MUNICIPALITY OF THE COUNTY OF KINGS

Review of Fire Protection Services in the Greenwich and Wolfville Fire Districts

January 2022

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EXECUTIVE SUMMARY

In June 2021 the Municipality of the County of Kings issued an RFP for a "Review of Greenwich and Wolfville Fire Protection".

Emergency Management & Training Inc. (EM&T) was retained to complete a review and in August completed onsite visits with stakeholder consultations at both the Greenwich Fire Department (GVFD) and the Wolfville Volunteer Fire Department (WVFD). In addition, we spoke with stakeholders at area fire departments.

While the focus was on the GVFD and the WVFD, the review had to consider the surrounding communities and their fire departments. It was immediately obvious that there is a high level of fire protection being provided in the two communities and the surrounding areas.

Strengths: The training programs appear to be effective, both fire departments have a large cadre of firefighters, the apparatus for both departments meet standards, and the economics of the fire service is effective as the volunteers do not receive a salary for their time or efforts.

Challenges: Firefighters often live outside the primary response areas for the fire departments. There are accountability challenges of fire services enabled under the Rural Fire District Act. Under the Rural Fire District Act, the roles and responsibilities of the Fire Commission are clear, however, the accountabilities are unclear for the fire departments.

The two fire departments, and the general area are very well outfitted with apparatus and equipment, surpassing what is generally expected in communities of this size and proximity. The citizens of the area have an exceptional level of volunteer fire service.

While undertaking the review, we have identified recommendations that apply in two areas; those specific to the two fire services in the review and those that should be considered by all fire departments within the County of Kings.

ACRONYMS

CAO	Chief Administrative Officer
CFAI	Commission on Fire Accreditation International
CISM	Critical Incident Stress Management
CSA	Canadian Standards Association
EM&T	Emergency Management & Training Inc.
FSANS	Fire Service of Nova Scotia
FUS	Fire Underwriters Survey
GVFD	Greenwich Volunteer Fire Department
GIS	Geographic Information System
IC	Incident Commander
ICISF	International Critical Incident Stress Foundation
JHSC	Joint Health and Safety Committee
Municipality	Municipality of the County of Kings
NFPA	National Fire Protection Association
OIC	Officer in Charge
PPE	Personal Protective Equipment
PV	Personal vehicle
SCBA	Self-Contained Breathing Apparatus
SOG	Standard Operating Guidelines
WVFD	Wolfville Volunteer Fire Department

INTRODUCTION

Overview

The Municipality of the County of Kings and the Town of Wolfville are two municipal units located within the geographic boundaries of the County of Kings, with the Municipality covering all area not with one of the three Towns. The Municipality does not directly own fire departments. The Municipality, rather, financially supports the services provided by thirteen organizations (the Town's Department and the Greenwich Fire Commission being two). The organizations vary in composition – some are owned by Fire Commissions, some by municipal units, others by not-for-profit organizations, and in the case of Greenwich, the Commission engages the services of a not-for-profit organization.

Several of the thirteen fire districts include overall boundaries that combine areas located within two separate municipal units (such as the case the Town's department) and other areas that are wholly within the Municipality but extend beyond the geographic boundaries of a Fire Commission (as in the case of the Greenwich Fire Commission). In these specific instances where there are Fire Districts wholly within the Municipality but beyond the geographic boundaries of a Fire Commission, the Municipality refers to fire districts as having both an "inside" area (the portion within the Town or Fire Commission) and an "outside" area (the balance of the fire district that is located within the Municipality). In the case of a Town department the Municipality has an area rate for the area outside the Town being served by the Town Department. The following two figures depict the inside and outside areas of the Wolfville and Greenwich Fire Districts.

FIGURE #1: Map of Fire District – Wolfville

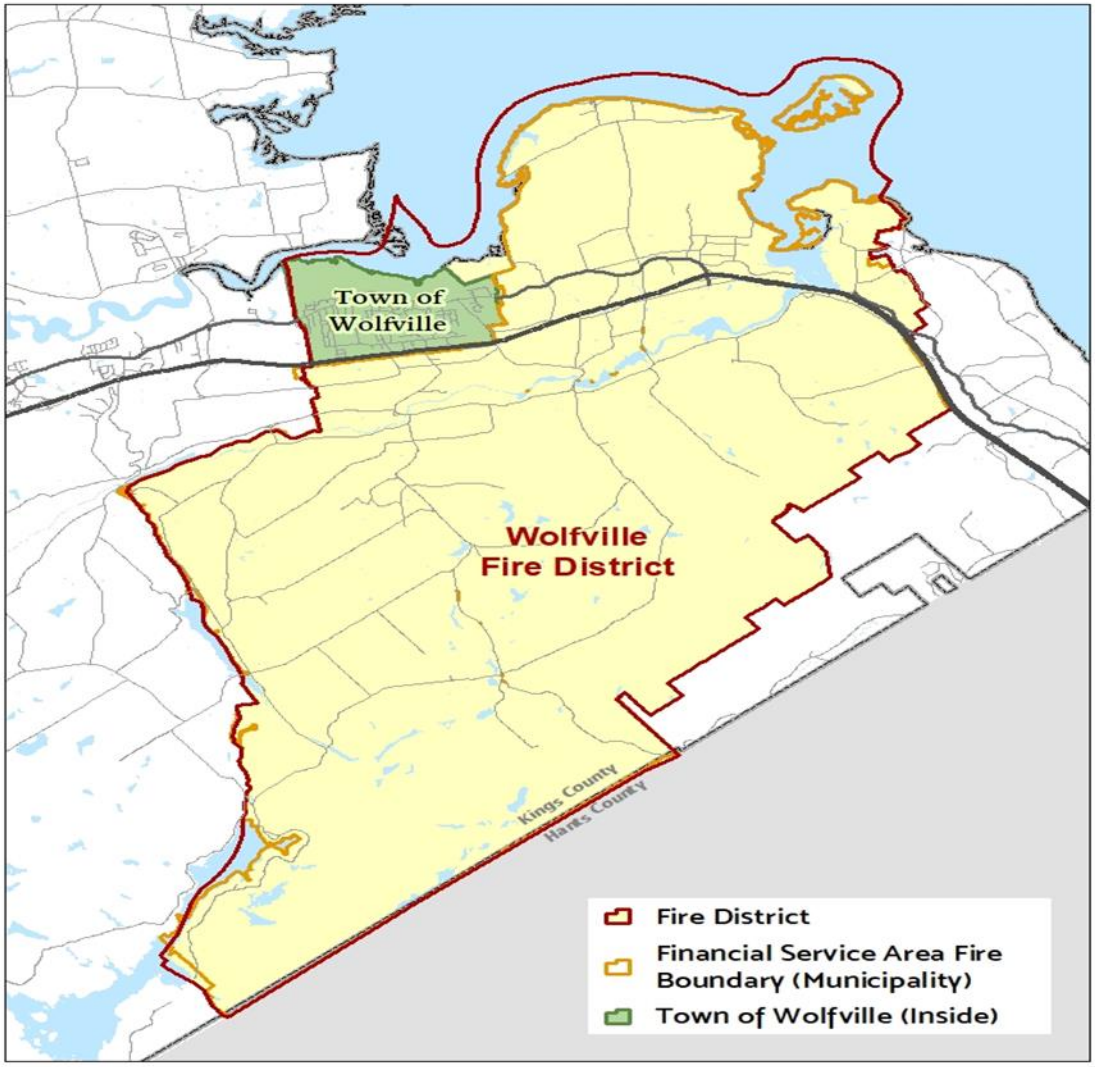
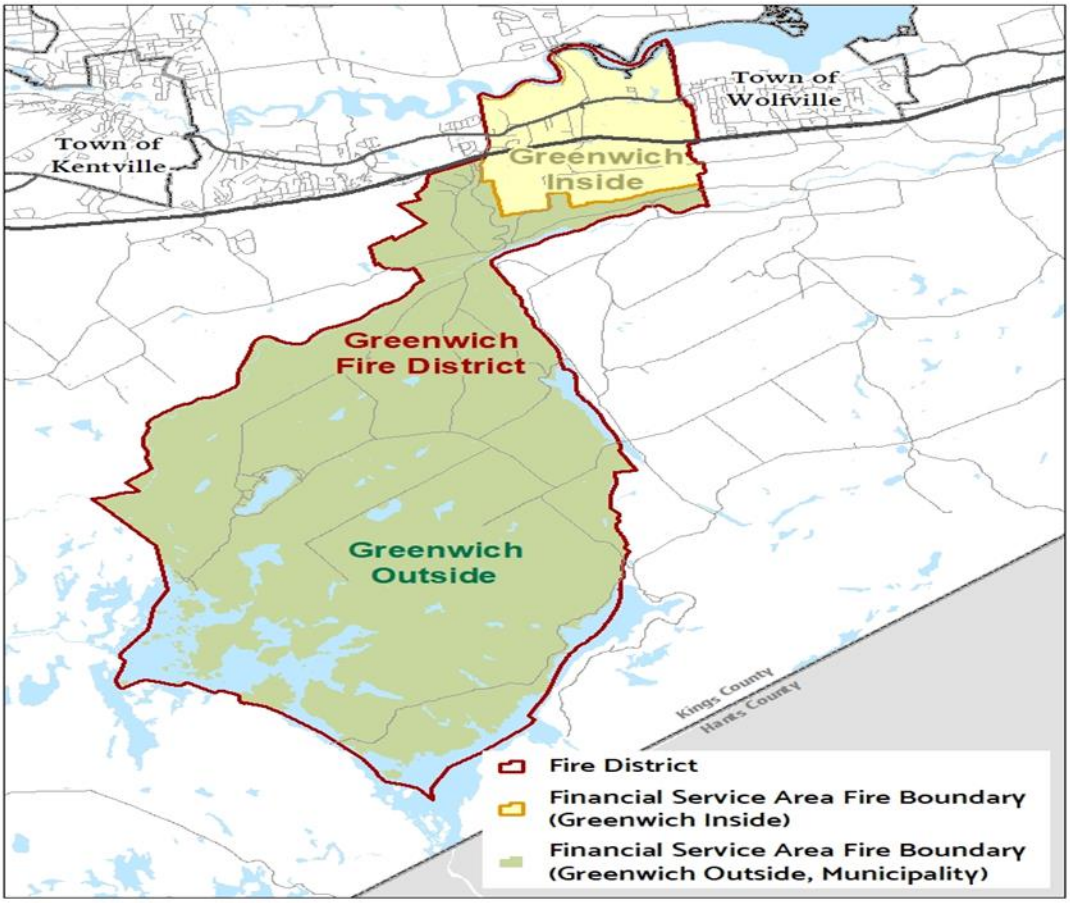


FIGURE #2: Map of Fire District – Greenwich



These Fire Services are vital to the communities in the county, providing protection from fire, life threatening emergencies, and dangerous conditions. The departments must be trained, equipped, and ready to respond to all types of situations. The task of completing a Fire Protection Review is critical as the County progresses, ensuring the most efficient and effective use of resources as the service continues to meet the demands of the community.

The Municipality and the Town have partnered in the engagement of a qualified consultant, with considerable experience and expertise in municipal fire services, to conduct a comprehensive assessment of the fire prevention services across both departments.

This review discusses if it would be useful or more efficient for the Greenwich and Wolfville departments to co-operate, reduce duplication or amalgamate while still ensuring appropriate response to the communities.

This report has been based upon (but not limited to) key performance indicators that have been identified in national standards and safety regulations such as:

- *Nova Scotia Fire Safety Act*
- *Rural Fire District Act*
- *Occupational Health and Safety Act*
- The National Fire Protection Association (NFPA) standards:
- NFPA 921 – Guide for Fire and Explosion Investigations
- NFPA 1001 – Standard for Fire Fighter Professional Qualifications
- NFPA 1002 – Standard for Fire Apparatus Driver/ Operator Professional Qualifications
- NFPA 1021 – Standard for Fire Officer Professional Qualifications
- NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plan Examiner
- NFPA 1033 – Standard for Professional Qualifications for Fire Investigator
- NFPA 1035 – Standard on Fire and Life Safety Educator, Public Information Officer, Youth Fire Setter Intervention Specialist and Youth Fire Setter Program Manager Professional Qualifications
- NFPA 1041 – Standard for Fire Service Instructor Professional Qualifications
- NFPA 1061 – Professional Qualifications for Public Safety Telecommunications Personnel
- NFPA 1072 – Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications
- NFPA 1201 – Standard for Providing Fire and Emergency Services to the Public
- NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
- NFPA 1500 – Standard on Fire Department Occupational Safety, Health, and Wellness Program
- NFPA 1521 – Standard for Fire Department Safety Officer Professional Qualifications
- NFPA 1582 – Standard on Comprehensive Occupational Medical Program for Fire Departments
- NFPA 1583 – Standard on Health-Related Fitness Programs for Fire Department Members
- 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

- NFPA 1730 – Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations
- NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
- NFPA 1901 – Standard for Automotive Fire Apparatus
- NFPA 1911 – Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles
- The Commission on Fire Accreditation International (CFAI), which is a program that promotes fire service excellence by evaluating a fire department based on related National Fire Protection Association standards, local legislation, and industry best practices (the parent organization for Commission on Fire Accreditation International is the Centre for Public Safety Excellence).
- This program has been adopted by many fire departments in Canada as a measure of best practices. Calgary, Edmonton, Guelph, Kitchener, Toronto, and Ottawa are just a few fire departments that have obtained accreditation from the Commission on Fire Accreditation International.
- Fire Underwriters Survey (FUS) technical documents

Project Consultants

Although several staff at Emergency Management & Training Inc. (EM&T) were involved in the collaboration and completion of this Plan, the core review was conducted by:

- Darryl Culley, President
- Lyle Quan, Vice President of Operations
- Richard Hayes, Fire Service Consultant

Together, the team has amassed a considerable amount of experience in all areas of fire and emergency services program development, review, and training. The EM&T team has worked on projects that range from fire service reviews, creation of strategic and master plans, and development of emergency response programs for clients.

