



The Town of
Hawkesbury

Fire Master Plan
Final Report
2021 - 2030

The Town of Hawkesbury

Fire Master Plan



March 1, 2021

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Introduction

This master plan addresses existing service delivery by Hawkesbury's fire department, explains why the current model is no longer the best value for money for the town, and recommends a change in direction and organization to make the optimal use of available resources.

Municipal councilors and administrators have a wide range of knowledge about the provision of community services, but they cannot be experts in all things which is why, from time to time, they commission consultants with specific content knowledge to review the administration and operation of municipal departments; in this case, the fire department.

Most fire service master plans open with an introductory outline of Ontario's fire service legislation and regulations, and the authority and responsibility of municipalities to provide fire service protection. As important as public legislative recognition is, it is also a boring way to start a report and has the tendency to cause readers to lose interest within the first few paragraphs and start flipping pages. Master plans can exist without legislation but entities (municipalities) must observe legislation and regulation. In the case of fire services, the fire chief should have current knowledge of legislation or can contact an adviser from the Office of the Fire Marshal for assistance. We will deal with legislation later. Instead, let's make sure we all understand what a master plan – any master plan – is and its purpose.

Master plans are – or should be – based on data, analysis, quantification, risk options, cost, and decisions. Fire service master plans are straight-forward to accomplish but not easy. They are, in their simplest form,

- a result of deep-diving into multi-years of fire service response data and records;
- correlating the data with changes in the protected area during the same years as the data gathered, which includes population, land area, demographics, development and economy;
- establishing patterns within incidents, response, and outcome; and
- establishing a risk profile based on the correlation.

A master plan is a comprehensive long-range plan intended to guide changes and development of, in this case, the fire department.

The resulting information, combined with population and demographic forecasts from StatCan, the Ontario Ministry of Finance, and the municipality, plus official plans and site-specific planning will assist to forecast expected human and physical resource needs and timing – and associated costs – for the master plan duration.

A master plan is conceptual and strategic. In the case of an emergency service, it assesses recent history and historic demand-change forecasts to determine if they were accurate, and their

influence on the new master plan. A fire master plan should consider expected change within the municipality and a means to accommodate or adapt to those changes. And a master plan should support Hawkesbury's Vision, Mission, and Values and be based upon the town's master plan.

A master plan allows Hawkesbury and its fire service to make the best use of its resources and outlines a logical, phased, change plan that includes maximizing the benefit of the fire service's human and capital assets.

The Town of Hawkesbury commissioned the development of a Fire Master Plan with the intent that it would entail a comprehensive fire services review and address current and anticipated community fire risks for the next ten years.

During the plan's process, Pomax's interaction with council, administrators, firefighters, and the fire chief has revealed that they are aware that the organization, structure, and function of its fire department no longer reflects the needs and circumstances of the community, and we agree. This master plan intends to set the fire service on a new path encompassing a culture change which recognizes a primary emphasis on fire and life safety education, fire prevention, and the need for emergency response when emergency deterrence efforts fail.

*Councillor Lawrence Bogue –
"Our number one priority is prevention and public education" June 1, 2020*

Emergency services are just organizations. Yes, we know they are tasked with the very important roles of protecting life and property, but they are still just organizations and should be operated as efficiently, effectively, and safely as possible considering the expenditure of public money. The Town of Hawkesbury is fortunate to have a group of career and volunteer firefighters dedicated to emergency response. But the value of fire services is in protecting residents from fire and injury through education and prevention, thereby diminishing the need for emergency response.

As much as we were impressed with the concern and commitment of the Chief and firefighters with respect to protecting the community, we also found some significant gaps in the organization and administration of the department which is not the fault of the department itself.

*"We are proud of our department – let us help"
Unknown firefighter via teleconference – June 23, 2020*

Since late 2018 the fire chief's position has been part-time; that is, the incumbent works three days a week. Prior to that the chief worked four days a week. The administrative assistant works five days, and the five full-time firefighters also work a full-time

schedule. The thought behind having a part-time chief's position is that it should take about 21 hours a week to oversee and administer the department. But that organizational structure, by itself, is significantly disadvantageous to the fire department and the municipality because of the loss of continuity and interruption of business that it causes.

Imagine the interruption in planning something like public education or fire prevention programs. It is the chief who has to lead those initiatives but if he or she works only three days a week, the flow of planning will often get pushed into the following week. And, if that planning includes meetings with other town officials such as the CAO and other department heads, trying to schedule those meetings on a three day a week cycle also causes challenges.

But we should be realistic and admit that a highly competent fire administrator would find ways of overcoming those 'three day a week' challenges. For example, he or she would work extra hours or employ a flex week rather than a regular three days every week. But it is very difficult for any municipality to attract that level of capable talent and even more difficult to find that proficiency in a person who wants to work only part time, has the requisite fire service knowledge, plus has the necessary skills in both official languages. Yes, it is possible but unlikely.

The key recommendations of this fire master plan include:

- Establishing a clear direction from Council to the Chief Administrative Officer that the priority in Hawkesbury is to prevent fires.
- Creating a clear, performance-based mandate from the Chief Administrative Officer to the fire chief that focuses on organization, capable administration, record keeping, staff training, public education, and fire prevention; and associated key performance indicators that can be evaluated quarterly.
- Employing a full-time fire chief whose aptitudes, education, philosophy, and demonstrated history reflect the ideals of protecting the public through prevention and education, and who exhibits a belief that the occurrence of fires indicates that prevention and education initiatives need to be reviewed and strengthened.
- Establishing a strategy and step by step path to accomplish the master plan within two years and maintaining and updating it thereafter.
- Assigning full time firefighters from the current rotational shift schedule to generally business hours Monday to Friday when many incidents occur, and volunteers aren't as readily available.
- Focusing full-time firefighters on enhancing public safety through public education; fire prevention and fire code enforcement; firefighter training; and emergency response coordinated with volunteers.
- Reinforcing the role and value of volunteers by using them as the primary response force.

- Implementing data gathering and information analysis practices to ensure decision making and public safety programs are fact-based and objective, and any decisions as to emergency response practices are also founded on fact.
- Changing the name of the organization from Hawkesbury Fire Department to Hawkesbury Safety, Prevention, and Fire. The name change recognizes a redefined emphasis on safety and prevention while acknowledging the importance and tradition of emergency response.

An implementation timeline, and the associated tasks, can be found in the [Master Plan Two-year Implementation and Development Phase](#) Gantt chart at the end of this report.

Pomax will remain available for the next 18 months to offer advice and assistance with task implementation. Periodic consultation and guidance will be accommodated within the scope of this project.

Part 1: Current State

a) Statistical Information

Based on a combination of information that Hawkesbury Fire Department reports to the Office of the Fire Marshal, and information provided to Pomax by the fire department, we determined that an average of nine structure fires occurred each year in Hawkesbury since 2014 (Exhibit 1), and most are attributable to cooking or smoking. The outlier to the number of fires is in 2020 when nine had occurred by the end of May. The reason for this upturn in frequency is unknown at this time but may be associated with increased activity at home, including cooking and smoking during COVID-19 lockdowns. This is speculation though, but the reasons should be determined by the fire department which may inform public education and prevention initiatives.

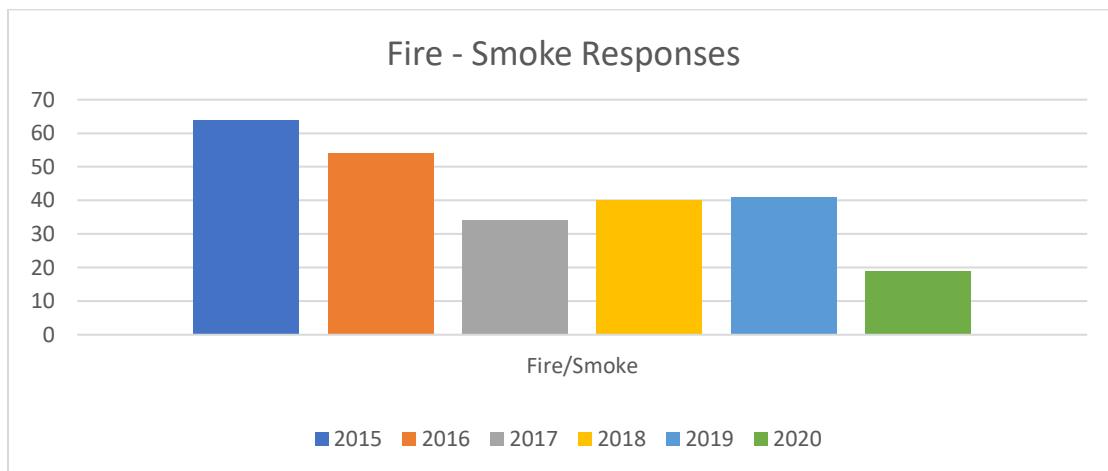
Exhibit 1: Fires and Loss 2014 – 2020

| | Number of Fires | \$ Loss | No. of Injuries | No. of Deaths | Causes |
|-------------|-----------------|-------------|-----------------|---------------|--|
| 2020 | 9 | Unknown | 0 | 1 | Cooking, smoking, arson |
| 2019 | 9 | \$1,190,000 | 1 | 0 | Cooking, smoking |
| 2018 | 9 | \$709,000 | 0 | 0 | Cooking, appliances |
| 2017 | 7 | \$135,500 | 0 | 0 | Not stated |
| 2016 | 9 | \$533,100 | 0 | 0 | Cooking, smokers' materials, appliances, unknown |
| 2015 | 10 | Unknown | Unknown | Unknown | |
| 2014 | 8 | Unknown | Unknown | Unknown | |

