipality for the legal title to the Equipment to be transferred to the Municipality, should the Municipality have provided the majority (51%) of the capital funding for the Equipment. If the Municipality has provided less than the majority of the

x

[redacted]
NOVA SCOTIA

capital funding for the Equipment, then the Fire Service Provider shall submit to the Municipality the greater of the book value or sale value received for the Equipment which will be proportionate to the capital funding provided by the Municipality.

4. In the event the Equipment becomes obsolete or surplus, Fire Services provider shall consult with the Municipality regarding its disposition and the use of any proceeds of disposition, should the Municipality have provided the majority of capital funding for the equipment.

5. Should the Municipality have provided the majority of capital funding, Fire Services Provider shall maintain insurance for the Equipment and shall have the Municipality named as an additional named insured in the Equipment's insurance policy or provide other coverage satisfactory to the Municipality to protect its property and liability interests, and shall provide proof of coverage to the Municipality upon request from time to time.

DATED at [redacted], Nova Scotia, this [redacted] day of [redacted]

[redacted]
Witness

Municipality of [redacted]

Per: [redacted]

[redacted]
Witness

[redacted] & District Volunteer Fire Department

Per [redacted]

APPENDIX X: EMERGENCY SERVICES COORDINATOR

Roles and Responsibilities

After reviewing the responsibilities for several of similar positions within Nova Scotia and across Canada the following responsibilities are being recommended.

The position's immediate supervisor should be the Municipal Chief Administrative Officer.

This is a support and resource position with the primary responsibility of preparing analysis and recommendations relative to fire protection services and coordinating the implementation of approved initiatives. This position will work in cooperation and consultation with the Fire Chiefs. This position is also responsible for liaising with the public, government agencies, non-government organizations and the private sector. This role supports the fire services by aligning the goals and objectives of fire services with those of the Municipality.

The position's overall primary goal is to develop and maintain optimal fire safety and response effectiveness throughout the county.

Fire Service Delivery Responsibilities (Not all inclusive)

- Develops and maintains a Municipal Fire Service Delivery Strategic plan for the County
    - Addressing the long and short term needs of the fire service including fire apparatus, related ancillary equipment and facilities
    - Volunteer firefighter recruitment and retention
- Coordinates Firefighter Service/Recognition Awards
- Presents fire services concerns and cost control measures to Council.
- Monitors and Volunteer firefighter Health and Safety and develops county wide Health and safety Policies and Procedures in consultation with the Fire Chiefs Coordinating Committee.
- Administers and Manages Annual SCBA Fit Testing for all firefighters
- Administers and manages all annually required testing of Fire Pumps, ladders, SCBA, etc.
- Manages and administers the annual fire department Registrations

- Manages and administers fire department radio licensing and systems.
- Development of a policy regarding the standardization of apparatus, equipment and training based upon the needs and capacity of each department and will allow for the development of bulk purchasing of equipment to ensure the cost effectiveness of providing specific services on a County-wide basis.
- Administer contracted fire protection services with the Town of Port Hawkesbury and the West Bay Road Fire Departments.
- Conduct an ongoing assessment of the quality of present contracted fire services preparation of value-for-money assessment for these contracted services.
- Administer general operating guidelines (GOG's) for all fire departments; assist fire departments in the implementation of GOG's; and monitoring to ensure compliance with GOG's in consultation with the Fire Chiefs Coordinating Committee.
- Provide assistance and training to fire departments in the implementation and use of software programs and an electronic records management system including (but not limited to) personnel information, response documentation, training records, fire prevention programs, financial data management, budgeting, reporting system and financial statement.
- Coordinates the monthly meetings of the Fire Service through the Fire Chiefs Coordinating Committee, including selecting and advertising the date and location, preparation of agenda and materials.
- Maintains municipally-sponsored fire department insurance policies and claims.
- Reviews minimum core standards and best-practices.
- Develop, coordinate, and provide assistance to fire departments in the implementation of a fire prevention program in consultation with the Fire Chiefs Coordinating Committee.
- Assist fire departments in the development and implementation of mutual-aid and water supply programs and services in consultation with the Fire Chiefs Coordinating Committee.
- Review the existing water supply for each department and prepare a long-term plan and budget for installation of dry hydrant facilities.
- Assist with the development of Pre-Plans for specific sites with high-hazard levels to life safety and property value.
- Prepare annual budget and long-term capital budget for fire protection services, including the review of budgets prepared by volunteer fire departments.
- Review current liability, vehicle, and facility insurance programs for fire protection services and provide recommendations regarding a County-wide plan.

- Obtain and maintain knowledge of the Insurance Underwriters fire protection services criteria and prepare reports regarding the impact of implementation of initiatives on these insurance ratings.
- Annually review current dispatch service agreements and prepare recommendations regarding maintenance of current services or utilizing alternative service(s).
- Review present communication practices with each department (inter-departmental, and County/department). Prepare reports and recommendations regarding enhanced communications; and provide assistance in the implementation of approved plans.

Emergency Management Coordinator Responsibilities (Not all inclusive)

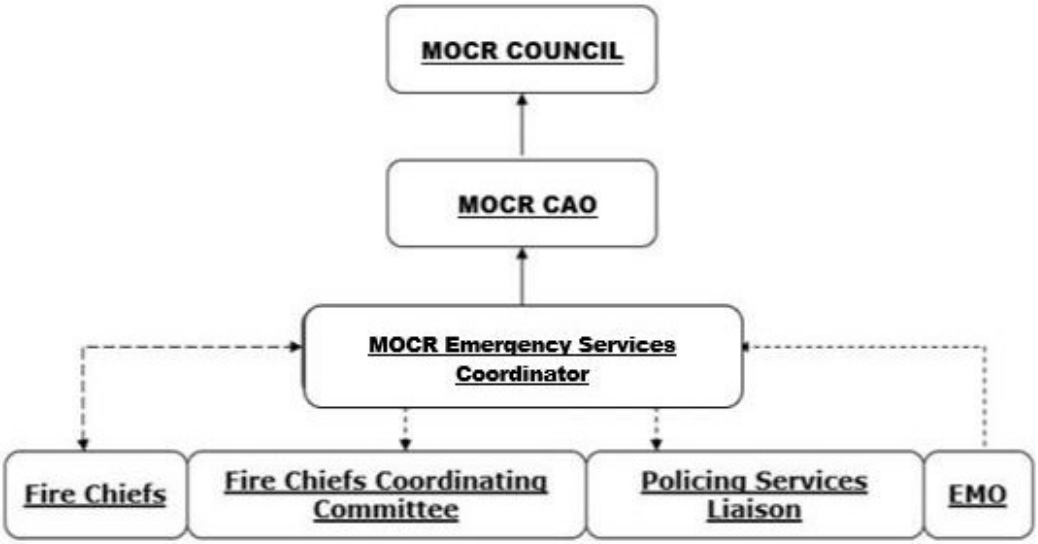
- The Emergency Management Coordinator shall be responsible for developing and maintaining the overall Emergency Management Plans and procedures for the Municipality of the County of Richmond.
- The Coordinator is required to assist municipal departments, non-governmental and volunteer agencies to develop plans and procedures in accordance with the EMO plan; to facilitate internal and external stakeholder's cooperation and to coordinate municipal operations with those of the provincial and federal governments in the event of an emergency.
- Additionally, the Coordinator is to ensure that the EMO EOC(s) and associated equipment are fully functional and ready for use in the event of an emergency. Design, develop, coordinate and implement region-wide and site-specific training regarding the various elements of the Emergency Management Plan.
- Execute a minimum of two "Preparedness Drills" per year, one which must include a coordinated response with local emergency services.
- Participate with internal and external committees and agencies regarding emergency preparedness, including those at the hospital, local, regional and provincial levels.
- Responsible for ensuring that all EMO NS guidelines for preparedness standards are communicated and met.
- Lead the EMO Planning team in the design, coordination and implementation of emergency preparedness plans, procedures and training (for internal and external events).
- Support the implementation and on-going education of the Incident Command System (ICS)throughout the organization, the key element of the Emergency Management Plan, including supporting the following responsibility areas; Safety and Security, Communications, Training, Operations, Logistics, Planning and Finance,
- Develop project plans and timelines for accomplishing outstanding tasks.
- Identify inconsistencies among plans and propose corrective measures.

- Identify systems and operational problems and propose solutions. Work to build consensus when jurisdictional response plans diverge.
- Participate and report on Emergency Preparedness Plan to the EMO Advisory Board in compliance with EMO NS.
- Identify systems and operational problems and propose solutions. Work to build consensus when jurisdictional response plans diverge.
- Participate and report on Emergency Preparedness Plan to the EMO Advisory Board in compliance with EMO NS.
- Investigate and research best-practices with respect to emergency preparedness, attend seminars, benchmark with other institutions and obtain resource material for review.
- Ensure that the Emergency Management Call Lists are up to date and functional.
- Coordinate all capital and significant operational requests to support emergency preparedness. Present summary requests to the CAO and EMO Chair for review and approval.
- Coordinate all capital and significant operational requests to support emergency preparedness. Present summary requests to the CAO and EMO Chair for review and approval.
- Attend Emergency Preparedness meetings with external agencies at the local, regional and provincial levels.
- Attend Emergency Preparedness meetings with external agencies at the local, regional and provincial levels.
- Attend Emergency Preparedness meetings with external agencies at the local, regional and provincial levels.

Liaison - Policing Services Responsibilities

The Emergency Services Coordinator will be the primary contact with the RCMP to address administrative and operational issues of common interest between the Municipality, the fire departments, and the police force.

CHART: REPORTING RELATIONSHIP



APPENDIX XI: FIRE CHIEFS COORDINATING COMMITTEE STRUCTURE

Mission

The Fire Chiefs Coordinating Committee is to achieve community risk reduction through a system of engineering, enforcement, education and consultation; and to provide a standard of emergency response, meeting the defined needs of the MOCR.

Areas of Responsibility

The Fire Chiefs Coordinating Committee will accomplish their mission through recommendations to Municipal Administration pertaining, but not limited to the delivery of:

1. Registration of Fire Services;
2. Registration of Emergency Service;
3. Volunteer Support;
4. Fire Service Operations;
5. Fire - Emergency Services;
6. Fire Service Prevention;
7. Fire Service Training;
8. Fire and Emergency Management;
9. Review relevant governing legislation and
10. Assess the operational and capital financial requirements of the Fire Departments

Committee Composition

The committee will be composed of the following:

- Municipal Emergency Services Coordinator
- One (1) Fire Chief from each fire department providing fire service delivery within the Municipality of the County of Richmond
- One (1) ex-officio municipal administrative staff person appointed by CAO to act as the Fire Chiefs Coordinating Committee secretary.

Alternates

Alternates will attend on behalf of committee members, only when it is not possible for the regular member to attend.

If the Fire Chief is not available, one Deputy Fire Chief, from that department will act upon the Fire Chief's behalf. For clarity, each fire department only gets one vote on matters of consensus.

Chairperson

The Municipal Emergency Services Coordinator shall be the committee chairperson.

Chairperson Duties

- Responsible for calling and scheduling meetings;
- Responsible to create and distribute the Agenda;
- Responsible to ensure decorum and proper procedure occurs during meetings;
- Inviting specialists or other guests as required;
- Presiding over meeting and guiding it as per the agenda;
- Ensuring a decision is reached on all agenda items;
- Ensuring the Committee carries out its functions and meets its obligations;
- Ensures that all recommendations of the Committee are brought forward to the Municipal CAO;

Meeting Frequency

- Meetings shall be held monthly or as determined by the Committee Chair.
- Meetings shall be held on the last Wednesday of each month.
- Special meetings may be called by the Chair or by request of two (2) or more members.