BACKGROUND

Wolfville Volunteer Fire Department

Wolfville is a town in Kings County well known for its tourism. It is home to Acadia University, which brings approximately 4,000 students to the community annually.

The Wolfville Volunteer Fire Department (WVFD) services approximately 4,200 residents within the town and 3,000 residents in the Municipality of the County of Kings immediately adjacent to the Town plus the influx of university students, with 40 volunteer firefighters who respond to an average of 197 calls per year (5-year average). There are approximately 1975 residential buildings and 265 commercial buildings within the town and 1372 residential buildings and 61 commercial buildings within the fire district outside of the town boundaries.

WVFD was established in 1890. In 1945 the fire department surrendered its incorporated status to become a department of the Town.

The fire department mission statement is “To provide quality Fire Suppression, Fire Prevention, and Rescue Services to protect the lives and property of the Citizens of Wolfville and surrounding communities.”

The current fire station was built in 1971 and is located at 355 Main Street, Wolfville. The building is attached to the municipal offices.

As a municipal fire department, the Fire Chief reports to the Chief Administrative Officer (CAO), who reports to Town Council. The fire department is funded through the property taxation collected separately by both the Town and the Municipality. The Municipality collects a capital rate from ratepayers outside of the Town but within the fire district covered by the Town department. When capital assets are purchased, the Town holds the assets and any associated long-term debt. Both the Town and Municipality support the operations of the department from their general tax rates.

Photo: Wolfville Fire Station with Town Hall on the right

Photo: Aerial view (Google Earth) of the fire station, Town Hall, and RCMP offices

Greenwich Volunteer Fire Department

Greenwich is a rural community located in eastern Kings County, Nova Scotia, west of the Town of Wolfville. The GVFD services approximately 742 residential properties (310 within the hamlet and 432 outside the hamlet) with approximately 1800 residents in the fire district. The fire department has 35-39 active firefighters responding to an average of 91 calls per year (5-year average). There are approximately 37 commercial buildings in the hamlet and 10 commercial buildings in the fire response zone outside of the hamlet.

The Greenwich Fire Commission was established under the R*ural Fire District Act*, which provides for the incorporation of Fire Protection Commissioners in rural districts. The commissioners are to oversee the appointment of officers, manage the finances and assets, "…and exercise all such powers as are necessary or incidental to the carrying out of the purposes of this Act"1. The commissioners are elected by the ratepayers of the hamlet of Greenwich, as defined by legislation.

The Fire Commission has engaged the Greenwich Volunteer Fire Department (GVFD), a body corporate incorporated under the *Nova Scotia Societies Act* in 1999, as their service provider. Prior to the incorporation of the GVFD Society, all firefighting was completed by the Commission of which the firefighters were members.

The Fire Commissioners, in discussion with the GVFD, determines the capital needs and then sets the tax rate for the properties within the Hamlet. The GVFD requests the capital tax rate from the Municipality for the properties served outside the Hamlet. Currently, the capital tax rate is $0.07 per one hundred dollars of assessed value, for both inside and outside rates. Although the fire department requests the capital tax rate for the area external to the Hamlet, the Municipality collects the taxes and forwards them to the Commission. The GVFD board of directors feels that they are not accountable to the Commission for these funds as the Commission is associated with the Hamlet (referred to as the inside area).

When capital expenses are incurred, such as when apparatus are purchased, the Fire Commission holds the loan.

In the past, the GVFD firefighters actively fund raised through bingo, boot drives, firehall rentals, and other events to provide for their equipment. The firefighters contributed extensive time to these events (more than 1,400 hours in 2019) raising more than $128,000 (prior to expenses) with a net fundraising of $57,000.

The GVFD has decided to cancel most of the fundraising events such as bingos as it was extremely demanding of the firefighters on top of their firefighter duties and training.

Operational funding is provided through an annual grant provided by the Municipality. There is

an application process, and the fire departments must justify their applications to the Municipality.

Photo: Greenwich Fire Station

Photo: Aerial view (Google Earth) Greenwich Fire Station

Fire Department Call Volumes

TABLE # 1: Call Volumes

Wolfville Fire Department				
	community	county fire district	outside fire district	Total
2016	86	63	41	190
2017	63	61	37	161
2018	111	60	52	223
2019	82	76	58	216
2020	77	60	59	196

Greenwich Fire Department				
	community	county fire district	outside fire district	Total
2016	38	36	32	106
2017	26	17	16	59
2018	26	38	19	83
2019	39	49	30	118
2020	18	35	37	90

Note: For Wolfville the term community refers to calls within the “town” boundaries. For Greenwich the term community refers to calls within the hamlet that is represented by the “fire commission”.

Firefighter Residences

Both fire departments use firefighters from within their response areas as well as outside of their response areas. The following maps plot the locations of where the firefighters reside.

Using NFPA 1720 as a guide, the Wolfville Fire Department should have 15 firefighters on the scene within 9 minutes of the call within the town limits (based on population density). Using a 5-minute travel time within town, provides a 4-minute turnout time.

For Greenwich and both Wolfville and Greenwich response areas outside of the communities, the NFPA standard is to have 6 firefighters on scene within 14 minutes. Using a 9-to-10-minute travel time to reach most of these areas would leave a 4-to-5-minute turnout time.

Using a 4-minute turnout times as the goal is to have the first fully staffed truck (4 firefighters) out of the door it is important to have as many firefighters as possible in proximity.

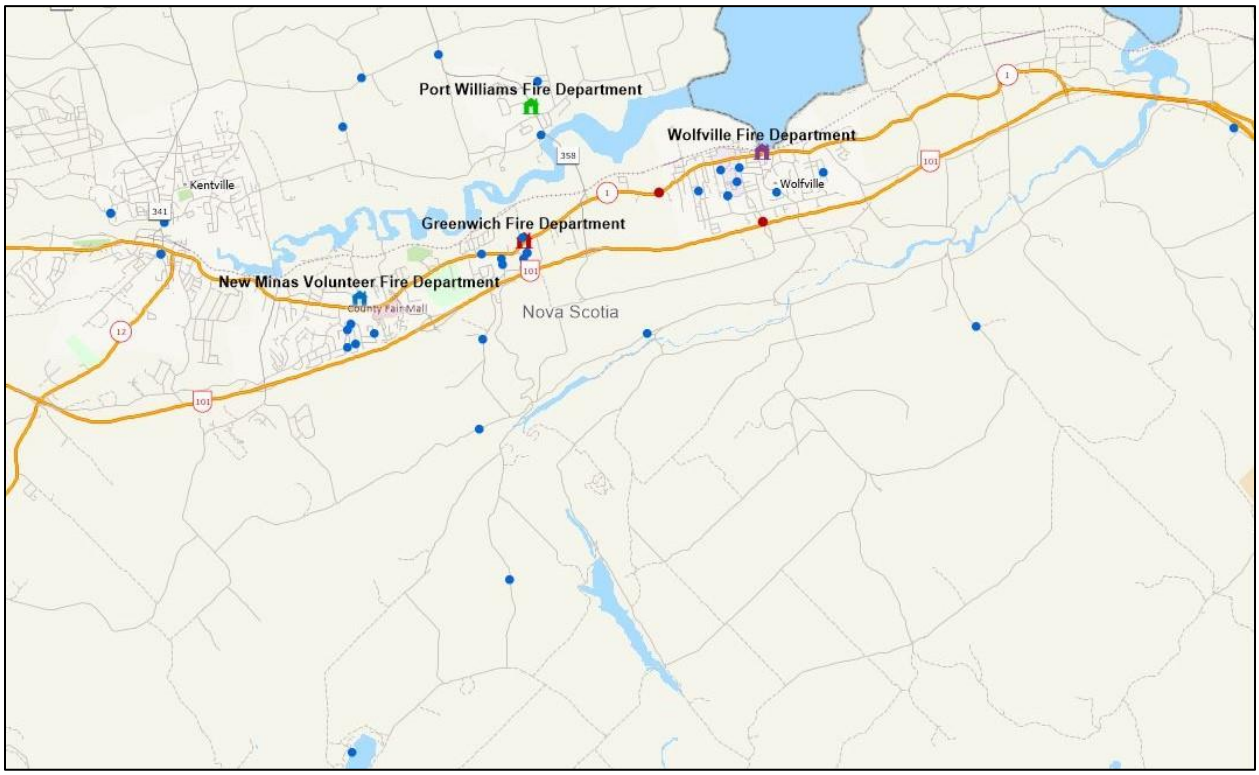
Fire Underwriters Survey does not give credit for volunteer firefighters who do not live or work within the response community.

The first map plots the residences of WVFD.

FIGURE #3: Map with Firefighter Residence Locations – Wolfville

The following map identifies the residences of the firefighters in the GVFD. While there are some firefighters that are in proximity of the fire station, most of the firefighters live in neighbouring communities, with some at extended distances.

FIGURE #4: Map with Firefighter Residence Locations – Greenwich

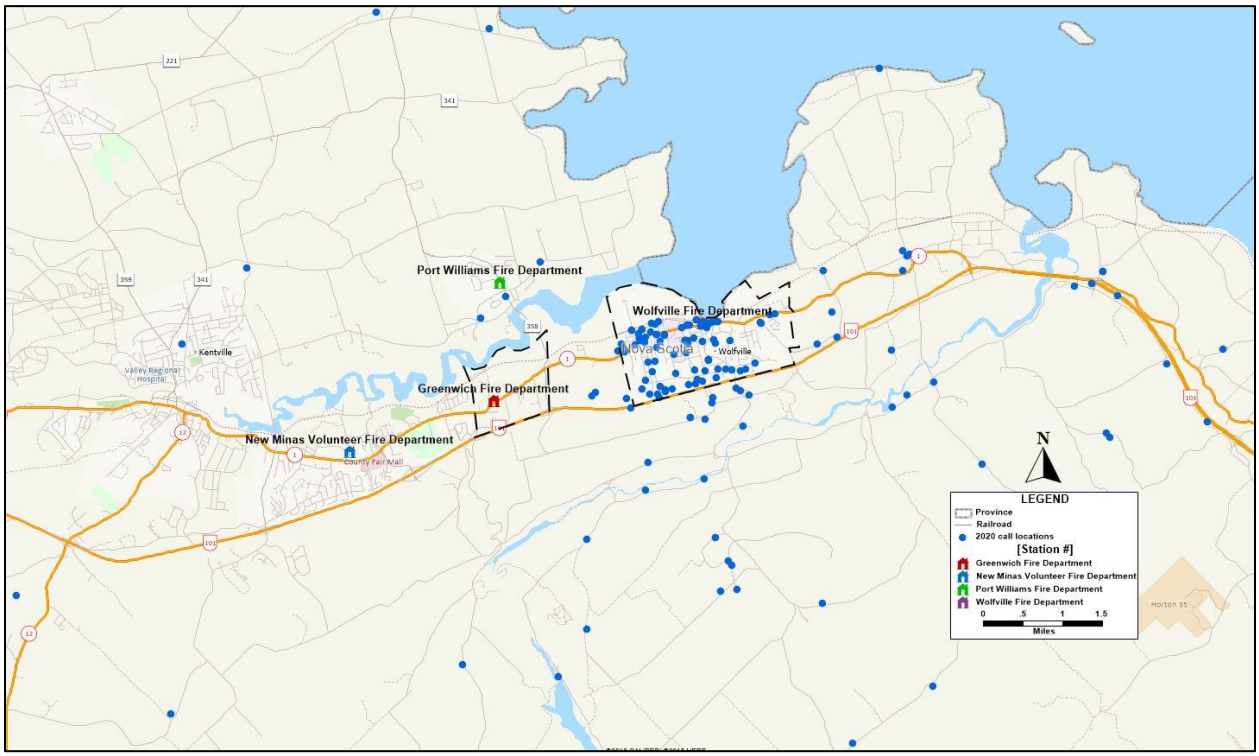


Call Locations

The following diagrams identify where the 2020 call locations are for each fire department.

Figure #5 identifies the call locations for WVFD. As illustrated, the highest density of calls occurs within the Town and in the outlying response area designated to the fire department. There are several calls where mutual aid has been provided.

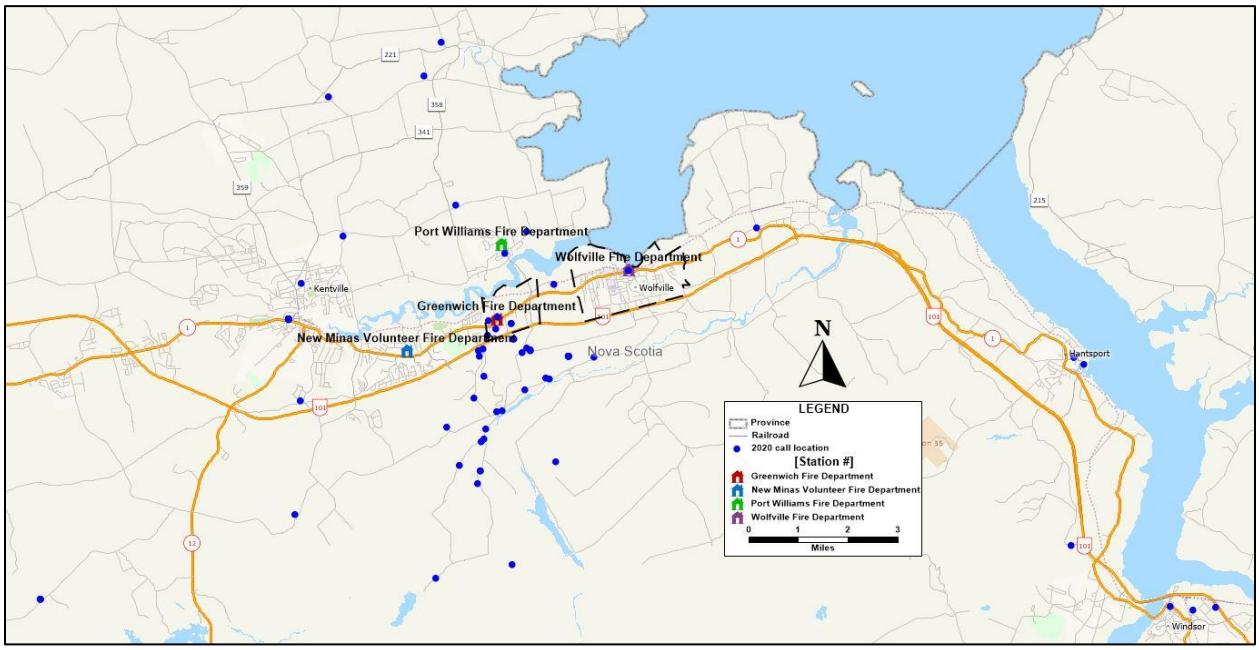
FIGURE #5: 2020 Wolfville Call Locations



The following diagram identifies the 2020 call locations for GVFD. This map illustrates a cluster of calls in Greenwich and the designated response area outside of the hamlet with other calls scattered as far away as Windsor, Hansport, and other distant locations. The GVFD receives additional calls due to its offer to support other fire departments for stand ins, fire support, events, etc., outside the normal mutual aid processes.

