# TOWN OF MORINVILLE
# FIRE SERVICE MASTER PLAN

November 2019

**Presented to:**

Town of Morinville
10125 – 100 Avenue
Morinville AB T8R 1L6

**Submitted by:**

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## PREFACE

This Plan serves as the Town of Morinville's (Morinville) Fire Department (MFD) Master Plan (Plan). The primary motivation for developing this Plan is to assist Morinville in establishing a long-term strategy for MFD. The strategy is based on community safety, risk assessment, corporate priorities and Council approved budget allocations. The Plan will be used as a tool to evaluate and forecast immediate and future emergency service needs of the community.

## ACKNOWLEDGEMENTS

Behr would like to specifically acknowledge the leadership, diligence and continuous improvement focus of Fire Chief Brad Boddez. While there are several challenges for the Town of Morinville and the Morinville Fire Department, Chief Boddez remained positive in his efforts to enhance the department and public safety for the community and its citizens.

## COPYRIGHT

## ACRONYMS / ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABC | Alberta Building Code | FT | Full-time |
| AED | Automated External Defibrillator | FUS | Fire Underwriter's Survey |
| AFC | Alberta Fire Code | GIS | Geographic Information System |
| AHJ | Authority Having Jurisdiction | HIRF | High Intensity Residential Fires |
| AHS | Alberta Health Services | HOWLS | Honor, Ownership, Wisdom Leadership and Safety |
| CAO | Chief Administrative Officer | KSA | Knowledge, Skills and Abilities |
| CBRN | Chemical Biological Radiological and Nuclear | MFD | Morinville Fire Department |
| CFAI | Commission on Fire Accreditation International | MVA | Motor Vehicle Accident |
| CIS | Critical Incident Stress | MVC | Motor Vehicle Collision |
| CN | Canadian National | MVI | Motor Vehicle Incidents |
| CNR | Canadian National Railway | NIST | National Institute of Standards |
| CPR | Cardiopulmonary Resuscitation | NFPA | National Fire Protection Association |
| CREPP | Capital Regional Emergency Preparedness Partnership | OHS | Occupational Health and Safety |
| CSA | Canadian Standards Association | POC | Paid-On-Call |
| DG | Dangerous Goods | PSAP | Public Safety Answering Point |
| EFAP | Employee Family and Assistance Program | PPE | Personal Protective Equipment |
| EM | Emergency Management | PT | Part-time |
| EMS | Emergency Medical Services | SCBA | Self-Contained Breathing Apparatus |
| EOC | Emergency Operations Centre | SOC | Standards of Cover |
| ERF | Effective Response Force | SOG | Standard Operating Guidelines |
| EVT | Emergency Vehicle Technician | SREMP | Sturgeon Regional Emergency Management Partnership |
| FF | Firefighter | STP | Student Training Program |
| FMR | First Medical Responder | ULC | Underwriters Laboratories of Canada |
| FSMP | Fire Service Master Plan | WEP | Work Experience Program |

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# EXECUTIVE SUMMARY

## Introduction

Today's fire and emergency services are continually being challenged by budget constraints, rising call volumes, and increasing and unusual risks against a backdrop of expectations to do more with less. The demand for emergency response and management services has expanded, causing the role to shift and for services to diversify. Failing to address these challenges leaves both the community and its responders vulnerable.

Effective management of an emergency services department requires a clear understanding of risk and the ability to administer an appropriate response to manage the risks. The primary focus of this project was to review the current state of the Morinville Fire Department (MFD) and provide recommendations in the form of a Fire Department Master Plan (Plan) that will assist Morinville in developing long-term strategies for its emergency services. This plan aligns with the direction of the community in a planned incremental approach. It supports long-term growth while building on Council's strategic goals for good governance and a safe community.

This Plan should be considered an essential priority, be evaluated on an annual basis, and updated regularly, as required, in order to reflect any changing risks and circumstance of the community. The recommendations/options contained in this plan may be considered critical requirements for public, firefighter and community safety.

## Fire and Emergency Services Master Planning Process

The following diagram illustrates the process used to complete the Fire Master Plan and our recommendations to maintain this Plan.

*Master Planning Process*
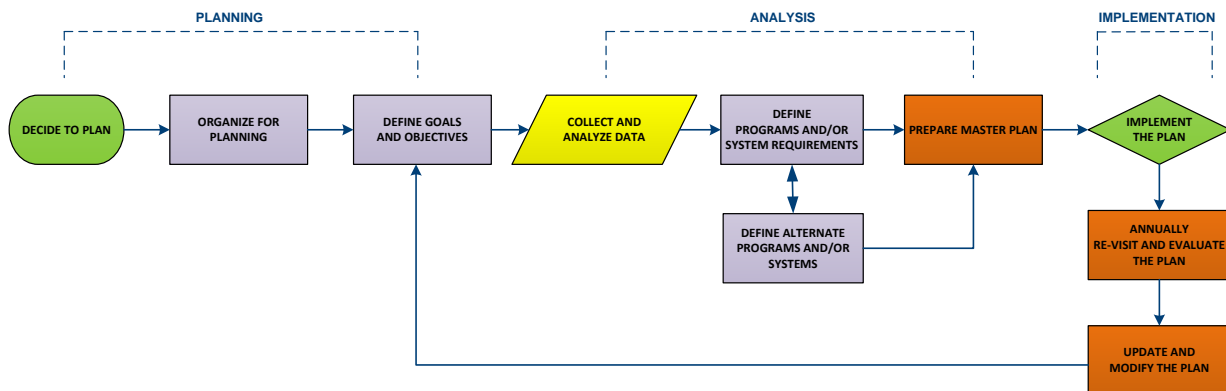
## Department Overview

Morinville Fire Department (MFD) is a 'paid-on-call' service that provides fire/rescue, emergency response, and fire prevention services to the residents of Morinville. The current staffing model consists of:

- I full-time Fire Chief
- 2 part-time Deputy Chiefs (25% each)
- 1 full-time clerical support
- 44 paid-on-call firefighters
  - 6 Captains
  - 4 Lieutenants
  - 34 firefighters

All paid-on-call, staff are trained for fire/rescue operations and emergency medical mutual aid. The department operates out of one fire station strategically and centrally located in the community.

MFD has 44 paid-on-call firefighter positions and tries to maintain this identified level due to recent economic conditions and the impact it's having on recruitment and retention for the department. The Fire Chief is also an important contributor to the Emergency Management (EM) Programs for the Town of Morinville, Sturgeon County and surrounding communities.

MFD provides fire and rescue services to the County of Sturgeon through a reciprocal agreement. The call volume for MFD to Sturgeon County is significant. The benefits and risks to this agreement are covered within this report.

MFD uses the latest in equipment, training and operational methods when providing the following services:

- Fire suppression
- Emergency medical mutual id
- Rescue
- Motor vehicle incidents/extrication
- Dangerous goods
- Urban wildfire interface
- Fire inspections
- Fire investigations
- Public education

MFD has a long and proud history in the Town of Morinville with a strong volunteer base that is supporting the fire services. While honoring their past, they are focused on continuous improvement with emphasis on firefighter and public safety. The challenges and limitations of a paid-on-call service, particularly during regular weekday hours, are resulting in some emergency response capability shortfalls. As the numbers of firefighters responding to the hall may be a challenge at times, it is also the level of training and of experience that they have, that can impact the response capabilities. The MFD staff we interviewed as part of this project is an energetic and committed team. The excellent condition of their equipment and facilities supports their high degree of professionalism.

## Community and Risk Overview

As referenced in the Morinville Community Profile; Morinville is a fast growing community within the greater Edmonton Metropolitan Region, located 34 km north of Edmonton and 20 km north of St. Albert, which serves as a regional centre to smaller neighbouring communities providing services, amenities, education, and healthcare to meet the needs of those living in northern greater Edmonton area. Morinville population is pushing towards 10,000, while projections indicate a continued growth of 4% per year.

Morinville tax base is primarily residential, with commercial/light industrial and institutional land use. The limitations of a paid-on-call fire service and the projected growth within the community are risk factors that need to be considered as part of Morinville's overall emergency response strategy. Morinville has an atypical mix of residential, commercial, light industrial and institutional land use for a town with a population of just under 10,000 people. This imbalance is primarily due to the transportation hub with the rail corridor and Highway 2, along with light industrial and commercial activities within this small community. This combined with the limitations of a paid-on-call fire service and the projected growth in the community, are risk factors that need to be given due consideration as part of Morinville's overall emergency response strategy. Specifically, these risk factors include:

- Industrial and commercial activities
- Transportation corridors
- Urban Wildland Interface
- Limitations of a POC Fire Service
- Growth Projections
- Responses into Sturgeon County

It is important for the Town of Morinville (Council and Administration), and the MFD to ensure their performance is aligned with known industry 'leading practices', recognized codes and standards such as the Alberta Building Code's Limiting Distance and Fire Department Response regulation, (also known as High Intensity Residential Fire (HIRF) requirements, Code of Practice for Firefighters, National Fire Protection Association (NFPA), and other accrediting bodies such as the Commission on Fire Accreditation International (CFAI). A comparison of service levels

with other similar emergency service departments is also useful to establish service goals and benchmarks for the MFD such as the municipal comparative analysis included in this report.

Historical event response data for the period of 2014–2018 was analyzed, and identified several basic categories of call types for Morinville Fire Department:

- Fires (all categories)
- Fire Alarm Activations
- Emergency Medical Assistance (Mutual Aid)
- Motor Vehicle Incidents (MVI)
- Rescues
- Hazmat (dangerous goods)
- Miscellaneous, i.e. electrical, standbys, smoke odours, police assist, train derailment, etc.

## Summary of Observations and Recommendations

The following recommendations are drawn from findings presented throughout the report. A timeframe within 0-60 months has been assigned to each recommendation, recognizing that the start and completion of any recommendation is based on annual corporate priorities, and Council approved budget allocations.

*Observation #1: Although the Alberta Building Code (ABC) and the Alberta Fire Code (AFC) regulate the construction and use of facilities in Morinville, there has been no formal collection and identification of structures in the community for the purpose of assessing/managing risks. Furthermore, the Town of Morinville is accredited for the Fire Discipline under the Alberta Safety Codes Act with several MFD staff qualified as Safety Codes Officers (Fire). However, there is no formal inspection cycle for major occupancies that pose higher risk fire and life safety occupancies such as Assembly (Group A & B), and Industrial (Group F). Fire and life safety inspections are provided by MFD on a "request basis" as detailed in the Town of Morinville Fire Services Bylaw # 14/2015.*

*Reference: Section 3.3, Structural Risk Analysis, Page 14*

> *Recommendation #1: Develop a building inventory program and establish a cyclical fire inspection program for higher risk fire and life safety occupancies*
>
> *Suggested completion: 0-36 Months*
>
> *It is recommended that an inventory of all building structures be classified, documented, and maintained using the Alberta Building Code Major Occupancy Classification system. It is important that an inspection of all structures be conducted and evaluated in terms of risk assessment/management matrix as described in Section 3.2, Table 3 (Page 13). This will aid in the planning of response resources (personnel and equipment) and standard operating guidelines. Furthermore, it is recommended that the Fire Chief establishes as an amendment to Bylaw #144/2015 and a cyclical inspection program that focusses on the higher risk fire and life safety risk occupancies. This would include occupancies such as the Alberta Building Code Group A, B and F classifications.*

***Observation #2:*** *MFD does not have an established Standards of Cover policy that provides a comprehensive series of benchmarks that define an affordable, acceptable, and appropriate level of service for the Town of Morinville.*

*Reference: Section 3.4, Community Risk Analysis Overview, Page 16*

> ***Recommendation #2: Develop a Standards of Cover policy defining service levels for Morinville***
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended the MFD undertake a comprehensive risk analysis of the community and develop a Standard of Cover (SOC) to effectively manage risks. The SOC is used to establish performance benchmarks for existing levels of service, while providing opportunities for continuous improvement at the same time. This would also provide a well-articulated description of services to be provided to the community with the full understanding and endorsement of Morinville Council.*
>
> *The benefits of completing an SOC will ensure that MFD has a clear understanding of the scope of overall risk for the community while enabling them to identify the resources and response capabilities necessary to adequately address those risks. The SOC will further ensure MFD has a safe and effective response force for all emergencies including fire suppression, emergency medical services and specialized response situations.*

***Observation #3:*** *Discussion with the Fire Chief indicates that staffing levels available to respond during normal weekday work hours is a significant challenge.*

*Reference: Section 3.4.4, Limitations of a Paid-On-Call Fire Service, Page 19*

> ***Recommendation #3: Fire Chief to research the weekday staffing challenge and provide Council with preferred option(s) for their consideration***
>
> ***Suggested completion: 0-36 months***
>
> *There are several options to address the staffing shortfall during normal weekday work hours. The options that are considered the most viable for consideration:*
>
> - *Establish 4 full-time firefighter positions for weekdays*
> - *Expand Hall Coordinator's program*
> - *Establish the Work Experience Program (WEP)*
>
> *It is important to note that each of these options provides the capacity to address challenges such as Safety Codes Fire Inspections, pre-fire plans, enhanced public education and operational requirements including an effective initial response for calls during weekdays. An analysis of these options is provided in Section 3.4.4.*

***Observation #4:*** *Over the past 5 years, MFD has been dispatched to over 50% of their total call volume outside of Morinville into Sturgeon County. It is acknowledged that changes in the MFD County response zone and increase in Town calls has changed this over the past 20 months. The growth projections for Morinville combined with the limitations of a volunteer service may create challenges in the future for MFD with responses into the County and result in a system shortfall. As such, a detailed review of the agreement is considered strategically critical.*

*Reference: Section 3.4.5, Response into Surgeon County, Page 21*

> ***Recommendation #4: Review response and compensation agreement with Sturgeon County***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended the Fire Chief conduct an impact analysis of the County's call volume to include the total time, number of staff and sequential calls for service while deployed to emergencies. The County pays Morinville for these responses however; a comprehensive review of the agreement should be undertaken that includes the Fire Chief's impact analysis from an operational perspective. In addition, a detailed financial analysis should be conducted to determine if the Town is being adequately compensated for the services provided to the County. This review should include considerations such as base rate for 24/7 services, administrative overhead, proportional costs based upon usage, and provide Morinville with a cost benefit analysis.*

***Observation #5:*** *MFD's current response categories do not provide the essential detail required for the Fire Chief to adequately identify trends and mitigation/prevention strategies. Parkland Emergency Communications Centre has the capability to provide detailed and specific call-type determinants that break down broad call types to more defined sub-determinants. This level of data is critical for the Fire Chief to determine trends and focus areas for mitigation and/or prevention measures strategies.*

*Reference: Section 4.1, Response and Service Categories, Page 23*

> ***Recommendation #5: Establish a more detailed category of responses to identify trends and mitigation strategies***
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended that the Fire Chief establish a more detailed inventory of response categories in order to identify trends and establish mitigation/prevention strategies. It is further recommended that the Fire Chief on a recurring basis provide a summary of this data to the Town's Senior Leadership Team and Council.*

***Observation #6:*** *The event/response protocols for the town do not include a critical task analysis that optimizes the deployment of staff (ERF) for the various call types.*

*Reference: Section 4.2.2, Effective Response Force, Page 30*

> ***Recommendation #6: MFD Administration conduct a critical task assessment on the types of calls typically encountered to develop an effective resource management protocol for both apparatus and staff***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that a development of a resource management protocol will assist in ensuring proper types of apparatus with optimal number of firefighters forming an effective company on each are dispatched given the critical tasks anticipated on each type of call. Example: Residential house fire with the NFPA recommended staffing to achieve 15 firefighters on scene within nine minutes (90% of the time). As the community of Morinville grows, the department needs to maintain a balance between the number of trained and experienced members with newer inexperienced members. The goal is to achieve a balance between full-time/fully trained members with inexperienced/recruit members. The addition of full-time staff recommended in this master plan can strengthen the use of POC by ensuring a level of experience and training.*

***Observation #7:*** *The theoretical 10-minute response Map 4 Section 4.6 (Page 46) depicts the areas for community development in Morinville. The majority of these growth areas are in the south sector of town. In addition to being outside the 10-minute HIRF ABC regulation, the CN rail corridor creates a potential response area restriction should a train be stopped or travelling through the road access.*

*Reference: Section 4.2.3, Firefighter Safety and Code of Practice, Page 31*

> ***Recommendation #7: Conduct a town growth area community development analysis***
>
> ***Suggested completion: 48-60 months***
>
> *It is recommended that the Town of Morinville Planning and Development Division conduct a detailed analysis of the areas identified for future growth. This analysis must consider the HIRF requirements, MFD's actual response capacity, and the railway restriction. It is anticipated that the town will have options such as:*
>
> - *Construction of a second fire hall south of the railway corridor in order to meet the HIRF and eliminate the risk of a train obstructing the emergency vehicle response, and;*
>
> - *All future residential developments in Morinville be designed in accordance with the ABC or provided with additional fire protection, such as non-combustible siding, no side-yard windows and sprinkler systems.*

***Observation #8:*** *The Parkland County Emergency Communication Centre (ECC) average call processing time is 125 seconds. The Alberta Fire Commissioner's office has deemed* this *call processing time as part of the fire department's receipt of notification when applying the ABC Limiting Distance and Fire Department's 10-minute response regulation. Leading industry practices for Emergency Services Communication Systems NFPA 1221 indicate an optimum call processing time of 79 seconds (call-answered, verification, and processing).*

*Reference: Section 4.3.1 Historical Response Data, Page 35*

> ***Recommendation #8: Enhance fire department receipt of notification protocols***
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended the Fire Chief working closely with the Parkland ECC develop enhanced receipt of notification protocols that include consistent use of pre-alerts and other procedures that reduces the current 125 seconds fire department notification process.*

***Observation #9:*** *MFD is currently taking advanced training on their records management software to take full advantage of the capabilities for advanced reporting. This includes essential information such as intervention time increments, staffing levels and total time of the response. For County emergency responses this data can be used to determine the operational and financial impacts for Morinville.*

*Reference: Section 4.3.1 Historical Response Data, Page 35*

> ***Recommendation #9: Enhanced collection of response data***
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended that MFD fully implements their data collection and records management systems in order to take full advantage of the systems capabilities.*

***Observation #10:*** *MFD has been averaging 47% of their Town calls and 17% of their County calls towards Alarms Ringing calls. The Town of Morinville Fire Services Bylaw 4/2015 contains a provision for the cost recovery of False Alarms. The following is an excerpt:*

> *Where Fire Services has taken any action what so ever for the purpose of extinguishing a fire or responding to a fire call or incident within or outside the Town of Morinville or for the purpose of preserving life or property from injury or destruction by fire or other incident on land within or outside of the Town of Morinville, including any such action taken by Fire Services on a false alarm, the Fire Chief, may in respect of any costs incurred by Fire Services charge to the person who caused the incident or the owner or occupant of the land/structure/vehicle in respect of which the action was taken.*

*Reference: Section 4.3.1 Historical Response Data, Page 35*

### Recommendation #10: Reduce Alarms Ringing Responses

### Suggested completion: 36-48 months

*It is recommended MFD conduct an in-depth analysis to determine the current trends of false alarms with the view to initiate preventative measures to reduce the occurrence and costs of false alarms. Effective public education, as well as proper enforcement of fees for nuisance alarms, will assist with minimizing unnecessary draw on MFD resources.*

***Observation #11:*** *Requests for medical first response and assistance for Alberta Health Services EMS is a valuable service, established by Council and provided by MFD to their community. MFD's has been averaging 18.8% of their Town calls and 6% of their County calls towards Mutual Aid/Assist outside Agency (medical aid). As mutual aid response requests require the call-in of paid-on-call firefighters, the impact on MFD can be significant if not closely monitored. Interviews with MFD staff have indicated they believe this type of medical first response is extremely important to the community and feels they can contribute significantly to life-threatening calls. The MFD medical first response program is deemed by Behr to be a relatively low cost, highly valued and effective service for Morinville.*

*Reference: Section 4.3.1 Historical Response Data, Page 35*

### Recommendation #11: MFD continue to work closely with AHS in the delivery of the Medical First Responder Program (MFR) (Medical First Responder Program)

### Suggested completion: Ongoing

*It is recommended that MFD continues to work closely with AHS to ensure their medical first response service is utilized in the most effective and efficient manner. Careful monitoring and communication with AHS are necessary to ensure that requests for service are made within accepted guidelines.*

***Observation #12:*** *MFD Administration has taken great strides improving the way data is being collected to assist in identifying areas of improvement. The next step is to develop a recurring report such as a dashboard that is reviewed by the Senior Leadership Team (SLT) and Council through the quarterly process.*

*Reference: Section 4.4, Annual Reports and Performance Dashboard, Page 43*

> ### Recommendation #12: Establish performance target reports and dashboard
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that MFD develop a data reporting process such as a dashboard and/or written report to demonstrate the quarterly or annual performance of MFD against identified objectives.*

***Observation #13:*** *During our interviews with the Fire Chief, Deputy Chiefs, Training Officer and a Captain, a prevalent theme emerged regarding the volume of administrative and management responsibilities that are required, such as maintaining training plans, recording and documentation of certifications and training activities, pre-fire plans, inventory management, fleet and equipment management, OHS program, recruitment, etc. All these activities require significant time to undertake.*