Meeting Location

Meetings shall be on a rotational basis located at various locations around the Municipality that have the ability to host approximately a dozen or more attendees.

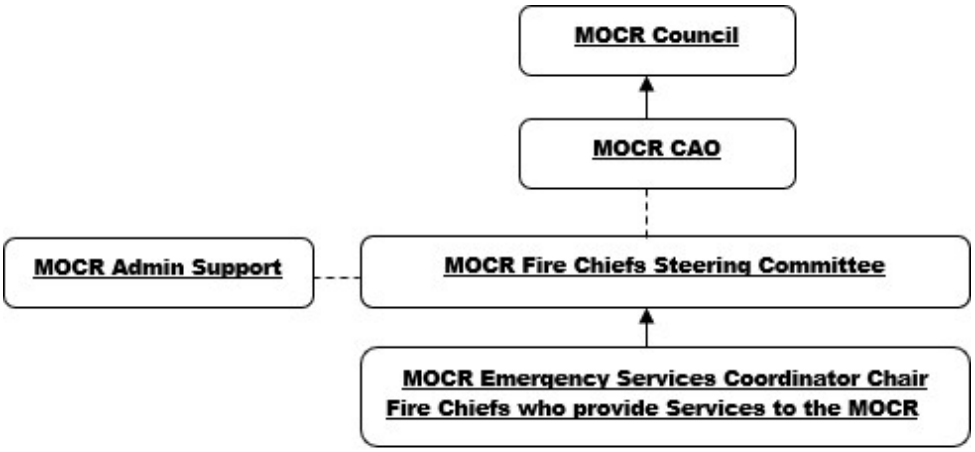
Code of Conduct & Conflict of Interest

- All members will conduct themselves in a professional manner at all times while a member.
- All members must be in good standing with their Fire Department.
- All members will govern under the Code of Conduct as adopted by Council, February 25, 2019.
- If a member has, at any time, a conflict of interest in relation to a particular issue or interest they must declare this conflict of interest under the agenda order of business.
- The conflict of interest is to be properly documented by the Secretary, and recorded in the minutes.

Process

- Meetings will be monthly and should alternate between agreed upon locations
- The Municipal Emergency Services Coordinator will serve as the Chair
- The Chair will be the primary liaison between the Fire Chiefs Coordinating Committee and the MOCR CAO.
- Decision will be by consensus of the members in attendance, rather than by voting.
- Matters for which no consensus can be achieved should be fully recorded, with explanation.
- Committee members, or alternates who attend on behalf of members, will be paid reasonable travel expenses in accordance with the Municipality of the County of Richmond travel rate policy.
- Agendas will include matters that relate to the Coordinating Committee's stated Mission and Areas of Responsibility.
- Matters for inclusion on the agenda will be submitted to the chairman one month before a scheduled meeting of the committee.
- The chairman may include matters on the agenda.
- Minutes shall be taken and approved by the Committee.

CHART: COMMUNICATIONS RELATIONSHIP



APPENDIX XII: FINANCIAL DATA

The following is collated information from fire department financial statements. This is the base data used to build up the historic costs of the fire-emergency services in Richmond County.

At the top of the columns is indicated the source of the data. There are three possibilities.

- Actual: expenditures/revenues come from annual statement actuals.
- Budget: are projected budget estimates, unconfirmed by actuals of expenditures/revenues.
- Est: No financial statement was provided, so instead an estimated value was used based on interpolating between existing data.

DISTRICT 10 VFD

	RED ISLANDS - DIST #10		2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Actual)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		25,000	35,431	27,500	54,928	22,500	50,000	35,893	38,072	38,732	42,476	36,250
5	CONTRIBUTION - Services- Richmond County		2,131	6,136	6,415	6,535	6,654	6,594	5,744	6,467	6,549	6,594	6,624
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		0	0	954	0	0	0	159	191	239	0	0
10	DONATIONS		450	0	0	340	2,345	0	523	537	671	895	1,173
11	BORROWING												
12	PROVINCIAL - GRANT		0	1,030	0	0	335	0	227	273	84	112	168
13	DNR Fees												
14	OTHER GRANT - One Time		0	0	0	0	0	0	0	0	0	0	0
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		113	113	98	107	160	100	115	116	116	122	130
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate		1,272	0	1,473	1,135	3,368	2,000	1,541	1,595	1,994	2,168	2,684
21	OTHER		3,205	0	0	395	80	0	613	95	119	158	40
22		TOTAL INCOME:	32,170	42,710	36,440	63,439	35,442	58,694	44,816	47,345	48,504	52,525	47,068
24	Income	NON-Municipal Sources Funding:	14.3%	2.7%	4.3%	2.6%	11.1%	3.6%	6.4%	4.9%	5.4%	5.8%	7.4%
25	Sources	Donations: % Revenue:	1.4%	0.0%	0.0%	0.5%	6.6%	0.0%	1.4%	1.4%	1.8%	2.4%	3.3%
26		Fundraised: % Revenue:	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.4%	0.5%	0.7%	0.0%	0.0%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	0	2,069	2,582	8,156	193	7,000	3,333	4,000	4,483	5,116	3,597
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	4,000	2,750	2,500	3,500	3,000	4,000	3,292	3,150	3,250	3,500	3,500
47		TOTAL Firefighting Operations:	4,000	4,819	5,082	11,656	3,193	11,000	6,625	7,150	7,733	8,616	7,097
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
66	FIRE STATION / HALL:	sub-total:	7,287	10,992	7,776	12,842	13,120	12,300	10,719	11,406	11,509	12,754	12,710
89	ADMINISTRATION:	sub-total:	8,825	14,709	13,902	13,993	12,666	16,544	13,440	14,363	14,276	14,401	14,605
93	MINOR CAPITAL:	sub-total:	3,259	4,277	5,687	8,556	0	8,000	4,963	5,304	5,561	5,519	4,000
95		TOTAL Other Operational Expenses:	19,370	29,978	27,365	35,390	25,786	36,844	29,122	31,072	31,346	32,673	31,315
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	185	0	0	0	0	0	31	0	0	0	0
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 23,555	$ 34,797	$ 32,447	$ 47,046	$ 28,979	$ 47,844	35,778	38,222	39,079	41,290	38,412
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ 6,466	$ 4,585	$ 3,256	$ 2,317	$ 1,652	$ 11,800	5,013	4,722	4,756	5,256	6,726
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 30,021	$ 39,382	$ 35,703	$ 49,363	$ 30,631	$ 59,644	40,791	42,944	43,835	46,546	45,138
113	TOTAL OPERATING SURPLUS/(DEFICIT):		2,149	3,328	737	14,076	4,811	(-950)	4,025	4,401	4,669	5,979	1,931

FRAMBOISE-FORCHU VFD

	FRAMBOISE - FORCHOU		2014-2015 (est)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Budget)	2019-2020 (est)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		17,600	10,000	0	5,953	15,000	19,000	11,259	9,991	9,988	13,318	17,000
5	CONTRIBUTION - Services- Richmond County		3,502	1,737	1,178	1,178	1,534	1,356	1,748	1,397	1,312	1,356	1,445
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		2,000	2,823	(-2,062)	3,080	3,000	2,000	1,807	1,768	1,505	2,693	2,500
10	DONATIONS			4,200	20	0	100		1,080	1,080	40	50	100
11	BORROWING												
12	PROVINCIAL - GRANT												
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees		120	267	90	90	140	120	138	141	110	117	130
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS												
19	CARRY-OVER FROM PRIOR YEARS			17,317	15,495	0	0		8,203	8,203	5,165	0	0
20	HST/GST Rebate		1,500	3,013	0	0	1,500		1,203	1,128	500	750	1,500
21	OTHER			0	946	0	0		236	236	315	0	0
22		TOTAL INCOME:	24,722	39,357	15,667	10,301	21,274	22,476	22,299	21,815	17,429	18,017	21,875
24	Income	NON-Municipal Sources Funding:	6.6%	8.3%	6.6%	0.9%	7.7%	0.5%	5.1%	4.8%	3.9%	3.0%	4.1%
25	Sources	Donations: % Revenue:	0.0%	10.7%	0.1%	0.0%	0.5%	0.0%	1.9%	2.3%	0.1%	0.2%	0.2%
26		Fundraised: % Revenue:	8.1%	7.2%	-13.2%	29.9%	14.1%	8.9%	9.2%	9.4%	9.9%	17.6%	11.5%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	2,000	1,647	2,601	0	2,000	2,000	1,708	1,650	1,650	1,333	2,000
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	3,200	3,164	3,450	4,370	2,000	3,200	3,231	3,237	3,255	3,190	2,600
47		TOTAL Firefighting Operations:	5,200	4,810	6,051	4,370	4,000	5,200	4,939	4,886	4,905	4,523	4,600
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	2,000	0	3,087	3,064	1,000	2,000	1,859	1,830	2,288	2,021	1,500
66	FIRE STATION / HALL:	sub-total:	9,650	12,999	10,382	16,953	8,700	8,350	11,172	11,477	11,096	11,334	8,525
89	ADMINISTRATION:	sub-total:	774	2,147	2,205	1,323	1,984	2,086	1,753	1,949	1,899	1,798	2,035
93	MINOR CAPITAL:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
95		TOTAL Other Operational Expenses:	12,424	15,146	15,674	21,340	11,684	12,436	14,784	15,256	15,283	15,153	12,060
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	3,408	212	0	0	0	0	603	42	0	0	0
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 21,032	$ 20,168	$ 21,724	$ 25,710	$ 15,684	$ 17,636	20,326	20,185	20,189	19,677	16,660
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ -	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$21,032	$ 20,168	$ 21,724	$ 25,710	$ 15,684	$17,636	20,326	20,185	20,189	19,677	16,660
113	TOTAL OPERATING SURPLUS/(DEFICIT):		3,690	19,189	(-6,058)	(-15,409)	5,590	4,840	1,974	1,630	(-2,759)	(-1,660)	5,215

GRAND RIVER VFD

	GRAND RIVER		2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Budget)	2017-2018 (est)	2018-2019 (Actual)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		16,000	38,281	21,000	20,000	8,925	15,000	19,868	20,641	16,231	14,642	11,963
5	CONTRIBUTION - Services- Richmond County		3,269	10,456	10,480	9,120	9,590	9,650	8,761	9,859	9,710	9,453	9,620
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		17,608	10,696	0	10,000	12,002	12,000	10,384	8,940	8,501	11,334	12,001
10	DONATIONS		3,370	2,770	0		4,640	0	2,156	1,853	1,547	2,320	2,320
11	BORROWING												
12	PROVINCIAL - GRANT		1,606	0	0		0	0	321	0	0	0	0
13	DNR Fees		0	1,573	0		0	0	315	393	0	0	0
14	OTHER GRANT - One Time		0	1,025	0		0	0	205	256	0	0	0
16	DUES, Membership Fees		733	540	0		0	0	255	135	0	0	0
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS												
19	CARRY-OVER FROM PRIOR YEARS		0	0	11,992		0	0	2,398	2,998	3,997	0	0
20	HST/GST Rebate		2,332	870	1,000	1,400	2,653	0	1,376	1,185	1,263	1,351	1,327
21	OTHER												
22		TOTAL INCOME:	44,918	66,211	44,472	40,520	37,810	36,650	45,097	45,133	39,863	38,327	37,230
24	Income	NON-Municipal Sources Funding:	10.4%	6.1%	2.2%	3.5%	7.0%	0.0%	4.9%	3.8%	3.2%	3.5%	3.5%
25	Sources	Donations: % Revenue:	7.5%	4.2%	0.0%	0.0%	12.3%	0.0%	4.0%	3.3%	3.1%	4.1%	6.1%
26		Fundraised: % Revenue:	39.2%	16.2%	0.0%	24.7%	31.7%	32.7%	24.1%	21.1%	22.3%	29.7%	32.2%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	7,416	1,078	500	1,700	3,977	0	2,445	1,451	1,544	1,892	1,989
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	4,023	0	0	3,000	3,000	0	1,670	1,200	1,500	2,000	1,500
47		TOTAL Firefighting Operations:	11,439	1,078	500	4,700	6,977	0	4,116	2,651	3,044	3,892	3,489
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
66	FIRE STATION / HALL:	sub-total:	16,038	20,075	10,700	12,900	4,450	5,000	11,527	10,625	8,263	7,450	4,725
89	ADMINISTRATION:	sub-total:	10,360	12,825	15,672	11,567	16,085	10,150	12,776	13,260	13,368	12,601	13,118
93	MINOR CAPITAL:	sub-total:	0	2,383	4,600	2,300	1,908	14,000	4,198	5,038	5,702	6,069	7,954
95		TOTAL Other Operational Expenses:	26,398	35,283	30,972	26,767	22,443	29,150	28,502	28,923	27,333	26,120	25,797
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	0	0	0	0	0	0	0	0	0	0	0
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 37,837	$ 36,361	$ 31,472	$ 31,467	$ 29,420	$ 29,150	32,618	31,574	30,377	30,012	29,285
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ 20,000	$ 25,000	$ 11,000	$ 6,000	$ 5,649	$ 7,500	12,525	11,030	7,537	6,383	6,575
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 57,837	$ 61,361	$ 42,472	$37,467	$ 35,069	$ 36,650	45,143	42,604	37,914	36,395	35,860
113	TOTAL OPERATING SURPLUS/(DEFICIT):		(-12,919)	4,851	2,000	3,053	2,741	0	(-46)	2,529	1,949	1,931	1,371