The new air light truck was acknowledged by the GVFD as not being in much demand in Greenwich, but a service that can be offered to other fire departments. It must be considered whether this an appropriate investment when most of the usefulness will be outside of the community, but the costs paid for through local taxpayers. While the truck also serves as a rescue truck, many communities have moved to Pumper / Rescue trucks where the pumper carries extrication equipment, including the front-line Greenwich pumper.

FIGURE #6: 2020 Greenwich Call Location



Factors impacting call volume

There are factors that can impact the call volume from year to year such as weather patterns, including severe storms, or major road construction projects that detour traffic. Longer-lasting changes, however, are directly related to these factors:

- Operating procedures
- Changes in technology
- Public education
- Community growth

Modifications to operating procedures can change call volume dramatically. For example, in those communities that enter automatic aid agreements will increase the number of calls into the community with the agreement.

Changes in technology can add or reduce the number of calls that the fire department responds to. For example, the introduction of carbon monoxide alarms, while having the potential to save lives, had added to the number of fire department responses. As more homes tie their smoke detectors and fire alarms into monitoring stations or smart-home systems, it is anticipated that the number of alarm calls will increase. Police services have seen a significant growth in alarm calls, with some communities getting so many false alarms that they no longer respond to alarm calls unless they have been confirmed by a secondary system or person on scene.

Public education can influence call volumes. For example, education programs, including the enforcement of penalties for multiple alarms, can reduce the number of false alarms the fire department responds to. Education and enforcement on public burning can reduce the number of grass fires and nuisance smoke complaints.

Community growth and tourism will also have an impact on calls; greater populations along with increases in commercial/ industrial properties and visitor traffic will impact call volume growth.

Surrounding Area

As has been noted, both GVFD and WVFD respond to areas outside of their specific community's fire districts. These responses make up part of the overall county coverage. Further, the fire departments within the county provide mutual aid for each other for larger events. When conducting the review, it is therefore vital to consider the neighbouring fire departments, mutual aid and automatic aid agreements, and overall county strategies (e.g., HazMat team).

Near Wolfville and Greenwich there are other fire departments within proximity. New Minas and Port Williams are the closest communities with fire departments that have significant overlapped response capabilities.

The Greenwich and Wolfville fire stations are approximately 4.7 km by road from each other along Nova Scotia Highway 1.

The Port Williams fire station is approximately 3.2 km from the Greenwich fire station and 5.3 km from the Wolfville fire station (via Highway 1 and Highway 358).

The New Minas fire station is approximately 3.2 km from the Greenwich fire station and 7.9 km to the Wolfville fire station along Nova Scotia Highway 1.

Photo: The above diagram (Google Earth) shows the proximity of the communities. (Note: circles are only to highlight community names)

There is no legislation or regulation in Nova Scotia or Canada regarding the placement of fire stations.

Prior to 2012 the Insurance Service Office, Fire Service Rating Schedule utilized a 5-mile (8.05 km) distance from a rural and volunteer fire department for a residence to be considered having fire protection for an insurance rating. This standard was used for many insurance companies in Canada as well as the standard for how close it was desirable to be to a fire station. This resulted in a protocol where fire station placements were often considered based on this premise. Hence, fire department goals were to often have stations within 16 km of each other – equivalent to 8 km from a single station. In 2012 the Insurance Service Office, Fire Service Rating Schedule moved to a platform based on the NFPA 1710/1720 time-based standards for insurance ratings.

NFPA 1710 for career fire departments and NFPA 1720 for volunteer departments is used as best practice in determining the availability and density of fire services. These standards are time based and NFPA 1720 provides a standard for volunteer response based on population densities.

While there is an extremely high density of firefighting services in the Wolfville/Greenwich/New Minas and Port Williams areas, there are a couple factors to determine what is appropriate.

For urban communities (>386 people per km2) the standard (NFPA 1720) is to have 15 firefighters responding to a structure fire and having the first apparatus capable of pumping water on scene within 9 minutes of the fire department being paged at a 90th percentile. The

Town of Wolfville, with a population of 4,195 (2016) (excluding university students and tourists) and an area of 6.46 sq/km the population density is 649 people per square kilometer, meets the definition of an urban community under this standard. The 10-percentile variance allows for parts of the community to be beyond the distance normally within the response target, severe weather, heavy traffic, and other obstacles for response.

For the rural communities (the surrounding Wolfville and Greenwich response areas) the standard is to have 6 firefighters responding with the first apparatus capable of pumping water on scene within 14 minutes of the fire department being paged at an 80th percentile.

For the "remote" areas, which are defined by being greater than 8 miles (12.87 km) from a fire station, 4 firefighters are to respond with a response time based on the distance travelled.

TABLE #2: NFPA 1720 Staffing and Response Time

Demand Zone	Demographics	Minimum FF to respond	Response time (minutes)	Meets objective (%)
Urban area	**>1000 people/mi^2 >386 people per km^2**	**15**	**9**	**90**
Suburban area	<500-1000 people/mi^2 <193-386 people per km^2	10	10	80
Rural area	**<500 people/mi^2 <193 people per km^2**	**6**	**14**	**80**
Remote area	Travel distance > 8 mi (12.87km)	4	Directly dependent upon travel distance	90
Special risks	Determined by Authority Having Jurisdiction	Determined by Authority Having Jurisdiction	Determined by Authority Having Jurisdiction	90

The NFPA standards are a best practice that allows municipalities to set a target and creates a standard measurement for the purposes of reviews such as this.

Studies have demonstrated that the first arriving apparatus should have a minimum of four firefighters to provide for an effective initial fire attack at a structure fire.

EM&T uses geographic information system (GIS) software called Caliper Maptitude. This

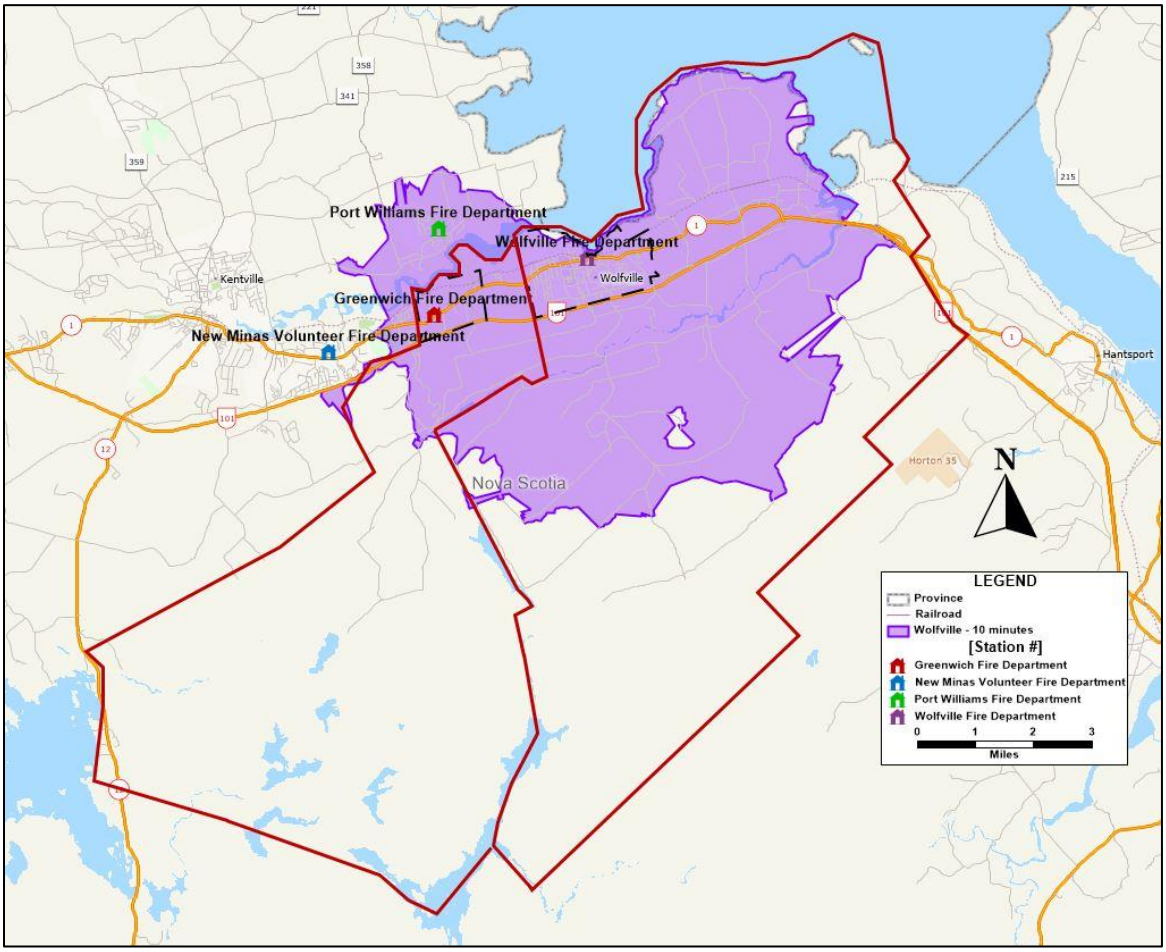
software considers the posted speed limit, road networks, one-way streets, roundabouts, and turn prohibitions. In the following maps, the high degree of response overlap is illustrated.

For this assessment, we assumed that the volunteers were able to have an apparatus responding to the call within 4 minutes of being paged, leaving 10 minutes for travel time. The map shows the 10-minute travel grid (based on posted speed limits) from the current Wolfville Station. While fire apparatuses are permitted to exceed the speed limit when responding to emergencies, such things as traffic congestion and poor whether must also be considered. The posted speed limit is therefore used in the program calculation.

The Greenwich and Wolfville Fire Response Districts are roughly illustrated in a red border.

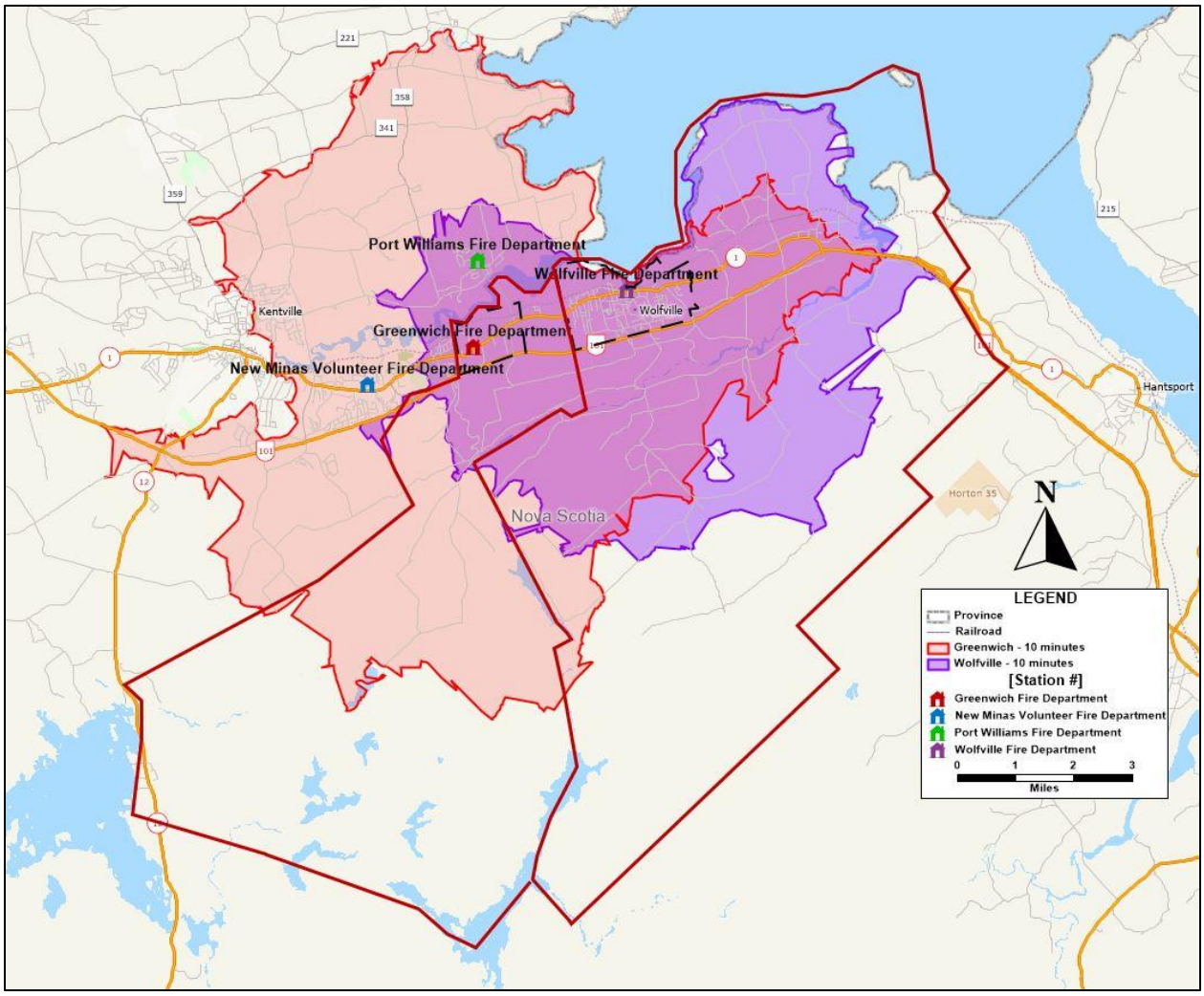
Within the capabilities illustrated, the Wolfville station can provide adequate response to Avonport to the east New Minas to the west, Port Williams to the north, and to the south Robinson Corner, Forest Hill, and White Rock. This response area fully engulfs the GVFD hamlet area as well as the area high school and local resort.