*Reference: Section 5.2.3, MFD Administration Positions, Page 55*

> ### Recommendation #13: Re-classify the Deputy Chief of Training to a full-time position from the current 25% part-time position
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended that one Deputy Fire Chief (Training and Logistics) being re-classified to a full-time position will enhance the administrative responsibilities to support Training, Safety Codes (fire inspections, prevention and investigations) as well as management and administrative requirements as noted above.*

***Observation #14:*** *MFD is not unique in the number of experienced members leaving the service to resignation or retirement. This places an increased emphasis on training and development to ensure there are qualified individuals to effectively and safely lead their respective crews in challenging and hazardous conditions.*

*The loss of more senior and experienced personnel is leading to a junior and less experienced firefighter complement for MFD. Exploring opportunities to retain this experience in some capacity may serve well with this demographic shift.*

*Reference: Section 5.3.3 Retention, Page 62*

> ### Recommendation #14: Research retention opportunities of senior members
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that the Fire Chief researches opportunities to retain senior and/or retiring members in non-operational roles, such as coaching, mentoring, and administrative roles.*

**Observation #15:** *MFD currently maintains an effective recruit training program with limited firefighter operational functionality until appropriate training and skill development has been achieved. This gradual advancement provides a safe and effective program for firefighter development.*

*MFD is not unique in the number of experienced members leaving the service to resignation or retirement. This places an increased emphasis on training and development to ensure there are qualified individuals to effectively and safely lead their respective crews in challenging and hazardous conditions.*

*The Fire Chief utilizes senior members to assist with overseeing various programs within MFD. This process allows for individual ownership and participation as well as pride for those individuals empowered within each of these roles. The time required for advancement towards Officer Positions may be considerable considering the constraints of POC staff. Advance planning for future training officer is imperative.*

*Reference: Section 5.3.4, Advancement and Promotion, Page 63*

> **Recommendation #15: Create a plan for advancement and succession**
>
> **Suggested completion: 36-48 months**
>
> *It is recommended that the Fire Chief create a sustainable succession plan to ensure enough firefighters are trained and ready to assume all roles, including Officer and/or Chief roles as required.*

**Observation #16:** *Currently the Deputy Chief responsible for training uses a manual spreadsheet that is relatively inefficient and labour intensive. Training records, qualifications, duration and certifications are all being done in paper hard copy and files. There are several software programs that can track and identify training requirements that will significantly reduce this laborious undertaking.*

*Reference: Section 5.4, Training, Page 64*

> **Recommendation #16: Enhance the use of on-line delivery of training, educational materials and records management**
>
> **Suggested completion: 0-36 months**
>
> *It is recommended MFD work with the Town of Morinville Human Resources to procure an on-line training/ learning environment software program to significantly enhance the delivery, and records management of the training/educational program for all MFD staff.*

***Observation #17:*** *Given the increased initial and on-going training requirements for front-line firefighters, as well as the reluctance or inability of paid-on-call firefighters to commit to these obligations, there is limited pool of possible recruits living in Morinville to draw from.*

*Training resources should be concentrated on those individuals who are willing and able to commit to the NFPA 1001 journeyperson curriculum and attendance expectations. There may be other areas within the MFD that could utilize individuals, both active and new, who would be able to contribute in a positive way towards the goals of the service. An example could be POC public education and prevention officers.*

*Reference: Section 5.4.1, Industry Recommended Qualifications, Page 67*

> ***Recommendation #17: Identify non-operational support positions***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended MFD Administration identifies areas or responsibilities that would benefit MFD, but not necessarily require the full NFPA 1001 journeyperson certification. Such areas or responsibilities may provide an increased public participation towards the service, and as well provide an avenue for active members who may not wish to or be able to continue in the full firefighter scope of practice.*

***Observation #18:*** *MFD currently requires all members to work towards achieving the qualifications required for NFPA 1001. This requires significant time and resources to achieve.*

*Reference: Section 5.4.1, Industry Recommended Qualifications, Page 67*

> ***Recommendation #18: Explore service level competencies for a maximum of 25% paid-on-call contingent as retention strategy***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that MFD adopt a similar approach to the BC Playbook and establish competencies for the expected service levels within Morinville's Standards of Cover. Not more than 25% of the paid-on-call contingents could be trained to exterior operations, which requires a lesser time commitment to achieve the KSAs. For clarity exterior operations means firefighters with this qualification cannot enter into a structure with an active interior fire. It is important to note that the Alberta Fire Chiefs are developing a similar competencies-based approach for fire department service delivery.*

***Observation #19:*** *Morinville has an established Health and Wellness program for their staff that provides $225.00 for fitness related expenses*

*Reference: Section 5.5, Health and Wellness, Page 69*

> ### Recommendation #19: Evaluate the Health and Wellness Program
>
> ### Suggested completion: 0-36 months
>
> *It is recommended that MFD continues the practice of providing health and wellness benefits for active members of the service. A process of tracking and evaluating the effectiveness of these bursaries with available options for the use of this resource should be implemented.*

***Observation #20:*** *As noted in Section 3, the MFD does not have a risk inventory of all structures in the town. This inventory would also serve as the basis for a formal pre-fire plan process. Pre-fire plans include information regarding the construction type, occupancy, building status, emergency contacts, utility shutoffs, fire suppression and detection systems, exposure information, water supply availability, access problems and any other hazards.*

*Reference: Section 6.5.1, Pre-Fire Plans, Page 82*

> ### Recommendation #20: Formalize pre-fire plan inventory
>
> ### Suggested completion: 36-48 months
>
> *It is recommended that MFD establish a formal pre-incident planning program that documents significant building aspects in a hard copy or electronic database where it can be retrieved when responding to incidents.*

*Observation #21:* *The current fire hall is overcrowded and has no capacity or facility to support the current operation. Specific areas include the need for equipment and Personal Protective Equipment (PPE) decontamination and drying, additional space to develop/expand fitness and wellness programs, enhanced bay area to support second line units with internal charging and exhaust capture systems, and additional workshops for equipment maintenance. A fire hall expansion needs to be strategically planned and consider community growth, regional and shared facilities and services opportunities, and potential changes in the MFD service delivery model. Aspects such as new opportunities to accommodate Alberta Health Service's for ambulance, or if 24/7 full-time coverage becomes necessary to meet community service needs.*

*Reference: Section 7.1.1, Fire Station Overview and Analysis, Page 89*

### *Recommendation #21: Continue with fire hall upgrades*

*Suggested completion: 0-36 months*

*Given the current operations, projected municipal development, and to accommodate the staffing increases, it is strongly recommended that the proposed renovation project for the fire hall continues as a priority. We understand there is an expansion plan in place for 2022 which could allow for additional bays. This plan needs to stay the course based on the current growth projections of the community coupled with the appropriate response requirements.*

*Observation #22:* *A limitation to the existing training facility is the ability to train in "live-fire" operations, which is a core competency of NFPA. As a result, MFD members are required to travel to training facilities outside the community that can facilitate these necessary exercises, allowing them to safely and efficiently train their personnel. Another limitation is that emergency vehicles should stay within the response area and as such MFD should not take their apparatus outside their jurisdiction for such training. Past practice has been to use the live-fire training buildings at the military base or Leduc.*

*Reference: Section 7.1.2, Fire Training Facility, Page 93*

### *Recommendation #22: Research the building of a live-fire training facility*

*Suggested completion: 48-60 months*

*It is recommended that the Fire Chief research live-fire training facilities such as the prefab, container style building that will allow for advance scheduling of necessary life-fire exercises.*

**Observation #23:** *MFD Pump 3 will be 17 years old in 2020.  NFPA 1901* indicates that *changes, upgrades, and fine tuning to NFPA 1901 have been truly significant, especially in the area of safety.  Fire departments should seriously consider the value (or risk) to fire fighters of keeping fire apparatus more than 15 years old in first-line service.*

*Reference: Section 7.2.1, Apparatus and Light Duty Vehicles, Page 93*

> **Recommendation #23: Replace fire apparatus Pump 3**
>
> **Suggested completion: 0-36 months**
>
> *It is recommended that the capital replacement for Pump 3 be approved in the Town of Morinville Capital Budget for 2020.  In addition, Pump 3 should be retained as a second line unit and use to maintain response capacity during periods when frontline units are unserviceable, out of service for maintenance, and can be deployed for sustained operations or operations beyond the Morinville response area such as training.*

**Observation #24:** *The Town of Morinville does not have a centralized asset management program that creates an inventory of all tangible assets, life cycles, maintenance, depreciation and replacement costs.  This program is considered important to strategically manage the MFD fleet and future acquisitions.*

*Reference: Section 7.6, Asset Management, Page 100*

> **Recommendation #24: Implement a comprehensive Asset Management Program with advanced equipment management software**
>
> **Suggested completion: 36-48 months**
>
> *It is recommended that the Town procures an asset management program.  This would ensure that preventative maintenance could be diligently tracked to avoid early retirement/replacement of assets.  This software will also provide valuable data for possible failure analysis.  This, combined with more rigorous and documented asset management practices, will ensure that the MFD maintains optimal utilization of its apparatus and equipment.*

## Implementation Costs and Timeframe of Recommendations

The majority of the recommendations presented in this report are achievable using existing staff/members time and will therefore not pose significant additional costs to Morinville. Other recommendations regarding staffing, database management, and software will have associated costs. Costs are estimates based on the comparable costs incurred by other departments.

*Notes:*

- *'Cost Neutral' refers to the use of internal staff through a normal workday schedule. Additional costs may apply if overtime is required.*
- *Undertaking of these cost neutral recommendations are contingent upon the staffing increases identified in this Plan.*
- *Recommendations identified as 0-36 months are considered to be critical priorities.*

To assist with the prioritization and implementation of the various recommendations three criterion where utilized: human resources, apparatus and equipment, and facility. A color coding of red for immediate short term, yellow for intermediate, and green for longer term has been applied to these criterion:

| Short Term | Intermediate | Long Term |
|---|---|---|
| 0 – 36 months | 36-48 months | 48-60 months |

| | Recommendation | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Source | Est. Cost | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | *Develop a Building Inventory Program and Establish a Cyclical Fire Inspection Program for Higher Risk Fire and Life Safety Occupancies* | | ● | ● | ● | | | | *Staff time* | *Cost neutral* | |
| 2 | *Develop a Standards of Cover policy defining service levels for Morinville* | | ● | ● | ● | | | | | | |
| 3 | *Fire Chief to research the weekday staffing challenge and provide Council with preferred option(s) for their consideration* | | ● | ● | ● | | | | *Staff time* | *Cost neutral* | *Cost will be dependent upon analysis and preferred option* |
| 4 | *Review response and compensation agreement with Sturgeon County* | | | | ● | ● | | | *Staff time* | *Cost neutral* | |
| 5 | *Establish a more detailed category of responses to identify trends and mitigation strategies* | | ● | ● | ● | | | | *Staff time* | *Cost neutral* | |
| 6 | *MFD administration conduct a critical task assessment on the types of calls typically encountered to develop an effective resource management protocol for both apparatus and staff* | | | | ● | ● | | | *Staff time* | *Cost neutral* | |
| 7 | *Conduct a town growth area community development analysis* | | | | | ● | ● | ● | *Staff time* | *Cost neutral* | |
| 8 | *Enhance fire department receipt of notification protocols* | | ● | ● | ● | | | | *Staff time* | *Cost neutral* | |
| 9 | *Enhance collection of response data* | | ● | ● | ● | | | | *Staff time* | *Cost neutral* | |
| 10 | *Reduce Alarms Ringing Responses* | | | | ● | ● | | | *Staff time* | *Cost neutral* | |
| 11 | *MFD work closely with AHS to ensure that medical aid service requests are limited to high severity assistance only* | | | | | | | | *Staff time* | *Cost neutral* | *Ongoing* |
| 12 | *Establish Performance Target Reports and Dashboard* | | | | ● | ● | | | *Staff time* | *Cost neutral* | |

| | Recommendation | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Source | Est. Cost | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | *Re-classify the Deputy Chief of Training to a full-time position from the current 25% part-time position* | | ● | ● | ● | | | | Operational Budget | Fire Officer (2020) $75,495 Deputy Chief $118,559 | |
| **14** | *Research retention opportunities of senior members* | | | | ● | ● | | | Staff time | Cost neutral | |
| **15** | *Create a plan for advancement and succession* | | | | ● | ● | | | Staff time | Cost neutral | |
| **16** | *Enhance the use of on-line delivery of training, educational materials and records management* | | ● | ● | ● | | | | Operational Budget | $5,000 p/yr. | |
| **17** | *Identify non-operational support positions* | | | | ● | ● | | | Staff time | Cost neutral | |
| **18** | *Establish service level competencies for a maximum of 25% Paid-On-Call contingent as retention strategy* | | | ● | ● | ● | | | Staff time | Cost neutral | |
| **19** | *Evaluate the Health and Wellness Program* | | ● | ● | ● | | | | Capital Budget | | |
| **20** | *Formalize pre-fire plan inventory* | | | | ● | ● | | | Staff time | Cost neutral | |
| **21** | *Fire Hall Upgrades* | | ● | ● | ● | | | | Capital Budget | $ 3.4 million | |
| **22** | *Research the building of a live-fire training facility* | | | | | ● | ● | ● | Capital Budget | Cost neutral | *Research feasibility. Procurement of prefab live fire training building: Est. $100K* |
| **23** | *Replace fire apparatus Pump 3* | | ● | ● | | | | | Capital Budget | $ 1.1 million | |
| **24** | *Implement a comprehensive asset management program with advanced equipment management software* | | | | ● | ● | | | Operational budget | TBD | *Depends upon type of system for Corporate application* |

## Summary

In creating this Plan, we analyzed several factors to determine the effectiveness and efficiency of the Morinville Fire Department (MFD). We evaluated the operational and administrative aspects of the department, as well as the ability of the department to work as a cohesive unit. Additionally, we evaluated the operational relationship/agreement with Sturgeon County. We then reviewed MFD's response data and its current resources and assessed their alignment with both existing and projected risks and levels of demand.

There are several aspects of the department along with recommendations in this Plan that needs to be considered in order to improve the effectiveness and efficiencies for MFD. During a thorough review of MFD's services, we identified 24 observations and recommendations for consideration. Although each recommendation has a corresponding timeframe, it is important to note this Plan needs to be re-visited on a regular or annual basis in order to stay on pace with the dynamic activities and economy of the community.

MFD has a long and proud history with the Town of Morinville. While honoring their past, they remain focused on continuous improvement with emphasis on firefighter and public safety. Implementation of the recommendations outlined in this Plan will better position MFD to mitigate community risk factors, accommodate community growth and activity, while maintaining excellent community relationships and value for money.

# SECTION 1
# INTRODUCTION

## 1.1    Project Background and Significance

Across Canada, all levels of government are facing strong demands for effective and efficient fiscal management.  To meet these demands, elected officials are relentlessly looking for ways to reduce and avoid costs while still maintaining and increasing value in the delivery of services for their citizens.  This environment has generated the need for communities to adopt more business-like approaches for delivering public safety services.

Senior fire and emergency service leadership, along with their municipal leadership realize they need to be proactive and examine all aspects of the service delivery systems and look for innovative efficiencies and effectiveness.

## 1.2    Project Scope

The goal of this project was to review Morinville's existing means of fire and emergency services delivery and develop a comprehensive and fiscally responsible Fire Service Master Plan (FSMP).  The outcomes are based on in-depth analysis of operations and services provided to the community using applicable legislation, and 'industry-leading' practices and standards.

This FSMP includes unbiased documented evidence and recommendations that will determine appropriate service delivery along with strategic priorities, action plans, timelines, resources and financial implications to position Morinville's Fire Department to effectively and efficiently deliver emergency services to the community.

### 1.2.1    Project Purpose

This FSMP will provide a systematic and comprehensive approach to evaluating risk and Morinville Fire Department's (MFD) capabilities within the community.  Additionally, the FSMP will help formulate and communicate strategic direction and highlight opportunities for improved service delivery.  Since various members of Council and Town staff participated in developing the FSMP, it will also provide an objective basis to support decision making with respect to community emergency service needs.

### 1.2.2    Project Objectives

This FSMP provides the results of the in-depth analysis done on MFD's operations and the services they provide to the community.  It is to be used to determine satisfactory service delivery and position Morinville to be more effective and efficient in the delivery of emergency services through current and future challenges.  This document identifies current and anticipated risks as well as applicable legislation, 'industry-leading' practices and relevant standards.

This document will serve as Morinville's blueprint for effective and efficient fire services and will:

- Identify how MFD currently delivers fire and rescue services, including an investigation of underlying issues, budgets, human resources, service delivery protocols, bylaws, etc.;

- Identify how fire and emergency response services should be delivered, with a view to ensure existing efficiencies continue and effectiveness is documented and areas which require improvement are identified.;

- Identify, administratively, what is and what is not working in fire and emergency response service delivery;

- Identify needs, opportunities, and concerns with a view to requirements for streamlined and effective services for residents and safety of emergency responders, financial efficiencies, proper infrastructure, fair compensation and rewards for emergency responders, etc.;

- Identify all areas including staffing, station location, vehicles and apparatus (new and replacement cycles), vehicle and apparatus maintenance, other equipment, administration, training, mechanical, fire prevention, emergency planning and public education, and;

- Identify any financial implications.

## 1.3 Project Approach

Our activities included an assessment of MFD's internal operations and its services, an evaluation of any previous studies done, a review of current and future risks and recommendations for control and mitigation.  Using available data that included benchmark information, municipal comparative analysis[1], and stakeholder interviews with community personnel, we analyzed the services provided by MFD, both mandated and discretionary.

Our analysis considered the following areas:

- Total area of review
- Population and future growth
- Financial resources and constraints
- Economics
  - o Local Economy
  - o Tourism
  - o Agriculture
  - o Construction
  - o Manufacturing
  - o Utilities
  - o Industrial Activity

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[1] *See Section 1.3.2, Municipal Comparative Analysis, Page 4*

- Multi-jurisdictional requirements and cooperation
- Impacts of Government legislation
- Support services – dispatch, maintenance
- Service delivery models
- Current and future development impact on risks and response
- Community risk factors
- Apparatus and equipment needs and inventories
- Building space requirements
- Staffing
- Administration
- Department structure, duties and workload
- By-Laws, Policies and Procedures
- Reporting structure and requirements
- Fire prevention & public education
- Community emergency management
- Training
- Succession planning

## 1.3.1    Fire and Emergency Services Master Planning Process

The following diagram illustrates the process we used to complete this plan and our recommendation to maintain it.

*Figure 1: Master Planning Process*
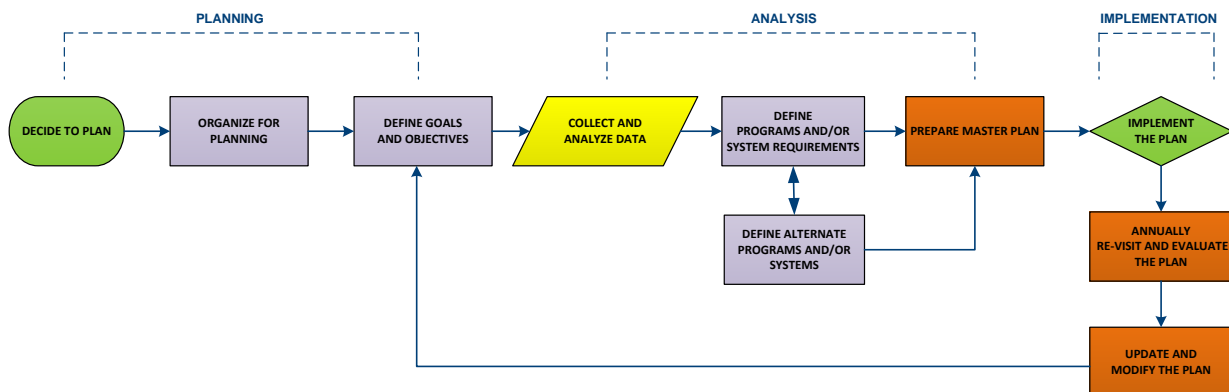
### 1.3.2    Municipal Comparative Analysis

A municipal comparative analysis was also conducted to analyze industry benchmarks and assess the relative strengths and weaknesses of the recommendations in this document.

Each participating municipality was asked to complete a questionnaire regarding call volumes, budgets, per-capita costs, number of fire stations, population, response area, and staffing levels.  We used 2014 – 2018 information for the purposes of this review, in order to get common information from each community.

## 1.4    Standards and References

This plan considers the following references and standards:

- Alberta Occupational Health and Safety, 2017
    - Firefighter Code of Practice
- Municipal Government Act, July 1, 2018
- National Fire Protection Association's (NFPA) Standards and Guidelines
- Alberta Building and Fire Codes, 2014
- Alberta Safety Codes Act, 2017
- Service provisions from similar communities

## 1.5    Targeted Interviews and Consultative Process

Targeted interviews were part of the data and information collection process. Participants were asked questions related to their areas of purview and expertise. An interview guide was used to conduct the interviews. This was used to promote an open discussion about community, risks, general concerns related to MFD, and MFD operations including strengths, weaknesses, opportunities, challenges, and anticipated changes.