2020- first five months only

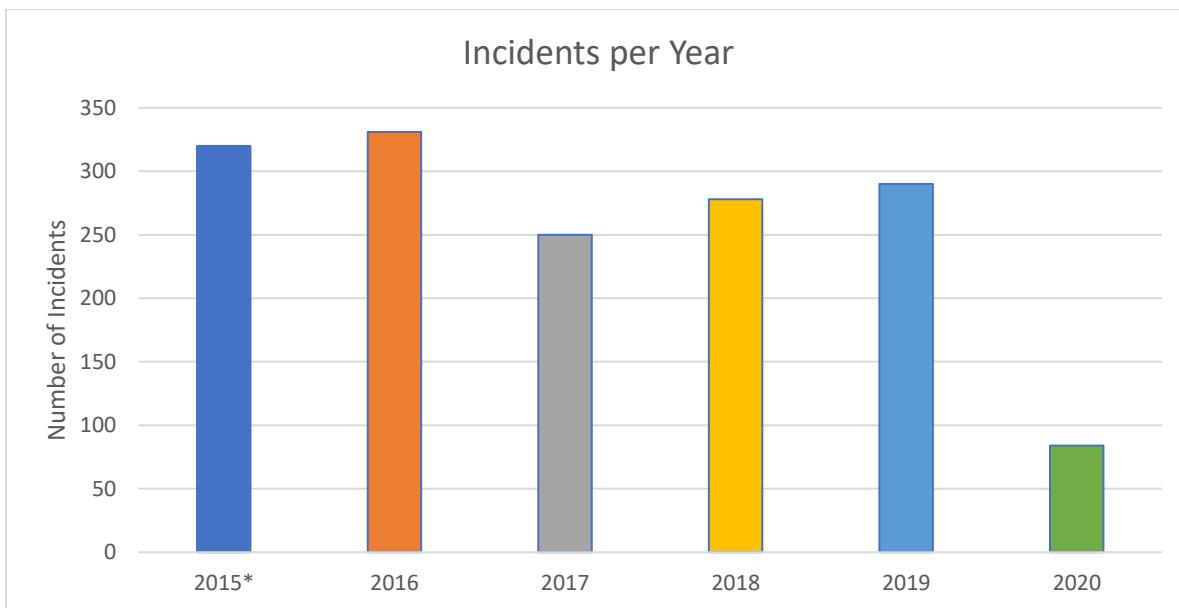
However, even though the number of fires has been about 9 per year, the fire department responds annually to approximately 40 calls categorized as fire/smoke (Exhibit 2). This is the call type assigned by dispatchers based on the information received from a caller. So, about 25% of possible fires to which the fire department is dispatched turns out to be a fire. It should be clear though that dispatchers must assign a response based on the information received even if, upon arrival and investigation, the call type is other than what was expected.

Exhibit 2: Fire - Smoke Dispatches by Year



The Hawkesbury Fire Department's annual responses to incidents of all types has ranged from a high of 320 in 2015, to 290 incidents in 2019, with the lowest frequency of incidents occurring in 2017 (Exhibit 3).

Exhibit 3: Total Incidents by Year



On average, this represents less than 1 response per day. Smoke/fire dispatches average 0.10 per day, and actual fires average less than one per month or .024 per day. Emergencies don't occur on an 'average' basis however and can take place anytime, but averages are shown to demonstrate that the Hawkesbury Fire Department is not experiencing any emergency call pressures. The type of incident responded to most often is medical calls (Exhibit 4), followed by alarms (Exhibit 5).

Exhibit 4: Medical Incidents by Day 2015 – 2020

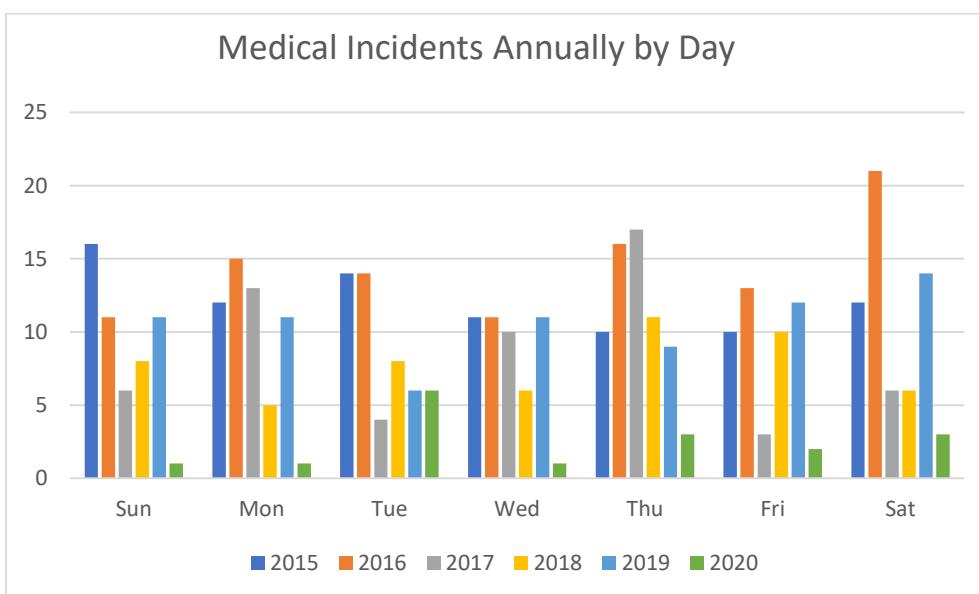
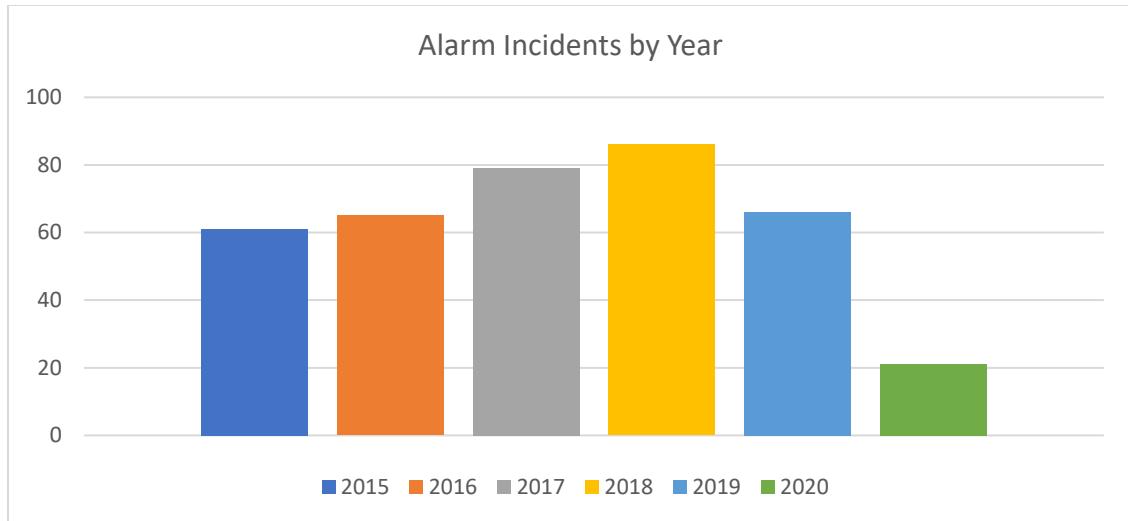
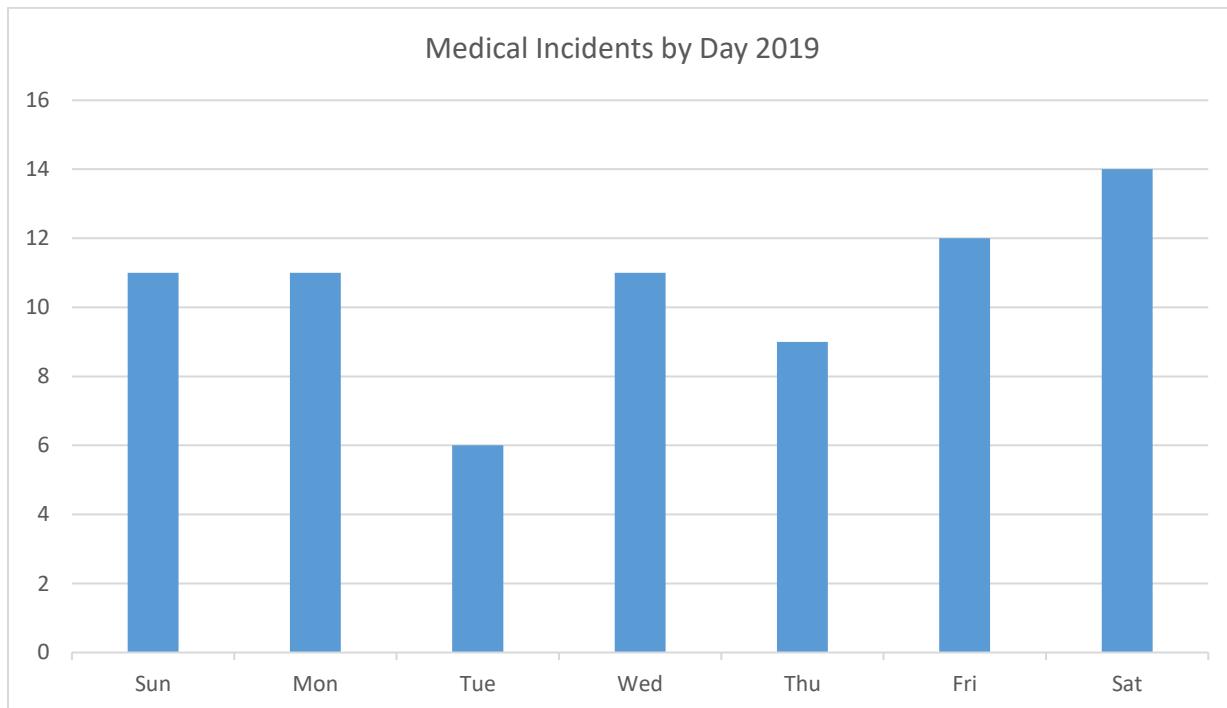


Exhibit 5: Alarm Incidents 2015 – 2020



In 2019, the day with the highest volume of medical responses was Saturday with 14 (Exhibit 6). This means that on 52 Saturdays in 2019, Hawkesbury Fire Department responded to 14 medical incidents, an average of 0.27 a day. Again, the purpose of showing average incidents is only to explain that the Hawkesbury Fire Department is not experiencing any call volume pressure that would warrant increased resources.