L'ARDOISE VFD

	L'ARDOISE		2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Budget)	2018-2019 (Actual)	2019-2020 (est)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		78,117	81,987	81,830	81,830	65,000	80,000	78,127	78,129	77,165	75,610	72,500
5	CONTRIBUTION - Services- Richmond County		2,079	1,403	1,352	836	1,097	1,200	1,328	1,178	1,121	1,044	1,149
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		18,487	6,912	6,532	6,500	2,948	3,000	7,397	5,178	4,745	4,149	2,974
10	DONATIONS		25,179	895	0	0	0		5,215	224	0	0	0
11	BORROWING		0	0	0	495,000	322,654		163,531	204,413	272,551	408,827	322,654
12	PROVINCIAL - GRANT		0	3,034	0	0	20,000		4,607	5,759	6,667	10,000	20,000
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		20	20	70	70	70		50	57	70	70	70
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate		0	24,964	3,270	61,780	62,977	40,000	32,165	38,598	42,007	54,919	51,488
21	OTHER		759	1,000	0	0	0		352	250	0	0	0
22		TOTAL INCOME:	124,641	120,215	93,054	646,016	474,745	124,200	263,812	291,646	334,504	414,987	299,473
24	Income	NON-Municipal Sources Funding:	0.6%	24.1%	3.6%	86.2%	85.5%	32.2%	38.7%	46.3%	51.9%	68.0%	58.8%
25	Sources	Donations: % Revenue:	20.2%	0.7%	0.0%	0.0%	0.0%	0.0%	3.5%	0.1%	0.0%	0.0%	0.0%
26		Fundraised: % Revenue:	14.8%	5.7%	7.0%	1.0%	0.6%	2.4%	5.3%	3.4%	2.8%	1.3%	1.5%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	960	3,411	6,060	7,500	7,905	7,000	5,473	6,375	7,116	7,468	7,453
40	EQUIPMENT:	sub-total:	13,118	4,695	0	0	0	0	2,969	939	0	0	0
45	COMMUNICATIONS:	sub-total:	0	0	2,250	4,000	3,871	3,500	2,270	2,724	3,405	3,790	3,686
47		TOTAL Firefighting Operations:	14,079	8,106	8,310	11,500	11,776	10,500	10,712	10,038	10,521	11,259	11,138
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	175	2,487	160	250	0	200	545	619	152	150	100
66	FIRE STATION / HALL:	sub-total:	12,746	10,848	8,974	10,125	6,514	9,300	9,751	9,152	8,728	8,646	7,907
89	ADMINISTRATION:	sub-total:	18,498	17,314	19,398	23,706	41,602	30,177	25,116	26,439	28,721	31,828	35,889
93	MINOR CAPITAL:	sub-total:	130	1,234	10,945	20,585	68,314	20,000	20,201	24,215	29,961	36,300	44,157
95		TOTAL Other Operational Expenses:	31,550	31,882	39,477	54,666	116,430	59,677	55,614	60,427	67,563	76,924	88,054
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	5,564	4,995	0	31,000	144,322	144,200	55,013	64,903	79,880	106,507	144,261
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 51,193	$ 44,983	$ 47,787	$ 97,166	$ 272,528	$ 214,377	121,339	135,368	157,964	194,690	243,452
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ 73,448	$ 75,231	$ -	$ 550,000	$ 291,400	$ -	165,013	183,326	210,350	280,467	145,700
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 124,641	$ 120,215	$ 47,787	$ 647,166	$ 563,928	$ 214,377	286,352	318,694	368,314	475,157	389,152
113	TOTAL OPERATING SURPLUS/(DEFICIT):		0	0	45,267	(-1,150)	(-89,182)	(-90,177)	(-22,540)	(-27,049)	(-33,811)	(-60,170)	(-89,680)

ISLE MADAME VFD

ISLE MADAME			2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Budget)	2019-2020 (est)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		163,212	167,885	174,828	179,098	185,414	180,000	175,073	177,445	179,835	181,504	182,707
5	CONTRIBUTION - Services- Richmond County		9,023	12,543	12,740	12,480	12,084	11,000	11,645	12,169	12,076	11,855	11,542
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)												
10	DONATIONS		0	0	0	4,000	300		860	1,075	1,433	2,150	300
11	BORROWING												
12	PROVINCIAL - GRANT												
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		0	76	40	215	385	200	153	183	210	267	293
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate												
21	OTHER												
22		TOTAL INCOME:	172,235	180,504	187,608	195,793	198,183	191,200	187,587	190,658	193,196	195,059	194,692
24	Income	NON-Municipal Sources Funding:	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
25	Sources	Donations: % Revenue:	0.0%	0.0%	0.0%	2.0%	0.2%	0.0%	0.4%	0.4%	0.5%	0.7%	0.1%
26		Fundraised: % Revenue:	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	3,744	5,840	5,227	4,744	7,626	5,800	5,497	5,847	5,849	6,057	6,713
40	EQUIPMENT:	sub-total:	11,409	15,334	3,672	12,420	25,484	2,500	11,803	11,882	11,019	13,468	13,992
45	COMMUNICATIONS:	sub-total:	2,750	2,250	2,577	8,684	3,751	3,500	3,919	4,152	4,628	5,312	3,626
47		TOTAL Firefighting Operations:	17,903	23,424	11,476	25,848	36,861	11,800	21,219	21,882	21,496	24,836	24,331
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	2,679	2,569	811	1,142	1,329	1,200	1,622	1,410	1,121	1,224	1,265
66	FIRE STATION / HALL:	sub-total:	19,177	12,772	10,300	16,641	8,534	9,650	12,846	11,579	11,281	11,608	9,092
89	ADMINISTRATION:	sub-total:	35,111	42,351	41,607	39,593	49,809	34,080	40,425	41,488	41,272	41,161	41,945
93	MINOR CAPITAL:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
95		TOTAL Other Operational Expenses:	56,967	57,692	52,718	57,376	59,672	44,930	54,893	54,478	53,674	53,993	52,301
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	12,299	8,848	7,967	5,827	4,342	3,300	7,097	6,057	5,359	4,490	3,821
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 87,169	$ 89,964	$ 72,161	$ 89,051	$ 100,875	$ 60,030	83,208	82,416	80,529	83,319	80,453
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ -	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 87,169	$ 89,964	$ 72,161	$ 89,051	$ 100,875	$ 60,030	83,208	82,416	80,529	83,319	80,453
113	TOTAL OPERATING SURPLUS/(DEFICIT):		85,066	90,540	115,447	106,742	97,308	131,170	104,379	108,241	112,667	111,740	114,239

LOCH LOMOND VFD

LOCH LOMOND			2014-2015 (Actual)	2015-2016 (Budget)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Actual)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		19,000	19,000	19,500	10,500	3,585	17,000	14,764	13,917	12,646	10,362	10,293
5	CONTRIBUTION - Services- Richmond County		1,946	10,137	11,000	10,295	10,561	10,650	9,098	10,529	10,627	10,502	10,606
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
9	FUNDRAISING (NET CONTRIBUTION)		1,001	3,000	344	5,515	5,205	6,000	3,511	4,013	4,266	5,573	5,603
10	DONATIONS		225	0	740	1,700	2,325	0	832	953	1,191	1,342	1,163
11	BORROWING		0	0	0	23,920	0	0	3,987	4,784	5,980	7,973	0
12	PROVINCIAL - GRANT		0	0	0	2,422	0	0	404	484	605	807	0
13	DNR Fees		592	0	0	0	0	0	99	0	0	0	0
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		3	0	0	6	7	0	3	3	3	5	4
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate		694	1,391	1,428	1,660	2,921	1,200	1,549	1,720	1,802	1,927	2,061
21	OTHER		4,850	0	780	0	0	0	938	156	195	0	0
22		TOTAL INCOME:	29,312	34,528	34,792	57,017	25,605	35,850	36,184	37,559	38,316	39,491	30,728
24	Income	NON-Municipal Sources Funding:	20.9%	4.0%	6.3%	49.1%	11.4%	3.3%	15.9%	14.9%	17.6%	21.3%	7.4%
25	Sources	Donations: % Revenue:	0.8%	0.0%	2.1%	3.0%	9.1%	0.0%	2.5%	2.8%	3.5%	4.0%	4.5%
26		Fundraised: % Revenue:	3.4%	8.7%	1.0%	9.7%	20.3%	16.7%	10.0%	11.3%	11.9%	15.6%	18.5%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	2,841	3,000	6,942	572	842	1,000	2,533	2,471	2,339	805	921
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
47		TOTAL Firefighting Operations:	2,841	3,000	6,942	572	842	1,000	2,533	2,471	2,339	805	921
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
66	FIRE STATION / HALL:	sub-total:	14,599	11,000	17,181	12,855	10,630	9,000	12,544	12,133	12,416	10,828	9,815
89	ADMINISTRATION:	sub-total:	10,009	19,624	14,122	14,691	13,151	13,884	14,247	15,095	13,962	13,909	13,517
93	MINOR CAPITAL:	sub-total:	0	5,000	0	0	2,483	5,000	2,080	2,497	1,871	2,494	3,741
95		TOTAL Other Operational Expenses:	24,608	35,624	31,303	27,546	26,263	27,884	28,871	29,724	28,249	27,231	27,074
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	0	0	0	0	11,533	15,000	4,422	5,307	6,633	8,844	13,266
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 27,449	$ 38,624	$ 38,245	$ 28,118	$ 38,638	$ 43,884	35,826	37,502	37,221	36,880	41,261
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ -	$ -	$ -	$ 25,805	$ -	$ -	4,301	5,161	6,451	8,602	0
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 27,449	$ 38,624	$ 38,245	$ 53,923	$ 38,638	$ 43,884	40,127	42,663	43,673	45,482	41,261
113	TOTAL OPERATING SURPLUS/(DEFICIT):		1,863	(-4,096)	(-3,453)	3,094	(-13,033)	(-8,034)	(-3,943)	(-5,104)	(-5,357)	(-5,991)	(-10,533)