*Table 1: Targeted Interview List*

| No. | Name | Job Title |
|-----|------|-----------|
| 1 | Barry Turner | Mayor |
| 2 | Stephane Labonne | CAO |
| 3 | Nicole Boutestein | Councilor |
| 4 | Stephen Dafoe | Councilor |
| 5 | Lawrence Giffin | Councilor |
| 6 | David Schaefer | Director Community & Protective Services |
| 7 | Brad White | Director of Planning & Economic Development |
| 8 | Shawna Jason | Chief Financial Officer |
| 9 | Brad Boddez | Fire Chief |
| 10 | Joel Houle | Deputy Fire Chief |
| 11 | Charles Lavalle | Deputy Fire Chief |
| 12 | Brian Johnston | Fire Captain |

**Note:** *Interview Guide is available in Appendix C*

## 1.6    Study Considerations

The following factors that affected both the assessment and effective mitigation of risk were considered and assessed:

Municipal Specific Considerations

- Total area of review
- Population and future growth
- Community risk factors
- Community demographic information
- Development and Area Structure Plans
- Multi-jurisdictional requirements and cooperation
- Current and future development impact on risks and response
- Financial resources and constraints
- Impacts of Government of Alberta legislation

- Bylaws affecting the emergency services
- Economic factors
- Current and futures construction
- Industrial activity
- Utilities
- Retail businesses and other services
- Agriculture
- Buildings and structures concentrating on high risk demands, including business, assembly occupancies, etc.
- Municipal Emergency Management Plans

Department Specific Considerations

- Geographic and physical boundaries for response (Morinville and Sturgeon County)
- Fire department annual reports
- Fire service focused reports previously conducted
- Budgets – previous, current and proposed
- Current staff rosters with qualifications
- Facilities including fire, rescue, dispatch, emergency operations centres
- Support services – dispatch, maintenance
- Department structure, duties and workload
- Service delivery models
- Apparatus and equipment inventory, and future needs
- Building space requirements
- Operation staffing and administrative needs
- Long range planning
- By-laws, Policies and Procedures
- Reporting structure and requirements
- Fire prevention & public education
- Emergency core service response
- Health and wellness
- Training and Recruitment records and standards
- Succession planning
- GIS mapping data
- Prevention programs such as inspections, education and enforcement
- Records and data management
- Emergency services standard operating guidelines and procedures

# SECTION 2
# COMMUNITY PROFILE

## 2.1    Community Overview

Morinville is located approximately 34 kilometres north of Edmonton along Highway 2 and is completely surrounded by Sturgeon County.  It serves as the commercial centre for the surrounding district and is also home to Sturgeon County's municipal offices.

## 2.2    Economy

Morinville's location along the Highway 2 transportation corridor, and CNR mainline, has supported the community in becoming a regional centre to neighbouring communities providing services, amenities, education and healthcare to meet the needs of those living in the area.

### 2.2.1    Morinville Economic Indicators

*Map 1: Morinville Overview Map*



Morinville's tax base is largely residential at 93%.  One of Morinville's largest employers is Champion Pet Foods which employs approximately 50 people.  This means that the majority of the working population travel to neighboring communities to work.

### 2.2.2    Growth Projections

Historically, Morinville has experienced modest growth and development over the past decade.  Growth projections provided by the Chief Financial Officer indicate an average annual population growth of 4.1%.  Municipal growth rates that are sustained for several years over 2% will result in challenges for all services provided by a municipality.  The municipality's fire protection capabilities, emergency response requirements and resource commitments are measured against risks for fire and other emergencies which are directly impacted by community growth and development.
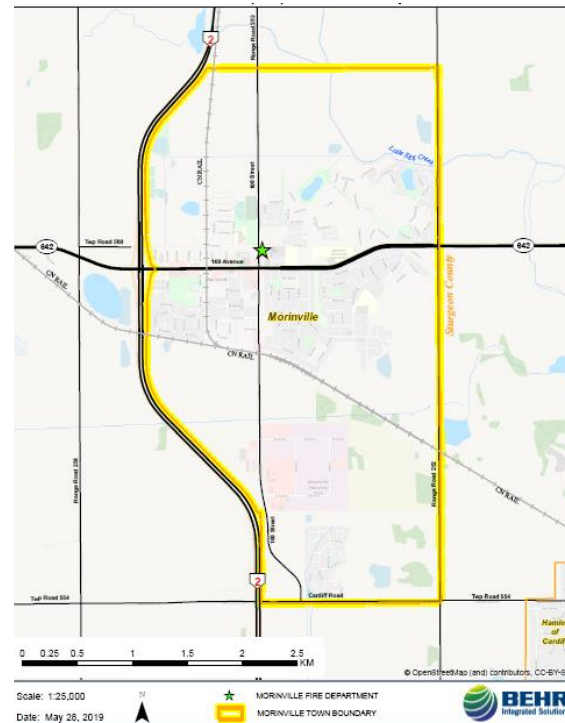
*Table 2: Historical Population Growth, 2011 – 2019[2]*

| Year | Actual Population | Increase | % Growth Increase |
|------|-------------------|----------|-------------------|
| 2011 | 8,504 | | |
| 2014 | 9,402 | 898 | 9.55 |
| 2016 | 9,893 | 491 | 4.96 |
| 2019[3] | 9,848 | -45 | -0.46 |

## 2.2.3   Community Demographics

Morinville represents a younger community with a median age category of 25-34 years and 21% of the population in the 24-39 year old age group.  The majority of the population since 2011 was represented in the 36-44 (187 more residents) and 55-64 (189 more residents) year age groups with an increase of 376 residents.

*Figure 2: Morinville Age Characteristics (Statscan 2016)*
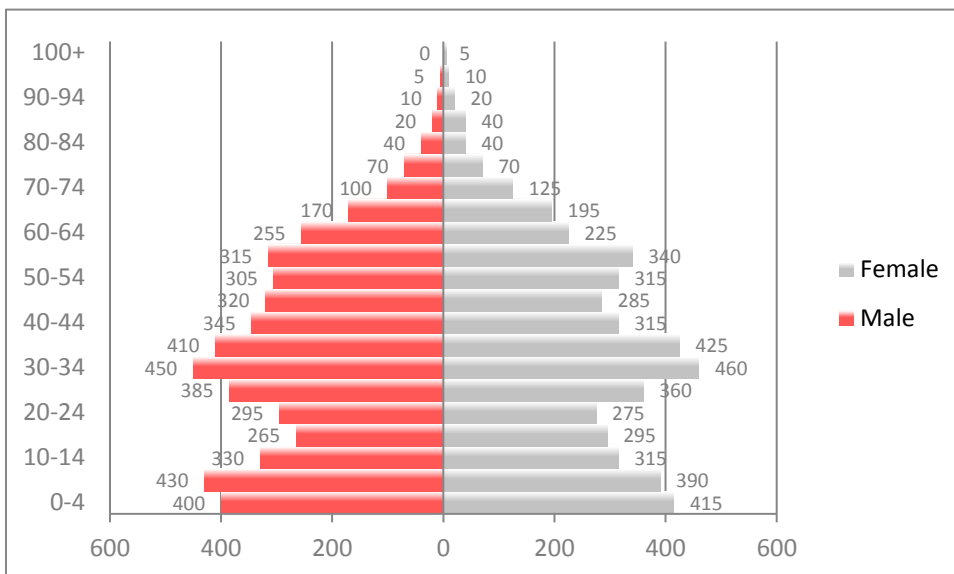
## 2.3    Community Planning and Development

Morinville has an atypical mix of residential, commercial, light industrial and institutional land use for a town with a population of just under 10,000 people.  This imbalance is primarily due to the transportation hub with the rail corridor and Highway 2, along with the light industrial, commercial activities within this small community.  This, combined with the limitations of a POC fire service and the projected growth within the community, are risk factors that need to be given due consideration as part of Morinville's overall emergency response strategy. Specifically, these risk factors include:

- Industrial and commercial activities
- Transportation corridors
- Urban wildland interface
- Limitations of a POC fire service
- Growth projections
- Responses into Sturgeon County

# SECTION 3
# COMMUNITY RISK OVERVIEW

## 3.1    Community Risk Assessment

A community risk assessment identifies inherent risks and associates them with the fire protection and other emergency service needs necessary to effectively, and efficiently manage them.    The overall purpose of conducting risk assessments is to establish an immediate, short-term and long-range general strategy for the delivery of fire and emergency services.

Conducting a risk assessment is the first step towards establishing a strategic plan to manage community risks based upon local needs and circumstances.  The results are used to assist the municipality in making informed decisions regarding the allocation of prevention and emergency response.

*Risk Evaluation*

- *Identify the existing risks and assign a value to specific risks based on quantitative and qualitative data*
- *Identify management strategies for high priority risks*
- *Predict future risks*

Every municipality has common and unique challenges when it comes to the safety of its citizens.  Municipalities have a fundamental and legislative responsibility to conduct community risk assessments in order to provide effective public and private property protection.   In general, the needs and circumstances of a community are relative to a municipality's economic situation, geography, population, fixed assets (including structures) and overall service delivery.

## 3.1.1    Challenges

Examples of challenges that have a correlation with community risks include, but are not limited to, the following:

- Industry
- Economy
- Rate of population growth in the community
- Demographics of the community
- Annexation of lands
- Transportation
- Landscape
- Natural disasters
- Influenza pandemic

### 3.1.2    Risk Management

Risk management is the anticipated likely occurrence of an unwanted event and the ability to put in place measures to mitigate the negative results of the event.  The challenge for risk management within a community lies in balancing the probabilities of an emergency and the expense of managing the risk.  Elected officials and policy makers ultimately determine the level of service to be delivered to the jurisdiction area.

MFD should consider the following Risk Evaluation Matrix to categorize risk using probability and consequence as a method of assigning risk to individual properties.  All properties in Morinville can be reviewed and then assigned to one of four risk levels seen on the Risk Evaluation Matrix, found on Page 12, Figure 3.

*Image 1: Risk Management*



## 3.2    Risk Evaluation Matrix

The evaluation of risks must account for the frequency and severity of incidents.  The risk is determined by analyzing historical, current and projected statistics to develop appropriate levels of service.  The staffing model and expected performance matrix is based on the distribution and concentration of resources.

*Distribution refers to the number of fixed resources, such as fire stations, that are placed throughout the community.  Distribution varies depending on factors related to the number of incidents and types of calls for service in the defined area.*

*Concentration refers to the assembling of resources, such as work force and equipment, needed to effectively respond to an incident in a given area within the community.  It must also identify the availability of additional response resources including the reliability and time of arrival of a secondary responding unit.*

When determining risk, decision-makers must understand the relationship between the probability of an event occurring and the consequence or impact it may have on the community.  The adopted service level goals help to determine the necessary concentration and distribution of preparation, prevention and emergency response resources.  The challenge for Morinville is to find the balance between Morinville's risk factors, growth projections (Section 2), and the funding levels required to achieve acceptable risk levels for:

- Prevention and response services, and
- Distribution and concentration of resources

**Probability** – The likelihood that a particular event will occur within a given time period. An event that occurs daily is highly probable. An event that occurs only once a century is very improbable on any given day. Probability is an estimate of how often an event will occur over a period of time.

**Consequence** – There are three types of consequences when considering possible response requirements:

- **Life-Safety:** Consequences resulting from incidents that risk the lives of occupants, the lives of responding personnel, and the amount of personnel and equipment required to recue or protect the lives of occupants from life-threatening situations. Incidents that risk life-safety include motor vehicle accidents, extreme weather, flooding, fire, hazmat, medical, and all types of rescue situations.

- **Economic Impact:** Consequences resulting in loss of property, income or irreplaceable assets.

- **Environmental Impact:** Consequences resulting in irreversible or long-term damage to the environment.

- **Other consequences**: Community impacts like the loss of historic buildings, recreation facilities or community infrastructure, are identified but do not affect how resources are deployed.

The following matrix (Figure 3) is divided into four quadrants, each of which can pose different requirements for the commitment of resources to be managed safely.

*Figure 3: Risk Evaluation Matrix*



*Different quadrants of the risk matrix need different response requirements.*
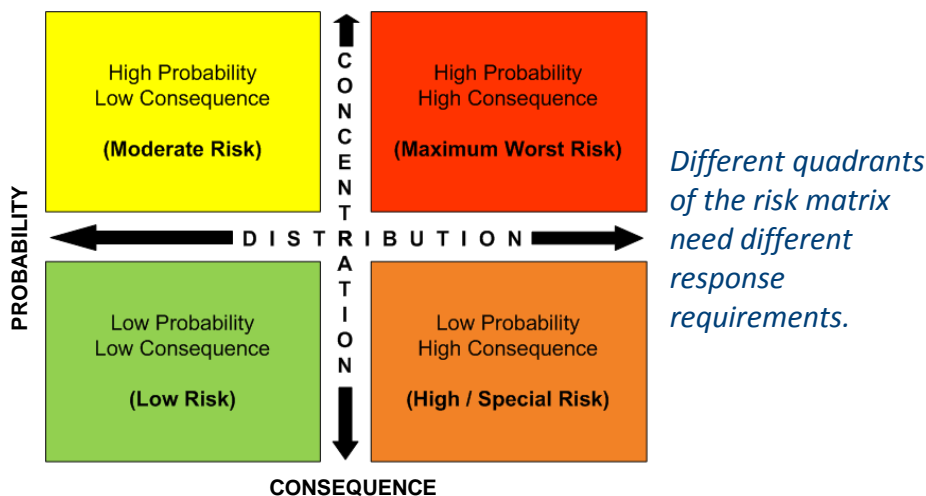
*Table 3: Risk Inventory (SAMPLE)*

**Low Risk = Low Probability and Low Consequence**

This category is limited to areas or incidents having a low probability of fire risk and low consequence for the potential for loss of life or economic loss. Some low risks include:

- Outdoor fire pits
- Non-structure lightning strikes
- Vacant land
- Parks without structures
- Isolated structures such as sheds

**Moderate Risk = High Probability and Low Consequence**

The majority of responses fall under this category. Moderate risks include:

- Motor vehicle collisions
- Carbon monoxide detection (emergency medical co-response)
- Monitoring/local alarms
- Vehicle fires
- Dangerous goods incidents with small quantities of a known product (20 litres or less), outdoor odours (natural gas or unknown)
- Miscellaneous explosions
- Emergency standbys
- Smoke
- Odours
- Fires:
  - garbage
  - detached garages
  - single or multi-family residential fires
  - small non-residential buildings less than 600 square meters

**High Risk = Low Probability and High Consequence**

There are very few properties/responses that are considered high probability, high consequence. These properties are categorized as large properties, over 600 square meters, without adequate built-in fire protection systems that have large concentrations of people or have a significant impact on the local economy. High risks include:

- Commercial, industrial warehouse
- Dangerous goods incidents with large quantities of known products (75 litres or more), unknown products or large exposure
- Hospitals, care homes, institutions
- Derailments & transportation of dangerous goods
- Bulk fuel storage facility fire/explosion

**Maximum Risk = High Probability and High Consequence**

This category of risk can be generally categorized as properties over 600 square meters that have high economic value in the form of employment or are not easily replaceable, or natural disasters occurring in highly populated areas, creating high life and property loss potential and strains on the department and other agency resources. Damage to properties in this category could result in temporary job loss or permanent closure of the business. Such properties are highly regulated or possess built-in fire protection systems. Some maximum risks include:

- Wildland fires
- Weather related events (floods, tornadoes, serve storms etc.)
- Large vehicle accidents, pile-ups , derailments
- Quantities of known products (+500-1000 litres), indoor natural gas odour
- Explosions or substation electrical fires
- Confirmed natural gas leak

*Town of Morinville*
*FIRE SERVICE MASTER PLAN*

## 3.3 Structural Risk Analysis

Analyzing structural fire risk in a community requires all building stock to be inventoried and evaluated. This inventory identifies the number of single and multi-family residential households, places of assembly (including schools, churches, hospitals, personal care homes, etc.), as well as all mercantile, commercial and industrial occupancies. In so doing, each building is evaluated for risk against the foregoing matrix.

The previous section explains that risk is based on the probability of an emergency occurring in a specific structure/facility/event etc. and the consequence of such an emergency in terms of impact. The probability – consequence matrix assists in determining the type of risk and the types of prevention needed should an event occur.

Large scale or special demand buildings such as schools, recreation centres, senior's homes and multi-residential structures must be constructed and operated in accordance with Alberta building and fire codes. The risk for structures like these is assessed against the response capabilities of the fire department. As new residential, commercial and industrial buildings are added to the community inventory, it is important that fire and emergency services be involved early in the planning process. This provides an opportunity to review and evaluate the impact on services allowing for recommendations that would serve to mitigate new risks.

The following tables and graphs are provided as samples to illustrate how the risk profile for Morinville can be developed.

*Table 4: Structure Inventory (SAMPLE)*

| Property Type | Total Properties |
|---|---|
| Assembly (theatres, hotels convention centres, public facilities with high occupancies etc.) | 177 |
| Institutional (schools, hospitals, care homes etc.) | 475 |
| Residential | 1,914 |
| Business and Personal Services | 2,110 |
| Mercantile | 107 |
| Industrial | 31 |
| **Total** | 4,814 |

The following sample table and graph display a summary of the risk ratings for properties/buildings that contain commercial and industrial businesses and or occupancy type locations. It is provided as an example of how to assess and assign a structural fire risk rating to any given building and is based upon the major occupancy classifications provided in Table 3 above. For example, an industrial facility with large quantities of dangerous goods and hazardous processes would be assigned a maximum risk rating.

*November 2019*
*Page 14*

*Table 5: Structural Risk Summary (SAMPLE)*

| Risk Designation/Rating | Risk Score Total | Count | Percentage |
|---|---|---|---|
| Maximum | 40 – 50 | 3 | 0.5% |
| High | 30 - 39 | 53 | 9 % |
| Moderate | 20 – 29 | 293 | 52 % |
| Low | 10 – 19 | 216 | 38 % |
| Not Assessed | 1 - 9 | 3 | 0.5% |
| Total | | 568 | 100% |

*Pie Chart 1: Estimated Structures Risk Level (SAMPLE)*
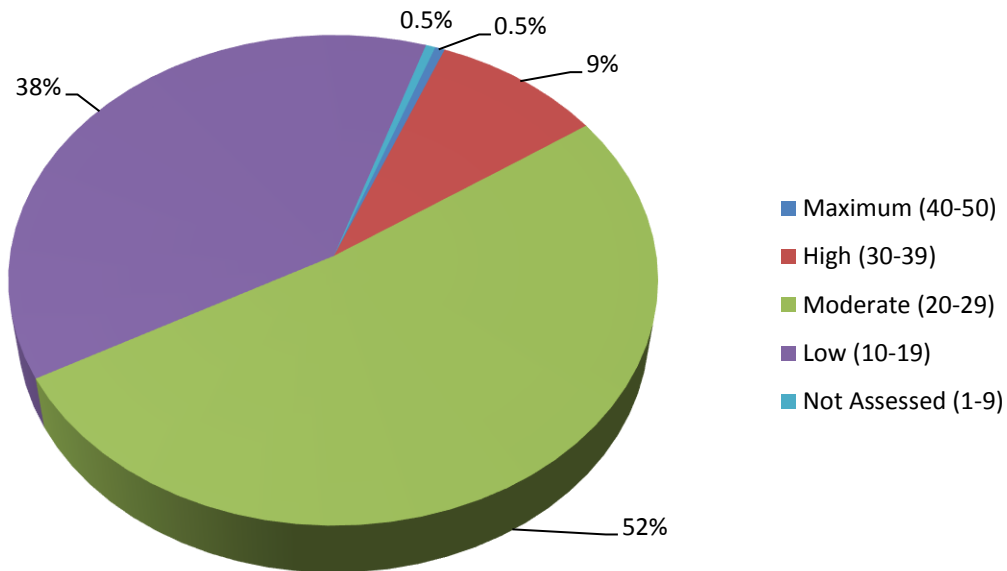


It is critical to use careful planning and consider alternative solutions when managing risk because the distribution of resources and capacity is limited. Spending large amounts of time and resources to solve a problem or risk with low frequency will have limited impact and make a minimal improvement to community safety. When planning for fire and emergency services, the planning process includes a detailed review of the frequency of events, the potential of loss, and the consequence(s) of loss to ensure efforts maximize safety and minimize consequence.