Exhibit 6: Medical Incidents by day 2019



b) Response Times and Record Keeping

Hawkesbury Fire Department's response times appear to be very fast but tell only part of the story. Dispatch records from 2015 to 2020 consistently show turnout time of under two minutes, travel time of under six minutes, and short time on scene. But the records only indicate the speed with which the on-duty firefighter arrived at a scene but don't tell us how long it took for volunteers to arrive or for enough of them to assemble and make up a sufficient firefighting team.

We recommend that the Hawkesbury Fire Department should change its record keeping procedures to capture the turnout times for volunteers and the time each volunteer or group of volunteers arrive on scene. These times and sequences are important when assessing resources and timeliness of service delivery at fires or rescues.

It should be clear though that the lack of a full set of records probably has had little negative effect on service delivery within the community. The response area is relatively small; call volume is low; medical responses are not often time critical, neither are alarms (the two most common response types in Hawkesbury), and the number of actual fires is infrequent although they should be lower.

Nevertheless, even though a lack of complete records has likely not had a negative impact on service delivery by the fire department, good record keeping is a best practice and should be initiated and maintained. An aspect of record keeping that is a significant assistance to decision making is outcome data. Outcome data is just that: a record of what happened at an incident, the services provided, and equipment used. For example, the fire department responded to 74 medical incidents in 2019. We were unable to find any records that explained what the fire responder did at any of those incidents. Were they the first to arrive, did they perform CPR, did they assist the paramedics, did they provide direction and comfort to the family or bystanders?

Event Phases

Call Taking Time – the elapsed time from when the telephone rings at the dispatch centre to the time firefighters are alerted to an event;

volunteer firefighters are alerted by paging a pager, smartphone, radio, or other device;

career (full time) firefighters are alerted by station paging which may be simultaneously broadcast to personal pagers or communication devices;

Turnout Time – the elapsed time from when firefighters are alerted to the time of the first truck's departure from the station;

Travel Time – the elapsed time from departing the station to the curbside arrival at the event (this is not necessarily the same time as arrival at the event; as examples, reaching someone who has fallen down an embankment or in the case of a fire in a unit of a multi-story building will require additional time to arrive at the event);

Time on Scene – the elapsed time from when fire apparatus (the trucks) arrived at the scene until departing the scene;

Paged to back at station – the total from the time firefighters were alerted until they arrived back at the station after the event was complete.

Few medical calls are time critical and there is a [large body of research](#), that can be found at the end of this section, that questions the efficacy of fire response to medical calls. But, specific to Hawkesbury, there is no local data to indicate whether there is value to firefighters responding to medical calls. Complete record keeping would allow the fire chief to report to council the service provided at medical incidents and decisions could be made, based on fact, whether to continue that practice or to restrict it to a very specific set of call types.

Response to motor vehicle collisions could also be better informed with accurate records. Responses to medical incidents and vehicle collisions have become a common practice for

... without complete record keeping and good data, council is approving operations based on opinion and practice rather than fact.

fire departments but few records exist to indicate the value of the responses. For example, if it were found that in 95% of motor vehicle collisions the role of firefighters was to block traffic and clean debris from the road, would council continue to allow volunteers to be called in or would a decision be made to restrict responses only when an entrapment was confirmed? The point is that without complete record keeping and good data, council is approving operations based on opinion and practice rather than fact.

We do note that in March of 2020 the Hawkesbury Fire Department established an operational guideline that reduced the number of firefighters responding to medical calls and smoke alarm/carbon monoxide alarms to one responder. Prior to March, a platoon of volunteers would be called to respond. This guideline was established to reduce possible exposure to COVID-19 but it should be left in place even after COVID-19 is no longer a prevalent issue. There is no need for a platoon of firefighters to respond to a medical call. The purpose of fire response is to intervene with critical patients until an ambulance can arrive. Considering that there are few time critical medical incidents, and only one or two people can work on a patient at a time, a platoon of firefighters is not needed for a single medical incident. This moderated response model also means that there are fewer large fire trucks travelling at speed through the community. There is ample evidence that there is a greater risk to the public from responding emergency vehicles than there is to the subject patient by not receiving fire assistance.

Even though there are no incident outcome records at the Hawkesbury Fire Department, the prevailing cause of smoke alarms and carbon monoxide alarms is that they are due to a malfunction. The March 2020 operational guideline, referenced in the previous paragraph, instructs dispatchers to ask a series of questions prior to a decision to send a firefighter to investigate alarms. We are unaware of any problematic outcomes in the nine months since implementation and encourage Hawkesbury to maintain that practice while gathering data about those and other call types. The

The result is expected to be a reduction in emergency responses by large fire trucks and a diminished danger to the public.

result is expected to be a reduction in emergency responses by large fire trucks and a diminished danger to the public.

Our recommendation is for Hawkesbury Fire Department to implement a complete and robust record gathering practice including firefighter activities at incidents and resulting outcomes.

c) Organizational and Operational Context

i. Apparatus and Equipment

The Hawkesbury Fire Department has been operating from its fire station located at 780 Spence Avenue in the Town of Hawkesbury since February 2002. The fire station is equipped with backup emergency power and sufficient office space for the current administrative functions. The indoor training rooms are sufficiently large for instructional needs and equipped with technology features that allow for in-person classroom and remote learning. The fire station also has adequate room for gear storage and includes firefighter workout facilities and dormitories. There appears to be an ample outdoor area to establish a firefighter training zone for such topics as forcible entry, simulated roof ventilation, and limited fireground evolutions (training scenarios), but not sufficient space for live fire training.

The department staff include:

- 28 volunteer firefighters (4 – Lieutenants and 24 firefighters)
- 5 full-time firefighters
- 5 full-time communicators (dispatchers)
- 1 part-time fire chief (21 hours per week)
- 1 full-time administrative assistant

Exhibit 7: Hawkesbury Fire Department Fleet

| Type of vehicle | Year | Make | Pump capacity | Water tank size |
|--------------------|---------------------------|--|---|-----------------|
| Pumper P1-96 | 1996 | Superior Emergency Vehicles Triple Combination | Hale 5000 lpm | 3600 litres |
| Pumper P1-99 | 1999 | Superior Emergency Vehicles Triple Combination | Hale 5000 lpm | 3100 litres |
| 95' Platform A-203 | 2003 | Techno Feu | Hale 7570 lpm | 1135 litres |
| Rescue R1-07 | 1986 body on 2007 chassis | Almonte Fire Trucks | Transportation of personnel and equipment | |
| Chief SUV C-114 | 2014 | Dodge Durango | Command Vehicle/Chief Officer | |
| Pickup S-116 | 2016 | Dodge Ram | Transportation of personnel and equipment | |
| Van P-030 | 2003 | Dodge Caravan | Public Education/Fire Prevention | |

Pumper P1-96 is scheduled for replacement in April 2021.

The full-time firefighters and communicators are represented by the International Association of Fire Fighters as Local #L1677, and the volunteer firefighters are represented by the United Steel Workers as Local #6565.

The town can expect one of the five full-time firefighters to retire within 5-6 years and perhaps up to four volunteer firefighter retirements. Based upon a stable, low-level population growth of approximately 1100 over the next 10 years (~110 per year) and an average increase of about 50 dwelling units per year,¹ in conjunction with the call volume data, there is no evidence that leads us to recommend an increase to the number of full-time firefighting personnel for the duration of this master plan. The fire department is forecasting to increase the cadre of volunteer firefighters by seven members to a total of 35 (4 lieutenants and 29 firefighters).

Exhibit 8: Firefighter Demographics

| Age | Full time firefighters | Volunteer firefighters |
|-------|------------------------|------------------------|
| 20-24 | | 2 |
| 25-29 | 1 | 6 |
| 30-34 | | 4 |
| 35-39 | 2 | 3 |
| 40-44 | | 1 |
| 45-49 | 1 | 6 |
| 50-54 | 1 | |
| 55-59 | | 1 |
| 60-64 | | 3 |
| Total | 5 | 26 |

The five full-time firefighters are organized into four platoons and work a rotational 10-hour day and 14-hour night shift pattern. This results in one fulltime firefighter on duty 24 hours a day. There are no lieutenants or captains within the full-time cadre.

The volunteer firefighters are organized into four platoons with

a Lieutenant designated as the officer on each platoon.

Consultations with Hawkesbury Fire Department personnel, and deliberations amongst Pomax staff, have determined that the Hawkesbury Fire Department has the requisite type and amount of fire apparatus (trucks), equipment, and tools which would be required to respond and perform either an interior or exterior firefighting scenario at a two story 186m² single family structure fire. In other words, the department is adequately equipped to handle most fires and mutual aid is available for those infrequent occasions when more assistance is needed. There is no indication that additional resources, other than what is already scheduled, will be required for the duration of this fire master plan.

All firefighters have been issued with personal protective clothing and there are approximately 10 spare sets of bunker suits (jacket/pants), for firefighters to wear should their personal issue be damaged, sent away for deep cleaning, or contaminated and awaiting cleaning.

¹ Please see Hawkesbury's 2019 Watson and Associates Economists Ltd. Development Charges report.