LOUISDALE VFD

LOUISDALE			2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Actual)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		125,042	150,566	140,532	155,050	136,645	137,000	140,806	143,959	142,307	142,898	136,823
5	CONTRIBUTION - Services- Richmond County		0	11,190	11,500	11,247	11,958	11,700	9,599	11,519	11,601	11,635	11,829
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		12,109	13,817	54,579	2,720	1,450	3,000	14,613	15,113	15,437	2,390	2,225
10	DONATIONS												
11	BORROWING												
12	PROVINCIAL - GRANT												
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		257	25	41	74	73	100	95	63	72	82	87
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate												
21	OTHER												
22		**TOTAL INCOME:**	137,408	175,598	206,652	169,091	150,126	151,800	165,113	170,653	169,417	157,006	150,963
24	Income	NON-Municipal Sources Funding:	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%
25	Sources	Donations: % Revenue:	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26		Fundraised: % Revenue:	8.8%	7.9%	26.4%	1.6%	1.0%	2.0%	7.9%	7.8%	7.7%	1.5%	1.5%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	5,064	4,132	7,324	2,016	2,038	10,000	5,096	5,102	5,345	4,685	6,019
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
47		TOTAL Firefighting Operations:	5,064	4,132	7,324	2,016	2,038	10,000	5,096	5,102	5,345	4,685	6,019
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	950	848	134	1,074	0	1,500	751	711	677	858	750
66	FIRE STATION / HALL:	sub-total:	10,296	11,330	9,694	10,101	13,343	12,000	11,127	11,294	11,285	11,815	12,672
89	ADMINISTRATION:	sub-total:	15,877	29,673	31,390	32,490	42,770	45,050	32,875	36,275	37,925	40,103	43,910
93	MINOR CAPITAL:	sub-total:	2,617	14,075	12,981	15,645	15,073	17,000	12,899	14,955	15,175	15,906	16,037
95		TOTAL Other Operational Expenses:	29,740	55,926	54,199	59,310	71,186	75,550	57,652	63,234	65,061	68,682	73,368
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	311	0	3,956	1,632	0	0	983	1,118	1,397	544	0
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 35,115	$ 60,058	$ 65,479	$ 62,958	$ 73,224	$ 85,550	63,731	69,454	71,803	73,911	79,387
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ 11,568	$ 3,588	$ 34,359	$ 60,006	$ 48,235	$ 39,000	32,793	37,038	45,400	49,080	43,618
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 46,683	$ 63,646	$ 99,838	$ 122,964	$ 121,459	$ 124,550	96,523	106,491	117,203	122,991	123,005
113	TOTAL OPERATING SURPLUS/(DEFICIT):		90,725	111,952	106,814	46,127	28,667	27,250	68,589	64,162	52,215	34,015	27,959

ST. PETERS VFD

ST. PETERS			2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (Actual)	2018-2019 (Actual)	2019-2020 (Budget)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		115,000	187,736	137,666	150,843	185,539	169,500	157,714	166,257	160,887	168,627	177,520
5	CONTRIBUTION - Services- Richmond County		733	12,634	13,881	23,910	25,330	24,400	16,815	20,031	21,880	24,547	24,865
6	CONTRIBUTION - Inverness County Area Rate												
7	CONTRIBUTION - GRANT - Inverness County												
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		10,689	12,011	13,421	13,961	7,367	7,000	10,742	10,752	10,437	9,443	7,184
10	DONATIONS		4,210	613	6,654	1,263	5,735	2,000	3,413	3,253	3,913	2,999	3,868
11	BORROWING		0	0	330,000	0	0	0	55,000	66,000	82,500	0	0
12	PROVINCIAL - GRANT												
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS												
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate		0	0	0	11,894	2,577	0	2,412	2,894	3,618	4,824	1,289
21	OTHER												
22		**TOTAL INCOME:**	130,632	212,994	501,622	201,871	226,548	202,900	246,095	269,187	283,235	210,440	214,724
24	Income	NON-Municipal Sources Funding:	0.0%	0.0%	65.8%	5.9%	1.1%	0.0%	12.1%	14.6%	18.2%	2.3%	0.6%
25	Sources	Donations: % Revenue:	3.2%	0.3%	1.3%	0.6%	2.5%	1.0%	1.5%	1.2%	1.4%	1.4%	1.8%
26		Fundraised: % Revenue:	8.2%	5.6%	2.7%	6.9%	3.3%	3.4%	5.0%	4.4%	4.1%	4.5%	3.4%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	20,911	11,733	36,034	18,143	37,761	22,000	24,430	25,134	28,485	25,968	29,881
40	EQUIPMENT:	sub-total:	0	0	0	0	0	0	0	0	0	0	0
45	COMMUNICATIONS:	sub-total:	3,739	2,875	3,451	3,163	2,876	4,500	3,434	3,373	3,498	3,513	3,688
47		TOTAL Firefighting Operations:	24,650	14,608	39,485	21,306	40,637	26,500	27,864	28,507	31,982	29,481	33,569
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	3,227	4,048	1,132	9,592	10,051	10,000	6,342	6,965	7,694	9,881	10,026
66	FIRE STATION / HALL:	sub-total:	23,196	22,463	25,098	40,750	59,631	24,000	32,523	34,388	37,370	41,460	41,816
89	ADMINISTRATION:	sub-total:	17,737	35,072	29,717	36,125	41,024	44,400	34,013	37,268	37,817	40,516	42,712
93	MINOR CAPITAL:	sub-total:	7,271	26,446	9,037	37,233	4,240	25,000	18,205	20,391	18,878	22,158	14,620
95		TOTAL Other Operational Expenses:	51,431	88,029	64,984	123,700	114,946	103,400	91,082	99,012	101,758	114,015	109,173
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	90,889	0	0	66,096	71,933	73,000	50,320	42,206	52,757	70,343	72,467
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 166,970	$ 102,637	$ 104,469	$ 211,102	$ 227,516	$ 202,900	169,266	169,725	186,497	213,839	215,208
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ -	$ -	$ 526,794	$ -	$ -	$ -	87,799	105,359	131,699	0	0
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 166,970	$ 102,637	$ 631,263	$ 211,102	$ 227,516	$ 202,900	257,065	275,084	318,195	213,839	215,208
113	TOTAL OPERATING SURPLUS/(DEFICIT):		(-36,338)	110,357	(-129,641)	(-9,231)	(-968)	0	(-10,970)	(-5,897)	(-34,960)	(-3,400)	(-484)

WEST BAY ROAD VFD

	WEST BAY ROAD		2014-2015 (Actual)	2015-2016 (Actual)	2016-2017 (Actual)	2017-2018 (est)	2018-2019 (Actual)	2019-2020 (est)	6-Year AVG	5-Year AVG	4-Year AVG	3-Year AVG	2-Year AVG
		REVENUE											
4	CONTRIBUTION - Richmond County Area Rate		0	24,963	31,849	17,000	31,634	17,000	20,408	24,489	24,371	21,878	24,317
5	CONTRIBUTION - Services- Richmond County		94	10,588	9,220	9,180	9,681	9,400	8,027	9,614	9,370	9,420	9,541
6	CONTRIBUTION - Inverness County Area Rate		56,397	62,225	63,246	55,000	35,976	55,000	54,641	54,290	52,306	48,659	45,488
7	CONTRIBUTION - GRANT - Inverness County		6,107	3,084	3,145	2,500	2,347	2,300	3,247	2,675	2,573	2,382	2,324
8	CONTRIBUTION - GRANT - CBRM												
9	FUNDRAISING (NET CONTRIBUTION)		2,299	1,887	3,357	4,000	6,302	5,000	3,807	4,109	4,665	5,101	5,651
10	DONATIONS		990	6,070	1,848		22,267		7,794	10,061	12,057	22,267	22,267
11	BORROWING												
12	PROVINCIAL - GRANT												
13	DNR Fees												
14	OTHER GRANT - One Time												
16	DUES, Membership Fees												
17	RESERVE FUNDS (Capital)												
18	INTEREST EARNINGS		16	18	17	0	28,553		5,721	7,147	9,523	14,276	28,553
19	CARRY-OVER FROM PRIOR YEARS												
20	HST/GST Rebate		2,639	2,510	0	0	0		1,030	627	0	0	0
21	OTHER		0	0	0	0	658		132	164	219	329	658
22		TOTAL INCOME:	68,541	111,344	112,681	87,680	137,418	88,700	101,061	107,565	106,620	104,599	113,059
24	Income	NON-Municipal Sources Funding:	3.9%	2.3%	0.0%	0.0%	21.3%	0.0%	4.6%	4.7%	5.3%	7.1%	10.6%
25	Sources	Donations: % Revenue:	1.4%	5.5%	1.6%	0.0%	16.2%	0.0%	4.1%	4.7%	4.5%	5.4%	8.1%
26		Fundraised: % Revenue:	3.4%	1.7%	3.0%	4.6%	4.6%	5.6%	3.8%	3.9%	4.4%	4.9%	5.1%
27													
28		**EXPENSES**											
29	FIREFIGHTING OPERATIONS:												
35	APPARATUS:	sub-total:	757	2,871	5,769	4,900	4,472	4,900	3,945	4,583	5,010	4,757	4,686
40	EQUIPMENT:	sub-total:	2,944	1,963	4,599	4,970	5,293	4,970	4,123	4,359	4,958	5,078	5,131
45	COMMUNICATIONS:	sub-total:	3,000	2,538	3,075	3,000	3,000	3,000	2,935	2,923	3,019	3,000	3,000
47		TOTAL Firefighting Operations:	6,701	7,372	13,444	12,870	12,765	12,870	11,004	11,864	12,987	12,835	12,817
49	OTHER OPERATIONAL EXPENSES:												
55	TRAINING:	sub-total:	20	866	12,747	3,000	2,654	3,000	3,714	4,453	5,350	2,885	2,827
66	FIRE STATION / HALL:	sub-total:	14,747	14,926	12,658	15,150	14,197	15,150	14,471	14,416	14,289	14,832	14,674
89	ADMINISTRATION:	sub-total:	14,292	28,703	22,415	20,091	23,910	20,311	21,620	23,086	21,682	21,437	22,110
93	MINOR CAPITAL:	sub-total:	3,533	17,265	35,864	26,750	26,462	21,750	21,937	25,618	27,707	24,987	24,106
95		TOTAL Other Operational Expenses:	32,591	61,760	83,685	64,991	67,223	60,211	61,743	67,574	69,027	64,142	63,717
96													
101	LONG-TERM DEBT PAYMENTS:	TOTAL Long Term Debt:	0	0	0	0	0	0	0	0	0	0	0
103	TOTAL FIRE SERVICE OPERATIONAL EXPENSES:		$ 39,292	$ 69,132	$ 97,128	$ 77,861	$ 79,988	$ 73,081	72,747	79,438	82,014	76,977	76,534
106													
110	CAPITAL EXPENDITURES	TOTAL Capital Expenditures:	$ -	$ -	$ -	$ -	$ -	$ -	0	0	0	0	0
112	TOTAL EXPENDITURE / BUDGET ESTIMATE		$ 39,292	$ 69,132	$ 97,128	$ 77,861	$ 79,988	$ 73,081	72,747	79,438	82,014	76,977	76,534
113	TOTAL OPERATING SURPLUS/(DEFICIT):		29,250	42,212	15,553	9,819	57,430	15,619	28,314	28,127	24,605	27,623	36,525

APPENDIX XIII: STATISTICS

Census Data

Statistics Canada has available online[133] the last general census data, dated 2016, for Richmond County. This data includes Chapel Island as part of the overall Richmond County data. However, StatsCan also provides breakdowns for three census sub-divisions in Richmond, and a separate one for "*Chapel Island 5*." This fire service review's focus does not include Chapel Island, so the following excludes that information.