FIGURE #7: 10-Minute Drive-Time from Wolfville Volunteer Fire Department



The following map shows both the Wolfville and the Greenwich response capabilities within 10-minute travel time. The Greenwich and Wolfville Fire District boundaries are roughly illustrated in a red border. As shown, Greenwich provides a large overlap including being able to cover the full community of Wolfville, Port Williams and New Minas.

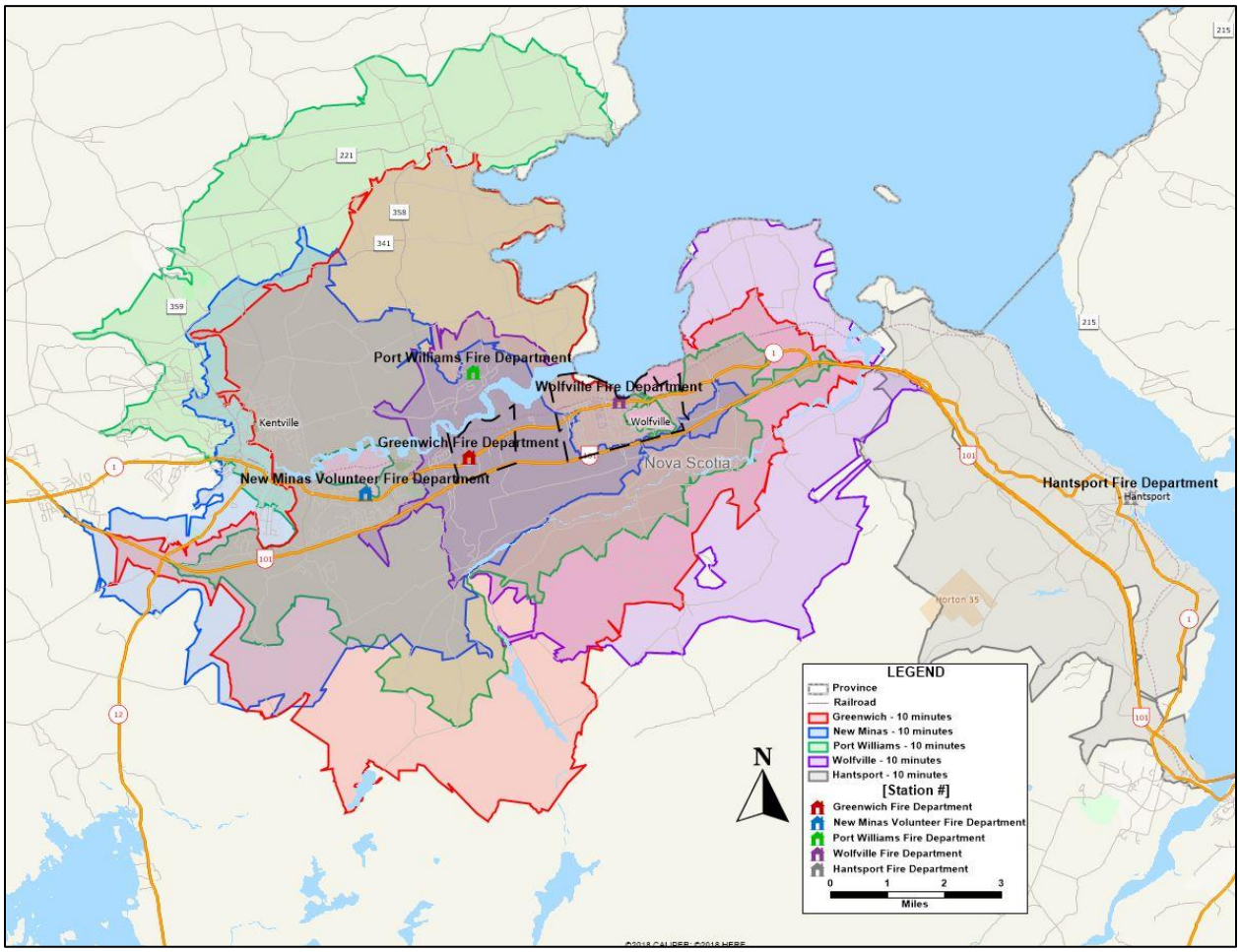
FIGURE #8: 10-Minute Drive-Time from Greenwich and Wolfville Volunteer Fire Department



The following maps shows the overlap of response capabilities when New Minas, Port Williams and Hantsport stations are included.

To the east, Wolfville and Hantsport response capabilities meet each other with very little overlap, but ensuring the populated areas are fully covered within the NFPA response standard.

FIGURE # 9: 10-Minute Drive Time from Fire (5) Fire Departments



To the west, the map demonstrates that the Town of Wolfville has overlap from three stations (Wolfville, Port Williams, and Greenwich) with New Minas having response coverage up to the University and along Highway 1A across the top.

Greenwich has 4 stations (Greenwich, Wolfville, Port Williams, and New Minas) capable of providing response within the NFPA standards with a very high level of overlap.

Port Williams has coverage overlap from four stations including Port Williams, Wolfville, Greenwich, and New Minas. It is further overlapped by the Canning fire station, not shown in this map.

New Minas has coverage overlap from three stations to the east (New Minas, Greenwich, and Port Williams) within this group with Wolfville being able to respond up to the border of the development, with additional overlap provided by Kentville to the west.

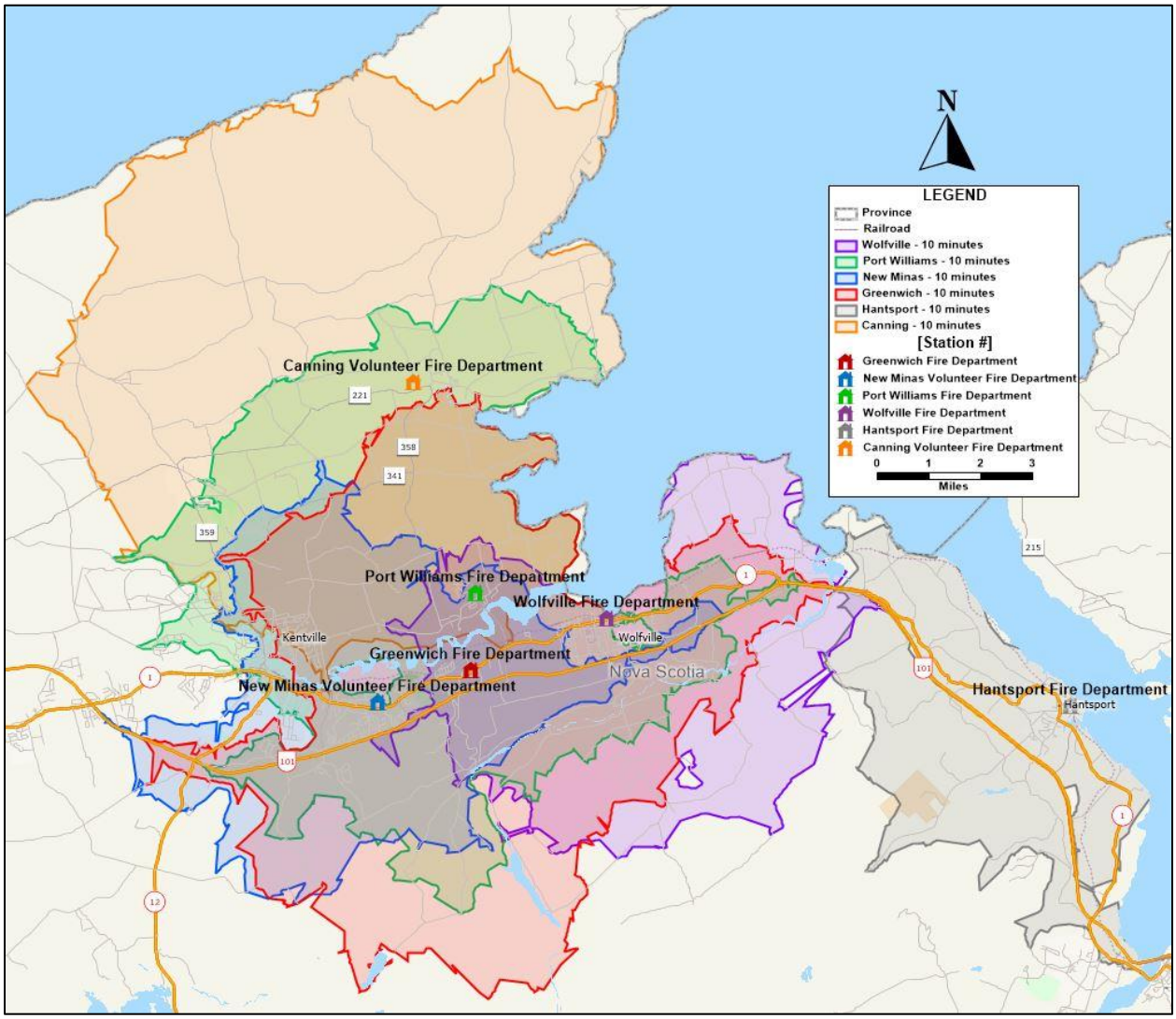
The level of response overlap in this area, particularly in Greenwich, is significant with the

ability to bring two dozen apparatuses and over 140 firefighters within a 10-minute travel time (14-minute response time).

While having a robust firefighting capability is important, this level of coverage in rural and suburban areas with relatively low call demand is redundant. Our team has provided fire service consulting in Nova Scotia, Newfoundland and Labrador, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon, and Nunavut, plus internationally. For a rural community served by volunteer firefighters, our team has never seen this density of firefighting capability.

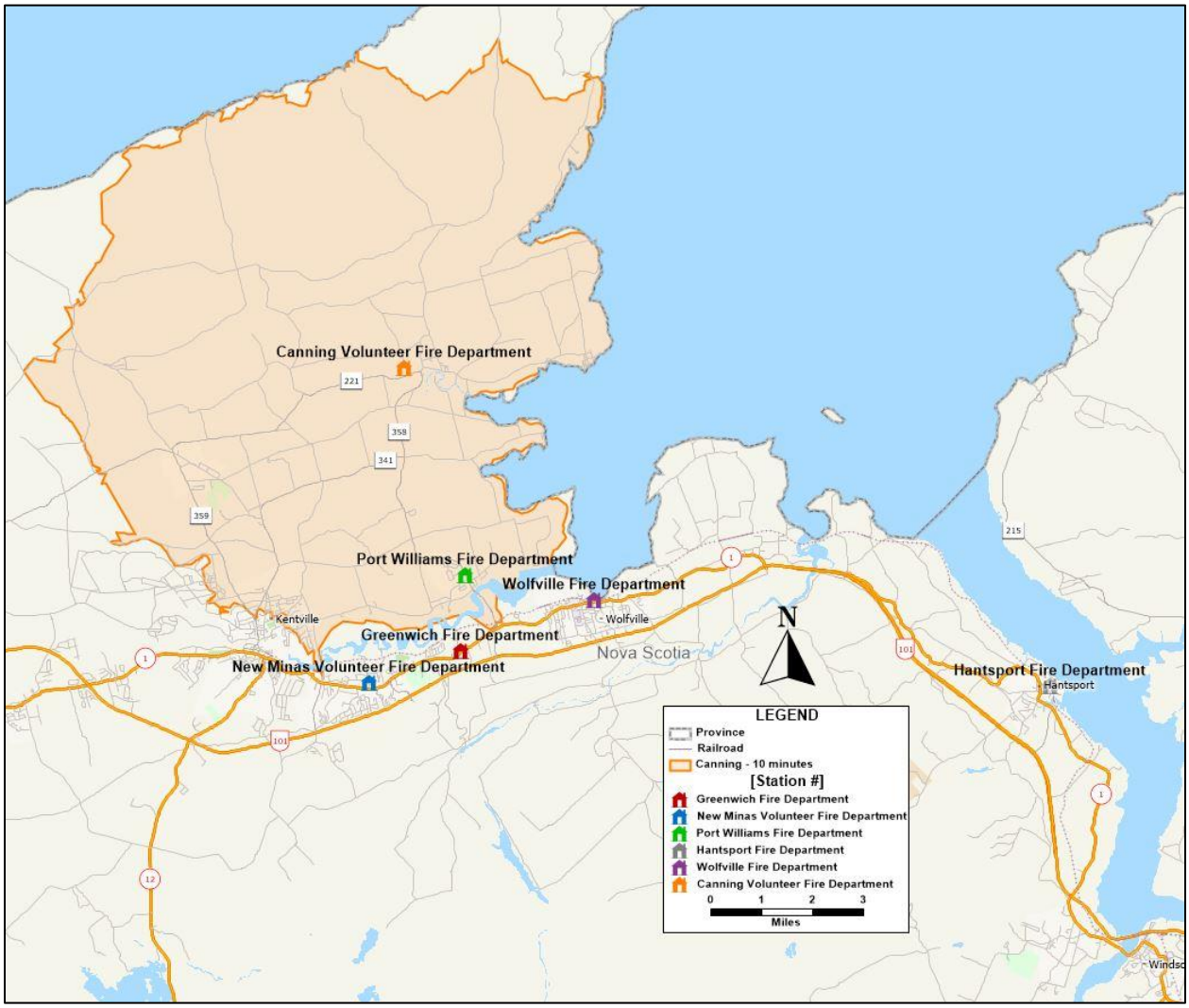
The map below adds the Canning Fire Department, station 1, to the coverage mapping. This station has capacity to cover Port Williams within the 10-minute travel time including the causeway crossing into Greenwich up to Highway 1.