There are an adequate number of self-contained breathing apparatus (18 units), face pieces (18), 58 air cylinders, Rapid Intervention Team air kit, and airline accessories systems for an emergency response to a two-story single-family structure fire. Firefighters are not issued with their own personal fit-tested facepiece. When firefighters respond to an emergency, they must wear whatever size of facepiece is available on the fire apparatus, which may or may not be the correct size for their face.

Exhibit 9: Self-contained Breathing Apparatus Supply

| Self-contained breathing apparatus | Spare air cylinders |
|---------------------------------------|--------------------------------------|
| 18 MSA FireHawk M7XT | 58 - 45 minute rated 4500psi |
| Two - Rapid Intervention Team Air Kit | 2 – 60 minute rated 4500psi |
| Airline accessory system | 4 – 60 minute rated 4500psi |
| Two – Hip Air Breathing Apparatus | With 10 Minute rated escape cylinder |

ii. Operational Guidelines

Interviews have revealed that the fire department's operating guidelines are sufficiently out of date that, except for the previously mentioned *Response Procedures for Medical and Verification Calls* issued in March 2020, the department does not have any operational guidelines.

The department's capability to establish an accountability system and operate within an Incident Management System at a fire or emergency is minimal, and there are no up-to-date standard operating guidelines or associated training plans in place. The result is that incident action plans, worksheets, tabletop exercises, and best practices at emergency scenes are lacking, and some firefighters experience confusion as to roles and responsibilities during emergencies and lack confidence in leadership.

This situation is aggravated by the fact that the department's only officers/supervisors – the volunteer Lieutenants who technically outrank the full-time firefighters – do not have ready access to portable radios for communication purposes during the initial stages of the alarm activation. Additionally, the Lieutenants arrive on scene after the single on-duty full-time firefighter has attempted to establish rudimentary emergency scene operations, including Incident Command. The lack of an incident command guideline leaves the scene responsibility and transfer of command process to greater liability if something goes wrong.

The department has portable 2-way radios for use at emergencies for the on duty full-time staff. However, there are portable radios which have yet to be issued to the Lieutenants for use on the fire/emergency scene.

We recommend issuing the portable radios to the Lieutenants immediately.

Recommendations respecting the creation or updating of operating procedures and guidelines are addressed in Part 3: Next Steps.

iii. Alerting and Response

Hawkesbury's fire dispatch centre is staffed around the clock by members of the communications division. The dispatch centre is equipped with two CriSys CAD system workstations. Fire department personnel are provided with Minitor VI analog pagers while the department portable radios are on a digital platform. Anecdotal information from some firefighters indicates that the quality of the analog pagers has degraded and, at times, hampers the clear reception of messages regarding fire department operations.

All full-time firefighters hold a D-Z class of Ontario Driver licence, which is required to legally drive pumper and other heavy fire trucks; however, only eight of the volunteer firefighters hold a D-Z licence.

Volunteer firefighters respond to an emergency scene in their personal vehicles. An argument can be made that a safer and possibly more effective method for volunteer response is to assemble at the fire station upon being alerted to an emergency. This action will eliminate the requirement for volunteer firefighters to carry potentially contaminated firefighting gear in their personal vehicles and keep contaminants away from themselves and family members. After donning their firefighting gear, volunteer firefighters can respond to the emergency scene in fully crewed fire apparatus as a team, which will enable the Incident Commander to implement ongoing components of the Incident Action Plan in a much more effective and efficient manner.

Given the importance of time in an emergency alerting and response model, real-time mobile device applications such as *Who's Responding* or *IamResponding* for volunteer firefighters and off-duty full-time firefighters, is essential to ensure their timely notification. Implementation of this type of mobile device application by 100% of volunteer and full-time firefighters will assist the dispatch centre to monitor and moderate response through call management, a dispatch centric standard operating guideline, training, and direction from an Incident Commander, assuming those items are implemented in the early period of the master plan.

iv. Response Types and Training

The Hawkesbury Fire Department is not adequately equipped and trained to respond to the following technical and/or specialized rescue response services. It should be noted that incidents of the following type happen infrequently or rarely.

- elevator rescue;
- trench rescue;
- rope rescue – high and low angle;
- building collapse;

- confined space rescue;
- swift water rescue; and
- ice and water rescue.

Hawkesbury firefighters should be equipped and trained to respond to the types of emergencies listed above at the of Awareness Level only as defined by the National Fire Protection Association in 4.1.4. of NFPA 1670: Standard on Operations and Training for Technical Search and Rescue Incidents.

Awareness Level. This level represents the minimum capability of organizations that provide response to technical search and rescue incidents.

Operations Level. This level represents the capability of organizations to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply limited techniques specified in this standard to support and participate in technical search and rescue incidents.

Technician Level. This level represents the capability of organizations to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply advanced techniques specified in this standard necessary to coordinate, perform, and supervise technical search and rescue incidents.

for Hawkesbury firefighters to have local access to such a facility established at or near the fire station. In addition to regular firefighter training held at the fire station or other local locations, annual live fire training is a mainstay of job performance requirements for a firefighter. Our consultations determined that there is no capability to hold local regular or annual live fire training. Normally, in the absence of a department owned/operated live fire training facility, training would be acquired at a centre endorsed by the Office of the Fire Marshal and Emergency Management such as the Leeds Thousand Islands Emergency Services Training Centre near Brockville. These types of facilities also provide on-line remote learning for various public fire and life safety and fire prevention training.

Hawkesbury Fire Department has no access to an on-site exterior training facility for topics such as forcible entry, simulated roof ventilation, or fireground evolutions and live fire training. It is essential for firefighters to have access to regular opportunities for hands-on training such as pumper operations, use of handlines and ground/vehicle monitors and ladder operations. It would be beneficial

v. The Communications Centre

The emergency communications section was established in 2001 as a revenue-based division. In other words, the intent is to sell dispatch services to clients either to cover the cost of dispatching or to make a profit. The centre operates on a 2020 budget of \$498,260 almost all of which is taken up in salaries and operating costs. Its single client is the United Counties of Prescott and Russell which contracts with Hawkesbury for the purpose of dispatching other fire services in the counties. The division provides after hours dispatching for other town departments. This is a risky business model because if the counties decide not to renew the dispatch contract, the town will have no means to offset the division's cost of staff and equipment. If each municipality included in the counties' agreement was separately contracted,

the impact of one municipal fire service leaving the dispatch arrangement would not be as great.

The counties' contract represents a cost per capita of \$6.30. That is calculated by taking the 2016 counties' census population of 89,333 and subtracting Hawkesbury's population of approximately 10,263. The contract with the United Counties is a flat rate of \$498,260 so does not fluctuate on a per capita basis, but we have used per capita costs for comparison to other municipalities that provide similar dispatch services. Our experience is that dispatch services range between \$3.00 per capita to approximately \$5.50. This indicates that Hawkesbury, at \$6.30 per capita, is at the high cost end of dispatch services.

The municipality has at least three options for dispatch services:

1. Status quo; continue the dispatch service in the current model and risk the possibility that its single client may not renew the contract.
2. Seek additional clients to increase revenue and reduce dependency risk. Potential clients need not be located nearby. Technology allows clients to be a substantial distance from the dispatch service provider.
 - a. To be competitive, Hawkesbury's fees for new clients would have to be in the \$5.00 per capita range.
 - b. Technical, capital, and maintenance costs may increase depending on the location of new clients and their technology.
 - c. Success in attracting additional clients could result in a workload that requires additional staff to handle it, thereby increasing costs.
3. Seek a dispatch provider for the municipality and cease providing dispatch services to the United Counties and local services after business hours.
 - a. The town can expect to pay approximately \$5.00 to \$5.50 per capita resulting in almost \$57,000 in dispatch service fees plus other technology costs. The annual total is estimated at \$65,000 for fees plus technology costs.
 - b. Hawkesbury would have to ensure that a dispatch provider can deliver services in French and English.

Our recommendation, under most circumstances would be to contract with a dispatch service provider and disband the communications division. It is the least risky option and removes the burden of managing another service obligation when there is already a lot to change. But Hawkesbury is in a difficult position because it doesn't have the resources to cope with change, and options two and three, above, require a means to assess and implement. Both option 2 – cultivate additional clients – and 3 – seek a dispatch provider – require staff time to do business model assessments. Option 2 requires an investment in time and money to attract and maintain clients. Currently, the town has a part time fire chief and a fire department that has (to avoid using stronger terminology) 'accountability' issues to resolve. There are, currently, insufficient

resources to address either a) the dispatch issue or b) the fire department service level, and certainly no resources to resolve both, and it is likely to be six months after the approval of this master plan before the fire department is ready to take any definitive steps forward on the multiple issues it faces.

The result is that we recommend the status quo for the communications division and the continued risk that its single client may decide not to renew the contract.

We also recommend that an assessment of what to do with the communications division occurs by July of 2022.

d) Fire and Life Safety Education for the Public

The current Establishing and Regulating By-law² stipulates in section 10 (a) that there shall be a Council approved policy regarding public fire safety education. Also, the 2020 Community Risk Assessment prioritizes implementing a council approved fire and life safety education program for the public including associated guidelines. But we have not been able to locate any council approved policies or guidelines in reference to public education, or any subject. As noted previously, the fire department's operating guidelines are sufficiently out of date that, except for the *Response Procedures for Medical and Verification Calls* issued in March 2020, the department does not have any operational guidelines. Neither is there evidence of an individual within the fire department who is trained and authorized to coordinate, supervise, and evaluate the delivery of a public education program.