The table on the next page shows some selected data from the 2016 census that is relevant to fire protection. The three subdivisions noted in the table are defined by StatsCan according to the maps that follow the table.

- Line 1; according to StatsCan the population in Richmond County has been declining since it peaked in 1988. The decline is actually more pronounced for Richmond County itself because the StatsCan population statistics include Chapel Island, who's population has been growing steadily over the past 4+ census collections.
- Line 2, 3; The total number of dwellings that are occupied by permanent residents (usual residents) is 77% of the total number of private dwellings. The balance are either unoccupied or seasonal/transient in occupation.
- Line 4; The highest population density is the Isle Madame area (census subdivision-C) at 24.3 persons/km^2. Overall, Richmond averages to 6.8 persons/km^2.
    - NFPA-1720[134] classifies fire response districts with less than 193 persons/km^2 as "Rural" or "Remote" which has a bearing on standards for manpower and response-times. See **NFPA-1720**, starting on page **167** for more detail on this subject.
- Line 7 → 13; almost 87% of dwellings in Richmond are single detached homes. Typically single detached homes are considered low/moderate risk fires and do not require exceptional skills or equipment to handle. They are a fire department's bread and butter incidents.
- Continued on page **320**.

[133] https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/search-recherche/results-resultats.cfm?Lang=E&TABID=1&G=1&Geo1=&Code1=&Geo2=&Code2=&type=0&SearchText=richmond&SearchType=Begins&wb-srch-place=search

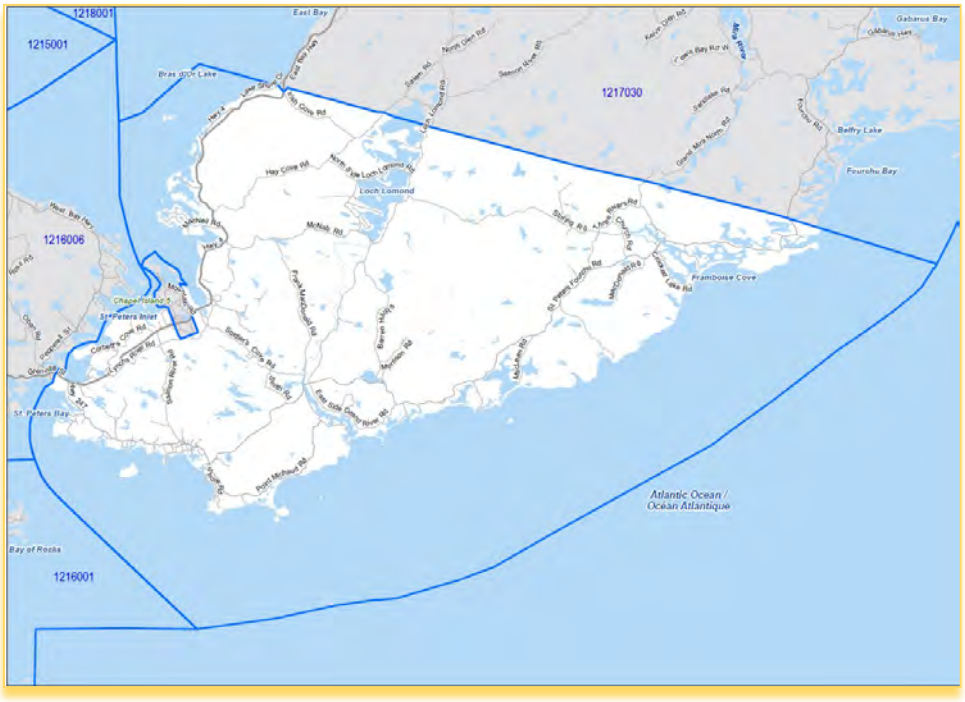
[134] National Fire Protection Association; NFPA-1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.

TABLE: RICHMOND COUNTY, SELECTED 2016 CENSUS DATA

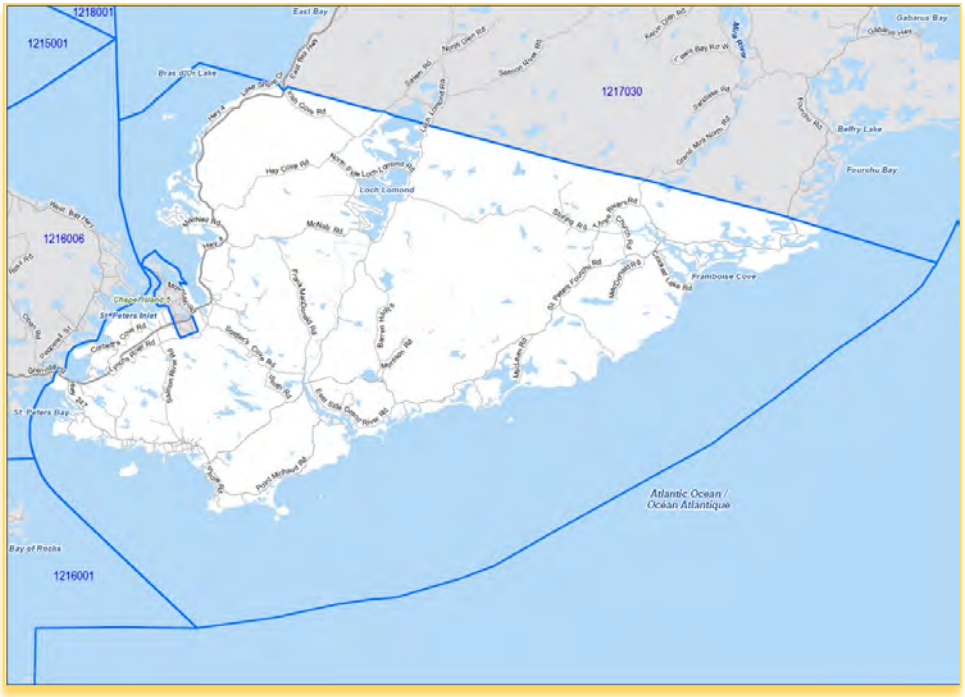
	Item	Sub-A	%	Sub-B	%	Sub-C	%	Totals
1	Population 2016	3,796	44.9	1,512	17.9	3,150	37.2	**8,458**
2	Total private dwellings	2,083	42.0	1,251	25.2	1,621	32.7	**4,955**
3	Private dwellings occupied by usual residents	1,696	81.4	729	58.3	1,397	86.2	**3,822**
4	Population density, persons per km^2	8.2		2.3		24.3		**6.8**
5	Land area, km^2	465	37.4	649	52.2	130	10.4	**1,244**
6	Occupied private dwelling by type of dwelling	1,700	44.4	730	19.1	1,395	36.5	**3,825**
7	- Single detached homes	1,400	82.8	695	95.9	1,215	86.8	**3,310**
8	- Semi-detached house	10	0.6	5	0.7	15	1.1	**30**
9	- Row house	5	0.3	0	0	0	0	**5**
10	- Apartment or flat in a duplex	10	0.6	5	0.7	20	1.4	**35**
11	- Apartment in a building fewer than 5 stories	115	6.8	10	1.4	65	4.6	**190**
12	- Other single detached house	5	0.3	0	0	0	0	**5**
13	- Movable dwelling	145	8.6	10	1.4	85	6.1	**240**
14	Household sizes:							
15	- 1 person	495	29.1	225	31.0	425	30.4	**1,145**
16	- 2 persons	715	42.0	330	45.5	555	39.6	**1,600**
17	- 3 persons	245	14.4	90	12.4	190	13.6	**525**
18	- 4 persons	185	10.9	60	8.3	170	12.1	**415**
19	- 5 or more persons	62	3.6	20	2.8	60	4.3	**142**
20	Number persons in private households	3,720	44.6	1,505	18.0	3,120	37.4	**8,345**
21	Average household size	2.2		2.1		2.2		**2.2**
22	Owned dwellings	1,685	83.6	610	86.5	1,230	85.4	**3,525**
23	Condominium dwellings	20	1.0	10	1.4	10	0.7	**40**
24	Rented dwellings	310	15.4	85	12.1	200	13.9	**595**
25	Band housing	0	0	0	0	0	0	**0**
26	Occupied dwellings by construction period:							
27	- 1960 or before	365	21.5	275	39.3	540	37.8	**1,180**
28	- 1961-1980	645	38.1	190	27.1	460	32.2	**1,295**
29	- 1981-1990	200	11.8	100	14.3	155	10.8	**455**
30	- 1991-2000	195	11.5	75	10.7	140	9.8	**410**
31	- 2001-2005	105	6.2	35	5.0	70	4.9	**210**

	Item	Sub-A	%	Sub-B	%	Sub-C	%	Totals
32	- 2006-2010	110	6.5	10	1.4	25	1.7	**145**
33	- 2011-May 2016	75	4.4	15	2.1	40	2.8	**130**
34	Owned private dwellings-major repairs needed	155	9.1	125	17.9	110	7.7	**390**
	Green cells are calculated in row	Blue cells are calculated in column						

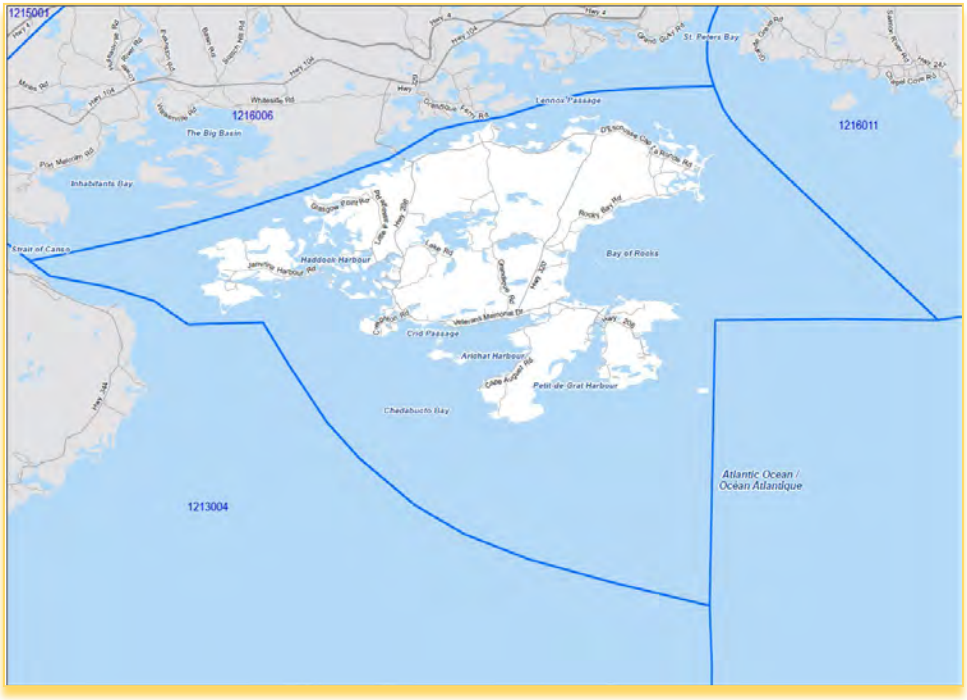
MAP: CENSUS SUBDIVISION-A



MAP: CENSUS SUBDIVISION-B



MAP CENSUS SUBDIVISION-C



- Line 21; The average household size in Nova Scotia is 2.3. Overall Richmond is slightly below that at 2.2, with census subdivision-B (east Richmond) lower again at 2.1 persons/household.
- Lines 22 → 24 shows that Richmond has a very high proportion (85%) of owned dwellings. The proportion provincially is 66%.
- Lines 27 → 33 show that 65% of Richmond housing stock is at least 40-years old, with more than 30% being older than 60 years old.
- Line 34; shows that slightly more than 10% of Richmond dwellings are considered by their owners to be in need of major repair. This is especially pronounced in census subdivision-B (east Richmond) where almost 18% of such dwellings were identified.