FIGURE #10: 10-Minute Drive Time from Six (6) Fire Departments



The following map is a 10-minute travel time grid from Canning Station 1 showing the coverage of Port Williams and along Road 358 to Highway 1. This department brings more than 30 firefighters and an additional 5 apparatus to support the area in a mutual aid requirement.

FIGURE #11: 10-Minute Drive Time from Canning Volunteer Fire Department



Merging the Wolfville and Greenwich station provides the opportunity to integrate and fall well within the NFPA standards of having a capable firefighting force.

With the adjustment of primary response boundaries between New Minas and Wolfville, the coverage of Greenwich would far exceed the NFPA 1720 standards.

APPROPRIATE DENSITY FOR FIRE SERVICES

The fire departments have acquired through capital acquisitions, such as apparatus and equipment, above and beyond what would normally be seen in smaller size communities around the country. Fire stations create capital and operational costs, such as utilities, maintenance and building replacements that will continue to increase with building age and the desire to add additional apparatus.

New health and safety standards including the prevention of cancers and infection control, will create a demand for better designed fire stations. With new fire stations having the potential to cost multi millions of dollars, an objective review of what is required versus what is desired must be undertaken to control the potential costs in the next decade. Small communities can find multi-million-dollar investments in fire stations overwhelming. The key to providing efficient but effective fire services is to have an area strategy (e.g., Wolfville and Greenwich) rather than historical placements based on rural communities and boundaries of 100 years ago. This will provide for the most efficient use of both capital and operational dollars. For the purpose of this report, our focus is the fire protection for the Town of Wolfville and the hamlet of Greenwich.

With this in mind and considering the scope of the RFP, there is no requirement to have 4 fire stations within such proximity, nor is there a need for two fire stations within the proximity of Wolfville and Greenwich.

CONSIDERATION FOR EFFICIENCIES

Primary consideration must be given to the end goal – where do we want to be? Through a discussion with several area fire chiefs, they want to see a robust firefighting system protecting their communities. When discussing the potential for consolidation, however, they wish their individual services to remain as established.

When looking for an assessment of consolidation we identify the following list:

- Adequate staffing
- Adequate and appropriate apparatus and equipment
- Reliable response
- Quality training
- Economical and appropriate cost to the community
- Accountability and transparency

Adequate Staffing

With the training documentation provided it would appear that most firefighters in both departments are trained to a base standard of NFPA 1001 level 1 firefighter.

Between the two fire departments there are over 80 firefighters, with many of them living outside of the response areas for the two fire departments. This capacity is well over the staffing that would be required for the number of calls that the departments respond to on an available basis; 40 to 50 firefighters should be more than adequate for this integrated area.

The only fire station size guidelines are set out by the Fire Underwriters Survey, which does not give credit to a fire department with less than 15 active and local firefighters (does not recognize out of town firefighters), and NFPA Standards which set out how many volunteer firefighters should be responding immediately (NFPA 1720) and what roles and capacities should be filled at a fire based on the building type/size (NFPA 1710).

NFPA 1710 sets ideal staffing for the following types of structure fires. If there are inadequate numbers to fulfill all the firefighting functions, the Incident Commander will have to make decisions on what positions not to utilize and what actions are safe and what actions are not safe. For example, Incident Command may decide not to conduct an interior fire attack if there are insufficient firefighters for it to be done safely.

- 186 meter squared (2,000 sq ft) two-story single-family dwelling without basement and having no exposures - effective response force of 16 firefighters (17 if aerial device is used)
- 1203 to 18,209 meter squared (13,000 – 196,000 sq ft) open air strip shopping centre –

effective response force of 27 firefighters (28 if aerial device is used)

- 111 squared meter (1,200 sq ft) apartment within a three-storey garden style apartment building – effective firefighting force of 27 (28 if aerial device is used)
- High rise fire in a building with the highest floor greater than 23 m (75 ft) above the lowest level – effective response force of 42 firefighters (43 if aerial is used).

The numbers identified, above and beyond the NFPA 1720 initial response (see Table #1), can be called upon via mutual aid or automatic aid agreements. With this in mind, there are more than adequate resources within the area.

Wolfville FD has firefighters living in Greenwich and Greenwich FD has firefighters living in Wolfville. Having firefighters responding to the closest station would reduce response time and increase callout reliability.

Having firefighters who live in neighbouring communities, such as Port Williams, would give the local fire department the opportunity to capitalize on trained firefighters being integrated into their departments.

Adequate and appropriate apparatus and equipment

With four pumpers, two tankers, two rescues (including the air/light truck), an aerial, and multiple support vehicles between the two fire departments, there is more than adequate apparatuses for the combined communities. A single integrated department, using mutual aid for structure fires in rural areas, would be adequate with two pumpers, one tanker, one rescue, and one aerial, along with the assigned support vehicles. Being able to reduce the fleet by four trucks deletes more than $3M in future replacement costs in the next 10 years. (2 pumpers at $1M each, a tanker and a rescue at $500K each)

It is noted that each department has multiple sets of key equipment, located on multiple trucks including extrication equipment, generators, portable pumps, etc. An integration would provide opportunity to surplus some of the equipment.

The challenge with keeping large fleets or duplicate equipment is that the additional equipment is built into the capital replacement schedule and therefore maintains the surplus at the taxpayer expense.

There is always the concern of the relatively rare major event, such as a large-scale fire involving multiple buildings, however, this is where an effective mutual aid agreement comes into play.

Reliable Response

Reliable response refers to more than meeting the response time. Reliable response time is about having the adequate number of firefighters on the responding trucks in a timely manner.

Unfortunately, neither Wolfville or Greenwich department has adequate tracking of how many staff are on scene within a prescribed time for various types of calls.

It is recommended that a more comprehensive data gathering agreement be initiated with the communications centre so that part of the regular radio traffic includes the number of firefighters on the apparatus that are responding. The fire departments can then use the dispatch data to monitor how many firefighters are on scene within predetermined timelines broken down by type of call.

It is, however, safe to assume that an increased number of local firefighters would show an increase in the department's reliability.

Quality Training

Both fire departments have presented material that demonstrate active and stringent training programs for the firefighters. It is important that training documents include the ability of each firefighter to meet the job performance requirements (JPR) for each skill set. Training is the key to quality assurance, reducing the risk of injuries, and effective fire suppression.

In the event of any injury of a firefighter, the first place following the scene, any investigation will start is the training program and records. It is critical that detailed records are maintained and are JPR based for each firefighter.

Economical and appropriate cost to the community

Currently the primary cost of the fire service is the capital cost, reflected in taxation through area rates separately imposed by the Town and the Municipality. Operational support is provided through the general taxation rates of the Town and Municipality. Operational funding is relatively low based on the fact that the firefighters are volunteers with very low honorarium to cover some of their costs. There are no salaries paid for training, firefighting, or other duties. There is a salary paid to the Fire Chief of Wolfville.

As both fire departments have aged stations, there must be consideration for provision of a capital fund to cover major reconstruction or replacement of these buildings. As fire stations built to the current standards take into consideration cancer prevention, infection control, training facilities, gender neutral facilities, appropriate equipment maintenance, etc., the costs of new facilities become very expensive.

1. Use of Estimates

Readers are cautioned that the following should be considered an order of magnitude estimation based largely on a variety of assumptions, which if varied, could have a material impact on the projected financial results of a merger.

2. Assumptions and Approach

2.1 Determination of Costs and Sharing Methods

EM&T has concluded through the use of NFPA standards and other fire related metrics that an operation the size and composition of the Town's Fire Department can more than adequately service the combined Town and Greenwich Fire Districts.

Given this determination, the 2021 actual costs associated with the Wolfville Fire Department have been used, and under the circumstances described below, altered to reflect the typical yearly cost recovery requirements for operating, reserve and debt contributions under a status quo model. Additionally, anticipated building replacement costs have been added to the status quo assumptions. The total of these projections are then compared to the anticipated costs associated with a merged operation and the construction of a single replacement station to estimate the operational and capital savings.

2.2 Financing of Tangible Capital Assets

The Town has historically purchased Tangible Capital Assets (TCAs) through funds accumulated over time and held in a dedicated fire replacement reserve. Annual transfers of operating funds are deposited into the reserve while reserve outflows are restricted to the purchase of fire related TCAs. Funding TCAs from an accumulated reserve is one capital financing approach; others include the issuance and repayment of long-term debt or the purchase of TCAs direct from annual operations. The objective of selecting a method of TCA financing generally relates to:

- Ensuring that assets are replaced prior to the end of useful life; and
- Purchase costs being spread over time so that the municipal units are not confronted with large year-over-year fluctuations in property tax rates.

The TCA estimates used in this analysis can be found in Appendix "A" and are based on the Town's projected ten-year capital spend. The financing structure is based in part on the accumulation and use of reserve funds and the issue of long-term debt. The March 31, 2021, base year costs have been adjusted to account for the full financing of a $1.4M ladder truck.

The proposed structure starts and ends at year ten with the same amount of funds in the reserve (~$920,000). The intent is to have a structure that can replicated starting in year eleven. It should be noted however that the proposed amount of long-term debt increases significantly

through the first ten years. It should also be noted that the projections contained herein do not include a building replacement reserve.

2.3 New Fire Station Assumptions

A single and new fire station (all costs in) with a Class D Level of estimation has been set at $4 million.

It is assumed that this new facility will be designed to current-day firefighting standards, be fully accessible and net zero in its operation. This gross estimate does not account for any offsetting funds that may be secured from the Provincial or Federal orders of Government.

One of the main assumptions contained herein is to finance the new station through the issuance of long-term debt (municipal debentures). It is proposed that this cost would be allocated to the Town and Kings based on a 40:60 sharing ratio.

In accordance with provisions of the *Rural Fire District Act,* it is assumed that net proceeds of the Greenwich Fire Commission (proceeds after the settlement of all existing debt) will be utilized to lower Kings' share of the new long-term debt.

Cost assumptions can be found in Appendix B.

2.4 Addition of Building Replacement Costs Associated with Status Quo

Given the Nova Scotia *Accessibility Act*, the desire to reduce the carbon footprint of municipal and municipally related infrastructure, and other service delivery matters discussed in this report, it is assumed both buildings will need to be replaced within 10 years under status quo. The two new buildings would be constructed to the same accessibility, net-zero and operational standards discussed for the newly merged station.

To quantify this assumption for status quo for comparison to merger costs, order of magnitude estimates have been included at $3.2M for Wolfville and $2.5M for Greenwich. Both of these capital expenditures are assumed to be funded by debt over a 15-year term at a debenture interest rate of 2.5%.

The inclusion and comparison of the annual principal and interest payments under both the status quo and merged scenarios have been included in the following analysis.

Status Quo assumptions are also found in Appendix B.

2.5 Allocation of Operating Costs and Rolling Stock Contributions

The proposed allocation of the annual operating and rolling stock replacement costs is based on a ratio of the five-year rolling average of non-mutual aid callouts incurred in each municipal

jurisdiction. This approach mirrors the method contained in the present-day Town/Kings Intermunicipal Services Agreement. The numbers (ratio) have been rescaled to reflect the combination of the Wolfville and Greenwich callouts.

Appendix C contains the merged estimate of a five-year rolling average of callouts.

Summary of Analysis

The following table compares the summarized results between the actual combined costs of the departments to a forecast of the merged cost by municipal unit (savings from both operating and capital perspectives).

FIGURE #12: Comparison of Status Quo to Merged Operation (Typical Year)

	Kings	Town	Total		Operating	Capital
Unmerged:						
Greenwich operating	$ 165,860	$ -	$ 165,860		$ 165,860	$ -
Greenwich new station debt	161,533	-	161,533			161,533
Greenwich capital	89,207	-	89,207			89,207
	416,600	-	416,600		165,860	250,740
Wolfville operating	179,118	165,339	344,457		344,457	
Wolfville new station debt	134,395	124,057	258,453			258,453
Wolfville capital	182,459	168,423	350,882			350,882
	495,972	457,820	953,792		344,457	609,335
Sub-total unmerged	912,572	457,820	1,370,392		510,317	860,075
Merged:						
Operating	254,659	125,641	380,300		380,300	
Reserve Transfer	142,872	70,489	213,361			213,361
New Station Debt	153,456	129,226	282,683			282,683
Sub-total merged	550,987	325,356	876,343		380,300	496,043
Increase / (decrease)	$ (361,585)	$ (132,464)	$ (494,049)		$(130,017)	$ (364,032)

Appendix D contains the detailed operating, reserve, and non-building related debt estimates.

1. Sources of Variability

Without limitation, the order of magnitude costs set out in this report could be materially influenced by:

- The chosen method of cost-allocation
  - Going forward year-over-year changes could be smoothed through the continued use of a five-year rolling average.

- New station costs
  - Securing third-party non-repayable funds; and
  - The amount of net proceeds available from the Greenwich Fire Commission relative to Kings' portion of the new long-term debt.

- Disposition of other Tangible Capital Assets
  - It is assumed that a full complement of vehicles and equipment can be secured from the two existing inventories; and
  - The Coordinator's work in recommending the retention of certain assets and liquidation of others could potentially lower the new debt costs associated for either the Town or Kings.

- Financing of Tangible Capital Assets
    - The order of magnitude estimates assume:
        - The new station will be fully financed with long-term debt;
        - Major rolling stock will be financed through a combination of long-term debt and reserve funding.
    - Any changes to the financing structure could have a material impact on the annual cost-recovery amounts being borne by both municipal units.

2. Role of the Coordinator

It is recommended that the Coordinator be charged with refining the order of magnitude estimates and assumptions contained in this report. Without limitation, this should involve the Coordinator undertaking a complete analysis of rolling stock and the fire apparatus of both departments. This work should produce a revised ten-year capital investment plan (see Appendix A for the order of magnitude estimate).

The Coordinator should further recommend a selection of all Tangible Capital Assets to be retained for use in the merged operation. The selection being based on the rightsized operation and the condition/serviceability of pre-existing assets.