In accordance with the mandatory requirement of 2. (1) of the Fire Prevention and Protection Act (FPPA) the Hawkesbury Fire Department (HFD) distributes general fire safety brochures in French and English to the public in the vestibule of the fire station. The fire department's website is very informative and talks about fire safety inspections and public education; a lock box program; public fire education resources; mission, vision, and values; and other subjects but, unfortunately, there was no evidence that this information extended further than the web pages. And it is rare for people, anywhere, to spontaneously look up fire safety hints on their local fire department website. This sort of passive public education is essentially useless which is why fire safety and public education has to be very proactive and 'in your face'. (See <https://cjrf.ufv.ca/journey-of-homesafe-community-risk-reduction-in-surrey/> for evidence of this statement).

There is no official/formal town sponsored social media presence for the dissemination of fire and life safety education to the public or other fire service related messaging in association with the Hawkesbury Fire Department. A social media presence, such as Facebook, Instagram, Twitter, would be beneficial for disseminating real time and legacy information and awareness regarding burning permits, fireworks, children's fire safety contests, extreme weather warnings, open air

² By-law N° 66-96 to Establish and/or Continue a Fire Department

burn bans, pleasure boating fire safety, firefighter recruitment, and public health (pandemic) issues, and downloadable fire safety tips and fire prevention checklists. Again, however, social media is a passive method of disseminating information and fully dependent on members of the public choosing to follow the fire department. We repeat, public education has to be shouted at the public, and relentless, for them to get the message.

The fire department is minimally involved in public education activities which reach out to the broad and diverse community throughout the town. There is no utilization of educational props such as the common model-size fire safety hazard house display, fire safety house trailer, or portable fire extinguisher training system suitable for safe indoor use at public events or in local schools, although the fire department has an informal community partnership with Canadian Tire Corporation and attends their annual fire safety event. There is also the occasional live-fire extinguisher training session provided outdoors.

The limited public fire and life safety education activities that are currently conducted through public education 'teams' receive minimal assistance from full-time firefighters. Normally, there are four teams of two volunteer firefighters each. However, the public education team members indicate they are marginally active, and there is meagre documentation of their activities. There is no current organizational chart showing the composition of the teams and no record of team member training, or qualifications of team members regarding the delivery of fire and safety education to the public.

In-person interviews indicate a significant decrease in public education team activities in 2018 - 2019, although school-based safety events were attended by Hawkesbury Fire Department upon request. No activities have been recorded to date in 2020.

Consultations confirmed that personnel involved in conducting fire-related education activities have not acquired a vulnerable sector check for work with children and/or other vulnerable populations. Nor have they attained certification to NFPA [1035](#).

Based upon a review of the available data provided by the Hawkesbury Fire Department, and as confirmed by management and staff, there are no current means (such as a quality assurance/data management program) to retrieve and extrapolate consistent and measurable data and statistics for the purposes of determining root cause analysis of fire and emergency incidents. This means there is no outcome or performance-based data or information available for analysis and subsequently being able to create, evaluate, and implement effective fire and life safety education mitigation actions or programs.

There is no specialist within the fire department associated with the establishment, delivery, and maintenance of a juvenile fire setter educational/intervention program (arson prevention). Additionally, there is no identifiable public information officer position, or activity, provided by Hawkesbury Fire Department. Subsequently, there is no formal authorization and capability for

the issue of timely and effective public information and media releases (print, radio, TV, social media) regarding fire department activities such as fire prevention, public relations, or information announcements after the department attends a fire incident.

Consultations confirmed there is no identifiable formal Systematic Approach to Training, or accompanying training program, to provide initial and refresher training to firefighters.

The typical industry standard training and certification, from an accredited institution, for a comprehensive public fire and life safety education program supervisor are National Fire Protection Standards (NFPA) [1035](#), NFPA [1041](#), and NFPA [1021](#). Public education team members should achieve NFPA 1035 certification as a minimum.

NFPA 1035 - Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications.

NFPA 1041 - Standard for Fire and Emergency Services Instructor Professional Qualifications

NFPA 1021 – Level II of Standard for Fire Officer Professional Qualifications

NFPA standards are voluntary. However, NFPA and other standards may be embedded in legislation and regulation which makes them compulsory. Municipal fire chiefs should maintain up to date knowledge of standards and legislation or contact their Office of the Fire Marshall adviser for guidance.

e) Fire Prevention and Code Enforcement

The current establishing and regulating by-law (66-96), states in section 10 (a) that there shall be a Council approved policy regarding fire prevention and code enforcement. Additionally, the 2020

Community Risk Assessment identifies a priority of implementing a council approved policy regarding fire prevention and code enforcement with associated standard operating guidelines.

Pomax has determined that there are no up to date council approved policies pertaining to fire prevention, code enforcement or fire investigations.

There is no active residential home smoke detector or carbon monoxide inspection and enforcement program or associated code enforcement. In lieu of a routine smoke and carbon monoxide household inspection program, Hawkesbury Fire Department has set up the Residential Visits Program. The 2020 Residential Visits Program Guide outlines the costs for the purchase and installation of alarms. But, again, the shortfall in this program is that the interaction between residents and the Hawkesbury Fire Department must be initiated by the resident. It is more of a service to residents – at a cost – if they need detector batteries changed or detectors are malfunctioning. It may offer an opportunity to provide some education within very limited circumstances and only if the visiting firefighter is inclined to provide education.

The Residential Visits Program does not appear to be policy based and does not indicate any reference to code enforcement regarding smoke and carbon monoxide alarms. It does not clearly define the participation of full-time and/or volunteer firefighters in visiting residences within an assigned sector of the municipality to ensure the presence of working smoke and carbon monoxide alarms for the entire town over a defined time (e.g., four-year) period. The only other identified municipal legislative tool related to fire prevention and code enforcement is the outdated and redundant 24 year old smoke alarm by-law #30-96, entitled *A by-law for the Corporation of the Town of Hawkesbury respecting devices for the early detection and simultaneous alarm, signalling the presence of fire at an early stage*. This by-law was passed in April 1996.

There is an anecdotal confirmation only that fire safety and code enforcement inspections are completed based upon request or complaint as required by the Office of the Fire Marshal and Emergency Management. But,

- there is essentially no information, policies, or guidelines to validate this activity actually takes place or where;
- there is no documented policy or evidence that the Hawkesbury Fire Department conducts what are known as routine fire safety inspections of buildings or facilities and which are subject to code enforcement.

The fire chief has confirmed that the Hawkesbury Fire Department relies upon the Office of the Fire Marshal and Emergency Management to conduct fire investigations pertaining to fires and explosions in Hawkesbury. There is no evidence provided by the Hawkesbury Fire Department that they have training and can conduct investigations of fires and explosions as outlined in Fire Marshal's Directive: 2019-002 Topic: Notification of Fires and Explosions.

Under the Fire Protection and Prevention Act, a fire chief is designated as the Chief Fire Official and as an Assistant to the Fire Marshal. There is no evidence that any other personnel who are involved in fire prevention inspections, code enforcement or fire investigations are designated as Assistants to the Fire Marshal or have been delegated to function as the Chief Fire Official under the Fire Protection and Prevention Act.

There is no evidence that the Hawkesbury Fire department conducts reviews of prepared Fire Safety Plans as required for designated occupancies under 2.8.2.1. (1) of the Fire Code. No evidence of approved fire safety plans was received from the fire department upon request. The fire department confirmed that they do not perform this service.

There is no evidence that the Hawkesbury Fire Department participates in formal or informal site plan or subdivision proposal/plan reviews for new construction in the town notwithstanding the presence of by-law #16-2000 being *A by-law to Appoint Fire Department Personnel as Building Inspectors*. Normally, these reviews are performed to assist the building department and to

confirm fire service access to prominent buildings, appurtenances, or other structures and developments during a fire or other emergency.

f) Standard Operating Guidelines

Standard Operating Guidelines (SOGs) are generally accepted and viewed as the day-to-day operational guidelines or 'rules' by which effective and safe operational readiness, function and administrative roles are established and maintained within a fire service.

Our consultations, and documentation received, have confirmed that there is only one current standard operating guideline issued by the Hawkesbury Fire Department. That operating guideline, SOG 400-A, issued on 17 March 2020, deals with response procedures for medical and alarm verification calls.

The scarcity of formally issued current and valid standard operating guidelines is disconcerting and may lead to fractured or 'free-lance' ineffective and potentially unsafe operations within the Hawkesbury Fire Department.

g) Occupational Health and Safety

The Hawkesbury Fire Department has a Joint Occupational Health and Safety Committee (JOHSC). The Fire Department has representation from fire management and Human Resources and one 'worker' representative from each firefighter association.

i. What's Missing?

There was no evidence of

- a council approved policy regarding the establishment and function of the Joint Occupational Health and Safety Committee for the fire department;
- a Hawkesbury Fire Department centric occupational health and safety Internal Responsibility System (IRS) framework that promotes a culture of safety within the department;
- the Joint Occupational Health and Safety Committee meeting on a regular basis during the first half of 2020 or that regularly scheduled monthly workplace inspections are being completed; meetings can be virtual during COVID;
- a formal written respiratory protection program relating to self-contained breathing apparatus, air compressor, air cylinder filling station and N-95 type masks, associated with Ontario Fire Service Section 21 Advisory Committee Guidance Note #4-9 Respiratory Protection Program, Ontario Regulation 833: Control of Exposure to Biological Or Chemical Agents, and Canadian Standards Association (CSA) Standard Z94.4-11 (Selection, Use and Care of Respirators);

- a standard operating guideline and/or mechanical/engineering means to reduce diesel and gasoline engine fumes in the fire station associated with Ontario Fire Service Section 21 Advisory Committee Guidance Note #3-1 Reducing Diesel Fumes in Fire Stations;
- the Hawkesbury Fire Department acquiring formal training for the Lieutenants or other firefighters regarding the role and responsibility of an Incident Safety Officer. NFPA 1521: Standard for Fire Department Safety Officer Professional Qualifications, and Ontario Fire Service Section 21 Advisory Committee Guidance Note 2-4, provide information regarding the importance of establishing an Incident Safety Officer at incidents to assist Incident Command with managing scene safety;
- a standard operating guideline that addresses the role and deployment criteria for an Incident Safety Officer;
- current Hawkesbury Fire Department related standard operating guidelines and adherence to Ontario Fire Service Section 21 Advisory Committee Guidance Notes. This serious and potentially unsafe circumstance must be afforded the utmost priority to address municipal due diligence, and to show that the employer has taken reasonable precautions for the protection of a worker under clause 25(2)(h) of the Ontario Occupational Health and Safety Act.

h) Emergency Management

The Town of Hawkesbury has enacted municipal legislation to address its responsibilities and activities required under the Emergency Management and Civil Protection Act.