Municipal Comparators

Periodically, municipalities will compare (i.e. benchmark) their many services to those of other municipalities in their peer group, as a means of judging whether or not they are above or below the norm for provision of service quality, quantity, and cost. This type of comparison can include fire departments, but it is a complicated process and the results are not always intuitive.

Some other provincial jurisdictions have more rigorous requirements in their legislation as compared to NS. For example, in Ontario, provincial legislation sets the standard.[135] Ontario is, arguably, the most regulated jurisdiction for fire services in Canada. Ontario municipalities are required to provide either a fire prevention public education program or a fire department that provides fire suppression services and meets the Municipality's "needs and circumstances." In practice, very few municipalities have such low risks that they do not need access to fire department services.

Compared to other jurisdictions, in NS there are significantly fewer directions and guidance on how, when, and where to provide fire protection services. Nevertheless, all municipalities are judged against their peers when push comes to shove, for example when there is a lawsuit alleging gross negligence. In that respect, what other fire departments and municipalities do, in Nova Scotia, the Maritimes, and across Canada, is very relevant.

Influencing Factors

The challenge in benchmarking fire services is finding one or more municipalities that make a good comparator with the subject municipality, specifically with respect to fire service influencing factors. Just because a municipality makes a good comparator for roads or parks (for examples) does not necessarily make them a good comparator for fire services; in GA's experience, usually not.

All municipalities need to consider what fire protection services they will provide and to what levels and standards. This process could broadly be called meeting the Municipality's "needs and

[135] (FPPA) *Fire Protection and Prevention Act, S.O. 1997, Chapter 4*. https://www.ontario.ca/laws/statute/97f04/v9

circumstances." In layman's terms the needs are the risks and expectations in the community. The circumstances are, broadly speaking, the affordability of the services; i.e. the ability or willingness to pay.

A municipality decides on what fire services to provide, to what level, and to what standard to provide them; after due consideration of many factors in the community. The term community is used deliberately because fire services may not need to be provided at exactly the same level in every community in the Municipality; i.e. in according to the needs and circumstances of each of those local communities.

For context, some of the more obvious fire service influencing factors that could be considered by a municipality may include some or all of the following. Each municipality is somewhat unique in this respect, which adds to the challenge of finding a comparator.

- Population (total, density, distribution, fluctuation daily/seasonal)
- Socio-Demographics (age, education, employment, wealth, traditions, community values, etc.)
- Geographic (size, topography, shape, land use, travel distances, barriers, etc.)
- Economic circumstances (ability to pay, willingness to pay, priorities, tax base)
- Fire risk in the community (potential for loss and impact of loss, built environment factors like age and density and occupancy, incident types and frequency, major risks like factories or hospital, wildland-urban interface, etc.)
- Legislative environment (provincial, municipal, duties, powers, responsibilities, sprinkler bylaw, etc.)
- Development (growth/shrinkage, stability, forecast, type; i.e. employment/residential/service, etc.)
- Fire protection (existing service level and standards, collective agreements, fire department insurance grading, mutual assistance available, staffing model-volunteer/career/composite, fire prevention, training, equipment, budget, traditional service expectations, etc.)
- Infrastructure (rural, urban, suburban, water supply, roads, bridges, traffic, etc.)
- Public attitudes towards fire protection (satisfied/unsatisfied, want more/less, etc.)
- Agreements (mutual-aid, automatic aid, contract service in or out)

Determining a recommended level of fire protection, based on community risk, is outside the scope of this review. However, a quick look at what other NS municipalities are paying for their fire services is instructive, in a broad sense, as to the levels of fire protection being provided in those communities, and in comparison to that being provided in Richmond County.

Perhaps the simplest means of making this financial comparison is to compare the cost of fire services as a percentage of the annual overall municipal expenses. The following table presents this financial comparison data, as could best be determined from published financial statements.

TABLE: MUNICIPAL COMPARISONS FOR COST OF FIRE SERVICES

MUNICIPALITY	YEAR	FIRE RATE	GENERAL REVENUE	FIREFIGHTING TOTAL COST	TOTAL MUNICIPAL EXPENSES	%	1% =
Town Port Hawkesbury	2018/19		$ 107,933	$ 107,933	$ 8,340,844	1.29%	$ 83,408
MD of Guysborough	2018/19	$ 587,858	$ 179,080	$ 766,938	$ 18,048,290	4.25%	$ 180,483
Richmond County	2018/19	$ 740,500	$ 25,000	$ 765,500	$ 14,032,018	5.46%	$ 140,320
Victoria County	2017/18	$ 452,431	$ 298,075	$ 750,506	$ 12,699,630	5.91%	$ 126,996
Colchester County	2018/19		$ 2,571,186	$ 2,571,186	$ 39,580,268	6.50%	$ 395,803
MD of West Hants	2018/19		$ 1,221,343	$ 1,221,343	$ 16,624,200	7.35%	$ 166,242
Cumberland County	2018/19		$ 2,644,437	$ 2,644,437	$ 29,476,848	8.97%	$ 294,768
Inverness County	2017/18	$ 922,300	$ 165,600	$ 1,087,900	$ 10,234,739	10.63%	$ 102,347
CBRM	2018/19	$ 608,821	$ 17,593,173	$ 18,201,994	$ 157,317,590	11.57%	$ 1,573,176
Pictou County	2017/18	$ 1,805,476	$ 180,834	$ 1,986,310	$ 14,921,621	13.31%	$ 149,216
					mean:	7.52%	
					median:	6.92%	

The amounts shown for the cost of fire services is broken out into revenue sources where these were possible to clearly identify in the municipal documents. Most of the municipalities that do not show a fire rate in the above table actually do collect revenues from such a rate, but the amount recovered is a blend of fire services and fire hydrant/water charges, without published rationale on the split. Therefore, when the fire rate revenue was not known the overall cost was placed in the general revenue column.

All municipalities listed above appear to use general revenue to supplement their fire rate revenues. All municipalities in the table use volunteer firefighters exclusively, with the exception of CBRM who uses career firefighters in a few of their many departments.

Meta Data

TABLE: POPULATION BASED DATA

		Financial Data Basis ending in 2019 StatsCan Data basis 2016 Census (excluding Chapel Island IR)										
	Source	**Item**	**Detail**									**TOTALS**
A	StatsCan	Census Division:	Subdivision-A			Subdivision-B					Sub-C	EXCLUDING
B	MOCR	Council District:	3	4	3	5	5	5	5	5	1, 2	CHAPEL ISLAND
C	Assessment	Fire Dept:	Louisdale	St. Peters	West Bay Rd	District 10	Fram-Forch	Grand River	L'Ardoise	Loch Lomond	Isle Madame	MOCR
C1	Assessment	Named Communities Protected:	23	27	5	9	10	9	12	7	32	134
D	StatsCan	Population:	3,796			1,512					3,150	8,458
E	Assessment	Assessment:	$420,089,300	$218,844,200	$23,862,300	$53,667,200	$16,798,100	$28,408,600	$68,173,600	$17,704,500	$223,299,200	$ 1,070,847,000
F	Assessment	Property Count:	2,723	2,684	342	638	529	548	1,331	492	3,602	12,889
G	StatsCan	Dwelling Units:	2,083			1,251					1,621	4,955
G1	F/ΣF*G	Dwelling Units (prorated based on property counts):	987	972	124	226	187	194	471	174	1,621	4,955
G2	D/G	Average Household Size	1.8			1.2					1.9	1.7
G3	G2*G1	Population (prorated based on Dwellings and avg household size	1,798	1,772	226	273	226	234	569	210	3,150	8,458
H	StatsCan	Area (sqkm):	465.13			648.90					129.69	1,243.72
H1	StatsCan	Persons per sqkm:	8.20			2.30					24.30	
H2	G3/H1	Area (sqkm) protected (prorated based on pop density):	219	216	28	119	98	102	247	91	130	

TABLE: MOCR COST BASED DATA

		Financial Data Basis ending in 2019 StatsCan Data basis 2016 Census (excluding Chapel Island IR)										
	Source	**Item**	**Detail**									**TOTALS**
A	StatsCan	Census Division:	Subdivision-A			Subdivision-B					Sub-C	EXCLUDING
B	MOCR	Council District:	3	4	3	5	5	5	5	5	1, 2	CHAPEL ISLAND
C	Assessment	Fire Dept:	Louisdale	St. Peters	West Bay Rd	District 10	Fram-Forch	Grand River	L'Ardoise	Loch Lomond	Isle Madame	MOCR
I	MOCR	Area Rates:	$0.10	$0.10	$0.10	$0.15	$0.15	$0.15	$0.16	$0.15	$0.11	
J	MOCR	St Peters District 8:		$0.09								
K	E/100*I	Theoretical Max Rate Revenue:	$ 420,089	$ 218,844	$ 23,862	$ 80,501	$ 25,197	$ 42,613	$ 109,078	$ 26,557	$ 245,629	$ 1,192,370
M	MOCR Budgets	MOCR Rate Revenue (3-yr avg):	$ 140,440	$ 167,830	$ 26,120	$ 62,972	$ 20,677	$ 28,560	$ 86,408	$ 27,497	$ 191,314	$ 751,818
N	MOCR Budgets	MOCR Expenses (3-yr avg):	$ 140,440	$ 167,830	$ 26,120	$ 62,972	$ 20,677	$ 28,560	$ 86,408	$ 27,497	$ 191,314	$ 751,818
P	Canso Dispatch	Annual incident Numbers (2018, MOCR areas only):	55	140	14	16	9	4	55	6	64	363
Q	N/P	MOCR cost/incident:	$ 2,553	$ 1,199	$ 1,866	$ 3,936	$ 2,297	$ 7,140	$ 1,571	$ 4,583	$ 2,989	$ 2,071
R	N/F	MOCR cost per property:	$ 52	$ 63	$ 76	$ 99	$ 39	$ 52	$ 65	$ 56	$ 53	$ 58
S	N/G3	MOCR cost per capita (prorated):	$ 78	$ 95	$ 116	$ 231	$ 91	$ 122	$ 152	$ 131	$ 61	$ 89
S1	N/E	MOCR cost as % of assessment:	0.033%	0.077%	0.109%	0.117%	0.123%	0.101%	0.127%	0.155%	0.086%	0.070%
T	N/G1	MOCR cost per Dwelling Unit (prorated):	$ 142	$ 173	$ 211	$ 279	$ 111	$ 147	$ 184	$ 158	$ 118	$ 152
U	N/H2	MOCR cost per sqkm:	$ 641	$ 777	$ 948	$ 531	$ 210	$ 280	$ 349	$ 301	$ 1,475	$ 604