3. Value Proposition

The following is a summary of the value proposition associated with a merger:

- More efficient service delivery (avoidance of duplicated operational and capital costs);
- The lowering of medium to longer-term recapitalization costs (recapitalizing one, not two departments);
- Proactively addressing accessibility requirements (the new station being designed to reflect regulatory standards prescribed under the Nova Scotia *Accessibility Act*);
- Addressing the carbon footprint reduction goal set out by both municipal units, i.e., the construction of a net zero facility; and
- A new facility being designed in line with present fire service standards and occupational health and safety requirements.

Amalgamating the fire services into one entity will reduce the long-term capital expenditures, for stations, apparatus, and equipment, that can be anticipated. It would allow the reduction of duplicate capital resources and focus the funding where it could be most efficiently used.

Governance

One of the measures in evaluating a model for fire service is the governance, accountability, and transparency of the operations.

With a municipal system there is oversight of the fire department by the CAO and council. Ultimately, the electorate has influence in the accountability of the system.

With a commission system, there is oversight of the financial aspect of the fire department by the Commission. The Commission must have audited financial statements submitted to the province to ensure financial accountability. The challenge is that this has not been done regularly in the past although the current commission is working towards this. One of the challenges is that the Commission, although responsible for the use of funds, only represents the hamlet itself and not the tax dollars from outside the hamlet. There is accounting standards that say that if the Commission is responsible for paying then they are responsible for recording the asset, and therefore should be showing on the commission balance sheet. *(Rural Fire District Act – Borrowing powers and title to property – 38 (3) The title to all property and assets acquired in whole or in part from funds of the commissioners or from funds for repayment of which the commissioners are responsible shall be held by the commissioners. R.S., c. 406, s. 38).* In talking to various fire chiefs, the result of this challenge can be the claim that some of the assets are owned by the Commission while other pieces of apparatus or equipment are owned by the fire department because the funding came from various sources (taxation outside the hamlet, donations, fundraising, etc.).

What should consolidation look like?

The *Rural Fire District Act* was established to provide fire services in rural areas of the province.

It establishes a commission which is elected by the local community members. The commission is intended to establish and oversee the taxation and use of the funds; however, the legislation has left open the potential for lack of accountability. For example, the GVFD leadership believe that the Commission has no authority over the taxation funding derived from ratepayers residing in the outer area of the fire district.

Fire services operated through a municipality have direct reporting structures where the fire chief is accountable, often to the CAO, and the CAO accountable to council.

The Town of Wolfville is significantly larger than the Hamlet of Greenwich and the current fire department reflects that size. When consolidating two fire services, the larger fire service can

absorb the additional call volume, firefighters, and resources with less impact on the operations. Both stations lack the capacity for expansion and both stations, due to their age will have the requirement to be rebuilt or retrofitted in the near future.

Fire station design standards have changed over the years and continue to evolve with advancing technology and increasing health and safety concerns for firefighters. For example, current health best practices require firefighters to shower following structure fires, hazmat calls, or medical calls where they have been contaminated. Neither station has adequate shower facilities to decontaminate more than a couple firefighters in a timely manner following a structure fire.

Both stations have access issues. For example, Wolfville's main street is extremely congested Friday to Sundays from May to September making it difficult for the firefighters to respond to the station and for the apparatus to gain access to the roadway. Greenwich station is located on a curve with an incline making sight lines challenging for apparatus leaving the station.

Greenwich fire has 39 firefighters on their rooster, however, with such a small community population, there is challenges in recruiting firefighters that are physically and mentally capable of the challenges of firefighting. In the longer-term, communities with larger populations have increased opportunity to recruit firefighters.

Taking into consideration administrative support, the Town of Wolfville has a finance department that oversees the collection and deployment of funds in a way that meets municipal and provincial standards.

New station location

A new station location would need to consider how to best serve the merged fire district. Key factors would be hall access to the Highway 101 and Highway 1 and ensuring response times could still meet NFPA standards for the most densely populated areas. Additional specific information has been provided to the Town of Wolfville, but more work will be required before a site can be selected.

Implementation Process

The following implementation recommendations are based on the analysis outlined in the previous sections of this report. EM&T is of the opinion that with proper planning that a consolidation can reduce the significant duplication and overlap while still maintaining appropriate coverage and response to the communities.

Given that the Town, the Municipality and the Greenwich Fire Commission are the authorities having statutory jurisdiction, in this section referred to collectively as the Parties, it is being recommended that the Parties undertake the consolidation process in three phases:

1. Immediately implement interim transition measures (authorized through amendment of the existing Agreement between the Town and Municipality);
2. Execute a Memorandum of Understanding (to generate the terms to be associated with a long-term contract for service between the Parties); and
3. Execute a long-term service agreement (as determined in phase 2) between the Town and the Municipality and Commission.

PHASE 1. SERVICE TRANSITION

Given the significant overlap and redundancy in service delivery and recapitalization costs identified through this review, and to direct monetary efficiencies toward offsetting the associated one-time costs of consolidation, it is being recommended that an interim service delivery arrangement be implemented. More specifically, it is being recommended that the present-day Intermunicipal Services Agreement between the Town and the Municipality be replaced with an interim Agreement with provisions that:

- Add the Commission as a Party;
- Have the Commission engage the Town as its service provider, or possibly a combination of the Town and the New Minas Volunteer Fire Departments beginning April 1, 2022;
- Encourage Greenwich firefighters to join the Town's brigade and those of the complements of adjacent departments;
- Place all non-essential capital assets purchases in abeyance during the term of the interim Agreement; and
- Have the Town and the Municipality continue the fiscal 2021-22 levy for 2022-23 and to place funds surplus to the operation of fire services in a dedicated reserve for use in offsetting one-time consolidation expenses associated with phase 2 and 3.

PHASE 2. EXECUTION OF A MOU AND TABLING OF FORMAL RECOMMENDATIONS

It is recommended that without limitation that the Parties agree to include provisions as outlined below within the MOU:

Consolidation Framework

1. A consolidation that is in accordance with the recommendations set out in this report.
2. A provision whereby the adjacent Fire Departments are provided with 90 days from the date of execution of the MOU to consider if they wish to join the consolidation.
3. A commitment to complete consolidation by March 31, 2023.

Administration of the MOU

4. That a Consolidation Coordinator (the Coordinator) be appointed and be equally funded by the Parties.

5. That the Coordinator be authorized to:
    a. Prepare and implement a communications plan focused on informing and keeping internal and external stakeholders up to date on the consolidation in addition to releases to the general public and property owners.
    b. Prepare a detailed plan of implementation for ratification by the Parties including:
        i. The scope and siting of a new Fire Hall;
        ii. The listing and costing of other required tangible capital assets such as fire apparatus and equipment;
        iii. A listing/valuation of tangible capital assets assumed to be redundant;
        iv. An organizational structure of the consolidated department including municipal registration and service provision requirements of the Parties; and
        v. A proposed draft agreement pursuant to s.60 Municipal Government Act that sets out ownership and governance as resting with the Town of Wolfville.
    c. Prepare a draft of the fee for service provisions to be contained in the s.60 Agreement including:
        i. How disposal proceeds of surplus tangible capital assets, net of pre-existing long-term debt obligations, would be applied;
        ii. Proposed cost-sharing and financing methods by which the Parties would share the cost of required tangible capital asset acquisitions;
        iii. Proposed methods by which the Parties would share the cost of operations; and
        iv. Proposed pro forma financial statements including, Statements of Operations, Financial Position and Cash Flows (operating, capital and reserve funds), together with a projection of the capital and operating tax rates to be levied by the three Parties.
6. A provision(s) that has the Coordinator reporting to the Chief Administrative Officers of the Town and the Municipality (or their designates) and the Chair of the Fire Commission.
7. The Coordinator being required to formally submit their final report on or before August 31, 2022.

PHASE 3. ACCEPTANCE OF MOU RECOMMENDATIONS AND EFFECTING THE CONSOLIDATION

Subject to the Parties formal acceptance of the Coordinator's report and recommendations, the Parties will provide the necessary resources to effect the consolidation. Without limitation the same or different Coordinator would be engaged to:

1. Have the s.60 Agreement finalized and executed by the Parties;

2. Acquire land and issue the required design and construction request for proposals related to the building; and
3. Arrange for the rightsizing of other Tangible Capital Assets, e.g., prepare requests for proposals for the acquisition of required assets and the transfer of title of existing assets.

It is recommended that this phase of implementation be administered by the Town of Wolfville, e.g., be administered under the Town's procurement policy, accounted for within the Town's financial records, and involve the Town's Fire Chief as the Department Head. Given the magnitude of the endeavour it is being recommended that the cost of this temporary but incremental resource be shared equally among the Parties.

Allocation of firefighters

An integrated fire department serving this population and area would be appropriate to have 40-50 firefighters.

Firefighters from Greenwich would be encouraged to join Wolfville, or other departments, based on the recruitment of the particular department

Based on the training programs that both fire departments have provided, their firefighters are at or working towards NFPA 1701 level 1 firefighters as a base level of training. Further, firefighters from both communities have stated that they have been able to work together successfully when both departments have responded to a call.

The consolidation of firefighters from two volunteer stations into one has been successfully completed in numerous municipalities where municipal amalgamations have occurred. This includes the City of Kawartha Lakes, Township of South Frontenac, Township of Springwater, Township of South Huron, Town of Fogo Island NL, and others.

Further, it would be encouraged that New Minas, Port Williams, and other area fire departments adopt Greenwich and Wolfville firefighters who live or work within their areas (working location if they can depart work to respond to calls). Port Williams has had challenges with firefighter staffing, yet some of the Greenwich and Wolfville firefighters live in Port Williams which could assist in local staffing.

Bringing on trained and experienced firefighters is much more efficient than recruiting new staff that require up to a year of training to meet the Firefighter I level.

Communication plan to the public

Having a communications plan would inform the public in both the interior and exterior taxation zones of Wolfville and Greenwich about the integrated strategy and how it will benefit

the community as a whole, ensuring that response times will remain within international standards.

Dispose of excess equipment apparatus

The Greenwich commission owns the fire apparatus equipment and station that have been funded primarily through capital and operational taxation with support through fundraising. Therefore, any assets or funds arising from the assets should be dedicated to continuing fire service projects with the area, either through funds from the sale, or distribution to fire departments serving the immediate area, following the legislation in the RFDA for the disposition of assets.

The Greenwich Fire Commissioners currently have an outstanding loan which should be paid off through the sale of apparatus, the station, and other assets. Therefore, Greenwich would be consolidated having paid off any debt it currently has.

FIREFIGHTERS' WELLBEING, HEALTH, AND SAFETY

Regardless of whether a firefighter is full-time or volunteer, there are several inherent risks to the position, including cancers, cardiac stresses, worksite injures and mental health stressors. It is incumbent on the fire service and the authorities having jurisdiction to ensure a safe workplace. This includes regular health and fitness training and assessment, minimizing exposures to toxins, appropriate opportunities for decontamination and rest breaks, on-scene health monitoring, appropriate limit to workload, and appropriate counselling.

Each fire department should have a cancer prevention strategy that is monitored and enforced by the safety officer and senior leaders. This strategy would include decontamination at the scene, transportation of contaminated bunker gear / clothing, decontamination of bunker gear/ clothing, showering before leaving the station, reducing toxins in the station, storage of bunker gear in a negative pressure room, etc.

Fire departments must also encourage physical fitness including support for regular workouts and annual testing. Heart attacks are one of the most frequent killers of firefighters and having a fitness strategy should be part of the SOGs.

Each fire department should have a mental health program that provides the adequate supports to and for firefighters and the types of traumas they experience. This should include the implementation of a county-wide critical/cumulative incident stress team with 24-hours immediate trained peer support. This is available through the Fire Service of Nova Scotia (FSANS) with access to Critical Incident Stress Management (CISM) teams trained to the International Critical Incident Stress Foundation (ICISF) standards.

Recommendations for the Wolfville and Greenwich Fire Departments

Integration

One of the primary questions for the review has been whether it is reasonable/possible to amalgamate the Wolfville and Greenwich fire stations without impacting the community coverage. Clearly the data shows that there is a high degree of coverage, to the point of redundancy.

Considering the geographical deployment and associated tax bases, the Greenwich and Wolfville fire departments could be amalgamated into a single entity and location, and still maintain a level of fire service protection that meets and exceeds the NFPA 1720 standards.

The amalgamation of the two fire departments would not have any impact on the mutual aid calls as they are within the response zone of several other fire departments.

Taxation / Cost Containment

Further, the willingness of the taxpayer to provide both capital and operational funding is a key driver. Fire service in Kings County has built-in efficiencies, since they are volunteer, with little staffing cost. However, with new fire engines costing as much as $1 Million each and aerial trucks $1.5 Million, there are regular capital costs to maintain. Every firefighter is issued bunker gear, helmet, gloves, etc. with a 10-year life span at an approximate price of $2500 per firefighter. When SCBAs (self contained breathing apparatus), thermal imaging cameras, extrication equipment, ventilation fans, hose and nozzles, portable pumps, generators, etc. are added, the capital equipment costs for a fire department are significant.

Firefighter Staffing

One of the benefits of integrating the two fire departments would be to maximize the efficiency of the fire service staffing by focusing on fire service member who live in the community and encouraging firefighters from outside jurisdictions to volunteer with their local service. For example, it would also be valuable to the neighbouring fire departments, such as Port Williams Fire Department, to be able to gain the firefighters who live in their community.

While residence is one consideration, another is the work location of the firefighters, impacting whether they are available to respond from the workplace. There are some occasions when having a firefighter who lives outside of the response area being part of the unit is therefore of benefit.

Fire services should have some level of redundancy and reserve support for those large or long-term events. Normally, this is accomplished with a mutual aid agreement, however, it is acceptable to have a contingency of firefighters outside of the immediate area to provide support.