*Observation #1: Although, the Alberta Building Code (ABC) and the Alberta Fire Code (AFC) regulate the construction and use of facilities in Morinville, there has been no formal collection and identification of structures in the community for the purpose of assessing/managing risks.  Furthermore, the Town of Morinville is accredited for the Fire Discipline under the Alberta Safety Codes Act with several MFD staff qualified as Safety Codes Officers (Fire).  However, there is no formal inspection cycle for major occupancies that pose higher risk fire and life safety occupancies such as Assembly (Group A & B), and Industrial (Group F).  Fire and life safety inspections are provided by MFD on a "request basis" as detailed in the Town of Morinville Fire Services Bylaw # 14/2015.*

*Recommendation #1: Develop a Building Inventory Program and establish a cyclical Fire Inspection Program for higher risk fire and life safety occupancies*

*Suggested completion: 0-36 months*

*It is recommended that an inventory of all building structures be classified, documented, and maintained using the Alberta Building Code Major Occupancy Classification system.  It is important that an inspection of all structures be conducted and evaluated in terms of risk assessment/management matrix as described in Section 3.2, Figure 3 (Page 12).  This will aid in the planning of response resources (personnel and equipment) and standard operating guidelines.  Furthermore, it is recommended that the Fire Chief establishes as an amendment to Bylaw #144/2015 and establish a cyclical inspection program that focusses on the higher risk fire and life safety risk occupancies. This would include occupancies such as the Alberta Building Code Group A, B and F classifications.*

Morinville needs to maintain an ongoing assessment of building risk in the community that is not limited solely to construction and permits.  This ongoing assessment allows Morinville to be well positioned to effectively handle future growth and changing risks to the community.

## 3.4    Community Risk Analysis Overview

As previously indicated, Morinville has experienced modest growth and development over the past decade.  Projections indicate an average annual population growth of 4.1%. Municipal growth rates that are sustained for several years over 2% will result in challenges for all services provided by a municipality.  This Fire Service Master Plan provides the framework for Morinville to annually assess the actual growth rate and potential challenges in emergency service delivery.  The municipality's fire protection capabilities, emergency response requirements and resource commitments are measured against risks for fire and other emergencies which have a direct implication as the result of community growth and development.

It is important for Morinville to ensure their performance is aligned with known industry 'best practices', recognized codes and standards such as Alberta's High Intensity Residential Fire (HIRF) requirements, NFPA, and other accrediting bodies such as the Commission on Fire Accreditation International (CFAI).  They must also compare themselves with other emergency service departments to establish goals and benchmarks such as the comparative analysis included in this report.

The summary of the risks analyzed should be combined in a newly developed document known as a Standards of Cover (SOC).  The SOC provides:

- An assessment of the Morinville's service environment including risks
- A description of the service delivery model designed to respond to the unique characteristics of the community and to manage the risks identified with the resources available through prevention, preparedness, and emergency response
- Emergency response benchmarks and/or performance targets for the MFD
- A basis for evaluating performance that addresses both current and future service demands for Morinville, including benchmark projections when or if the need to transition from a primarily POC service to an enhanced composite department is required

Along with the ongoing assessment of building risk in the community, the SOC would also incorporate the previously identified community risk factors:

- Industrial and commercial activities
- Transportation corridors
- Urban wildland interface
- Limitations of a POC fire service
- Growth projections
- Responses into Sturgeon County

Morinville's response time goals need to reflect a continuous process of examining performance trends, industry standards, and the unique fire and emergency service current needs, and future growth of the community.  The SOC will provide benchmarks that consider risks and demands for service against available resources.  This combination of data will define MFD's performance expectations, assist in evaluating performance, identify gaps, and guide service improvements.

An important outcome with establishing a SOC is to obtain Council's understanding of the various risk factors and the endorsement of the service levels and response time benchmarks. This provides the Fire Chief with the basis for a business plan and accountability framework that should be measured to balance available resources and levels of service that is affordable, acceptable, and appropriate for the citizens of Morinville.

> **Observation #2:** *MFD does not have an established Standards of Cover policy that provides a comprehensive series of benchmarks that define an affordable, acceptable, and appropriate level of service for the Town of Morinville.*
>
> **Recommendation #2: Develop a Standards of Cover policy defining service levels for Morinville**
>
> *Suggested completion: 0-36 months*
>
> *It is recommended the MFD undertake a comprehensive risk analysis of the community and develop a Standard of Cover (SOC) to effectively manage risks. The SOC is used to establish performance benchmarks for existing levels of service, while providing opportunities for continuous improvement at the same time. This would also provide a well-articulated description of services to be provided to the community with the full understanding and endorsement of Morinville Council.*
>
> *The benefits of completing an SOC will ensure that MFD has a clear understanding of the scope of overall risk for the community while enabling them to identify the resources and response capabilities necessary to adequately address those risks. The SOC will further ensure MFD has a safe and effective response force for all emergencies including fire suppression, emergency medical services and specialized response situations.*

## 3.4.1    Industrial and Commercial Activities

Industrial and commercial buildings pose challenges to emergency services because of the size of the facilities and the amount of personnel on site. Although both the Alberta building and fire codes address fire suppression requirements for each classification, these properties can be taxing for an emergency response as they require substantially more resources, specifically, more personnel, apparatus, and water. Morinville has an atypical mix of light and medium industrial and commercial activities for a town of less than 10,000. MFD will be overwhelmed by any event occurring at an industrial site if the fire/emergency has progressed beyond the point of origin. Morinville is a member of the Capital Regional Emergency Preparedness Partnership (CREPP) agreement that pools regional resources and responses to major events. In a major event, MFD would be the sole response for the first 20 minutes to 45 minutes before resources from CREPP (such as Sturgeon County, St. Albert or Edmonton) could arrive on scene.

## 3.4.2    Transportation Corridors

There are two main transportation corridors that pass within Morinville - Hwy 2 along the west side of the community and 2 CN Rail lines that intersect through the community – east/west and north/south. Estimates obtained from CN Rail indicate 2 trains every 24 hours. These trains transport large volume commodities such as dangerous goods. In addition; commercial road traffic also passes directly through the community along 100 Avenue. These two systems also support the local economy and provide the principal

thoroughfare for domestic, industrial, and commercial transportation that link eastern and western Canada.

### 3.4.3    Wildland Urban Interface

Wildland urban interface has become an emerging issue in communities where large amounts of vegetation (fuel loads) are present.  This concern requires considering the need for adequate water distribution, construction setbacks from vegetation and wildland fire training.  Response statistics for wildfires are relatively low in Morinville with 22 outside fires occurring since 2014. Outside fires to Sturgeon County where MFD responded were 125 during the same period.

### 3.4.4    Limitations of a Paid-On-Call Fire Service

MFD utilizes a POC fire service delivery model.  During the interviews with the Chief Officers and staff it became very apparent that MFD has a very professional and committed team.  The limitations of a POC service as discussed in Section 4 include that many of the paid-on-call firefighters are employed outside of Morinville, and are somewhat limited in their ability to leave their place of employment to respond for MFD.  There are several options to address the staffing shortfall during normal weekday work hours these options include the following three are considered the most viable for consideration:

*Full-time weekday staff*

*Establish a full-time response level for weekdays by hiring 4 qualified journeyperson firefighters.  This would provide an effective initial response of 3 firefighters and 1 Officer for the initial response. The fourth position provides redundancy for absences and the staffing level to maintain 3 on duty.*

*Expand Hall Coordinator Program*

*Increase the current Hall Coordinator program from 1 available POC per day to 3 POCs per day for normal weekday work hours.  Currently 1 POC has the opportunity, if available to work as the Hall Coordinator. The Hall Coordinator receives a flat rate of $100 per day. This option would see 3 available POCs working each day as Hall Coordinators and the initial response with 1 Officer*

*Research WEP Program*

*Investigate the viability of hosting a Work Experience Program (WEP) for 5 individuals pursuing firefighting as a career.  The WEP program provides an excellent opportunity to have additional trained firefighters available for immediate response, 24 hours a day 7 days a week.  This program provides a one year practicum for journeyperson firefighters where they receive free accommodations in exchange for work experience, additional training and a letter of reference upon completion of the program.  WEPs are paid when they respond to emergencies only.  Other fire departments such as Hinton (AB), Big White (BC) and Sun Peaks (BC) have WEP firefighters.  Attached as Appendix D, is a 2018 overview presentation from Big White's WEP that has been very successful for 17 years*

*and stands as the model for others to emulate. It is acknowledged that this program will require costs for accommodations until the proposed Fire Station renovations are completed and additional staff time to manage this program*

It is important to note that each of these options provides the capacity to address challenges such as Safety Codes Fire Inspections, pre-fire plans, enhanced public education and operational requirements including an effective initial response for calls during weekdays.

*Table 6: WEP Program Advantages and Disadvantages*

| Option | Advantages | Disadvantages |
|---|---|---|
| Four full-time weekday staffing | • Effective weekday response<br>• Staffing capacity to address safety codes, pre-plans, public education etc. | • Cost is estimated to be $450k per year including fringe costs |
| Expand Hall Coordinator | • Effective weekday response<br>• Staffing capacity to address safety codes, pre-plans, public education etc.<br>• Cost is estimated to be $75K per year and does not include additional POCs to sustain a 3 member Hall Coordinator schedule | • Increases work/life balance challenges for POCs<br>• Ongoing administrative/management challenges to maintain schedule of available POCs<br>• POCs staffing level will need to be increased in order to consistently have 3 available POCs for weekdays. |
| WEP | • Effective weekday response<br>• Staffing capacity to address safety codes, pre-plans, public education etc. | • Cost is estimated to be $120k per year<br>• Town provides accommodations for WEPs<br>• Increase in administrative work to maintain the program |

> ***Observation #3:*** *Discussion with the Fire Chief indicates that staffing levels available to respond during normal weekday work hours is a significant challenge.*
>
> > ***Recommendation #3: Fire Chief to research the weekday staffing challenge and provide Council with preferred option(s) for their consideration***
> >
> > ***Suggested completion: 0-36 months***
> >
> > *There are several options to address the staffing shortfall during normal weekday work hours. The options that are considered the most viable for consideration:*
> >
> > - *Establish 4 full-time firefighter positions for weekdays*
> > - *Expand Hall Coordinator's program*
> > - *Establish the Work Experience Program (WEP)*
> >
> > *It is important to note that each of these options provides the capacity to address challenges such as Safety Codes Fire Inspections, pre-fire plans, enhanced public education and operational requirements including an effective initial response for calls during weekdays. An analysis of these options is provided in Section 3.4.4., Limitations of a Paid-On-Call- Fire Service, Page 19*

## 3.4.5    Responses into Sturgeon County

MFD has an agreement with Sturgeon County to respond into the County when required. The challenge with this is when MFD responds outside of the Morinville, it may leave the community vulnerable in response to other incidents.  A review of the 5-year average reasons statistics indicated higher responses into the County compared to Town calls.

There is a significant draw on MFD resources for response to emergency calls into Sturgeon County, with a 52% average over the 2014-2018 time periods.  The years of 2017, 2018 and 2019 are showing a shift to a higher percentage of Town calls compared to County calls.

Over the last 20 months an adjustment to the County's response area for MFD, and the increase in town calls has changed the averages to less than 50% County responses. The current agreement with the County provides; response vehicles, station garaging, Town vehicle response rates, annual PPE contribution, administrative contribution to cover standby costs and wages for the responding staff (See Appendix E Sturgeon County Agreement).

***Observation #4:*** *Over the past 5 years, MFD has been dispatched to over 50% of their total call volume outside of Morinville into Sturgeon County. It is acknowledged that changes in the MFD County response zone and increase in Town calls has changed this over the past 20 months. The growth projections for Morinville combined with the limitations of a volunteer service may create challenges in the future for MFD with responses into the County and result in a system shortfall. As such, a detailed review of the agreement is considered strategically critical.*

***Recommendation #4: Review response and compensation agreement with Sturgeon County***

***Suggested completion: 36-48 months***

*It is recommended the Fire Chief conduct an impact analysis of the County's call volume to include the total time, number of staff and sequential calls for service while deployed to emergencies. The County pays Morinville for these responses however; a comprehensive review of the agreement should be undertaken that includes the Fire Chief's impact analysis from an operational perspective. In addition, a detailed financial analysis should be conducted to determine if the Town is being adequately compensated for the services provided to the County. This review should include considerations such as base rate for 24/7 services, administrative overhead, proportional costs based upon usage, and provide Morinville with a cost benefit analysis.*

# SECTION 4
# RESPONSE STATISTICS AND PERFORMANCE STANDARDS

## 4.1    Response and Service Categories

Response and Service Categories provide a method of capturing the diverse types of emergencies and service type responses requested of the fire service.  These response/service categories, if too broad, make it difficult for the Fire Chief to determine trends or evaluate risks. For example, the fire suppression category encompasses all types of fire related responses.  If this category is further expanded to identify responses such as kitchen or stove-top fires, chimney fires, minor fires (i.e. dumpster fires), the Fire Chief could develop specific prevention programs that target the recurring types such as cooking safety or promote chimney cleaning and maintenance as part of the public education program.

Capturing accurate time stamps for each response is a necessity to allow for the Fire Chief to analyse the actual performance criteria against required standards whether those by NFPA or those set by the jurisdiction in their Standard of Cover or similar approved document. It is common practice to capture important benchmarks achieved on the fire scene as well as other emergency scenes.  Morinville dispatch services are provided through the Parkland County Emergency Communications Centre utilizing the Priority Dispatch System with specific protocol determinants for each type of emergency received.  MFD response data is initially collected by Parkland County and forwarded to the Morinville Fire Chief when requested.

Parkland County Emergency Dispatch Services data reviewed detailed specific call-type determinants that break down broad call types to much defined sub-determinants.   The purpose of defining these calls to such fine detail is to ensure proper resources are sent for each call request.  It is important to capture these specific codes and develop them into useful data that can assist the Fire Chief in identifying trends, risks, resource management, and training requirements.

The following table captures the different code types within the supplied MFD data reports

*Table 7: Incident Types (2014-2018)*

| MFD Current Emergency Calls by Type | |
|---|---|
| Medical Aid Assistance with AHS | Mutual Aid/Assist Outside Agency |
| Fire Emergency | Structure Fire<br>Vehicle Fire<br>Outside Fire |
| Motor Vehicle Incidents<br>Incidents involving railway | MVI/Train Derailment |
| Rescue | Citizen Assist/Rescue |
| Service | Alarms<br>Smoke Fire Investigation |
| Other | Gas Leak/Odour<br>Hazmat<br>Electrical Hazard<br>Explosion |

The following table captures the different code types for MFD as provided by Parkland County

*Table 8: Parkland Emergency Communications Centre Determinants*

| Emergency Calls by Type | |
|---|---|
| EMS | Mutual Aid to Incident (Multiple Units Cold)<br>Mutual Aid to Incident (Single Unit – Code Hot)<br>Mutual Aid to Incident (Multiple Units Hot) |
| Fire Emergency | Residential (Single)<br>Non-Dwelling Building/Structure (Shed, Garage)<br>High Rise<br>Commercial/Industrial Building<br>Extinguished Fire<br>Small Outside Fire<br>Small Brush/Grass Fire<br>Wildland Fire<br>Large Brush/Grass Fire<br>Large Outside Fire<br>Controlled Burn<br>Light Smoke<br>Odor of Smoke<br>Heavy Smoke |

| Emergency Calls by Type | |
|---|---|
| | Appliance (Contained) |
| | Extinguished Fire |
| | High Life Fire |
| | Chimney |
| | Large non-dwelling Building/Structure (Barn/Storage Building) |
| | Small non-dwelling Building/Structure (Barn/Storage Building) |
| | Building Structure over Water |
| | Commercial/Industrial Building with Hazardous Materials |
| | Mobile Home, House, Trailer, Portable Office |
| | Vehicle Fire (Extinguished) |
| | Vehicle Fire |
| | Vehicle Fire Threatening Non-Structure Object |
| | Threatened Building Structure |
| | Commercial Vehicle |
| | Large Fuel/Fire Load Vehicle |
| | Agricultural/Farm/Excavation Machinery |
| Motor Vehicle Incidents<br><br>Incidents involving railway | Collision/Derailment involving Vehicles |
| | High Occupancy Vehicle (High Mechanism) |
| | High Mechanism |
| | Multi-Vehicle Pile-up |
| | Pinned (Trapped) Victim |
| | Vehicle vs Pedestrian/bicycle/motorcycle |
| | Vehicle vs Building |
| | Unstable Vehicle |
| | Vehicle Blocking Traffic (No Injuries and No hazard) |
| | No Injuries and No Hazard |
| | Other Vehicle Explosion |
| Rescue | Entrapment (Un-confirmed) |
| | Entrapment (Confirmed) |
| | Elevator Malfunction – Occupants Inside |
| | Entrapment (Peripheral Only) |
| | Ice Rescue |
| | Inland Water Rescue |
| Service | Unknown Situation (Investigation/Call Box) |
| | Residential (Multiple)Locked In/Out of Building (Non-medical Assistance) |
| | Citizen Assist (Non-medical Assistance) |
| | Animal Rescue |
| | Locked in Vehicle |
| | Water Problem with Electrical Hazard |

| Emergency Calls by Type | |
|---|---|
| | Electrical Arching |
| | Wires Down with No smoke or Arching |
| | Electrical Odor |
| | Unknown Situation (Investigation) |
| | Electrical Hazard with or Near Water |
| | Sewer Drain |
| | Outside Residential Line |
| | Outside Tank <5 Gals/20 Litres |
| | In or Near Waterway |
| | Dry Dock/ On Land |
| Other | High Life Hazard |
| | Fuel Odor |
| | Uncontained Large Spill |
| | Contained Large Spill |
| | Uncontained Hazmat |
| | Uncontained Illegal Drug Lab |
| | Transformer (Wire to Pole) |
| | No Injuries with Hazard |
| | Injuries |
| | Unknown Situation/Other Codes Not Applicable |
| | Fuel/Fluid Leak |

*Observation #5:* MFD's current response categories do not provide the essential detail required for the Fire Chief to adequately identify trends and mitigation/prevention strategies. Parkland County Emergency Communications Centre has the capability to provide detailed and specific call-type determinants that break down broad call types to more defined sub-determinants. This level of data is critical for the Fire Chief to determine trends and focus areas for mitigation and/or prevention measures strategies.

*Recommendation #5: Establish a more detailed category of responses to identify trends and mitigation strategies*

*Suggested completion: 0-36 months*

*It is recommended that the Fire Chief establish a more detailed inventory of response categories in order to identify trends and establish mitigation/prevention strategies. It is further recommended that the Fire Chief on a recurring basis provides a summary of this data to the Town's Senior Leadership Team and Council.*

## 4.2    Industry Standards

The most widely accepted standards for the fire service are from the National Fire Protection Association (NFPA).  Several decades of research have resulted in NFPA establishing industry benchmarks for operation and firefighter safety.  The use of industry standards, such as NFPA, does not limit a local government's flexibility to develop levels of service based upon local conditions and economic realities.  Rather, the use of these standards as a guide, along with Alberta's HIRF requirements, Safety Codes Legislation and the Alberta Firefighter Code of Practice can allow MFD to establish levels of service that optimize service delivery within its fire service budget requisitions while maintaining firefighter and public safety.

NFPA has done considerable research in selecting the recommended standards and ensuring they reflect the primary value of life-safety in emergency response.  The NFPA's Standard 1720: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer or Paid-On-Call Fire Departments provide clear performance standards for departments to ensure effective measurement and reporting of activities.

Alternatively, most Canadian municipalities choose to develop a performance standard based on their specific risk factors, organizational capacity and economic conditions.  This type of performance standard is acceptable as there is no legislated or regulated obligation for a community to have a fire service in Alberta.  In this case, the responsibility to understand community expectations and to determine an appropriate level of investment in fire service rests with Morinville's Mayor and Council.

The NFPA sets standards for intervention time, and although these are not requirements, they are widely accepted as industry best practices.  They therefore provide a good standard by which departments can measure their performance and set targets.  NFPA's Standard 1720: provides a basis to evaluate the MFD's service effectiveness.  The table below is an excerpt from NFPA Standard 1720 that identifies the recommended minimum staff to respond (ERF) and response time based upon demand zone (fire protection area) and demographics.

To comply with NFPA 1720, this table shall be used by the AHJ to determine staffing and response time objectives for structural firefighting, based on a low-hazard occupancy such as a 2000 ft$^2$ (186 m$^2$), two-story, single-family home without basement and exposures and the percentage accomplishment of those objectives for reporting purposes as required.

*Table 9: Staffing and Response Time*

| Demand Zone | Demographics | Minimum Staff to Respond | Response Time (minutes) | Meets Objective (%) |
|---|---|---|---|---|
| Urban Area | >1000 people/mi$^2$ | 15 | 9 | 90 |
| Suburban Area | 500-1000 people/mi$^2$ | 10 | 10 | 80 |
| Rural Area | <500 people/mi$^2$ | 6 | 14 | 80 |
| Remote Area | Travel distance >8 mi | 4 | Directly dependent on travel distance | |
| Special Risks | Determined by AHJ | Determined by AHJ based on risk | AHJ | |

- *A jurisdiction can have more than one demand zone*
- *Minimum staffing includes members responding from the AHJs department and automatic aid*
- *Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table*

This table also includes a percentile objective for POC services to meet the recommended standards. In the case of urban or suburban areas, the objective would be to respond to all calls for service 90 % and 80% of the time within 9 and 10 minutes, respectively.

Based upon NFPA 1720 (Table 9 above), Morinville would be categorized as Urban area with a recommended response/travel time of 9 minutes from notification and 15 firefighters in 90% of all emergencies within the town boundaries.