Incidents in MOCR, calculated basis as % of total WBRVFD property assessments

TABLE: FIRE DEPARTMENT EXPENSE BASED DATA

	Source	Financial Data Basis ending in 2019 StatsCan Data basis 2016 Census (excluding Chapel Island IR) Item	Detail									TOTALS
A	StatsCan	Census Division:	Subdivision-A			Subdivision-B					Sub-C	EXCLUDING
B	MOCR	Council District:	3	4	3	5	5	5	5	5	1, 2	CHAPEL ISLAND
C	Assessment	Fire Dept:	Louisdale	St. Peters	West Bay Rd	District 10	Fram-Forch	Grand River	L'Ardoise	Loch Lomond	Isle Madame	MOCR
C1	Assessment	Named Communities Protected:	23	27	5	9	10	9	12	7	32	134
D	StatsCan	Population:	3,796			1,512					3,150	8,458
E	Assessment	Assessment:	$420,089,300	$218,844,200	$23,862,300	$53,667,200	$16,798,100	$28,408,600	$68,173,600	$17,704,500	$223,299,200	$ 1,070,847,000
F	Assessment	Property Count:	2,723	2,684	342	638	529	548	1,331	492	3,602	12,889
G	StatsCan	Dwelling Units:	2,083			1,251					1,621	4,955
G1	F/ΣF*G	Dwelling Units (prorated based on property counts):	987	972	124	226	187	194	471	174	1,621	4,955
G2	D/G	Average Household Size	1.8			1.2					1.9	1.7
G3	G2*G1	Population (prorated based on Dwellings and avg household size	1,798	1,772	226	273	226	234	569	210	3,150	8,458
H	StatsCan	Area (sqkm):	465.13			648.90					129.69	1,243.72
H1	StatsCan	Persons per sqkm:	8.20			2.30					24.30	
H2	G3/H1	Area (sqkm) protected (prorated based on pop density):	219	216	28	119	98	102	247	91	130	
L	FD's Budgets	FDs' Reported MCR Revenue (3-yr avg) + MOCR services:	$ 154,533	$ 193,174	$ 31,298	$ 49,070	$ 14,674	$ 24,095	$ 76,654	$ 20,864	$ 193,359	$ 757,721
P	Canso Dispatch	Annual incident Numbers (2018, MOCR areas only):	55	140	14	16	9	4	55	6	64	363
V	FD's Budgets	FDs' Operational Expenses (3-yr avg): **	$ 73,367	$ 143,496	$ 25,356	$ 41,290	$ 19,677	$ 30,012	$ 88,183	$ 28,036	$ 78,829	$ 528,246
W	V/P	FDs' operationa cost/incident:	$ 1,334	$ 1,025	$ 1,811	$ 2,581	$ 2,186	$ 7,503	$ 1,603	$ 4,673	$ 1,232	$ 1,455
X	V/F	FDs' operational cost per property:	$ 27	$ 53	$ 74	$ 65	$ 37	$ 55	$ 66	$ 57	$ 22	$ 41
X1	V/E	FDs' operational cost as % of assessment:	0.017%	0.066%	0.106%	0.077%	0.117%	0.106%	0.129%	0.158%	0.035%	0.049%
Y	V/G3	FDs' operational cost per capita (prorated):	$ 41	$ 81	$ 112	$ 151	$ 87	$ 128	$ 155	$ 133	$ 25	$ 41
Z	V/G1	FDs' operational cost per Dwelling Unit (prorated):	$ 74	$ 148	$ 205	$ 183	$ 105	$ 155	$ 187	$ 161	$ 49	$ 107
AA	V/H2	FDs' operational cost per sqkm (prorated):	$ 335	$ 664	$ 921	$ 348	$ 200	$ 295	$ 357	$ 307	$ 608	$ 425

** NOT INCLUDING costs of Long Term Debt and Capital Expenditures

FD's Financial reporting appears incomplete/inaccurate

Incidents in MOCR, calculated basis as % of total WBRVFD property assessments

Basis WBRVFD percentage (33%) for MORC portion of entire operation in both counties

The above meta data shows some of the relationships between the various fire department serviced areas in Richmond County. Some data was derived by algebraic operations on known data, and produces results that are only approximately accurate. Those calculation pathways are shown in the left hand "source" column.

Relative cost calculations are absolutely difficult on a year over year basis due to the variability of some of the financial data originating with the fire departments. For that reason, most financial data is averaged over several years, as noted, with the 2019/20 year being the end date.

APPENDIX XIV: TABLE OF RECOMMENDATIONS

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 7	Coordinating Committee	Current Committee of Council is not effective	GA recommends the establishment of a fire chiefs coordinating committee that is not a committee of Council. The committee should consist of the volunteer fire chiefs and responsible MOCR administrative staff who have responsibility to report, develop, and recommend action to MOCR executive administration, and thereby to Council as/if necessary and when appropriate. The MOCR staff on the committee must have the authority to bring back action and direction to the committee as appropriate. The key MOCR administrative staff representative on the committee should be the emergency services coordinator.			46
Recommendation 16	Equipment	Firefighting Equipment meeting standards and provincial Legislation	GA recommends that the purchasing, testing, inspection, maintenance, and retirement of; bunker gear, SCBA, fire hose, rescue rope and harness, life safety rope and harness, ground ladders, and flashlights be done in accordance with all requirements of NS occupational health safety and safety legislation, for all affected equipment, in all fire departments.			65
Recommendation 17	Equipment	Firefighting Equipment meeting standards and provincial Legislation	GA recommends annual quantitative fit-testing of all persons who will be required to wear SCBA or medical mask on an annual basis, in conformance to NS occupational health and safety legislation. Since not all firefighters will be able to wear breathing protection for various reasons; those firefighters who are not fit-tested and therefore not qualified to wear SCBA or medical masks should not be permitted to operate in IDLH atmospheres.			66

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 3	FD registrations	Lack of service agreements	GA recommends that in addition to the Fire Department Registration that municipal staff develop and implement a fire services delivery agreement between the Municipality and the individual fire department societies, to be approved by Council. Such an agreement is also recommended by the provincial fire marshal.			36
Recommendation 1	FD registrations	Registration process review	GA recommends that MOCR conduct a review of the registration process in Richmond County and amended it to reflect the current best-practice registration process and format.			34
Recommendation 2	FD registrations	Registration process review	GA recommends that MOCR update the existing Council registration policy and expand it to include the necessary tools for municipal administration and Council; to not only achieve delivery of adequate fire service throughout the Municipality but to also provide adequate municipal oversight. The policy should address at least the areas listed above.			35
Recommendation 45	Finance	Accountability and transparency	GA recommends that the Emergency Services Coordinator manage the purchasing of all minor capital equipment. With advice from the Fire Chiefs' Coordinating Committee he should set priorities on what equipment will be purchased that year. Funding for these purchases should be managed by MOCR directly.			145
Recommendation 46	Finance	Accountability, transparency, sustainability of service	GA recommends that the Emergency Services Coordinator have discretionary powers to make adjustments, within the approved minor capital annual budget, to determine the exact mix of minor capital purchases according to need. In this way, the fire departments will be able to more quickly reset priorities as unplanned needs arise (e.g. after a major fire incident), balanced with equipment expiry deadlines.			145

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 47	Finance	Accountability, transparency, sustainability of service	GA recommends that any surplus minor capital funds at the end of the fiscal year (if any) be placed into a revolving reserve account for the future purchase of minor capital equipment. This initiative will remove any pressure on the fire departments to spend all the available minor capital funds in a particular year, even if not immediately required by service needs in that particular year.			145
Recommendation 48	Finance	Accountability, transparency, sustainability of service	GA recommends that the surplus minor capital revolving reserve account have a set maximum amount of approximately $75,000. If in any given future year there is an unprecedented or emergency need to make minor capital purchases, and there are insufficient budgeted funds, a mechanism should be in place for the Emergency Services Coordinator to request Council to release additional funds to cover the need, such funds to be withdrawn from the reserve.			145
Recommendation 49	Finance	Accountability, transparency, sustainability of service	GA recommends that the Emergency Services Coordinator should manage the purchasing process. In this way municipal purchasing procedures will be followed, county-wide purchasing of standardized equipment will occur, and therefore best value for public funds should result.			146
Recommendation 50	Finance	Accountability, transparency, sustainability of service, meeting standards and Legislation	GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for fire apparatus annual inspection, maintenance, and testing; for every piece of fire apparatus, in every fire department, where such service is indicated by NFPA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.			146

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 51	Finance	Accountability, transparency, sustainability of service, meeting standards and Legislation	GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for firefighting, rescue, and personal protective equipment annual inspection, maintenance, and testing; for every piece of affected equipment, in every fire department, where such service is indicated by NFPA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.			146
Recommendation 52	Finance	Accountability, transparency, sustainability of service, meeting standards and Legislation	GA recommends that the Emergency Services Coordinator establish and coordinate the execution of service contract(s) for respirator fit-testing; for every eligible firefighter, in every fire department, to meet CSA standards and/or provincial/federal legislation. Such contracts to be funded and managed directly by MOCR.			146
Recommendation 53	Finance	Accountability, transparency, sustainability of service, meeting standards and Legislation	GA recommends that every fire department cooperatively participate in fire apparatus and equipment inspection and testing, as well as firefighter fit testing, that is coordinated by the Emergency Services Coordinator. Fire services effectiveness, efficiency, and the safety of firefighters and the public depends on these activities.			146

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 54	Finance	Appropriate fee for service	GA recommends that the annually funding grant provided to the West Bay Road volunteer fire department be in proportion to; the total value of property assessments in Richmond County that fall within the WBRVFD response boundary, divided by the sum of the total value of Richmond County and Inverness County property assessments within the entire WBRVFD response boundary. Assessment values to be as determined by the Property Valuation Services Corporation (PVSC), and based on an average of the past two years of data.			146
Recommendation 30	Finance	Best value for insurance	GA recommends that an insurance specialist be hired to review liability and comprehensive insurance policies and coverage options in order to prepare an RFP that obtains needed/desired coverage at best value. Self-insurance (i.e. deductible) risk assessments should be considered.			125
Recommendation 55	Finance	Fees for extraordinary services	GA recommends that MOCR develop a bylaw to set fees for service and the methods, penalties, and rights associated with setting and collecting such fees. Such fees are described in more detail starting on **page 108** in this report.			147
Recommendation 42	Finance	Retention of assets for service continuity assurance	GA recommends that the ownership, and all associated rights thereto, of all capital asset purchases for fire protection and made by funds derived from MOCR, whether paid directly for the purchase of the asset by MOCR or provided to the fire department for their purchase of the asset, be retained and secured by agreement to the benefit of MOCR in proportion to the funds provided for the asset purchase.			144
Recommendation 26	Finance	Revenue for extraordinary services	GA recommends that MOCR implement service fees for reasonable cost recovery to highway responses.			108

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 27	Finance	Revenue for extraordinary services	GA recommends that MOCR identify suitable services, and implement the appropriate by-laws and procedures for cost-recovery fees for these services.			109
Recommendation 28	Finance	Revenue for extraordinary services	GA recommends that the Municipality pursue prosecution and seek fines for violations of the Fire Code, in accordance with the provisions in the *Fire Safety Act*.			110
Recommendation 31	Finance/Service	No existing corporate inventory of minor capital equipment	GA recommends that MOCR have the fire departments provide a complete inventory of all minor capital equipment; and that this inventory be evaluated as sufficient, or not, to meet the service delivery commitment contained in the fire departments' registration documents with the Municipality.			127
Recommendation 32	Finance/Service	Providing adequate minor capital equipment	GA recommends that expenditures on minor capital equipment be increased from historic levels since they appear to be below sustainable service-requirements.			130
Recommendation 33	Finance/Service	Providing adequate minor capital equipment	GA recommends that the need for the purchase of minor capital items be evaluated on the basis of the required inventory of items (e.g. how many 2½-inch fire hoses are needed) and each items' expected life-span with input from fire department actual experiences. Such an evaluation will reveal the actual needed replacement rate for all such items where replacement age is discretionary, i.e. not mandated. The above tables show that type of analysis.			130
Recommendation 35	Finance/Service	Providing adequate minor capital equipment	GA recommends that $149k (2020 dollars) be the target as a long-term plan for annual minor capital budgeting, until experience or an accurate inventory proves this is/not sufficient.			131