Data Management

One of the challenges identified in conducting the review was the lack of reliable detailed data. For example, there is no data to identify how many firefighters are on each responding apparatus. Further, non-emergency (burning complaints), emergency calls, and mutual aid calls are mixed in such a way that creates challenges in providing accurate reports. The current data system does not track effectively how many firefighters are on an apparatus or how many firefighters are on a scene within appropriate response targets. Therefore, it is important to invest in a fire service data management system including the resources to ensure the needed and accurate data is entered.

General Recommendations for Fire Departments in the County of Kings

Community Risk Assessment

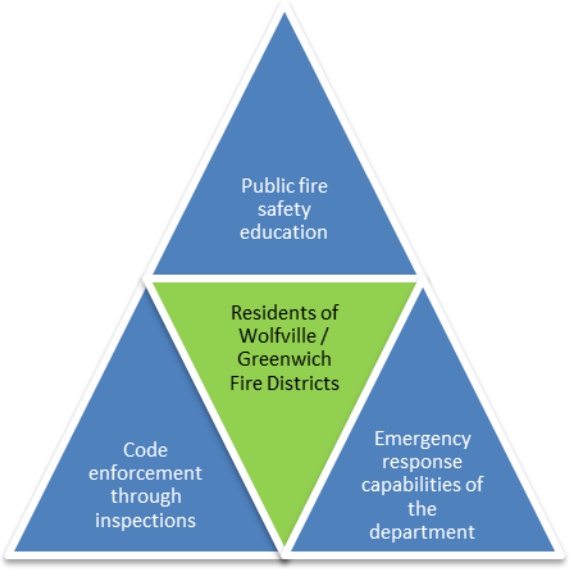
Fire Departments should complete a Community Risk Assessment in accordance with NFPA 1300. Although this is a time-consuming effort, it helps to identify the risks in the community and put in place strategies for prevention, mitigation, and response. A CRA also helps ensure the fire departments are of the appropriate size and capacity for the area in which they are providing coverage.

Enhancing Fire Prevention Initiatives

The Fire Departments have prioritized emergency response and fire prevention programs are not as active. Best practices identified by the Canadian Fire Underwriters Survey, NFPA standards, and the CFAI places priority on fire prevention. Preventing fires and emergencies is the most effective and efficient means of dealing with emergencies, as well as reducing fire related injuries and death.

Numerous Fire Departments across Canada use “Three Lines of Defence” when planning to meet the needs of the community.

The identified three lines of defence are:



1. **Education** – Fire safety education is the key to mitigating the fire and life hazards before they start. With the growth of the community, how will the municipality continue to meet the fire safety educational needs of the community?
2. **Inspections and Enforcement** – If the public education program does not prove effective, then the next step is for the fire department to enforce fire safety requirements through inspections.
3. **Emergency Response** – If the first two lines of defence fail the community, through its fire department, should be prepared to respond in an efficient and effective manner to put the fire out and/or mitigate the emergency itself.

Each fire department, as part of their operational funding should be required to submit an annual fire prevention and education plan. This plan should include, at a minimum, smoke detector plan, home fire escape planning, fire safe cooking, and strategies for high-risk groups

including children, elderly, new immigrants, and vulnerable occupancies. Vulnerable occupants include hospitals, long-term care, retirement homes, custody facilities and group homes for the cognitively challenged.

Some communities across Canada recruit volunteers specifically for the fire prevention role or utilize volunteer firefighters that no longer wish to be responding to emergencies.

Persons being utilized in the public education programs should be trained to NFPA 1035 Fire and Life Safety Educator.

For persons involved in the inspection and enforcement of fire codes NFPA 1031 Fire Inspector Qualifications is the standard for training. Many fire services train their officers to this standard, which gives them additional insight into causes of close calls and fires.

These programs are readily available online or in virtual class formats.

Officer and Chief Positions

Officer positions should be based on merit, including experience, training, education, and the ability to lead. Election of officers promotes a system of favoritism, cliques, and is not always based on trust. Therefore, the municipal human resources department should be involved in the promotional processes.

NFPA 1021 sets out training standards for officer and chief positions.

Rural Fire District Act

Provincial fire legislation is dated, lacks line of accountability, and should be updated. Current legislation does not clearly define the authority having jurisdiction. Further, there are numerous fire service models of governance that leave gaps in accountability.

Group Purchasing

Fire departments have high capital costs that could be reduced through county-wide purchasing policies and collaboration for major purchases. For example, group purchases could result in reduced purchase costs. Further, the standardization of equipment across the County would improve automatic aid and mutual aid operations by having all firefighters familiar with and being able to use equipment on site from various fire departments.

Key Performance Indicators

The integral step to quality assurance and constant improvement is to be able to identify and measure operations through key performance indicators. Performance measurement programs rely on developing baseline and benchmark expectations. Once these criteria have been set,

the department is then able to conduct an evaluation of achieved outcomes, verses desired outcomes. For the fire service, some of the desired service-related programs to be measured and evaluated include (but are not limited to) fire prevention, fire suppression, training, and response times to emergencies.

Benchmarking is the process of measuring and comparing an organization's results against similar programs and services of its peers, established norms and recognized industry standards along with the organization's past performance and projected expectations. This would be a longer-term County program to monitor and assist fire services in moving forward.

Setting of Performance Standards for the Fire Department

Why performance measurement and benchmarking?

- They help to answer the following questions:
    - What are your specific goals;
    - What specific outcomes are you aiming for;
    - How will you know if you are achieving them;
    - How well should you be doing;
    - How are you doing versus your peers;
    - How can you improve, and;
    - How will you know you're doing better.

When setting standards for the fire service, the department should start off by reviewing its Mission Statement and Goals and Objectives. These statements set the foundation for what the department wants to accomplish. By doing this, it also gives much more meaning and credibility to the noted statements.

There are seven key purposes to measuring the performance of a fire service:

1. To evaluate the effectiveness of the department's programs and services
2. To control the outputs
3. To allow for more accurate budgeting
4. To motivate staff in meeting goals of the department
5. To promote needed improvements for the fire service
6. To celebrate the meeting of the goals and benchmarks set by the department, and
7. To learn from the process on how to improve on a continuous cycle.

One key point to note is that to make them practical, performance measurements must be Specific, Measureable, Attainable, Realistic and Time Bound (SMART). By doing this, the department has in place a set of goals that anyone in the fire department can relate to and understand the need for such measurements. This also accomplishes buy-in from the members of the SFES because the goals are realistic.

But the setting of these measurements is just the beginning. They must become part of the department's culture and part of an annual review cycle to ensure that they are effective and meeting the needs and expectations of the department.

Potential KPI Areas of Focus

Fire suppression and emergency response services are among the key programs that the fire service can offer to its community. As such this is also an area that sets many basic performance standards such as:

- Turnout time
- Identified response standards for volunteer fire departments
- Amount of staff required to be on the scene of an incident within a set time
- Fire suppression operations
- Technical response.

Training: Without a proper training program that is based on the community's expectations and industry standards, it is difficult to identify what needs to be delivered and measured. It is assumed that the department responds to the standard incidents such as:

- Fire suppression
- Motor vehicle collisions
- Hazardous materials response (at a minimum level of awareness response)
- Public assist/non-emergency responses

Based on this list, the training officer must ensure that all staff involved in such responses are

trained to effectively deal with such incidents. This training would also include training on any associated equipment used for such responses.

For this KPI section there is need to set a baseline for the following key areas:

1. Programs being delivered by the fire department and the related mandatory and non-mandatory training requirements (based on related standards);
2. A breakdown of training time required for the volunteers and how these training hours can be attained through monthly and annual training schedules;
3. What options are available for "catch up" training if members miss any mandatory training, and
4. Completion of an annual report by the training officer to identify what was covered and what needs to still be addressed.

Fire Prevention: Of the three lines of defense, fire prevention is the key focus. For the fire prevention division, their programs would fall under the first two areas of education and enforcement. As with any division, training and certification of identified staff to carry out these duties is required. The level of training would depend on the tasks assigned to the individual(s).

Areas for tracking include the number and type of public education events, number of people reached in each type of event, and the type and amount of properties to be inspected (focused on risk) within a calendar year.

Vehicles and Equipment: To ensure that a fire department is able to meet its emergency response objectives, it must have a fleet of vehicles and related equipment that are dependable and ready to respond at a moment's notice.

For this specific section, the fire department can set a baseline for the following key areas:

1. Overall cost per vehicle based on life expectancy;
2. How does this equate to cost per kilometer or hour of service, and
3. Based on maintenance costs, is the present life expectancy set for fire department vehicles cost effective or are adjustments required.

Dollars saved vs. dollar lost ratio: By measuring this, the department is looking at related fire loss reductions that can be contributed to better prevention education initiatives, more effective response efforts or even more fire suppression systems installed in facilities within the Community. Along with this type of "saved vs. loss" ratio, it is also worth keeping track of cost per-capita for fire services. This will demonstrate to the community how their costs compare to similar size fire departments and communities.

Human Resources: People are the most valuable asset of the fire department and therefore it is important to monitor how the fire department is supporting its members. KPIs in this specific area could include:

1. Injuries during training
2. Injuries during response
3. Illnesses related to the duties – specifically cardiac, respiratory and cancer illnesses
4. Costs associated with injuries

		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Cash Inflows:												
Starting Balance		$ 699,682	$ 919,177	$ 986,325	$ 1,194,481	$ 1,405,759	$ 1,520,431	$ 1,476,074	$ 1,431,053	$ 1,385,355	$ 1,244,741	$ 1,083,171
Transfer from Operating Fund		259,000	213,361	213,361	213,361	213,361	213,361	213,361	213,361	213,361	213,361	213,361
Interest earned	1.50%	10,495	13,788	14,795	17,917	21,086	22,806	22,141	21,466	20,780	18,671	16,248
		969,177	1,146,325	1,214,481	1,425,759	1,640,206	1,756,598	1,711,576	1,665,879	1,619,496	1,476,773	1,312,779
Asset Costs:												
Aerial Ladder Truck (2000)					-	1,450,000						
Pumper 1 E-One Cyclone (2019)												
Ford Utility Vehicle												
Pumper 3 E-One Cyclone (2003)				-	900,000							
Tanker 6 Int'l Pumper/Tanker (2006)											-	
Rescue 4 Pumper Rescue (2007)									850,000			
Ford Haz Matt vehicle										170,000		
Fire Trucks		-	-	-	900,000	1,450,000	-	-	850,000	170,000	-	-
Radio Repeater Replacement												
Equipment Upgrades		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
SCBA Apparatus		30,000	140,000									
Misc Fire Equipment		50,000	160,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Debt Service Principal & Interest		-	-	-	-	99,775	260,523	260,523	260,523	354,755	373,602	373,602
Debt Service Obligation		-	-	-	-	99,775	260,523	260,523	260,523	354,755	373,602	373,602
		50,000	160,000	20,000	20,000	119,775	280,523	280,523	280,523	374,755	393,602	393,602
Ending Balance		$ 919,177	$ 986,325	$ 1,194,481	$ 1,405,759	$ 1,520,431	$ 1,476,074	$ 1,431,053	$ 1,385,355	$ 1,244,741	$ 1,083,171	$ 919,177
Debt Payment Schedule												
Year 1	2022/23		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Year 2	2023/24				-	-	-	-	-	-	-	-
Year 3	2024/25					99,775	99,775	99,775	99,775	99,775	99,775	99,775
Year 4	2025/26						160,749	160,749	160,749	160,749	160,749	160,749
Year 5	2026/27							-	-	-	-	-
Year 6	2027/28								-	-	-	-
Year 7	2028/29									94,232	94,232	94,232
Year 8	2029/30										18,846	18,846
Year 9	2030/31											-
Year 10	2031/32											
			$ -	$ -	$ -	$ 99,775	$ 260,523	$ 260,523	$ 260,523	$ 354,755	$ 373,602	$ 373,602

APPENDIX B: PROFORMA CAPITAL EXPENSE – REPLACEMENT OF STATIONS

		Merged Station		New Wolfville Station (Status Quo)		New Greenwich Station (Status Quo)
All in construction estimate		$ 4,000,000		$ 3,200,000		2,500,000
Contribution ratio						
Kings	60.00%	2,400,000	52.00%	1,664,000	100.00%	2,500,000
Town	40.00%	1,600,000	48.00%	1,536,000	0.00%	-
	100.00%	$ 4,000,000	100.00%	$ 3,200,000	100.00%	$ 2,500,000
Financing Assumptions:						
Kings		2,400,000		1,664,000		2,500,000
Less: Net proceeds of Fire Commission		(500,000)				(500,000)
		1,900,000		1,664,000		2,000,000
Town		1,600,000		1,536,000		-
Financing terms:						
Interest		2.5%		2.5%		2.5%
Term of debenture (years)		15		15		15
Annual Estimates (Prin. & Interest):						
Kings' portion		$ 153,456		$ 134,395		$ 161,533
Town portion		129,226		124,057		-
Total		$ 282,683		$ 258,453		$ 161,533

APPENDIX C: ESTIMATED FIVE-YEAR ROLLING AVERAGES OF CALLS (FOR USE IN ALLOCATION OF CERTAIN COSTS)

Unmerged:						
Wolfville FD	Total	Town	Kings		Town %	Kings %
2016	131	64	67		48.85%	51.15%
2017	115	49	66		42.61%	57.39%
2018	159	89	70		55.97%	44.03%
2019	142	58	84		40.85%	59.15%
2020	115	60	55		52.17%	47.83%
Average	132	64	68		48.09%	51.91%
Greenwich FD						
2016	73		73			
2017	43		43			
2018	63		63			
2019	80		80			
2020	49		49			
Average	62	-	62		0%	100%
Merged:						
2016	204	64	140		31.37%	68.63%
2017	158	49	109		31.01%	68.99%
2018	222	89	133		40.09%	59.91%
2019	222	58	164		26.13%	73.87%
2020	164	60	104		36.59%	63.41%
Five year averages	970	320	650		33.04%	66.96%