By-law # 19-2018 was enacted 30 April 2018 and generally outlines the positions from Hawkesbury's various departments, and representatives from outside agencies, that will support the ongoing efforts of the Community Emergency Management Coordinator (CEMC) and committee within the Emergency Management and Civil Protection Act and supporting Regulation(s). By-law #19-2018 also designates the CEMC as emergency management program coordinator and the chair of the emergency management program committee. Council has designated an emergency information officer.

Consultations identify that the most recent comprehensive review of the Hawkesbury Hazard Identification and Risk Assessment (HIRA) was completed in December 2017. There is evidence that the foundation of the current HIRA is associated with another municipality and still contains some references to that municipality.

We were unable to find evidence that the Community Emergency Management Coordinator and the alternate Community Emergency Management Coordinator have been formally appointed to those positions by Council. Additionally, the Community Emergency Management Coordinator confirmed that, as of July 2020, they had not acquired training and certification. The alternate Community Emergency Management Coordinator confirmed anecdotally that they

have completed some emergency management courses but there is no documentation that they have acquired Community Emergency Management Coordinator certification.

Consultations revealed that there is ambiguity about the role and oversight/supervision of the expected performance and activities of the Community Emergency Management Coordinator. It was identified anecdotally that, currently, the Emergency Management Coordinator reports to the fire chief. However, there is no organizational chart or discernable detailed position description or performance mandate available for the primary or alternate Emergency Management Coordinator regarding the performance of their duties. The Community Emergency Management Coordinator confirmed that they have not acquired any other Community Emergency Management Coordinator related training such as exercise program management, note taking, Incident Management System (IMS), or Basic Emergency Management (BEM).

The appointment of an alternate 0.125 Full Time Equivalent Community Emergency Management Coordinator, who is not the fire chief, would remove the expectation of having the fire chief respond to the Emergency Operations Centre during a community emergency to potentially function as both the fire chief and the Community Emergency Management Coordinator (a difficult task to be on scene and at the Emergency Operations Centre at the same time).

During our consultations, the Community Emergency Management Coordinator was not able to provide:

- copies of minutes of meetings or documentation of other related activities (e.g., municipal support staff and municipal control group emergency management training) pertaining to the emergency management program committee, or a Council approved annual emergency management work plan. Additionally, there is no information or documentation regarding the terms of reference for the operation and functioning of the emergency management program committee and its responsibility to maintain the emergency management program and annual review and testing of the emergency response plan;
- correspondence from the Office of the Fire Marshal and Emergency Management regarding their 2018 or 2019 annual compliance checklist audit and subsequent Annual Statement of Completion regarding compliance activities required under the Emergency Management and Civil Protection Act;
- information and documentation about recent municipal emergency management exercises or planning for upcoming municipal emergency management exercises (e.g., five-year emergency management exercise schedule);
- information and documentation about recent annual, 2018 and 2019, municipal emergency plan testing (e.g., testing the operational capability of the primary and

secondary Emergency Operations Centres) and annual emergency plan reviews. The most recent version of the Hawkesbury Emergency Response plan is from July 2017;

- information and documentation about 2018 and 2019 annual reviews of the Hawkesbury Hazard Identification and Risk Assessment and Critical Infrastructure registry;
- information and documentation about involvement in community emergency management public education activities (e.g., annual Emergency Preparedness Week and Covid-19 pandemic measures).

REFERENCE MATERIAL (related to medical calls and whether response time is critical – please see Response Times and Record Keeping, page 9.

1. Advanced Clinical Interventions Performed by Emergency Medical Responder Firefighters prior to Ambulance Arrival; Lori L. Boland MPH, Paul A. Satterlee MD, Karl M. Fernstrom MPH, Kai G. Hanson MS, Prasanna Desikan PhD & Brian K. LaCroix EMT-P.
2. Ambulance Lights and Sirens Should Only Be Used When the Benefit Outweighs the Risks by Anna Bona, MD; and Matt Friedman, MD.
3. A practice review of the infrastructure and development processes of the 2013 British Columbia Emergency Health Services Resource Allocation Plan; Alan Craig, MScPI, ACP
4. College of Physicians and Surgeons of Ontario Policy Statement #5-12, Delegation of Controlled Acts.
5. Evidence-Based Optimization of Urban Firefighter First Response to Emergency Medical Services 9-1-1 Incidents; Alan M. Craig MScPI, P. Richard Verbeek MD & Brian Schwartz MD.
6. Evolving Issues in Oxygen Therapy in Acute Care Medicine; Laveena Munshi, MD, MSc; Niall D. Ferguson, MD, MSc.
7. Lights and Siren Transport and the Need for Hospital Intervention in Trauma Patients; David W. Ross DO, Lisa M. Caputo MA, Kristin M. Salottolo MPH, Raymond Coniglio RN, MSN, T. Ryan Mayfield MS, NREMT-P, Charles W. Mains MD, Matthew M. Carrick MD & David Bar-Or MD
8. Lights and Siren Use by Emergency Medical Services (EMS): Above All Do No Harm; U. S. Department of Transportation National Highway Traffic Safety Administration Office of Emergency Medical Services (EMS); Douglas F. Kupas, MD, EMT-P, FAEMS, FACEP.
9. Considerations in Establishing Emergency Medical Services Response Time Goals; Prehospital Emergency Care; E. David Bailey & Thomas Sweeney.
10. Use of Warning Lights and Siren in Emergency Medical Vehicle Response and Patient Transport; National Association of Emergency Medical Services Physicians (NAEMSP) and the National Association of State EMS Directors (NASEMSD).
11. Oklahoma's Data-Driven Approach to Urban EMS Response Time Reform; Journal of Emergency Medical Services; By Jeffrey M. Goodloe, MD, NREMT-P, FACEP, Curtis L. Knoles, MD, FAAP , Duffy McAnallen, NREMT-P , Matthew L. Cox, NRP , David S. Howerton, NREMT-P.
12. Operational and Administrative Analysis Tulsa Fire Department Tulsa, Oklahoma Draft Report – June 2016; Center for Public Safety Management; International City/County Management Association.
13. Unnecessary Use of Red Lights and Sirens in Pediatric Transport; Prehospital Emergency Care; Beech Burns MD, MCR, Matthew L. Hansen MD, MCR, Stacy Valenzuela MD, Caitlin Summers MPH, Joshua Van Otterloo MPH, Barbara Skarica MPH, Craig Warden MD, MPH & Jeanne-Marie Guise MD, MPH

Part 2 Establishing Structure

a) Fire Service Governance

Discussing the state of the Hawkesbury Fire Department is a difficult conversation to have but the town contracted Pomax to conduct a comprehensive fire service review, develop a Fire Master Plan, and address current and anticipated community fire risks for the next ten years. So, we will report on and address what we have found.

We will assume that the fire department can adequately respond to a residential or small commercial structure fire and conduct fire suppression and possibly rescue activities because all fire staff seem committed to that function. Beyond that, we have no evidence of training, policies, procedures, prevention, or education activities, or any other substantiation that would give us confidence to think that this is a well-organized department. In fact, we are only assuming that response to a small structure fire will be adequate because most firefighters have a personal interest in performing fire suppression to the best of their ability but, again, there is no evidence of a training plan.

The previous paragraph may seem to be a harsh assessment but it is fact without blame.

There are four parties that have responsibility for running a competent fire department.

1. Council;
2. the Chief Administrative Officer (CAO);
3. the fire chief;
4. the firefighter team reporting to the chief.

Council has responsibility for ensuring local bylaws reflect the needs of the community with respect to fire department services with the most critical of those services being public education about fire risk, and inspection of premises. Council also has the responsibility of hiring a Chief Administrative Officer who can set performance standards for, and monitor, the fire chief.

The Chief Administrative Officer must establish a mandate and performance standards and measurement indicators for the fire chief. This can take the form of a mandate letter with primary emphasis on public education and prevention. Key indicators should be established against which the fire chief's success can be measured. The performance indicators should be objective and measurable, with no ambiguity.

The CAO should meet with the fire chief on a quarterly basis to review activities of the previous quarter, task and project progress, and the status of the fire master plan.

The fire chief has a responsibility to

- know of and remain up to date with legislation, standards, and guidelines (for example, from the office of the Fire Marshal);

- ensure local policies, procedures, guidelines, and pre-incident plans are up to date and fully understood by all staff members;
- training plans are established and carried out;
- ensure proactive, high profile, public education is carried out;
- make sure proactive, high profile, inspection and prevention activities are carried out;
- the fire department is operated competently in all other things.

Due to the fire chief's responsibilities outlined above, council and the CAO have a responsibility to ensure these activities are adequately funded, including competence training and certification for the fire chief and staff who have been assigned the responsibilities in the bullet list above.

The Chief Administrative Officer is likely to need assistance establishing responsibilities and performance indicators for the fire chief. A CAO cannot be expected to know the intricacies of each department for which he or she is responsible. The fire chief should know the complexities of the objectives and duties he or she is required to accomplish but that expectation hasn't resulted in a capable, organized fire department thus far.