## 4.2.1 Intervention Time

Intervention time is defined as the time between the fire department receiving notification of an emergency and commencing assistance at the scene of the emergency. Increased intervention time can have two important impacts on a landowner:

- Decreased survivability for trapped victims
- Increased loss in the event of an emergency
- Building design restrictions
- Higher property insurance premiums

*Table 10: Intervention Time Defined*

| Intervention Time Urban: Population >1000 people/mi$^2$ | | | | | |
|---|---|---|---|---|---|
| **Time Values** ← | | | | | → |
| **Notification** | | **Intervention Time** | | | |
| Discovery | Emergency Call | Enroute Time | | | Set-up |
| | | Dispatch Time (Call Handling) | Assembly or Chute Time | Total Response (Including Travel) | |
| Time Unknown | | Included | Included | 540 sec @ 90% | 120 sec |
| | | | Min. Staffing | | |
| | | | 15 | | |
| *Time indirectly manageable* | | *Time directly manageable* | | | |
| ← | | **Reflex time** | | | → |

Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Upon assembling the necessary resources at the emergency scene, the fire department shall have the capability to safely commence an initial attack within 2 minutes 90 percent of the time.

**Discovery:** This is the time between the start of the emergency and when a person or an engineered system has detected the incident.

**Emergency Call:** This is the period between discovery and the actual notification of emergency services. The initial call is taken at the Parkland Emergency Communications Centre for MFD.

**Dispatch Time/Notification:** This is the time required to extract the necessary information from the caller to allow the proper response to be initiated. The dispatcher identifies the correct emergency location and initiates the dispatch by paging the MFD.

**Assembly (Chute) and Travel Time:** This is the time from when Dispatch notifies the firefighters by pager, until the first vehicle leaves the station and arrives on scene. NFPA 1720 establishes that response time begins upon completion of the dispatch notification and ends at the time interval shown in Table 8 and when the assigned vehicle arrives on scene.

Morinville's population density would be categorized as urban; therefore, the response system capacity would be a minimum of 15 firefighters arriving within 9 minutes in 90 percent of all calls for service. Assembly or Chute time can be quite significant for a POC fire service. Firefighters must be available and able to quickly respond from their residence or place of employment. Many factors add to the length of time it requires to arrive safely at the fire station. MFD requires that a minimum of 6 firefighters, including an Officer and trained operator be on board their responding apparatus. Once a vehicle leaves the station, it must safely negotiate the best route between that point and the location of the emergency.

**Setup Time:** This is the time it takes (on site) to evaluate the necessary actions, position the required resources, and commence the intervention. In the case of a fire, completing size-up, assigning the necessary tasks and deploying resources can provide delays on scene. A well-trained crew can minimize these delays while providing a safe, successful response. The recommended standard for this process is 2 minutes.

The most variable portion of the total intervention time is the response travel time, which is primarily a function of the distance from the station to the incident, but is also influenced by several other factors, including but not limited to:

- Size of the response zone
- Distance to the emergency
- Layout and footprint of the community (route widths and alternatives)
- Impediments, such as weather or time of day (traffic congestion)
- Transportation system (including roadways, bridges, underpasses, overpasses, railway, major highways, construction road surface, detours, etc.).

## 4.2.2    Effective Response Force (ERF)

In addition to the call volume statistics for MFD, an analysis of the ERF was conducted. The initial response to an incident is currently averaging 8.5 firefighters. MFD does not deploy an apparatus until it is properly staffed with a minimum of four firefighters (including a qualified Officer and qualified Operator).

However, consideration should be taken for each type of call for optimal deployment of staff and apparatus utilizing a critical task analysis. An example of a critical task analysis which indicates response protocols including staffing levels for the various emergencies is included in Section 6.4 (Page 76). Also attached as Appendix F are the event protocols for the Town and County. MFD's current practice does not limit the number of firefighters responding. Discussion with the Fire Chief indicates that for minor responses, such as medical first response can have as many as 10-12 firefighters responding. Restricting the numbers of POC firefighters that respond in order to optimize the efficiency and effectiveness can have a negative impact on the POC staff. The primary reason for joining MFD is to respond to emergencies.

Development of the MFD critical task protocol needs to consider this challenge and balance the interests of the members. Many POC departments will send a lesser complement of firefighters to bring their assembly (chute) time down. This concept is risky for both the firefighters and the persons and property they are protecting.

NFPA 1720 recommends for POC fire services in an urban area to have an ERF of 15 firefighters arriving on scene within 9 minutes of notification in 90% of all calls for service. Average response time (Town and County) is 11 minutes and 40 seconds with an average ERF of 8 firefighters arriving on scene and averaging an additional 13 firefighters available to respond. This is deemed to be a response system shortfall that needs to be address. The recommendation to implement a weekday staffing option should greatly enhance the ERF

and response system capacity.  A one-year (2018) sample of the average number of MFD firefighters responding to both Town and County calls was supplied by MFD:

*Table 11: Call Types 2014-2018*

| 2018 | Town of Morinville | Sturgeon County |
|---|---|---|
| Average Number of Firefighters On-scene | 8.87 | 7.94 |
| Average Number of Staff Available to Respond | 14.84 | 14.48 |

**Observation #6:** *The event/response protocols for the town do not include a critical task analysis that optimizes the deployment of staff (ERF) for the various call types.*

**Recommendation #6:  MFD Administration conduct a critical task assessment on the types of calls typically encountered to develop an effective resource management protocol for both apparatus and staff**

**Suggested completion: 36-48 months**

*It is recommended that a development of a resource management protocol will assist in ensuring proper types of apparatus with optimal number of firefighters forming an effective company on each are dispatched given the critical tasks anticipated on each type of call.  Example: Residential house fire with the NFPA recommended staffing to achieve 15 firefighters on scene within nine minutes (90% of the time).  As the community of Morinville grows, the department needs to maintain a balance between the number of trained and experienced members with newer inexperienced members. The goal is to achieve a balance between full-time/fully trained members with inexperience/recruit members. The addition of full-time staff recommended in this master plan can strengthen the use of POC by ensuring a level of experience and training.*

## 4.2.3    Firefighter Safety and Code of Practice

In 2006, the Alberta Municipal Affairs and Housing, Alberta Fire Commissioner's Office and Employment, Immigration and Industry Workplace Health and Safety Ministry staff developed an information bulletin that clarified the responsibilities of an employer in providing a safe work environment for emergency operations and fire service.   This document explains several areas of the Occupational Health and Safety Code of Alberta and the expectations for a municipality or employer with respect to setting a clear understanding of what fire services will be provided and to what standard.

The Government of Alberta has prescribed minimum standards for fire service with regards to Occupational Health and Safety. Part 2 in the code outlines the planning process to ensure safety for firefighters and efficiency of operation.

*Part 2: Hazard Assessment, Elimination and Control*

> *(1) Each employer must determine exactly what emergency service(s) the fire department will be authorized to provide and identify the level or standard to which each service will be performed. This includes response to structural fires, wildland fires, and various rescue situations including technical rescue, dangerous goods and chemical, biological, radiological and nuclear (CBRN) incidents among others.*

> *(2) Once these decisions have been made, this service level determination is usually committed to writing in the form of a bylaw, policy or guideline. The employer must then clearly communicate to firefighters what is expected from them as workers when responses are made. The means of communicating and maintaining this information is through the collection of guidelines, (commonly referred to as standard operating procedures, or guidelines (SOPs or SOGs) and policies which describe the authorized activities of the fire service and how the activities are to be performed as required by (1) above. These documents form the basis of the written plan.*

## 4.2.4 Alberta Building Code Limiting Distance and Fire Department Response (HIRF) Requirements

As part of its commitment to addressing HIRF requirements in Alberta, the province amended its building codes to address:

- Make homes safer from the spread of fire
- Provide more time for occupants to escape
- Provide appropriate time for firefighters to respond when there is a fire

High-intensity residential fires involve rapid heat release and fire spread beyond the point of origin that usually involved adjacent buildings (defined by the HIRF Working Group). Typically, these fires include early exposure to large amounts of combustible materials. HIRFs can occur in any of the following groupings:

- Occupied residential buildings
- Unoccupied residential buildings (under construction)
- A mix of occupied and under-construction residential buildings

The intent behind the requirement is that when fire suppression staff cannot respond to a fire in less than a ten-minute total response time, buildings must be located farther away from the property line or provided with additional fire protection, such as non-combustible siding, no side-yard windows and sprinkler systems. Additional fire protection measures slow the spread of fire by either containing it or suppressing it and giving the fire

department additional time to arrive before the fire spreads out of control or becomes a high intensity residential fire.

The Alberta Building Code specifies a '10 minute' response time must be achieved for 90 percent of the incidents. The definition of 'total' response time is the time from when a fire department receives the emergency call to the time when a fire department vehicle is capable of beginning fire suppression activities (typically a pumper truck with hoses and a crew) arrives at the scene of incident.

Additionally, where a fire department is unable to respond to a fire within 10 minutes, more than 90% of the time buildings must have greater protection from exposure fires and not necessarily require increasing the physical distance of structures from each other and/or the property line. This may include rated fire resistive design for exposed walls and unprotected openings as well as residential sprinkler installation. This will have a direct impact on Morinville's MDP and ASPs should the growth projections be realized.

> ***Observation #7:*** *The theoretical 10-minute response Map 4 in Section 4.6 (Page 47) depicts the areas for community development in Morinville. The majority of these growth areas are in the south sector of town. In addition to being outside the 10-minute HIRF ABC regulation the CN rail corridor creates a potential response area restriction should a train be stopped or travelling through the road access.*
>
> ***Recommendation #7: Conduct a town growth area community development analysis***
>
> ***Suggested completion: 48-60 months***
>
> *It is recommended that the Town of Morinville Planning and Development Division conduct a detailed analysis of the areas identified for future growth. This analysis must consider the HIRF requirements, MFD's actual response capacity, and the railway restriction. It is anticipated that the town will have options such as:*
>
> - *Construction of a second fire hall south of the railway corridor in order to meet the HIRF and eliminate the risk of a train obstructing the emergency vehicle response, and*
> - *All future residential developments in Morinville be designed in accordance with the ABC or provided with additional fire protection, such as non-combustible siding, no side-yard windows and sprinkler systems.*

Morinville does have a Fire Service Event Protocol Policy that indicates what units will respond to the various situations, it could be enhanced by providing measurable targets for performance and the required ERF. Key points relevant to levels of service for MFD are the current staffing resources and understanding limitations of resources needed to safely and effectively manage the event. The Alberta Code of Practice for Firefighters clearly outlines the requirements that firefighters must have appropriate policies and guidelines as to what resources will be deployed to an emergency incident. The following excerpt applies:

*(3) The guidelines and policies required in (2) must include:*

      *a) Identification of the standard firefighting functions or evolutions expected of firefighters based on the emergency services to be offered, including functions or evolutions that must be performed simultaneously;*

      *b) The minimum number of firefighters required to safely perform each identified firefighting function or evolution;*

      *c) The specific worker safety rules, procedures, first aid, and medical attention services for firefighters to be followed at each type of emergency incident;*

      *d) The number and types of firefighting vehicles, equipment and firefighters required for the initial response to each type of emergency incident to which firefighters might reasonably be expected to respond.  This includes policies or procedures to be followed when minimum staffing or equipment levels cannot be met;*

      *e) A guideline or policy on the minimum training a firefighter must be given before being considered competent to perform certain emergency operation functions identified above;*

      *f) A detailed description of the incident management system to be followed at an emergency incident; and,*

      *g) A detailed description of the personnel accountability system to be used at each emergency incident.*

## 4.3   Response Statistics

Emergency response statistics provide an extremely valuable source of information for several reasons.  A careful and ongoing assessment of current and historic response data will aid MFD Administration in identifying:

- Critical response effectiveness
- Community trends
- Assessing current community risks
- Evaluating the effectiveness and compliance with National and Provincial Codes
- Evaluating the effectiveness and compliance with local bylaws
- Opportunities for preventative programs
- Identify possible efficiencies and deficiencies
- Recommendation for service level standards
- Future resource needs (Operational and Capital)
- Public education

Historical event call data for the period of 2014 - 2019 was analyzed and identified several basic categories of call types for Morinville Fire Department:

- Fires (all categories)
- Fire Alarm Activations

- Emergency Medical Assistance (Mutual Aid)

- Motor Vehicle Incidents (MVI)

- Rescues

- Hazmat (Dangerous Goods)

- Other, i.e. electrical hazard, gas leak/odour, etc.

These categories become the basis for assessing the levels of service by analysing the current community risks and emergency response resource capability to effectively control and mitigate damage to life and property for each type of event.  To obtain an appropriate level of service standard, all stakeholders must understand the risk and be open to recognizing the need for a safe and effective response.

Each type of event requires an identified amount of properly trained and equipped staff to safely and effectively complete necessary tasks, either consecutively or cumulatively in a timely manner.  For this reason, the levels of service link directly to the resource model (Facilities, Equipment and staffing) availability.

To make informed recommendations on what level of service MFD can perform safely and effectively, an evaluation of recent and current response data including event types, response times, and staffing availability of typical daily demands for service was completed.

The importance of capturing accurate and complete data on emergency and other service-related events cannot be under-stated.  With regular analysis of this data, the Administration can be pro-active to the needs of their community.

Response and travel time identified in Section 4.2.1, Page 28 have been further defined as enroute and total response times. These increments are of importance for this analysis and are defined as:

***ENROUTE TIME:*** *The time from the dispatch notification (pager call-out) to the arrival of minimum responders to the Fire Station*
***TOTAL RESPONSE TIME:*** *The time from completion of the dispatch notification that includes enroute and travel time.*

## 4.3.1   Historical Response Data

MFD's emergency call volume in Town has steadily increased over the studied 5 years, while the number of emergency calls to Sturgeon County has decreased over the 5 years.   Since 2014 the MFD response zone for the Sturgeon County has continued to decrease in geographic size.  This may be the reason for the decrease in emergency responses to the County.  Supplemental data for the current year (to August 2019) provided by MFD has shown that this trend is continuing.

Capturing accurate time stamps for each response is a necessity to allow for the Fire Chief to analyse the actual performance criteria against required standards whether those by NFPA or those set by the jurisdiction in their Standard of Cover or similar approved document. It is common practice to capture important benchmarks achieved on the fire scene as well as other emergency scenes.

Dispatch services are the primary contact point for capturing identified benchmarks, as well as an important component of fire ground safety and accountability. Many services require their dispatchers to actively monitor fire ground communications and capture important benchmarks from the fire ground. These benchmarks are then included in the reporting documents for the incident. As well, vital communications that may be missed on the noisy fire ground may be caught by the attentive dispatcher and forwarded to the Incident Commander.

MFD Administration purchased an industry specific records management program and is currently implementing some of the advanced capabilities available. Data provided by MFD included four years of run times for MFD including both Town and County responses detailed in the call types captured in Table 5. As well, MFD is now able to provide supplemental data extracted from their Provincial run reports and provided such for December 2018 to August 2019.

Although the run data reviewed from both Parkland County and MFD was not completely in sync, the differences were not significant and allowed an accurate account of the 2014–2018 MFD performance.

The data provided by Parkland Emergency Dispatch Services was reviewed and contained the following breakdown of performance data for the dates January 1, 2014 to August 20, 2019:

- Total Calls: 677 (Town responses only)
- Average time to complete dispatch: 2 minutes and 5 seconds
- Time for MFD to assemble (chute time): 7 minutes and 5 seconds
-  First MFD apparatus travel time to the scene: 2 minutes and 35 seconds
- Time from MFD notification to on-scene: 9 minutes and 40 seconds
- Of the 677 Town responses, MFD arrived on-scene 471 times, and where cancelled either in station or enroute 206 times

> ***Observation #8:*** *The Parkland County Emergency Communication Centre (ECC) average call processing time is 125 seconds. The Alberta Fire Commissioner's office has deemed* this *call processing time as part of the fire department's receipt of notification when applying the ABC Limiting Distance and Fire Department's 10-minute response regulation. Leading industry practices for Emergency Services Communication Systems NFPA 1221 indicate an optimum call processing time of 79 seconds (call-answered, verification and processing).*
>
> ***Recommendation #8: Enhance fire department receipt of notification protocols***
> ***Suggested completion: 0-36 months***
>
> *It is recommended the Fire Chief working closely with the Parkland ECC develop enhanced receipt of notification protocols that include consistent use of pre-alerts and other procedures that reduces the current 125 seconds fire department notification process.*

A sample of data provided by the MFD Fire Chief for the period of December 7, 2018 to August 25, 2019 utilizing their software program with information gleamed from their Provincial run reports was consistent with the 4.5-year data above. The MFD is starting to take full advantage of many of the opportunities within their purchased software package that were not historically available to them.

271 incident reports:

- Average Dispatch Time 00:02:10
- Average Chute Time 00:07:04
- Average Response Time 00:09:26
- Average Total Time 00:41:25
- Average # of Personnel at scene 8.27
- Average # of Total Personnel 14.12
- Total Personnel Hours 2305 hours 53 minutes
- Average Personnel Hours per incident 8 hours 31 minutes
- Total Dollar Loss $706,000.00 Average reported Dollar Loss $353,000.00 for 2 incidents.
- Total Saved $375,000.00 Average reported Dollar Saved $187,500.00 for 2 incidents

> ***Observation #9:*** *MFD is currently taking advanced training on their records management software to take full advantage of the capabilities for advanced reporting.  This includes essential information such as intervention time increments, staffing levels and total time of the response. For County emergency responses this data can be used to determine the operational and financial impacts for Morinville.*
>
> ***Recommendation #9: Enhanced collection of response data***
>
> ***Suggested completion: 0-36 months***
>
> *It is recommended that MFD fully implements their data collection and records management systems in order to take full advantage of the systems capabilities.*

The following tables are the statistical analysis of the various call types for both the Town and County:

*Table 12: Total Town and County Calls 2014-2018*

| Year | Town | County |
|------|------|--------|
| 2014 | 116  | 167    |
| 2015 | 107  | 202    |
| 2016 | 119  | 124    |
| 2017 | 126  | 103    |
| 2018 | 160  | 121    |

*Table 13: Call Volume by Type Town Responses 2014-2018*

| Call Type | Town | Call Type | Town |
|-----------|------|-----------|------|
| Structure Fire | 41 | Explosion | 2 |
| Vehicle Fire | 10 | Electrical Hazard | 4 |
| Outside Fire | 22 | MVC/Train Derailment | 60 |
| Gas Leak/Odour | 22 | Mutual Aid/Assist Outside Agency | 118 |
| Smoke/Fire Investigate | 8 | Hazmat | 8 |
| Citizen Assist/Rescue | 14 | Alarms | 319 |
|  |  | **Total** | 628 |

*Pie Chart 2: Town Call Volume by Type 2014-2018*



**2014-2018 Town Call Volume by Type**

- Structure Fire
- Vehicle Fire
- Outside Fire
- Gas Leak/ Odour
- Smoke/Fire Investigate
- Citizen Assist/Rescue
- Explosion
- Electrical Hazard
- MVC/Train Derailment
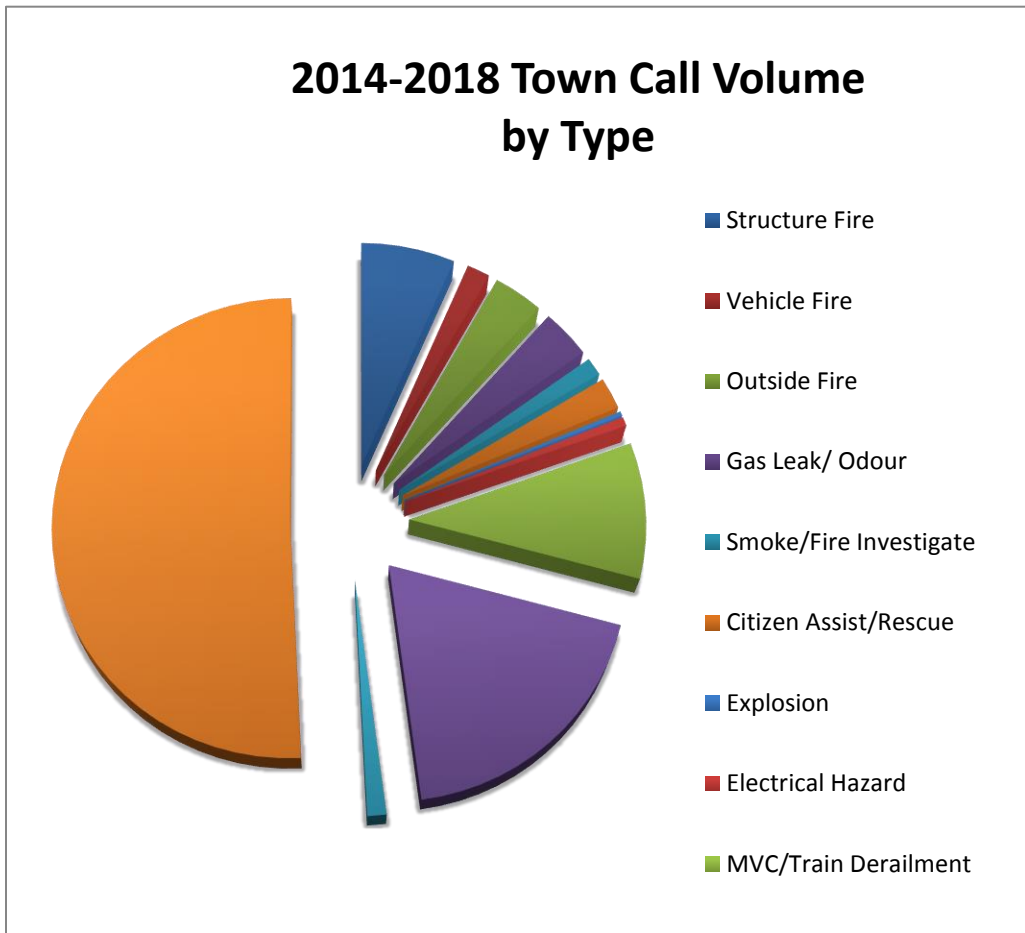
*Table 14: Call Statistics - In Town*

| Type | Year | | | | | |
|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | Total |
| Structure Fire | 6 | 8 | 6 | 6 | 15 | 41 |
| Vehicle Fire | 3 | 4 | 2 | 1 | 0 | 10 |
| Outside Fire | 1 | 8 | 9 | 0 | 4 | 22 |
| Gas Leak/ Odour | 8 | 5 | 3 | 5 | 1 | 22 |
| Smoke/Fire Investigate | 4 | 2 | 0 | 0 | 2 | 8 |
| Citizen Assist/Rescue | 3 | 2 | 1 | 1 | 7 | 14 |
| Explosion | 1 | 0 | 1 | 0 | 0 | 2 |
| Electrical Hazard | 1 | 0 | 0 | 0 | 3 | 4 |
| MVC/Train Derailment | 11 | 13 | 10 | 12 | 14 | 60 |
| Mutual Aid/Assist Outside Agency | 21 | 10 | 27 | 26 | 34 | 118 |
| Hazmat | 1 | 1 | 2 | 2 | 2 | 8 |
| Alarms | 56 | 54 | 58 | 73 | 78 | 319 |
| **Total** | 116 | 107 | 119 | 126 | 160 | 628 |