APPENDIX D: DETAILED ESTIMATES

Cost Recovery Requirements	Wolfville Representative Year			Adjustments	Restated for Merger
Operating:					
Kings' share of operating expense	$ 179,118			66.96%	$ 254,319
Kings' share of debt and reserve transfer	182,459				142,872
King's share of building related debt					153,456
	361,576	52.0%			550,648
Town share of operating expense	165,339			33.04%	125,474
Town share of debt and reserve transfer	168,423				70,489
Town share building related debt					129,226
	333,763	48.0%			325,189
Increase to account for Wolfville non-fire benefit					
					325,189
	695,339				875,836
Non-Operating:					
Sale of service	507				507
Total	$ 695,846				$ 876,343

	Wolfville Representative Year			Adjustments	Restated for Merger
Operating Expense					
Salary and wages	$ 80,343			$ 11,657	$ 92,000
Employee Benefits	14,179			(379)	13,800
Meetings, Meals and Travel	1,788			212	2,000
Professional Development	13,599			4,401	18,000
Membership Dues & Fees	310			190	500
Telecommunications	8,001			499	8,500
Office Expense	3			497	500
Insurance	3,816			1,184	5,000
Marketing and Communications				-	0
Stipends & Honorariums	34,017			10,983	45,000
Miscellaneous				-	0
Heat	2,978			522	3,500
Utilities	12,963			(2,963)	10,000
Repairs and Maintenance	10,727			(727)	10,000
Vehicle Fuel	3,739			2,261	6,000
Vehicle Repairs & Maintenance	40,842			4,158	45,000
Vehicle Insurance	5,664			2,836	8,500
Operational Equip & Supplies	68,595			6,405	75,000
Equipment Maintenance	18,639			(3,639)	15,000
Contracted Services	23,012			(3,012)	20,000
Licenses and Permits	1,749			251	2,000
Net Operating Expense	$ 344,964			$ 35,336	$ 380,300
Debt Payments and Reserve Transfers					
Interest on Debentures	$ 927			$ (927)	$ -
Debenture Payments	22,400			(22,400)	-
	23,327			(23,327)	-
Kings' building related debt	-			153,456	153,456
Town's building related debt	-			129,226	129,226
	-			282,683	282,683
Balance of Aerial Truck Financing					
Kings' portion	35,649			(35,649)	-
Town's Portion	32,907			(32,907)	-
	68,555			(68,555)	-
Transfers to Capital Reserve	259,000				
Kings' portion				(30,561)	142,872
Town portion				(15,078)	70,489
	259,000			(45,639)	213,361
	350,882			145,161	496,043
Total	$ 695,846			$ 180,497	$ 876,343

APPENDIX E: REVIEW OF STANDARD OPERATING GUIDELINES

EM&T reviewed the Standard Operating Guidelines (SOGs) for both the Greenwich and Wolfville fire departments. Rather than identify each department separately, we have consolidated the comments into one document.

The following comments are to help the fire departments ensure that they have covered critical areas, improve the ease of use by the firefighters, and create standardization between organizations, as applicable. The fire departments should review these comments and adjust their SOGs as appropriate.

SOGs should have a table of contents to make it easier and more efficient for firefighters to find specific guidelines.

General Comments

At the end of each SOG, there should be a provisional statement to the effect of:

It is understood that this guideline may not address all circumstances. Conditions may exist that require some type of deviation by the Incident Commander/Supervisor.

Decisions should always be based on experience, the safety of the public, and the safety of the Fire Department Personnel.

There must be a clear process for informing firefighters of any updates and recording when each update has been reviewed by each firefighter. It would be advantageous to have an electronic file that firefighters could access to ensure ease of access to the most recent versions.

There should be a guideline for responding when firefighters or other members submit comments, questions, or possible revisions to the SOGs. This should include a feedback loop with responses including timelines for assessment and response.

Maintenance of SOGs “on a regular basis” needs to be defined. One suggestion is to establish a review window for the various types of documents. For example, the guideline for answering a phone may have a revision time of every 5 years, whereas a guideline for maintenance of PPE may be annually or biennially.

Where there are two or more sections of the SOGs referencing the same topic, (e.g., Rapid Intervention Team) these should be consolidated into one section.

Responsibilities/ Authorities

The responsibility to provide or revoke tasks, authorities, privileges, etc. (e.g., pump operators, completion of training levels, driving privileges) must lie with an individual (not the organization). Common terminology is “Fire Chief or designate”.

If a committee is involved, the committee should be making recommendations to the Fire Chief or designate who provides the direction and signs off on the decision. Common practice is to have the training/authority completed and signed off by those conducting the training and then the final complete file provided to the Fire Chief or designate for final signature and approval.

This wording should also be reflected in health and safety associated policies. It is the Fire Chief who is ultimately responsible for worker health and safety.

Responsibility should rest with individuals, not a body such as “the fire department” or a committee. In text, using ‘the department’ is likened to saying, ‘the fire truck’. There is no person affixed and therefore the responsibility is not owned.

When referring to “the leadership team”, this needs to be clearly defined so all readers know who is on the leadership team. To avoid any misunderstanding, it is recommended to spell out the position within this team.

Under the scope of the SOGs one states, “Authority to deviate from these guidelines rests with the Incident Commander who is solely responsible for the results of any deviation.” It may be prudent to remove “who is solely responsible” as this may not be the case. Each

officer/supervisor needs discretion in any procedure/guideline to allow for the circumstances in which they find themselves. An example would be in saving a choking victims life. Firefighters are taught a procedure on how to stand behind the patient and administer the abdominal thrusts to remove the object. How then is this done when the patient is in a wheelchair? Must the written procedure/guideline be followed verbatim, or is their opportunity to use the principles provided in the procedure and apply them in this given circumstance to allow for success?

Another example would be the Incident Commander delegating tasks at a fire scene. An interior division Captain will have direct supervision of their firefighters in changing circumstances that the IC may not be aware of and therefore need to initiate direction appropriately.

All SOGs should be signed off by the Fire Chief.

Chain of Command – there must be a clear differentiation between the Administrative Chain of Command and that of the process of Incident Command at a fire scene. There may be times, for example, where a chief officer arrives at a scene that is being effectively commanded by a

Captain and leaves the IC role with the Captain.

The role of the Safety Officer in the Incident Command role: The Safety Officer, in reference to the Health and Safety responsibilities derived from the Occupational Health and Safety Act, should be removed from the Chain of Command as it would work in parallel. All personnel are given responsibility for health and safety in the Act as part of the Internal Responsibility System. It is the responsibility of the local fire department to ensure they review the Nova Scotia Occupational Health and Safety Act and any related regulations and ensure compliance. When reviewing the NFPA 1500 it is heavily directed to other (USA) jurisdictions.

In the case of an incident where there is a Safety Officer present, the Safety Officer can stop any unsafe function without the order of the Incident Commander. They would report to the Incident Command on what transpired but the authority of the Safety Officer should not be confused.

There are numerous references to Incident Command (IC) in the documents. It must be noted that IC is only established upon arrival at a scene. Prior to that point the person responsible is the Officer in Charge (OIC).

Call Reports: Documents generated at, or for an incident are legal documents and, in some cases, should be confidential to only those who were part of the incident (i.e., medical calls). SOGs should provide direction on where these documents should be securely stored.

Forceable Entry: Consider the usage of wording regarding forceable entry that protects the IC. The wording should include the responsibility of the building owner or key holder to arrive and provide entry. Failure to respond would mean that no forcible entry will occur unless there is evidence of fire or other immediate emergency. The fire crews will complete two 360 reviews of the structure, looking into available windows, and utilizing available Thermal Imaging Cameras. If there is no evidence of fire after this time, the IC may deem the incident a false alarm and return all apparatus back into service.

Health and Safety Policy

Can a firefighter refuse unsafe work? It is recommended that the scope of the statement “all employees have the right to refuse unsafe work” be clearly defined so there is no misunderstanding as to what is meant.

Safety Glasses: There are Canadian Standards Association (CSA) safety glasses that are ‘over glasses’; they fit on top of prescription glasses providing the necessary protection for the

worker where eye protection is necessary. There are also side clips that can make prescription glasses safer.

Firefighter injuries: if there is a critical injury, the Worker Joint Health and Safety member should have opportunity to investigate in accordance with the Act.

For firefighter injuries requiring transport to a medical facility, it should be the duty of the Fire Chief or designate to notify the next of kin. Not ensuring this is specifically assigned may encourage inappropriate contact.

Personal Protective Equipment

SOGs should be updated to reflect that NFPA 1851 now requires the certification of PPE twice a year.

With regards to doffing PPE at the scene, there should be guidance to the firefighters on what they should be wearing for the trip back to the station and the provision of such outerwear.

During the site decontamination process, protective eyewear, N95 masks, gloves, and long sleeve shirts should be worn. There should be no open skin exposed.

When using commercial washers (instead of bunker gear extractors) for bunker gear, they typically spin too fast and can damage the bunker gear. The spins settings should be set at a rate set by the manufacturer of the bunker gear. Where financially possible, proper bunker gear extractors should be used. Some models can also accommodate other types of wash cycles for other types of PPE such as gloves.

If firefighters are using PPE that was personally purchased, it must meet or exceed appropriate safety standards and be approved by the fire chief.

The individual(s) conducting the cleaning and inspecting of PPE should don appropriate PPE. This would include, but not limited to, rubber gloves, N95 mask, safety glasses, and ensure there is no bare skin on the arms. Reference should be made to conducting a visual inspection for damage when cleaning PPE.

There should be a clear process established to taking equipment/ PPE out of service, properly tagging it, and responsibility to report the deficiency to the appropriate person(s).

Whenever equipment is taken out of service it is important to note the reason, or deficiency, for why it is out of service.

According to the manufacturer and CSA, only level 1 technician trained personnel should change batteries in self-contained breathing apparatus (SCBA).

Driving and Apparatus Operations

Once a firefighter has completed their driving training, a review and check for the provincial

licensing should be undertaken prior to the file being presented to the Fire Chief or designate for sign off. The driver file should then be shared with the corporation (municipality) so that the list of personnel authorized to drive is maintained for the insurance policy needs. Driver training programs should be approved by the insurance company.

It is recommended that in the driver/ Operator training, the candidate complete the NFPA 1002 certification. After this initial training, then concentrate on skills maintenance and changes in design.

A pre-trip inspection “circle check” is required for commercial vehicles. Research into the provincial legislation should be conducted around the exemptions and/or expectations of a fire department conducting pre-trip inspections. To complete a thorough pre-trip inspection should take in excess of fifteen minutes. This delay would exacerbate the effects of fire or medial emergencies. Most jurisdictions allow for a post-trip and regular scheduled inspections. The clear guidance should be articulated in this document. It is recommended that a documented circle check be completed at the conclusion of each call prior to putting the apparatus back into service. This will ensure the vehicle is in a ready state with documented proof of the same.

“Records maintained by the department”; it is best to assign this duty to a position(s) within the department. A person(s) needs to be responsible to ensure that checks are done and that any deficiencies are rectified.

A provision for the operator should be included to state, “Operators will ensure the safest and most appropriate route is taken at the time of responding from the fire station.” There are occasions where situations occur after, or in some cases before, that create hazards, but the operator is not privy to.

Best practice is to include limits on apparatus speed in good traveling conditions. Jurisdictions use varying limits of speed over the posted limits such as a maximum of 10km/h over in town and 20km/h over on highway. It is recommended that research be conducted into limits from like fire departments within the province.

Consider including wording about the approach and placement of apparatus for emergency and non-emergency events to avoid having to reverse later.

In a collision involving a fire department vehicle, the policy should address where there are personal injuries or critical injuries involved. The Worker Members of the Joint Health and Safety Committee (JHSC) also have the right to investigate. Who is responsible to the investigation of an accident? Generally, this is more than just the police. Often there is a corporate interest due to insurance requirements to conduct an internal investigation. There should be clear direction of what documentation is required when in an accident within this policy.

A clear and separate procedure should be developed that provides guidance for all personnel on how to guide apparatus in reverse. This guidance should include appropriate two-armed signals, the use of traffic vests, the use of lights, etc. All personnel should be trained on this procedure and this training should be documented. NFPA statistics prove that there are a significant number of firefighter deaths and injuries from reversing apparatus.

Personnel using personal vehicles (PV) to respond to calls should have a separate policy. This should outline expectations of use of a PV. Who pays if there is an accident? Who is responsible should a ticket be levied? Is there any reimbursement of use? What if this individual loses their license? The Officer should notify their insurance company of this use.

Disciplinary Action

Discipline may be necessary for numerous violations that may or may not be similar. There are occasions where numerous violations may have a similar cause but dissimilar violations. The lack of critical thinking skills, for example, may be an underlying problem but the individual manifests this problem in dissimilar occurrences.

It should be noted that during the course of an investigation, other personnel may be required to be interviewed and factually present the information that they are privy to.

It should be the responsibility of the Fire Chief to table a recommendation for dismissal of an employee to the Board or Council.

It should be clear in the policy who has the authority to write disciplinary notices.

Procurement

There should be provision in this section for the Fire Chief to expend certain funds to allow for proper business transactions in the daily operations of the fire department. To always run to the Board for approval is inefficient and a waste of resource. Set limits are appropriate for signing off as long a procurement processes are followed. For example, there should be the direction of providing quotations for certain dollar amounts, the ability to sole source purchase for various set reasons, and the submission of documentation.

There should be a clear conflict of interest policy that includes the potential for real or perceived conflict of interest.

Alcohol/ Cannabis at the Fire Department

Understanding that in the Greenwich Fire Station has a hall on the second floor used for public, private, and fire department events, there must be very diligent SOGs, and steps being taken to prevent the use of alcohol or other substances creating risk for the firefighters or fire department. These would include ensuring appropriate insurance coverage, provincial alcohol

permits, and ensuring that alcohol or cannabis not be permitted outside of the hall portion of the building or designated smoking areas. Alcohol, cannabis, or illicit drugs must not be permitted on the fire apparatus floor or work areas, including the truck apron and parking areas.

There should be policy prohibiting the use of alcohol or cannabis within 12 hours prior to driving apparatus. This would require “designated drivers” at community functions.

Note: in cases of heavy drinking, 12 hours may not be adequate to ensure the driver is not impaired.

Fire departments across the country have been removing onsite alcohol due to the potential liabilities.