The CAO and fire chief will require assistance, particularly in the first two years of this master plan, to establish policies, procedures, operating guidelines, training plans, incident plans, public education programs, inspection activities, and other curricula and documentation because reestablishing Hawkesbury's fire department will be a full-time job for a while. Our recommendations include reorganizing the fire department to assign responsibility for some of the programs, identified in this report, to full time staff members, but it is unreasonable to expect them to immediately accomplish training and activity plans and carry them out without strong guidance.

The price of the recommended assistance is likely close to \$125,000 in the first 18 months of the fire master plan, but that money will be recovered through cost avoidance within five years.

We recommend a full-time fire chief. A part time fire chief cannot be expected to accomplish the tasks associated with turning the Hawkesbury Fire Department into an organization that can deliver value to the community.

ii. Organization

We recommend a change to the fire service organization to concentrate on aggressive public education inspection, and prevention programs. The passive programs that are in place at the Hawkesbury Fire Department are not good value for the community – they are, essentially, a waste of whatever time and money are spent (see <https://cjr.ufv.ca/journey-of-homesafe-community-risk-reduction-in-surrey/>). Here is an excerpt from the community risk reduction report conducted by the Centre for Public Safety and Criminal Justice Research at the University of Fraser Valley:

Conclusion

Over the course of more than 12 years since the HomeSafe program was introduced in 2008, the evidence shows it is effective in reducing the frequency of fires at residential properties, increasing fire-related safety, and decreasing the likelihood of fire-related fatalities in the City of Surrey. The positive impacts are consistently shown not only in properties that were visited, but throughout the entire city as well. A consistent, systematic, and ongoing approach for outreach to residents for a fire safety campaign and smoke alarm verifications and installations has been the contributing factor of HomeSafe's success.

In the first period of the HomeSafe implementation (Period 2: 2008-2010), approximately 7,500 properties each year were reached through cohort visits, HomeSafe inspections, smoke alarm installations by request, and crew alarm verification at incidents. Over the next period of seven years (Period 3: 2010-2017), nearly 7,200 properties received interventions each year in addition to the over 19,000 individuals reached through the City tax lineup and Surrey Food Bank initiatives. In its third period (Period 4: 2018-2019), HomeSafe was able to significantly increase the frequency of home visits by 30% (to around 9,400 visits per year,) in addition to reaching nearly 10,000 individuals through the telemarketing, tax lineup, and Surrey Food Bank initiatives. In total, over 91,000 properties were visited and nearly 30,000 individuals reached through various HomeSafe initiatives over its 12 years.

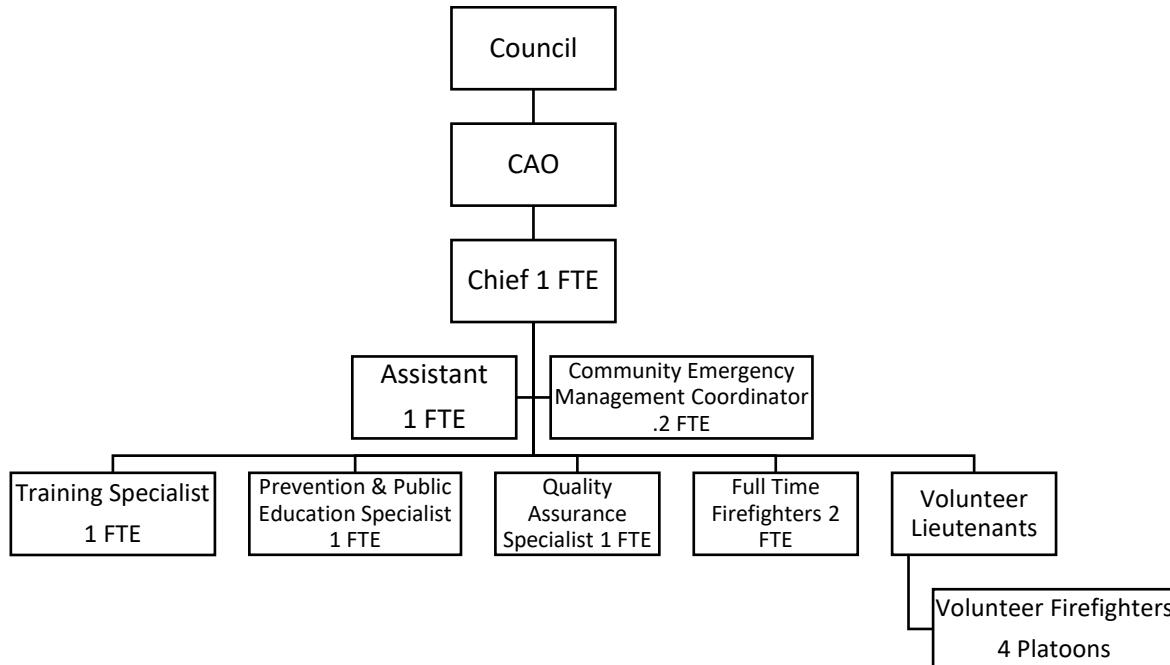
As result of this extensive effort, the fire rate per 100,000 population at the City of Surrey has been significantly reduced by nearly 80% since HomeSafe was implemented (from 80-88 fires per 100,000 population prior to HomeSafe to only 20-21 fires per 100,000 population in 2019). With respect to percentage of functioning smoke alarms at residential fires, a significant jump of almost double has occurred during the HomeSafe implementation (from less than 30% prior to HomeSafe to around 60% in 2019). The severity of fires has also been reduced by almost double, as the percentage of fires contained to the room of origin has increased from 15% prior to HomeSafe to over 40% in 2019. The program also resulted in a reduction of casualties by at least 40%, from 8.6 casualties per 100,000 population every year prior to HomeSafe to around 4.8 casualties in the last two years of 2018 and 2019.

Despite the overall success, not all initiatives within the program have shown similar positive impacts. The data shows that some initiatives delivered more positive impacts than others in specific outcomes. Consistently, the cohort visits by on duty firefighters or community engagement volunteers, inspections/smoke alarm installations by request, and crew visits at incidents have proven to be more effective in reducing fire rates than other HomeSafe initiatives. In general, these three interventions cut the fire rates at their visited properties by 73%, 79%, and 74% respectively. By comparison, the drop-off of door hangers and information packages resulted in an **increase** in fire rates by 12% and 15%.

As reported in a) Statistical Information, on page 6 of this report, Hawkesbury has reported an almost consistent nine structure fires annually over the past five years. The town also has five full time firefighters, and it is difficult to justify the need for five fulltime firefighters considering the type of incidents to which they respond. The current organizational structure is not a good value

to the municipality in part because little can be shown to be accomplished. We recommend the following fire department structure within a similar staffing complement as currently exists.

Exhibit 10: Recommended Organizational Design



The only staffing difference between the existing organizational structure and that proposed in Exhibit 10 is that the chief is shown as a full-time position whereas the current chief is part time.

There will be some who ask why a training specialist, prevention and public education specialist, and quality assurance specialist are needed. Why can't one person do all three jobs in a small organization, or why can't the fire chief take care of some of the work? The simple answer is that this fire service is going to require two years of intense work to achieve value for money and improve fire safety to the community, and that work cannot be done successfully by one or two people. False economy of that nature will result in a continuation of the present situation at the Hawkesbury Fire Department.

We recommend that the five full time staff should have an opportunity to compete for the three specialist jobs contingent on them committing, in writing, that they will complete all required courses to achieve certification, and other courses that the town may deem necessary, within the first year in the position. In addition, the specialist positions – in fact, all positions – should be reviewed and assessed quarterly based on key performance indicators such as training accomplished; inspection frequency; active public education programs; reduction in fire frequency; fire investigations accomplished.

There should be a clear priority in program direction towards reducing fires through education and prevention.

We recommend that the specialists and fulltime firefighters work a flexible Monday to Friday shift that does not include overnight hours under normal circumstances. The flexible shift allows them to adjust their at-work time to accommodate instructional and promotional activities that may occur outside of normal business hours, yet most of their time would be spent on Monday to Friday day shifts. This would allow them to work in close contact with the fire chief to enable discussion and planning about program delivery and success indicators.

The recommended organizational and program design, assuming care is taken in choosing a competent chief who is focused on community safety through incident reduction, should allow Hawkesbury to accomplish fire incident decline similar to those seen in

<https://cjr.ufv.ca/journey-of-homesafe-community-risk-reduction-in-surrey/>.

Fire Chief Gascon –

“We need to change our business model” June 1, 2020

“This [Master Fire plan] process is an exciting opportunity for the town to improve and do the hard work to close gaps” (June 21, 2020 via telephone)

iii. Resource Sharing

The provincial government, the Association of Municipalities of Ontario, and many other counties and regions and private companies recognize and promote the concept that the greatest savings and enhancements to public safety can be achieved by sharing services or through the concept of “Neighbours working with neighbours”.

The overall goal of this endeavour in the fire service is to enhance public safety while providing effective and efficient services to ratepayers. This entails local fire services approaching neighbours with the intent of improving relations, mutual aid, and emergency scene interaction before emergency services personnel meet to fight a fire, or work with paramedics and police officers at a mass casualty motor vehicle collision, and perhaps sharing access to fire apparatus such as aerial devices and tankers.

“Shared services [with our neighbours] is important for Hawkesbury” June 1, 2020.

Daniel Gatien – Chief Administrative Officer

The Community Risk Assessment speaks to improving relations and training with

- other emergency services including police and emergency medical services;

- local and regional/county social services and community service clubs to partner on a community basis regarding the delivery of such services as public fire and life safety education, fire extinguisher training, and juvenile fire prevention programs.

A Champion in this endeavour, at the CAO's or Director of Purchasing's level, should be engaged to facilitate and explore the implementation of expanded municipal shared services. This would be initiated in order to take advantage of economies of scale through centralization of purchase for:

- firefighter consumables such as bunker gear, helmets, gloves, boots;
- self-contained breathing and air cylinders;
- firefighting equipment such as fire hose, nozzles, portable pumps, and auto extrication equipment;
- replacement of shared fire apparatus;
- testing, repairs, and maintenance of fire apparatus and equipment.