*Table 15: Call Volume by Type County Responses 2017-2018*

| Call Type | County |
|---|---|
| Structure Fire | 84 |
| Vehicle Fire | 52 |
| Outside Fire | 125 |
| Gas Leak/Odour | 10 |
| Smoke/Fire Investigate | 7 |
| Citizen Assist/Rescue | 4 |
| Explosion | 6 |
| Electrical Hazard | 12 |
| MVC/Train Derailment | 245 |
| Mutual Aid/Assist Outside Agency | 45 |
| Hazmat | 3 |
| Alarms | 124 |
| **Total** | 717 |

*Pie Chart 3: County all Volume by Type 2014-2018*
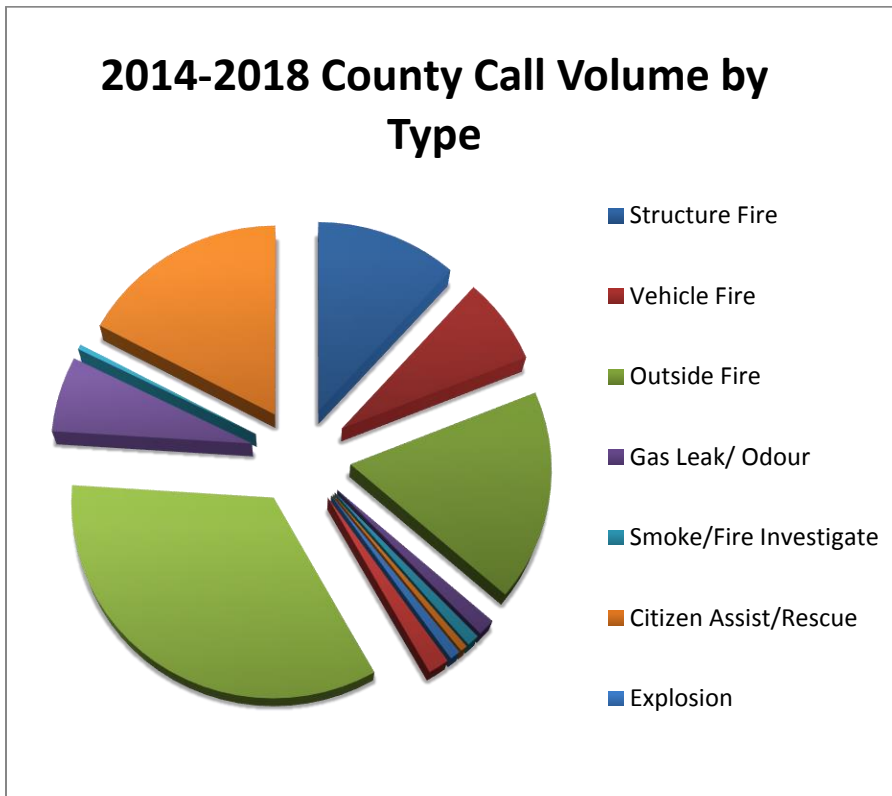


*Table 16: Call Statistics - County*

| Type | Year | | | | | |
|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | Total |
| Structure Fire | 18 | 21 | 16 | 18 | 11 | 84 |
| Vehicle Fire | 10 | 17 | 10 | 5 | 10 | 52 |
| Outside Fire | 30 | 44 | 19 | 13 | 19 | 125 |
| Gas Leak/Odour | 3 | 5 | 1 | 0 | 1 | 10 |
| Smoke/Fire Investigate | 2 | 1 | 3 | 1 | 0 | 7 |
| Citizen Assist/Rescue | 1 | 1 | 1 | 0 | 1 | 4 |
| Explosion | 0 | 1 | 1 | 3 | 1 | 6 |
| Electrical Hazard | 4 | 4 | 0 | 3 | 1 | 12 |
| MVC/Train Derailment | 69 | 67 | 39 | 30 | 40 | 245 |
| Mutual Aid/Assist Outside Agency | 4 | 13 | 10 | 8 | 10 | 45 |
| Hazmat | 0 | 2 | 1 | 0 | 0 | 3 |
| Alarms | 26 | 26 | 23 | 22 | 27 | 124 |
| **Total** | 167 | 202 | 124 | 103 | 121 | 717 |

*Observation #10:* *MFD has been averaging 47% of their Town calls and 17% of their County calls towards Alarms Ringing calls. The Town of Morinville Fire Services Bylaw 4/2015 contains a provision for the cost recovery of False Alarms. The following is an excerpt:*

*Where Fire Services has taken any action what so ever for the purpose of extinguishing a fire or responding to a fire call or incident within or outside the Town of Morinville or for the purpose of preserving life or property from injury or destruction by fire or other incident on land within or outside of the Town of Morinville, including any such action taken by Fire Services on a false alarm, the Fire Chief, may in respect of any costs incurred by Fire Services charge to the person who caused the incident or the owner or occupant of the land/structure/ vehicle in respect of which the action was taken.*

*Recommendation #10: Reduce Alarms Ringing responses*

*Suggested completion: 36-48 months*

*We recommend MFD conduct an in-depth analysis to determine the current trends of false alarms with the view to initiate preventative measures to reduce the occurrence and costs of false alarms. Effective public education, as well as proper enforcement of fees for nuisance alarms, will assist with minimizing unnecessary draw on MFD resources.*

*Observation #11:* *Requests for medical first response and assistance for Alberta Health Services EMS is a valuable service, established by Council and provided by MFD to their community. MFD's has been averaging 18.8% of their Town calls and 6% of their County calls towards Mutual Aid/Assist Outside Agency (medical aid). As mutual aid response requests require the call-in of paid-on-call firefighters, the impact on MFD can be significant if not closely monitored. Interviews with MFD staff have indicated they believe this type of medical first response is extremely important to the community and feels they can contribute significantly to life-threatening calls. The MFD medical first response program is deemed by Behr to be a relatively low cost, highly valued and effective service for Morinville.*

*Recommendation #11: MFD continue to work closely with AHS in the delivery of the Medical First Responder Program (MFR) (Medical First Responder Program)*

*Suggested completion: Ongoing*

*It is recommended that MFD continues to work closely with AHS to ensure their medical first response service is utilized in the most effective and efficient manner. Careful monitoring and communication with AHS are necessary to ensure that requests for service are made within accepted guidelines.*

## 4.4    Annual Reports and Performance Dashboard

The call data that is collected by MFD provides valuable information that can be compiled and analyzed to develop ongoing or annual reports that detail the performance against approved standards.  These can be in the form of written reports and/or dashboards.  This information will assist MFD Administration to make necessary adjustments in their service delivery.  This information can also be provided to Morinville Administration and Council where necessary.

Below is an example of a dashboard report that can be generated utilizing the information captured by their records management software

*Image 2: Emergency Services Dashboard (SAMPLE)[4]*



---
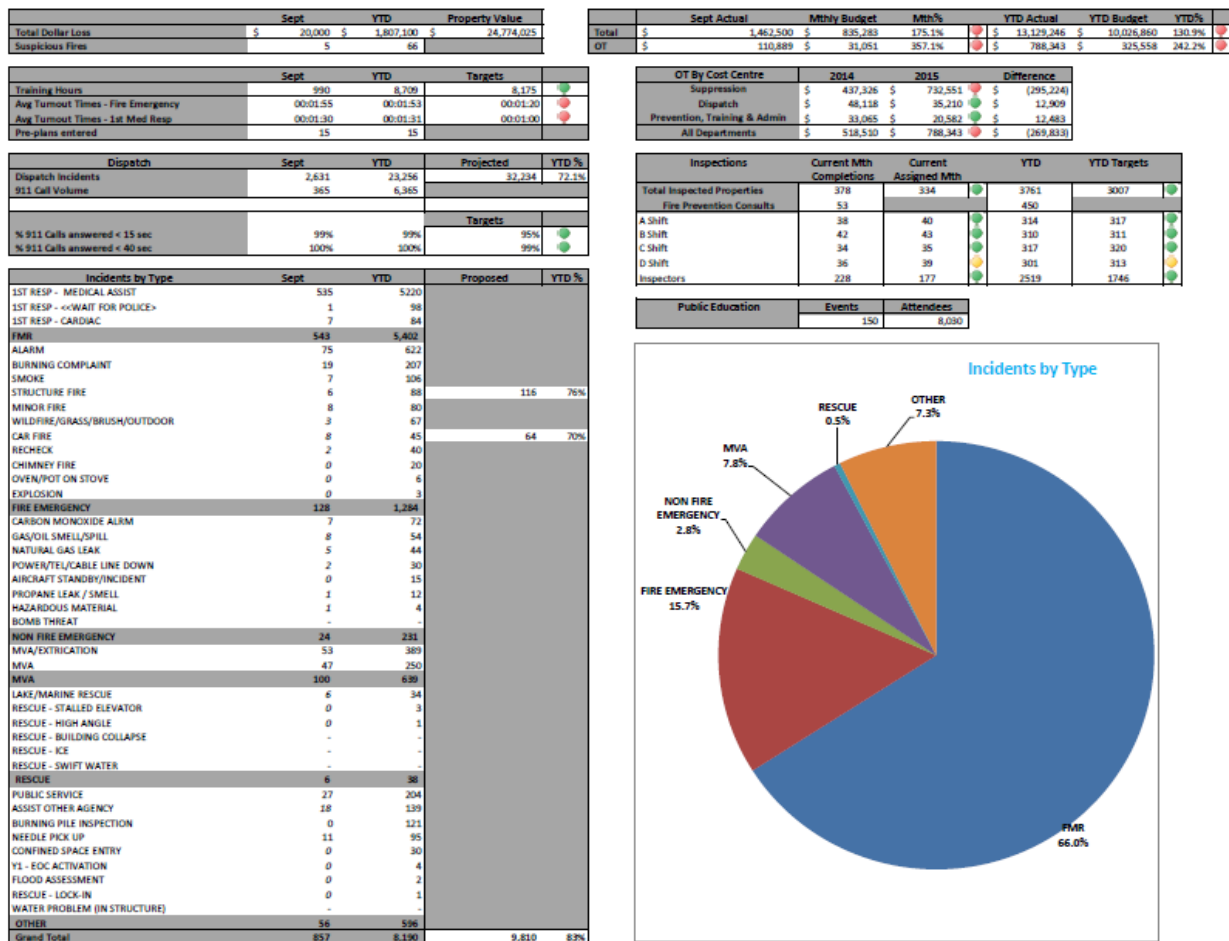
[4] *Reference: Kelowna Fire Department, Sample*

> ***Observation #12:*** *MFD Administration has taken great strides improving the way data is being collected to assist in identifying areas of improvement. The next step is to develop a recurring report such as a dashboard that is reviewed by the Senior Leadership Team (SLT) and Council through the quarterly process.*
>
> ***Recommendation #12: Establish performance target reports and dashboard***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that MFD develop a data reporting process such as a dashboard and/or written report to demonstrate the quarterly or annual performance of MFD against identified objectives.*

## 4.5    Paid-On-Call Firefighters Challenges and Limitations

One trend that is of concern, is the decreasing number of firefighters that are available and respond to initial calls for assistance, and a subsequent decrease in the ERF for these types of emergencies. This may be a result in the limited number of paid-on-call firefighters that are active in the MFD, or the inability to be available to respond when required. This issue is not unique to MFD, as many POC fire departments face the challenge of maintaining an effective POC firefighting complement to consistently meet the demands of a growing community. It is recognized that many of the paid-on-call firefighters are employed out of town and/or are somewhat limited in their ability to leave their place of employment to respond for MFD. The increasing commitment required of paid-on-call firefighters may be a major impediment for those that may already be or wanting to become members of MFD. Legislative requirements for training and certifications have increased significantly over the last number of years for firefighters. In a recent FUS article the following was identified as some of the challenges/limitations of a volunteer or POC emergency response system:

*Volunteerism Down*

*Roughly 80% of fire departments in Canada are staffed by volunteers or paid-on-call responders. That means that when a building is on fire, there will be several extra minutes in total response time as firefighters need to travel from their homes or places of work to the fire hall before suiting up and responding to the fire scene with an engine.*

*In years past, before the digital age, participating as a volunteer on the local fire department was a fun way to be part of the local community. It seems, however, that people's lives have become busier and volunteering on the local fire department is seen more as a second job than a way to be part of the community.*

*This is exacerbated by businesses that historically were very supportive of volunteer fire departments, but that in recent decades have pulled their support. In fact, more and more businesses are advising their employees that they are not allowed to leave while on shift. This may be understandable since businesses are focused on producing their own financial results, which are unlikely to benefit from having employees called away in the middle of shifts, leaving their posts unmanned.*

*There are many factors that have resulted in the downward trend in volunteer firefighting, including location economics. Firefighters often do not live and work in the same town. In Vancouver, for example, few firefighters can afford to live in the city, so they have homes in cities like Coquitlam, Maple Ridge or Surrey, which may result in their place of residence being farther away from the fire station.*

*An interesting side note is that many insurers assume large cities are 100% career fire forces, but this is not the case. More and more cities are looking to reduce their overhead by cutting fire department budgets and fire departments are turning to volunteer or paid on-call models in an effort to maintain some level of fire protection.*

*The biggest factor in reduced volunteerism seems to be apathy. More people are assuming that they do not need to contribute as someone else will. When it comes to public fire protection, however, this can have very serious consequences. A lack of standards for training firefighters has been identified as a serious problem.*

*There are actually a number of standards for training firefighters, but they are expensive and time-consuming to implement. The result is that most communities do not implement them. In fact, a recent study for British Columbia firefighters found it was not economically feasible to train firefighters to the minimum National Fire Protection Association Standard Level 1. For volunteer fire departments, this is a big problem, and for the communities that they serve, there is a significant liability exposure in having emergency responders who are not certified Level 1 firefighters responding to very dangerous incidents on behalf of the community. This is beyond the serious risk to firefighters themselves.[5]*

### 4.5.1    Transition Benchmarks: Composite Fire Department

During the input session with the Town of Morinville Council the emphasis of maintaining a POC service was discussed. The Council values their POC firefighters and the contribution they provide to the community. It was recognized that if the growth projections are realized by Morinville over the next 5 years an enhanced service delivery system may be required. The typical evolution in a fire department is to transition from a POC to a composite service that is a combination of full-time and POC firefighters.

There is a point in the growth of a community where reliance on a paid-on-call firefighting complement alone is insufficient for the actual and potential risks that exist. It is our opinion that Morinville is not yet at this point in their assessed risk factors and growth that would warrant a combination of full-time firefighters supplemented by the existing paid-on-call firefighters. Careful consideration must be taken to ensure the anticipated workload on the POC firefighters force does not lead to burn-out or over tasking their capacity.

As an interim approach, establishing a full-time Fire Officer position along with the preferred weekday firefighter option to assist with the staffing shortfalls is the recommended approach. Having a fire officer with a minimum of 3 firefighters on duty

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[5] *https://www.canadianunderwriter.ca/features/far-from-standard/*

during weekdays combined with a viable paid-on-call force would assist with meeting the intent of NFPA 1720 response time and ERF. This additional staffing capacity would significantly improve the response time requirements for the HIRF requirements. This Fire Officer would also be assigned additional duties with the Safety Codes fire investigation, inspection and public education functions as legislated in the Alberta Safety Codes Act.

Over the next 5 years, a continuous review of the response statistics as identified in this report is crucial in validating the effectiveness of this option in terms of public and firefighter safety.

Should the response statistics over the next five years or less indicate that the responses are not meeting the aspirational standards set by Morinville's Council in the Standards of Cover (previously recommended) additional full-time firefighters would be required.

## 4.6    Response Time Maps

The more strategically located a station is in a community and the more direct the travel routes are between the stations and different parts of the community, theoretically, the lower the response times will be from that fire station. Response times typically refer to the combination of call handling, enroute and response/travel time.

### 4.6.1    Theoretical Response Time

Response travel time is a product of the distance that must be traveled between the station and the incident. The more centrally located a station is in a community and the more direct the travel routes between the stations and different parts of the community, the lower the theoretical response times will be from that fire station. Morinville's fire station is centrally located within the community.

According to the 2016 Census Morinville Fire Protection Local Service Area is 11.15 km$^2$ or 4.31 sq./mi with a population of 9848 (population density of 883.2 km$^2$ or 2,286/sq. miles). Based upon NFPA 1720, this community would be categorized as urban area with a recommended response/travel time of nine minutes from notification. Given the assessed risk factors identified in this review, combined with the available mutual aid, regional resources, and the ABC Limiting Distance and Fire Department Response (HIRF requirement), it was considered prudent to examine the 10-minute suburban response time standard.