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 34	Finance/Service	Providing adequate minor capital equipment. Meeting standards and provincial Legislation	GA recommends that a number of bunker gear sets be purchased annually. Blanket purchasing contracts should be signed that permit the fire department to purchase/requisition annually, say over a 5 or 7-year period, estimated maximum/minimum numbers of firefighters' PPE components, at agreed prices. This strategy allows the fire department to quickly react to unplanned changes in the status of their critical PPE inventory and immediately take pre-approved action to address the need. It also smooths out large variations in the annual budgeting process.			131
Recommendation 39	Finance/Taxation	Funding stability at a sustainable, as need level	GA recommends that funding for the fire departments should come from the general taxation rate. The rational is that fire-emergency services benefits everyone in the county, and everyone should pay an equal amount.			142
Recommendation 40	Finance/Taxation	Funding stability at a sustainable, as need level	GA recommends that Richmond County (MOCR) grant each of the fire departments sufficient funds that are adequate, on a case by case basis, to meet their annual operating expense needs, in a sustainable manner, and that meets the fire departments' commitment to service delivery contained in their annual fire department registration with MOCR. This funding to come from revenues from the general tax levy.			144
Recommendation 41	Finance/Taxation	Funding stability at a sustainable, as need level	GA recommends that MOCR directly fund the expenditures associated with the purchase of major capital assets, specifically; the acquisition of pumper and pumper-tanker fire apparatus, as part of MOCR corporate capital acquisition plans. Such purchases should be separate from fire department operating expense needs.			144

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 6	Fire service coordinator	Task was to review current role of MOCR's Fire Service Coordinator and recommend appropriate roles and function moving forward	GA recommends that a full-time Emergency Services Coordinator position be appointed with responsibilities for fire-service coordination, county emergency management coordinator, and police liaison. Such position to report to the CAO.	Q1 2021		43
Recommendation 21	Fire Stations	Building condition audit needed	GA recommends that a suitable engineering firm be contracted to perform a building condition audit and standards audit of all fire stations.			70
Recommendation 22	Fire Stations	Meeting legislative and best-practice standards, affordably	GA recommends that planning and construction of new stations should be done with the assistance of professionals that have fire station design experience and are familiar with the NFPA health and safety requirements and other best practices for fire stations.			78
Recommendation 10	Fleet	Fire Apparatus maintenance meeting standards	GA recommends that only one qualified and experienced fire apparatus maintenance service provider do all the NFPA component servicing on all fire fleet vehicles, in every fire department. This provider must have mobile servicing capability and should perform such services inside Richmond County.			64

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 11	Fleet	Fire Apparatus maintenance meeting standards	GA recommends that only one qualified and experienced fire apparatus testing and inspection service provider do all the NFPA and FUS stipulated, in-service and acceptance level testing and inspection of fire apparatus. This provider must have mobile testing and inspection capabilities and should perform these services inside Richmond County.			64
Recommendation 12	Fleet	Fire Apparatus maintenance meeting standards	GA recommends that only a certified Emergency Vehicle Technician should be servicing, inspecting, and testing all fire apparatus. This includes the pump, pump transmission, all pump ancillary systems, emergency warning systems, electrical power systems, and all other components specified in NFPA-1901.			65
Recommendation 13	Fleet	Fire Apparatus maintenance meeting standards	GA recommends that annual, semi-annual, monthly, and daily (weekly); inspections, maintenance, and testing be done in accordance with the NFPA/ULC/FUS standards, and with provincial pre-trip safety inspection guidelines.			65
Recommendation 14	Fleet	Fire Apparatus maintenance meeting standards and reliability	GA recommends that a single vehicle maintenance service be contracted to provide cab and chassis servicing of all fire apparatus in all fire departments in Richmond County. This service provider should have mobile servicing capability so that fire apparatus are out-of-service for the minimum amount of time, by performing (where possible) basic maintenance services at the nearest suitable fire station. The service provider should also have access to a shop where heavier work can be performed. Speciality work should be sent to the nearest suitable service provider.			65

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 15	Fleet	Fire Apparatus maintenance meeting standards and reliability	GA recommends that complete servicing, inspection, testing, and maintenance records be securely kept, for every fire apparatus, for the life of the fire apparatus. Such records should be subject to regular evaluation to determine (in advance) trends and evidence of need for rebuilding, preventative maintenance, or possible predictable service failure.			65
Recommendation 9	Fleet	Fire Apparatus purchases meeting standards	GA recommends that all fire apparatus when purchased new should be specified, constructed, tested, and accepted in conformance with the requirements of the latest edition of NFA-1901. And CAN/ULC-S515. Relevant to Richmond County this NFPA standard has a number of categories of fire apparatus that includes Pumper, Initial Attack, Mobile Water Supply (Tanker), Aerial, and Special Service (rescue trucks). Fire apparatus equipped with a fire pump must be tested and certified to the requirements of ULC-S515 to be recognized for insurance grading purposes (i.e. meeting FUS rating requirements).			64
Recommendation 8	Fleet	Fire Apparatus Standardization	GA recommends that all MOCR purchased fire apparatus be standardized in specification in order to speed the acquisition process and obtain better pricing. This should include a standard chassis, standard pump size and make/model, standard features and capability, and a standard body configuration. Such standardizations will also reduce maintenance costs, improve interoperability between fire departments at incidents, and improve training efficiency across the County, and reduce liability for the Municipality.			64

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 19	Fleet/Finance	Fire Apparatus availability and reliability	GA recommends that two older (no longer first-line) pumpers or pumper-tankers be kept serviceable/operational as maintenance reserves. The purpose of reserves is to be able to, on short notice, temporarily replace apparatus that are out of service for a day or more. They will also remain available for use at major incidents. They should be placed and maintained in suitable fire stations.			66
Recommendation 18	Fleet/Finance	Fire Apparatus replacement meeting standards and affordability	GA recommends that MOCR adopt a Policy of Council that sets a fire apparatus replacement schedule. The following schedule should be adopted for the purposes of determining fire apparatus suitability for continued service and as a budget planning tool for future fire apparatus replacement.			66
Recommendation 36	Fleet/Finance	Service reliability and personnel safety	GA recommends the following table of scheduled fire apparatus replacements.			138
Recommendation 37	Fleet/Finance	Service reliability and personnel safety	GA recommends an annual contribution of approximately $170k to a fire capital reserve account to reduce the annual capital fluctuations in the fire department budgets to a minimal amount. Adequate reserve funds would greatly reduce the need to debenture these predictable capital costs, thereby reducing the overall cost of capital purchases. This amount will need to be adjusted over time with inflation of fire apparatus costs, and the value of the Canadian dollar.			139

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 4	Major capital assets	Assets not secured	GA recommends that the ownership, and all associated rights thereto, of all capital asset purchases for fire protection and made by funds derived from MOCR, whether paid directly for the purchase of the asset by MOCR or provided to the fire department for their purchase of the asset, be retained and secured by agreement to the benefit of MOCR in proportion to the funds provided for the asset purchase			37
Recommendation 5	Mutual-aid agreements	Agreements do not exist, liability issue	GA recommends that MOCR develop and execute mutual-aid agreements with all surrounding municipalities and with fire-emergency service providers as recognized under the MGA. These agreements should address mutual-aid relationships; between municipalities (i.e. municipal to municipal), between municipalities and fire/emergency services providers (i.e. within and without the Municipality), and between fire/emergency service providers themselves (i.e. fire department to fire department). The best way to accomplish this is to develop a suitable multi-lateral mutual-aid agreement to which all parties are signatory.			38
Recommendation 29	Personnel	Protection of personnel due to injury or death	GA recommends that the following benefits be provided by the Municipality to all volunteer firefighters; Provincial Workers Compensation Benefits ($62k insured amount), VFIS Accident and Sickness coverage and disability coverage ($100k on-duty principal amount, disability weekly $700 maximum), VFIS MFAP (member and family assistance program for mental health). Discussion with the volunteer firefighters is recommended.			125

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 38	Personnel	Protection of personnel due to injury or death	GA recommends that Richmond County elect the highest WSIB protection, and provide firefighter accident, sickness and disability (AD&D) benefits, and MFAP benefits for all firefighters.			141
Recommendation 56	Point Tupper	Meeting best-practice standards in preparation for responding to industrial incidents	GA recommends that a more formal process be developed in sharing industrial emergency plans, where the local fire service would be involved. The process should also include site specific training at the plant, table-top and eventually on-the-ground exercises, and regular familiarization tours with sufficient personnel from the local fire departments; all to help ensure that emergency plans are effective.			217
Recommendation 57	Point Tupper	Meeting best-practice standards in preparation for responding to industrial incidents	GA recommends that an automatic-aid agreement be developed and implemented for specific classifications of responses to the specific high-risk facilities in Point Tupper, specifically Port Hawkesbury Paper, NuStar Energy, and Nova Scotia Power.			217
Recommendation 58	Point Tupper	Services agreement	GA recommends that Richmond County and Port Hawkesbury enter into a shared services agreement for the provision by Port Hawkesbury of fire-emergency services in Point Tupper and in the west-end of Richmond County as described by service delivery model 7; "Status Quo, Port Hawkesbury Agreement with Extended Coverage Areas," and for all of the reasons discussed starting on page **199.**			217
Recommendation 59	Point Tupper	Services agreement	GA recommends that the shared services agreement include provisions as follows;			217

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 60	Point Tupper	Services agreement	GA recommends that Richmond County and Port Hawkesbury adopt a fee for the delivery of fire-emergency service based on a standards and value-based component funding model. This component funding model is described in Funding Option E: Standards and Value of Service, a Component Approach.			218
Recommendation 61	Point Tupper	Services agreement	GA recommends that Richmond County retain a percentage of preferred ownership in any Port Hawkesbury fire department related capital works/projects for which they might agree to share costs. Such agreement to share costs should demonstrate a clear benefit to the provision of fire-emergency services by the Port Hawkesbury fire department in the area(s) in Richmond County where those services are provided.			218
Recommendation 43	Registration	Accountability and transparency	GA recommends that all fire departments be required to annually file with MOCR an audited financial statement of all revenues and expenses; in a standardized format that MOCR specifies. Such filings should be a condition on fire departments receiving any publicly funded; grants, services, or capital assets.			145
Recommendation 62	Registration	Efficiency of service delivery	GA recommends that the Municipality include a multi-lateral automatic-aid provision in their service agreement with each of the society fire departments.			223
Recommendation 44	Registration/Finance	Accountability and transparency	GA recommends that all fire departments be required to annually file with MOCR a report on incidents responded to, including type of incident, location of incident, benchmark times for the incident, and staffing at each incident. Such filings should be a condition on fire departments receiving any publicly funded; grants, services, or capital assets.			145

Ref. Number	Subject	Issue	RECOMMENDATION	WORKSHEET Est. Timeline	WORKSHEET Est. Cost	Ref. Page
Recommendation 20	Service /Finance	Most economical means to meet service demand	GA recommends that in fire departments where there is only one fire apparatus in the station that is, or should be, equipped with a chassis mounted major water pump, that that apparatus should be a pumper-tanker. That apparatus should meet all the requirements stipulated in NFPA-1901 both for a pumper and for a mobile water supply apparatus, and it should be provided with suitable equipment to perform the roles of both a pumper and a mobile water supply apparatus (i.e. a pumper-tanker).			67
Recommendation 23	Water Supply	Rural water supply security	GA recommends that dry-hydrants be installed and maintained at rural water supply points within the County as follows.			84
Recommendation 24	Water Supply	Rural water supply security	GA recommends that good records of all dry-hydrant maintenance, inspections, and testing should be kept as protection against liability, for reference, and pre-planning purposes.			85
Recommendation 25	Water Supply	Rural water supply security	GA recommends that all dry-hydrants established on private property be accompanied by an executed agreement defining rights, duties, and liabilities.			85

※ **END** ※