Hawkesbury and its neighbours should explore mutually beneficial public safety based, automatic aid agreements so that the closest fire station responds to a fire or other emergencies as authorized under the Fire Prevention and Protection Act.

By implementing a "Neighbours working with Neighbours" process, Hawkesbury could explore the following services with the goal of enhancing public safety and reducing costs through elimination of duplication of infrastructure such as:

- public fire and life safety education activities, props, and participation on community-based committees;
- physical assets such as aerial devices and tankers,
- face-fit testing and self-contained breathing apparatus maintenance and air cylinder filling operations;
- scene lighting or air cylinder fill trailers;
- Incident Command trailer/vehicle for large scale incidents etc.;
- fire safety and prevention inspection services;
- vulnerable occupancy inspections and fire drills;
- fire investigations and inter-agency arson task force;
- fire safety plan (OFC 2.8) annual reviews;
- fire and emergency incident data management and quality assurance program;
- post-traumatic stress injury (PTSI) program for firefighters and families.

b) Local Bylaws

We can go into a lengthy explanation of what should be in a Fire Department Establishing and Regulating By-Law but municipalities have legal advice for that purpose and hundreds of examples from other Ontario municipalities. Through the establishing and regulating by-law, municipal council has the means to identify the types and levels of fire protection core services to be delivered to the community based upon local needs and circumstances as required by the *Fire Protection and Prevention Act, 1997* and identified in the Community Risk Assessment.

Hawkesbury's Establishing and Regulating By-Law is from 1996. The fire department, municipality, legislation, and fire industry best practices have changed significantly since then. The town should review all fire related bylaws periodically, most of which are listed below, and update them as required. Initial reviews of existing bylaws can be completed by the fire chief who can then alert the CAO to changes required. Any over 10 years old are immediate candidates for review and revision.

- #16-2020, *A By-law to Establish Development Charges for the Corporation of the Town of Hawkesbury*, which came into effect on 1 September 2020. This by-law details the matter of applicable development charges for fire protection services. It also provides insight into projected growth and development within Hawkesbury;
- #23-2019, *A By-law to appoint Daniel Gascon Fire Chief for the Corporation of the Town of Hawkesbury*. Chief Gascon continues to serve the town as fire chief on a part time basis of 21 hours per week;
- #11-2019, *By-law to impose fees and charges for false alarms in the Town of Hawkesbury*. This bylaw is up to date and refers to a fee levy of \$300 against an owner with respect to the second false alarm within a twelve (12) month period from the date of the first false alarm and a fee levy of \$1,000 for any false alarms within this same twelve months;
- #35-2019, *A by-law to extend the fire dispatching services agreement with the United Counties of Prescott and Russell*, which was passed on 28 February 2019. This by-law extends the existing fire dispatching agreement between the Town of Hawkesbury and the United Counties of Prescott and Russell until 28 February 2021;
- #69-2018, *A by-law to provide for the participation of the Town of Hawkesbury Fire Department in the Province of Ontario Mutual Aid Plan*, which was passed 15 October 2018. This by-law details the authorized participation of the Hawkesbury Fire Department within the provincial mutual fire aid plan and program and is typically known as 'Mutual Aid';
- #37-2016, *Being a by-law to authorize the entering into an Indemnification Technology Fees Collection Agreement with Fire Marque Inc.*, which was passed 13 June 2016. This agreement between the town and Fire Marque Inc authorizes Fire Marque to make claims for recoverable funds from insurers under the insurance policies of

homeowners/tenants to cover the costs and expenses incurred by the Hawkesbury Fire Department when it responds to a fire or other emergency incident;

- #55-2010, *A By-law to execute a Tiered Response Agreement with the Corporation of the United Counties of Prescott and Russell*, which was passed on 28 June 2010. This entails an agreement between the town and the United Counties of Prescott and Russell regarding the delivery of emergency medical services by the Hawkesbury Fire Department within Hawkesbury and designated areas of the Township of Champlain;
- #50-2001, *Being a by-law to provide standards for the maintenance and occupancy of property in the Town of Hawkesbury*. This by-law was passed 19 years ago on 10 July 2001. It refers to some fire service-related aspects such as the establishment of fire routes, fire alarms, and detectors, and buildings damaged by fire;
- #16-2001, Being a by-law for prescribing the time for setting fires in the Corporation of the Town of Hawkesbury and the precautions to be observed. This 19-year-old by-law should be reviewed for currency and applicability;
- #16-2000, *A by-law to Appoint Fire Department Personnel as Building Inspectors*, which was passed 28 February 2000. This by-law deals with appointing the fire chief and fire prevention officer within the Hawkesbury Fire Department as building inspectors for assisting the chief building official in association with specific sections of the building code in relation to fire related matters;
- #31-96, *Being a by-law respecting fireworks and firecrackers*, which was passed on 29 April 1996. This 24-year-old by-law regulates the sale and display of fireworks and firecrackers;
- #30-96, A by-law of the Corporation of the Town of Hawkesbury respecting devices for the early detection and simultaneous alarm, signalling the presence of fire at an early stage. This by-law was passed 29 April 1996 and does not have any provisions regarding carbon monoxide alarms;
- #29-96, *By-law of the corporation of the Town of Hawkesbury respecting fire routes*. This by-law regarding fire routes in the town was passed 29 April 1996;
- #63-95, *A by-law to execute an agreement with the Town of Lachute for the use of firefighting equipment*, which was passed 8 June 1995. This 25-year-old agreement between Hawkesbury and Lachute outlines fees and operational criteria for personnel and fire apparatus should either one of the municipalities requests firefighting assistance.

Part 3: Next Steps

This section addresses recommended changes to the fire department for the next ten years – the master plan period.

All indications, such as the 2019 Watson and Associates Economists Ltd. Development Charges report, and the Ontario Ministry of Finance population and demographic forecasts indicate that Hawkesbury will experience moderate to low growth over the next ten years with an expectation of approximately 50 housing units and 110 people per annum on average. Hawkesbury has seen a decline in population since the 2006 StatCan census and even a slight decline in private dwellings from the 2011 census. The land area is slightly under 10 square kilometers. Barring unforeseen changes there are no indications that the community will see any pressure to increase suppression or staffing resources for the duration of this master plan other than renewing trucks and equipment on a cyclical basis.

The goal then, is to organize the department into an efficient and effective entity, achieve value for money for the municipality, and lower the risk and liability to the community. This is an onerous task that will require the cooperation and support of all parties and careful selection of the people who will be tasked with accomplishing the objectives

The steps we recommend are charted on the following pages and should be accomplished within two years. The balance of the ten year plan will require maintenance of an effective fire prevention and public education program, and a department which should continuing providing value to the community.

... [an] evolution of culture is needed to change the fire department" June 1, 2020

Daniel Gatien – Chief Administrative Officer

| | | 2021 | | | | | | | | | | | | 2022 | | | | | | | | | | | | 2023 | |
|--|--|--|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|--|
| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Ongoing | |
| Master Plan Two-year Implementation and Development Phase | | Task | Activity By | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Approve the master plan | Council | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Write fire chief's position specification concentrating on aptitudes, attitudes, and skills related to public education and prevention | CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Conduct a search for a fire chief | CAO Search Team | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Hire a fire chief | CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Seek out and hire a contractual technical writer to assist with creating policies, procedures, training plans, pre-fire plans, other documents that have been identified as missing from the fire department | CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Technical writer creates identified documents and plans | Technical writer; Fire Chief; CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Deliver mandate to fire chief; set key performance indicators | CAO; Chief | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Meet quarterly with fire chief; review mandate; review activities; review accomplishment of key performance indicators (ongoing) | CAO; Chief | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Conduct a competition for specialists: training; public education and prevention; quality assurance | Chief; CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Hire specialists | Chief; CAO | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Newly hired specialists to attend training programs (duration shown does not suggest full time training; training to take place episodically over the identified period) | Specialists | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Design aggressive public education programs | Specialist; Chief | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Conduct aggressive public education programs (continuous review and revision of education programs) | Specialist; firefighters | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Alert business owners and the public to assertive prevention activity that will be implemented | CAO; Chief | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Conduct assertive prevention activities (ongoing) | Specialist; firefighters | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Conduct training programs and quality assurance activities (ongoing) | Specialist; volunteer trainers | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Engage neighbouring fire services in discussions about resource and apparatus sharing; purchasing partnerships | Fire Chief | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Assess business plan relating to Hawkesbury continuing as a dispatch service provider | Fire Chief; CAO | | | | | | | | | | | | | | | | | | | | | | | | |

| | | 2021 | | | | | | | | | | | | 2022 | | | | | | | | | | | | 2023 |
|---|--------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Ongoing |
| Master Plan Two-year Implementation and Development Phase | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Task | Activity By | | | | | | | | | | | | | | | | | | | | | | | | | |
| Based on business plan results either seek new clients or plan to decommission the communications division and seek a communications service provider | Fire Chief; CAO | | | | | | | | | | | | | | | | | | | | | | | | | |
| Review Master Plan progress, activities, timelines; adjust master plan (ongoing annually) | Fire Chief; CAO; Council | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unless unexpected population, demographic, or geographic changes occur, the fire service, upon accomplishing some daunting tasks over the next two years, will go into a 'review, adjust, implement' stage for the balance of the master plan period. On a long range basis, greater coordination or amalgamation with neighbouring fire services should be explored. | | | | | | | | | | | | | | | | | | | | | | | | | | |

"We are looking forward to this blueprint for the future. We want to have value for the taxpayer money spent on the fire department" June 1, 2020

Mayor Paula Assaly