The following response maps indicate:

- Map 2: Actual Response Times - MFD response capacity based on the current response system performance as derived from the response statistics.
- Map 3: 10 Minute HIRF Map - ABC Limiting Distance and Fire Department Response
- Map 4: 9 Minute Theoretical Response Map (NFPA 1720 Urban)
- Map 5: 10 Minute Theoretical Response Map (NFPA 1710 Urban)

***Note:*** *NFPA is noted as an industry best practice guideline only, and not a requirement. Theoretical response mapping methodology is available in Appendix G.*

*Map 2: Actual Response Times*



Morinville Fire Department - 11:40 Minute Actual Response
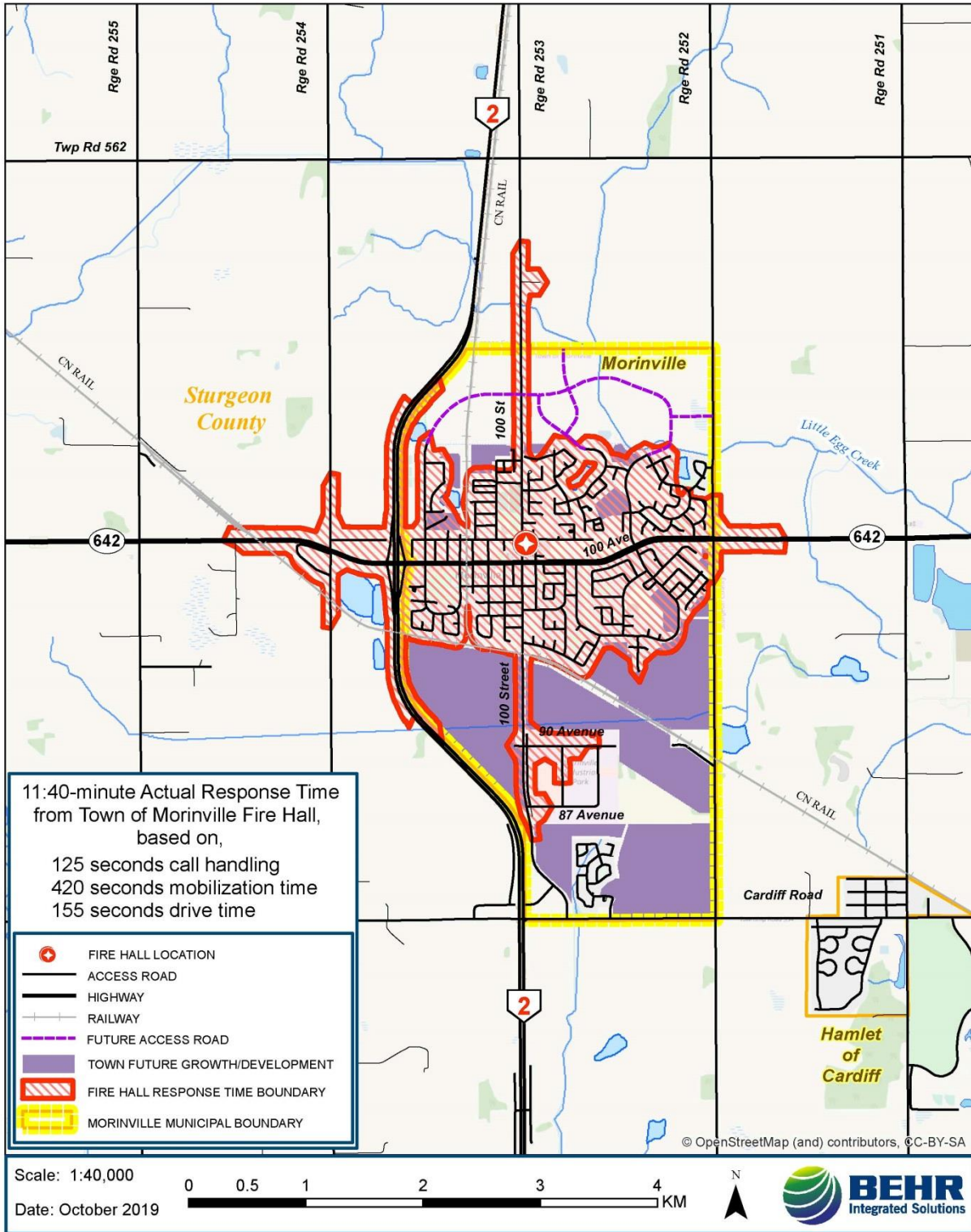
*Map 3: 10 Minute HIRF Map*

## Morinville Fire Department - 10 Minute (HIRF) Building Code Standard



10-minute (HIRF) Building Code Standard Response from Town of Morinville Fire Hall, based on,

125 seconds call handling
410 seconds mobilization time
65 seconds drive time

| | |
|---|---|
| ⊙ | FIRE HALL LOCATION |
| | ACCESS ROAD |
| | HIGHWAY |
| | RAILWAY |
| | FUTURE ACCESS ROAD |
| | TOWN FUTURE GROWTH/DEVELOPMENT |
| | FIRE HALL RESPONSE TIME BOUNDARY |
| | MORINVILLE MUNICIPAL BOUNDARY |

Scale: 1:40,000
Date: October 2019

0   0.5   1   2   3   4 KM

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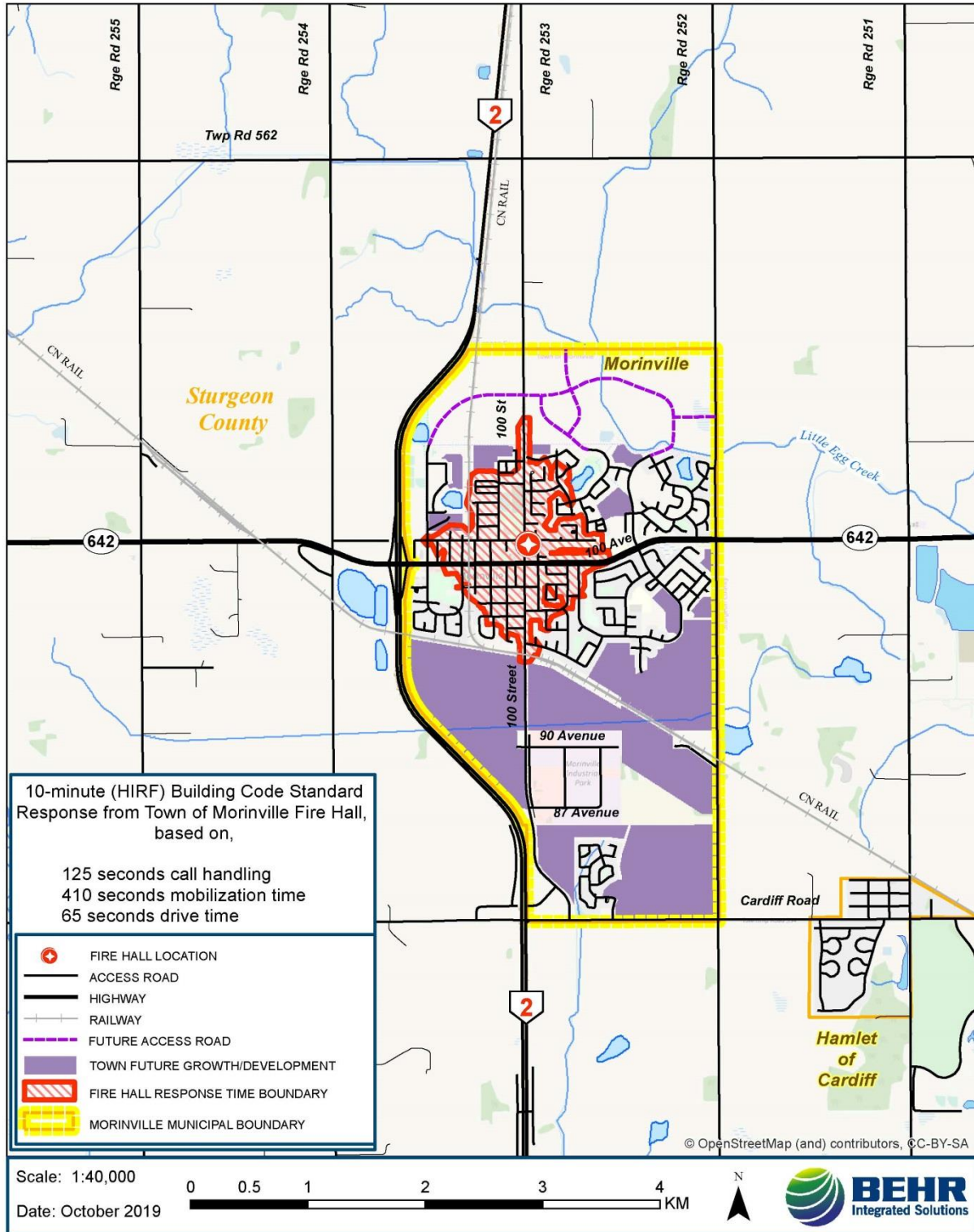
*Map 4: 9 Minute Theoretical Response Map (NFPA 1720 Urban)*



Morinville Fire Department - 9 Minute NFPA 1720 Response
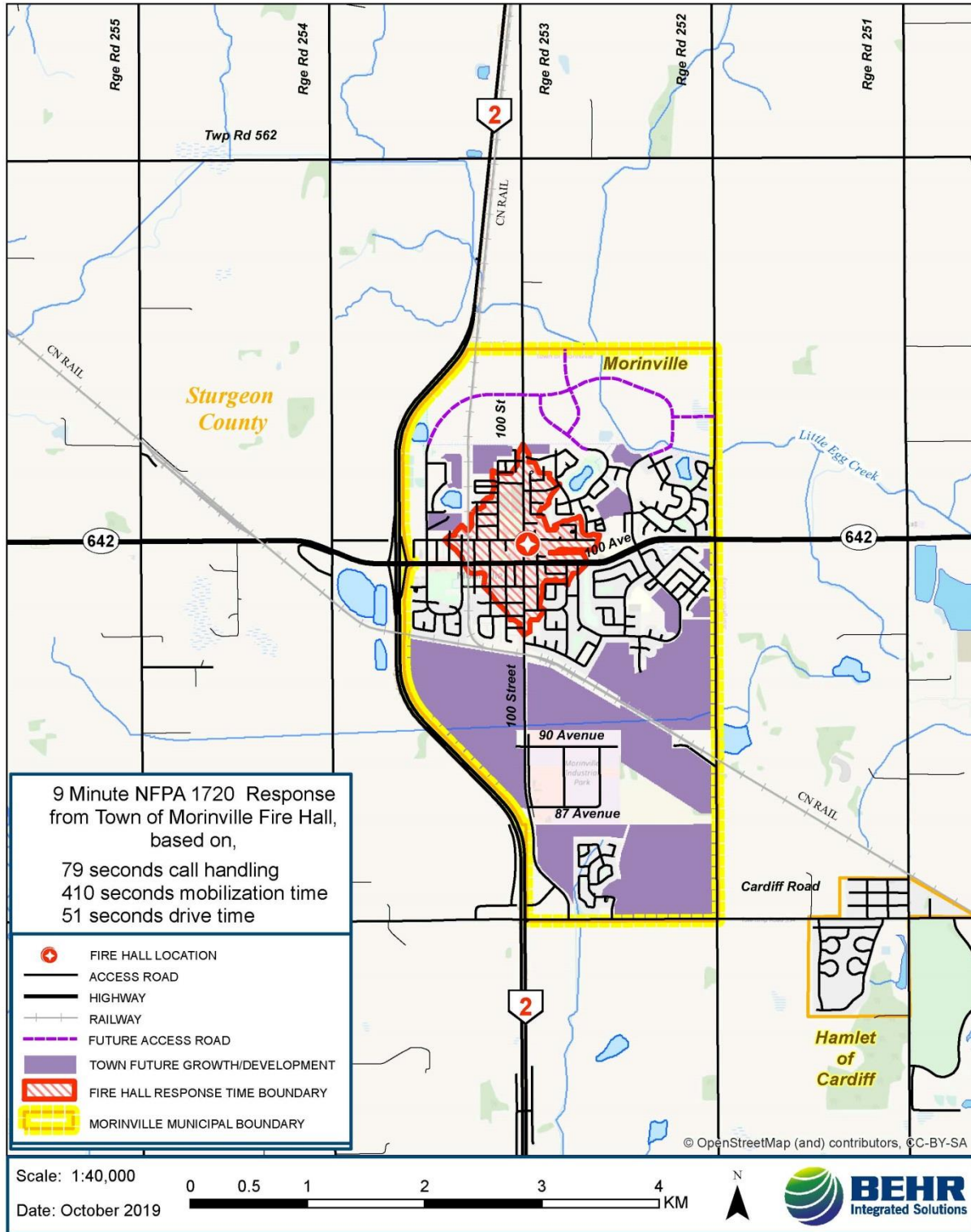
*Map 5: 10 Minute Theoretical Response Map (NFPA 1710 Urban)*

# Morinville Fire Department  -  10 Minute NFPA 1710 Response



10 Minute NFPA 1710 Response
from Town of Morinville Fire Hall,
based on,

79 seconds call handling
80 seconds mobilization time
441 seconds drive time

| | |
|---|---|
| ⊕ | FIRE HALL LOCATION |
| | ACCESS ROAD |
| | HIGHWAY |
| | RAILWAY |
| | FUTURE ACCESS ROAD |
| | TOWN FUTURE GROWTH/DEVELOPMENT |
| | FIRE HALL RESPONSE TIME BOUNDARY |
| | MORINVILLE MUNICIPAL BOUNDARY |

Scale:  1:40,000

Date: October 2019

0   0.5   1   2   3   4 KM

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## 4.7   Emergency Response Deployment System Capabilities

As indicated in Section 4.1 (Page 23), of this report, the response statistics provided do not include the level of data necessary to validate the occurrence of coincidental and sequential responses.  The response data for 2014-2018 does show steady increases of Town responses and decreases of responses for County over the last 20 months.

Based on industry recommended practices (HIRF, NIST[6] and NFPA), MFD's current ERF has the critical task capability to handle one single-family residential fire, provided it has not extended beyond the room of origin.  This capability assumes the minimum initial ERF of 4 (Officer plus three firefighters) is not predisposed at other emergencies such as an EMS call, or responding to Sturgeon County, and that the initial response does not exceed 9 minutes.  The following factors contribute to the response system limitations:

- **MFD is dependent on the response of paid-on-call firefighters**

  As previously identified, the timeframe required to assemble an effective number of qualified firefighters has been and continues to be a challenge for MFD, particularly during weekday daytime hours  This is not to lay blame on any system or individual, but rather focus on the universal challenge facing volunteer or POC fire services in today's society.

  The ability to attract and retain volunteer or POC firefighters will continue to be a challenge for MFD.  The turnover rate of the paid-on-call firefighters has been attributed to the high demands required for training and emergency responses amidst their full-time jobs, family and personal responsibilities.

- **The volume of emergency response dispatches to Sturgeon County**

  On average, MFD is dispatched to approximately just under half of their total call volume to Sturgeon County.  The average time committed to these calls is 1 hour and 15 minutes (based on statistics from January 1, 2018 – August 20, 2019).

  The financial advantage appears to be supportive of this agreement; however, a comprehensive review of the agreement should be undertaken.

- **Coincidental response capacity**

  The MFD has minimal capacity to effectively and safely respond to two or more coincidental or sequential events.  This issue is not unique to MFD and is not considered to be a major concern at this time.

- **There is significant amount of EMS Mutual Aid calls**

  Requests for medical first response and assistance for Alberta Health Services EMS is a valuable service provided by MFD to their community.  Care must be taken to ensure that this requests for this service is within accepted guidelines.

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[6] *https://www.nist.gov/*

# SECTION 5
# DEPARTMENT PROFILE

## 5.1    Department Overview

Morinville Fire Department (MFD) provides essential emergency services to the Town of Morinville and into Sturgeon County, its citizens, and visitors.  Statistics from the 2016 Statistics Canada census show Morinville with a stable population of just less than 10,000 and a land area of 11.34 km². MFD currently responds out of one centrally located firehall that contains its headquarters.  MFD is considered a POC fire service, which relies on minimal full-time staff supported by POC firefighters.

Volunteer or POC fire services have long valued service history with their respective communities throughout North America.  As communities grow and risks increase, there becomes an increased reliance on their fire service, with many facing challenges to provide the necessary fire protection.  This, in turn, forces them to move towards a hybrid fire service model.

Just as most fire services throughout Canada have changed through time, MFD has adapted to the increasing and diverse service needs of the community through specialized training and equipment.  Today's MFD delivers emergency response to much more than the traditional fire response and is considered the fire service's raison d'être, or reason for being.  The services provided by MFD are designed, organized and operated in compliance with Morinville's bylaws, goals and objectives for public safety.  This includes response to motor vehicle collisions, medical first response, wildland urban interface, dangerous goods spills/releases, industrial response, rail, highway and river response.  Along with emergency response, MFD also performs fire inspections, pre-fire planning, public education and fire prevention public service, as well as other charitable activities in the community.

MFD also provides emergency response through a contract arrangement into Sturgeon County, which accounts for almost 50% of their call volume.  Emergency dispatch services are provided to MFD through the Parkland County 9-1-1 Call Centre Public Safety Answering Point (PSAP)/ECC.

MFD is also a major contributor to the Emergency Management System (EM) for Morinville with the secondary Emergency Operations Centre (EOC) located within MFD's firehall.

### 5.1.1 Mission and Vision

Individual Mission and Value Statements are important placeholders for an organization. Mission and Vision statements should succinctly state their purpose and objectives for the present and into the future.

***Morinville Fire Department's Mission***

*We, the hardworking professionals of the Morinville Fire Department, are dedicated first and foremost to protecting the quality of life for the citizens of our community, through multi-level emergency response and the protection of life, property, and the environment.*

***Morinville Fire Department's Vision***

*We are resolute in working towards our goals of an Emergency Services Department that provides full service and whenever possible assists, supports or forms partnerships with other municipalities or private business.*

*We are unrelenting in our goal to continue to be one of the most cost-effective Alberta fire departments in the 5,500 - 9,000 population range.*

*We are committed to the service delivery of fire prevention, education, training, suppression, investigation and inspections.*

*We see our fire department continuing to be the Emergency Regional Service Centre for the Morinville and Sturgeon area.*

## 5.2 Human Resources

The heart of any organization is its people. MFD is classified as a paid-on-call service capable of providing both Fire/Rescue and Emergency Medical Response.

### 5.2.1 Staffing Complement

Morinville Fire Department currently consists of the following staff members:

- 1 Fire Chief – (Permanent full-time)
- 2 Deputy Chiefs – Operations and Fleet Services, and Training and Logistics (part-time @ .25 each)
- 1 Administrative Assistant (Permanent full-time)
- 4 Captain Firefighters (paid-on-call)
- 4 Lieutenant Firefighters (paid-on-call)
- 36 Firefighters (paid-on-call)

MFD has an average staffing level of 42 paid-on-call firefighters, which is variable given the recruitment and retention challenges with POC firefighters. MFD currently retains 2-3 past members to assist with fire investigations.

*Image 3: MFD Organizational Structure (2018)*
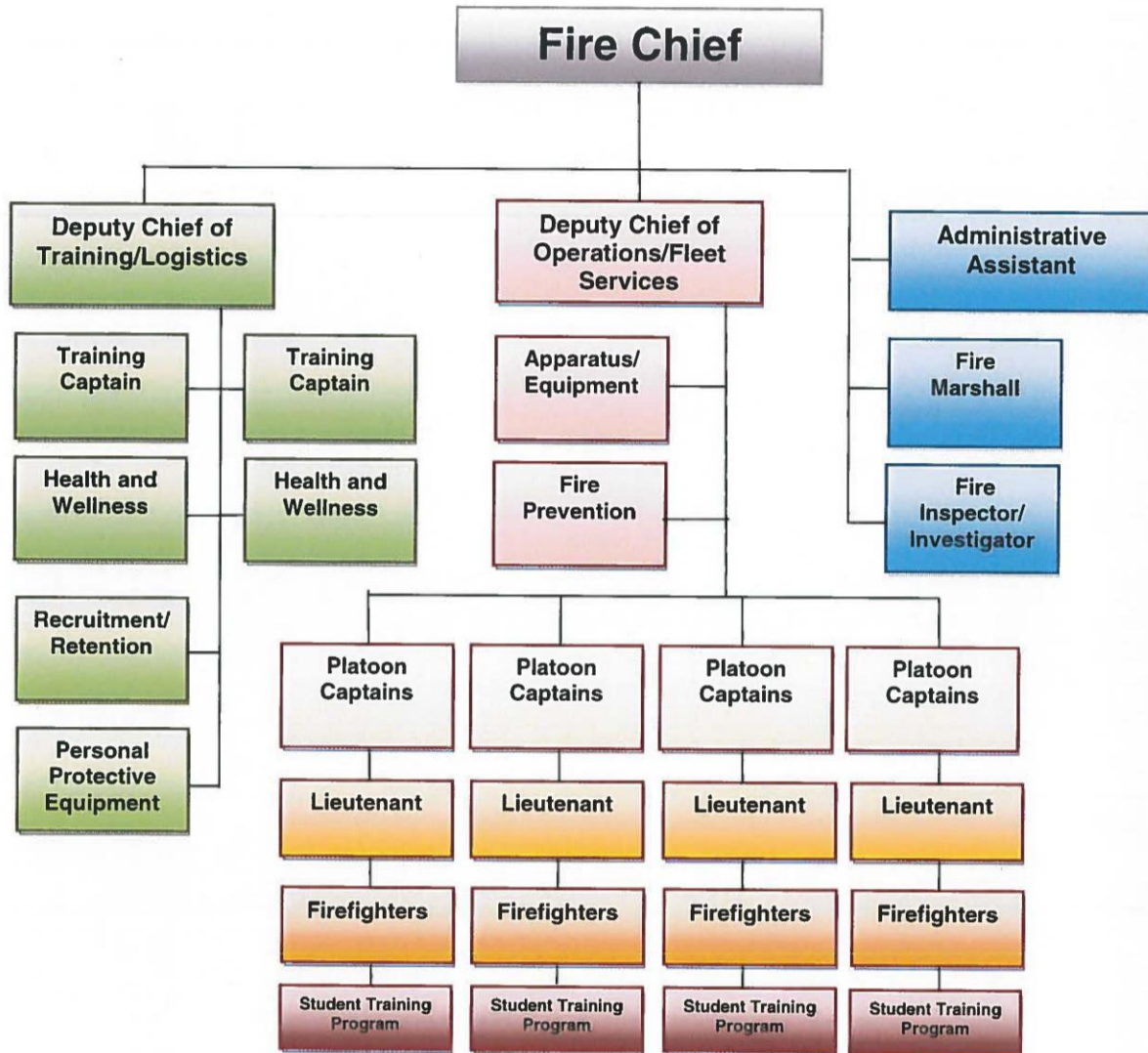
## 5.2.2    Department Leadership and Management

Effective and efficient leadership and management starts at the top to guide an organization towards success.  Elected officials are relentlessly looking for ways to effectively manage and avoid costs while still increasing value in the delivery of services for their citizens.  This environment has generated the need for communities to adopt more business-like approaches for delivering public safety services.

Modern emergency services now require the development of business approaches such as:

- Conducting regular market (external) analysis
- Developing performance measures and objectives for core services including emergency response, fire prevention, public education and health and safety
- Regularly monitoring and reviewing performance to determine effectiveness
- Ensuring value for service

An effective organizational structure must promote and support strong, effective leadership, sound business management and continuity, effective communication with opportunities for staff development.  In some cases, this may require a shift from the historical approach of maintaining current systems to a focus on creating a future for the department that is responsive to change and is sustainable and efficient.

Emergency service leaders have also had to adopt a more business-like approach to leading and managing their departments.  Along with their municipality's senior administration, they need to be proactive and examine all aspects of their service delivery systems to look for innovative efficiencies and effectiveness.

## 5.2.3    MFD Administration Positions

### 5.2.3.1    Fire Chief

The Fire Chief is responsible for the planning, organizing, coordinating, directing and maintaining of programs, operations, facilities and infrastructure primarily utilized by the Morinville Fire Department, as well as the provision of contracted fire services to neighboring municipalities.  As required, the Fire Chief will represent Morinville regionally, provincially, and nationally in matters relating to fire and associated emergency services.

The Fire Chief is responsible for the development and oversees the implementation of:

- Comprehensive fire prevention/education/inspection programs for the community
- Fire training programs for the department in relation to service levels approved by Council
- Inspections and investigation as necessary

- Department specifications and standard operating procedures for the provision of fire and related emergency service delivery
- Development, preparation and administration of the fire services budget
- Responding to and assuming command of resources and operations for emergency response as required. This position authorizes and coordinates fire response/requests in accordance with mutual aid agreements with neighboring communities as required
- Other duties as necessary

The current Fire Chief Position Description details that this position priorities are:

- 30% Administrative Management
- 20% Operations
- 15% Human Resource Management
- 15% Budgeting
- 10% Emergency Work
- 10% Safety Awareness

### 5.2.3.2    Deputy Fire Chief

The Deputy Chief position is responsible for assisting the Fire Chief in the planning, organizing, coordinating, directing and maintaining of programs, operations, facilities and infrastructure primarily utilized by the Morinville Fire Department. This position assists the Fire Chief in the provision of fire and emergency services within the corporate boundaries of Morinville, as well as the provision of contracted fire and emergency services to neighboring municipalities. In the absence of the Fire Chief they shall represent Morinville regionally, provincially and nationally in matters relating to fire and associated emergency services.

The Deputy Chiefs are responsible for:

- Assisting with the development of fire training programs for the department in relation to service levels approved by Council;
- Assisting with the development and implementation of department specifications and standard operating procedures for the provision of fire and related emergency service delivery;
- Responding to and assuming command of resources and operations for emergency response as required, in the absence of the Fire Chief. These positions may authorize and coordinate fire response/requests in accordance with mutual aid agreements with neighboring communities as required;
- Other duties as necessary

The current Deputy Fire Chief Position Description details that these positions priorities are:

- 30% Administrative Management and 20% Operations or
- 30% Operations and 20% Administrative Management

Plus:

- 10% Human Resource Management
- 10% Budgeting
- 10% Emergency Work
- 10% Safety Awareness

The following theoretical images suggest how to allocate leadership time to effectively manage a department:

*Pie Chart 4: Fire Service Time Management[7]*

**Fire Chief**

| | |
|---|---|
| 5% | ■ Operate the system |
| 20% | ■ Improve the System |
| 75% | ■ Create the Future |

**Deputy Fire Chief Level**

| | |
|---|---|
| 50% | ■ Operate the system |
| 40% | ■ Improve the System |
| 10% | ■ Create Change |

**Lieutenants to Firefighters**

| | |
|---|---|
| 85% | ■ Operate the system |
| 10% | ■ Improve the System |
| 5% | ■ Create Change |
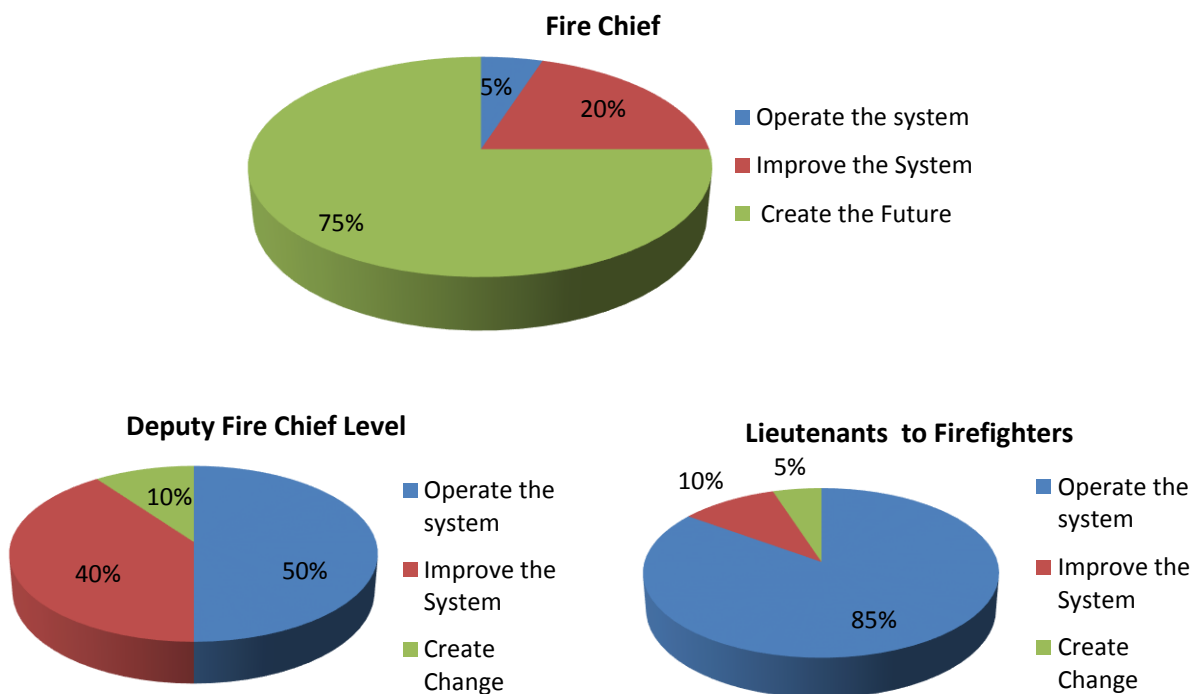
[7] *Sergeant, Chase, (2006) 'From Buddy to Boss, Effective Fire Service Leadership', PennWell, Tulsa OK*

When compared to similar sized departments, MFD is operating with a minimal number of leadership positions and is considered to be non-sustainable. The increasing leadership, administrative and management requirements have resulted in the need for additional capacity.

### 5.2.3.3    Administrative Assistant

Responsible to the Fire Chief to provide a variety of administrative support functions, but not limited to the following:

- Review and verify incidents to create and submit invoices for payment
- Monitor budget and assist with budget preparation
- Collect and organize statistical data
- HR support to fire department members
- Assist public and serve as a liaison to other town departments
- Other administrative duties as required

---

***Observation #13:*** *During our interviews with the Fire Chief, Deputy Chiefs, Training Officer and a Captain, a prevalent theme emerged regarding the volume of administrative and management responsibilities that are required, such as maintaining training plans, recording and documentation of certifications and training activities, pre-fire plans, inventory management, fleet and equipment management, OHS program, recruitment, etc. All of these activities require significant time to undertake.*

***Recommendation #13: Re-classify the Deputy Chief of Training to a full-time position from the current 25% part-time position***

***Suggested completion: 0-36 months***

*It is recommended that one Deputy Fire Chief (Training and Logistics) being re-classified to a full-time position will enhance the administrative responsibilities to support Training, Safety Codes (fire inspections, prevention and investigations) as well as management and administrative requirements as noted above.*

---

## 5.2.4    MFD Non-Administrative Positions

### 5.2.4.1    Captain Firefighter – Paid-On-Call

The Captain Firefighter is a front-line firefighter responsible to the Fire Chief and is required to demonstrate high-level knowledge and competence regarding all aspects of fire and rescue operations. Responsibilities include leading a team of firefighters in both emergency and non-emergency situations. This position is required to make potential life changing decisions while considering the safety of their staff with constant analysis of reward and consequences of such decisions. This position will be required to assume

an incident command role until relieved where necessary by a higher-ranking position within MFD.

Captains may be assigned specific portfolios by the Fire Chief in such areas as PPE, equipment, training programs, or others as deemed necessary by the Fire Chief.

### 5.2.4.2    Lieutenant Firefighter – Paid-On-Call

The Lieutenant Firefighter position assists with or assumes operational leadership roles for the safe and effective oversight of emergency operations.  Lieutenants will be assigned to individual crews by incident command to safely and effectively lead teams of firefighters to complete assigned tasks.  The Lieutenant may be required to act as Incident Commander at emergency incidents until relieved by a higher authority.

Lieutenants are assigned specific portfolios by the Fire Chief in such areas as PPE, equipment, training programs, or others as deemed necessary by the Fire Chief.

### 5.2.4.3    Firefighter – Paid-On-Call

Responsible to the operating Officer for performing fire suppression, rescue, and dangerous goods control functions, fire prevention and related duties.  The firefighter shall participate in the Department's Occupational Health and Safety Program and comply with all departmental standards, policies and procedures.

### 5.4.4.4    Recruit Firefighter – Paid-On-Call

Responsible to the lead Training Officer or on-scene immediate supervisor for performing limited fire suppression and dangerous goods control functions under close supervision, as well as fire prevention and related duties.  The Recruit Firefighter shall not be a member of an interior attack team and is not permitted to wear SCBA or work on ladders, except for training evolutions.  At the discretion of the lead Training Officer, the Chief or Deputy Chief, they may be permitted to support other emergency roles where proper training has been obtained.  The Recruit Firefighter shall comply with all Departmental standards, policies and procedures.

## 5.3    Recruitment, Selection, Retention and Promotion

Personnel recruitment is a key function of all emergency service agencies.  The community places a tremendous amount of faith in their fire personnel, trusting them to provide the highest level of service when the public is most vulnerable.  As such, the process used to select personnel should be very comprehensive.

Experience within the fire and emergency services industry has shown that relaxing the requirements for entry-level positions is not the answer for recruiting any employee.  Instead, most departments have had the greatest success when qualified applicants are encouraged to apply.  This process often involves targeted advertising and promotional campaigns aimed at demonstrating the benefits, as well as the personal satisfaction of becoming part the fire service.  Existing firefighters should be encouraged to participate in any such campaign.

MFD provides paid-on-call firefighting response for the town of Morinville and surrounding communities. All firefighters provide response to a broad range of emergency situations and must be properly trained to safely and effectively conduct the expectations as defined in the Departments Level of Service.

MFD Administration attempts to select and retain the best individuals possible for any available position. Both the recruitment and retention of paid-on-call firefighters remains a significant challenge. Again, this issue is not unique to the Town of Morinville, as most communities that rely on volunteers POC firefighters to provide the necessary level of response are faced with significant challenges in recruiting new firefighters and retaining the firefighters they have. Current rate of POC firefighters leaving Morinville is an average of 7.6% per year or 6-8 members annually.

## 5.3.1 Recruitment

Personnel recruitment is a key function of all emergency service agencies. The community places a tremendous amount of faith in their fire personnel, trusting them to provide the highest level of service when the public is most vulnerable. As such, the process used to select personnel should be very comprehensive.

The reasons for candidates seeking positions in a volunteer or POC fire department depend on the individual, but are typically identified as:

- The desire to contribute to the community
- Status
- Brotherhood/sisterhood
- Continuing education
- Seeking qualifications/experience towards full-time firefighter positions

Experience within the fire and emergency services industry has shown that relaxing the requirements for entry-level positions is not the answer for recruiting any employee. Instead, most departments have had the greatest success when qualified applicants are encouraged to apply. This process often involves targeted advertising and promotional campaigns aimed at demonstrating the benefits, as well as the personal satisfaction of becoming part the fire service. Existing firefighters should be encouraged to participate in any such campaign.

Firefighting opportunities are advertised through the town web site and social media, as well as word of mouth from existing members. MFD conducts their recruitment program once per year starting January (main recruitment drive) with intake commencing February. During this recruiting campaign, they typically attract 4-6 new applicants which complete the program and become part of the firefighter pool. Ideally, candidates prove to be long-standing members of the service.

There are some firm requirements for recruitment for MFD. One being that MFD firefighters are required to reside in the Town of Morinville, as this is a necessary

requirement to ensure a safe and timely response is achievable. Some services have a relaxed residency requirement, particularly when an individual is employed in the response area and is available to leave their employ when requested.

A concept that may have some merit for MFD is to recruit individuals that do not wish to, or are unable to fulfill all the obligations of a 1001 firefighter. There are several functions within the service that may be able to be accomplished effectively and safely outside the role of a front-line firefighter. If certain roles could be identified by MFD administration, there may also be opportunity for some of the current retiring or past members to continue to contribute.

Not unlike other fire and emergency services and communities, MFD is challenged with recruiting POC firefighters. MFD acknowledged these challenges and initiated several recruitment and public relations initiatives, including:

- Student Training Program (STP)
    - Administered through the MFD Fire Chief and Deputy Chief of Training
    - POC firefighters with NFPA 1041 Level 1 certification are instructing in the program that typically has 4-6 participants from the schools targeting 15-18-year-old students
    - Training occurs on regular training nights and Sundays where necessary
    - This program is very successful and has led to 10-12 past students becoming active members of the MFD
    - Fire Prevention Month
        - Hold Open Houses once per week during this month
        - Participates in their 'Partners in Protection' Program.
        - Partnering with a local pizza company in a unique program to reward citizens with working smoke detectors
- Tours
    - Opportunities for groups or individual tours of MFD facility and services
- Community Presence
    - When members are out in the community, taking time to show and explain the scope of their services
- Social Media
    - Town Web Site
    - Facebook

## 5.3.2    Selection

Potential candidates for volunteer/paid-on-call firefighter positions go through an internal selection process requiring applications to be submitted to MFD Administration for review of credentials. Candidates must submit a criminal records/vulnerable section check along

with a driver abstract prior to commencing any training. Successful candidates from the application phase will then move into the interview phase which consists of a panel of interviewers made up by the recruitment committee. Usually this panel consists of 3-4 members. If candidates succeed through this phase, they will move onto the physical assessment stage. This test consists of push ups, sit ups, (not in PPE) then job related activities such as rope pull, victim rescue, charged hose advance, equipment carry, and ladder climb.

The recruits then are fitted for PPE and station wear and begin their 12-week training course. They are issued a radio after this training and complete another 3 month probation period. After consultation with the Fire Chief and the Training Officers, the candidates are brought to the general membership for their approval and vote. During the initial training phase, MFD Training Officers can assess the candidates and provide valuable feedback to the Fire Chief prior to final sign-off.

The majority of volunteer/paid-on-call fire services do not impose a physical fitness evaluation such as the CPAT or completion of the NFPA 1001 journey-person qualifications in 12 months. The minimum standards include confirmation from their physician that they are medically fit to perform the duties of a volunteer firefighter, willingness to participate in training, ability to respond to emergencies day or night on a consistent basis and living in close proximity to the fire station.

The increasing costs and time commitment to train recruit firefighters is quite significant which validates the need for a comprehensive selection process. MFD has a good selection process with several opportunities to both assess the candidate, as well as provide much needed exposure of expectations for the candidate.

### 5.3.3   Retention

MFD typically loses 6-8 active firefighters per year to resignation or retirement. This has led to a decrease in qualified officers and experienced firefighters. The training costs, compensation, equipment (including PPE), consumables and staff time for each paid-on-call firefighter is estimated to be $15-20K. These costs must be given due consideration when evaluating the long-term viability of the current response system and the move to an enhanced full-time paid-on-call combination service.

The typical reasons for both the decreased interest in applying for a volunteer or POC firefighter position and ongoing retention issues include:

- Increased demands on Department time obligations
- Low call volume
- Family obligations
- Primary work obligations
- Childcare
- Physical move out from the community

- Increased training demands up to NFPA 1001 and other requirements
- Occupational and safety requirements
- Full-time/career firefighter opportunities
- Low compensation provided

> ***Observation #14:*** *MFD is not unique in the number of experienced members leaving the service to resignation or retirement. This places an increased emphasis on training and development to ensure there are qualified individuals to effectively and safely lead their respective crews in challenging and hazardous conditions.*
>
> *The loss of more senior and experienced personnel is leading to a junior and less experienced firefighter complement for MFD. Exploring opportunities to retain this experience in some capacity may serve well with this demographic shift.*
>
> ***Recommendation #14: Research retention opportunities of senior members***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that the Fire Chief researches opportunities to retain senior and/or retiring members in non-operational roles, such as coaching, mentoring, and administrative roles.*

### 5.3.4   Advancement and Promotion

Once a recruit commences training with MFD, they are placed on a minimum of six months' probation and subject to all performance and conduct expectations as contained in the MFD Policy manual.

Recruit firefighters are carefully managed by the Captains and Lieutenants with direction from Administration throughout their probationary period. Recruit firefighter advancement to full firefighter status will occur in conjunction with policy.

The following positions are filled through assessment and appointment:

- Fire Chief - Appointed by Director of Community and Protective Services
- Deputy Fire Chief Operations and Fleet Services – Appointed by the Fire Chief
- Deputy Fire Chief Training and Logistics – Appointed by the Fire Chief
- Captains – Appointed by the Fire Chief and Deputy Fire Chief
- Lieutenants – Appointed by Fire Chief and Deputy Fire Chief

Promotions for Captain and Lieutenant vacancies are made by assessing each candidate's value in six identified criteria:

1. Seniority - 30%
2. Call volume – 25%
3. Attendance – 20%
4. Response hours – 10%
5. Training – 10%
6. Interview – 5%

Feedback from the Fire Chief and Deputy Fire Chiefs indicate that this process is working well for the Department and getting enough applicants for consideration for each vacancy.

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*Observation #15: MFD currently maintains an effective recruit training program with limited firefighter operational functionality until appropriate training and skill development has been achieved.  This gradual advancement provides a safe and effective program for firefighter development.*

*MFD is not unique in the number of experienced members leaving the service to resignation or retirement.  This places an increased emphasis on training and development to ensure there are qualified individuals to effectively and safely lead their respective crews in challenging and hazardous conditions.*

*The Fire Chief utilizes senior members to assist with overseeing various programs within MFD.  This process allows for individual ownership and participation as well as pride for those individuals empowered within each of these roles.  The time required for advancement towards Officer positions may be considerable considering the constraints of POC staff.  Advance planning for future Officer training is imperative.*

> *Recommendation #15: Create a plan for advancement and succession*

> *Suggested completion: 36-48 months*

*It is recommended that the Fire Chief create a sustainable succession plan to ensure enough firefighters are trained and ready to assume all roles, including Officer and/or Chief roles as required.*

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## 5.4    Training

Training and competency refer to the specific programs within a fire department, which exist to support the services MFD provides.  A prepared and competent workforce reduces risk and safely optimizes service delivery.  An effective workforce-training program will align the growth and development of personnel to the organization's mission and goals.

Training and education program activities are identified by assessing the Knowledge, Skills and Abilities (KSA) needed for the firefighters to perform their duties as outlined in the department's SOGs and Procedures.  Additionally, Occupational Health and Safety (OHS) has increased the formal requirements for training and maintaining records of that training with compliance to OHS regulations, Firefighter Code of Practice, and applicable NFPA standards. When firefighters are competently trained and possess the KSAs for the services they are expected to provide, they reduce risk and increase both their own safety and the safety of the public they serve.

A significant challenge that has been identified in interviews is the increasing volume and complexity of record keeping, particularly around individual member training requirements and certification tracking.

MFD maintains a comprehensive schedule for required training of both the incumbent staff as well as recruits progressing through the required training. Regular training dates are scheduled throughout the calendar year with the expectation that at least fifty percent (50%) of the training sessions are attended. Regular training sessions are routinely conducted by the Fire department Training Branch (which is overseen by the Deputy Chief of Training) and/or qualified instructors.

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*Observation #16: Currently the Deputy Chief responsible for training uses a manual spreadsheet that is relatively inefficient and labour intensive. Training records, qualifications, duration and certifications are all being done in paper hard copy and files. There are several software programs that can track and identify training requirements that will significantly reduce this laborious undertaking.*

> *Recommendation #16: Enhance the use of on-line delivery of training, educational materials and records management*
>
> *Suggested completion: 0-36 months*
>
> *It is recommended MFD work with the Town of Morinville Human Resources to procure an on-line training/learning environment software program to significantly enhance the delivery, and records management of the training/ educational program for all MFD staff.*

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As the expectations of the public and increased complexity of situations routinely encountered increases, it will require Fire Departments to expand their training programs and scheduling to ensure their firefighters are qualified for all tasks assigned. MFD has recognized the need for the methodical development of training that encourages members to plan their future growth within the organization. MFD training addresses core competencies as well as unique or specialized training that are anticipated for the safe performance of duties. MFD has recently committed to enroll each of their officers in an industry recognized Incident Command training program. This program requires extensive on-line and practical scenario training.

Members are also encouraged to develop and demonstrate leadership as they serve MFD. The current training curriculum is considered effective and consistent with NFPA and other applicable standards.

Individual provinces are focussing in on training standards for career, volunteer and POC fire services in attempts to standardize the training and qualifications required to serve as a firefighter. NFPA 1001 is the widely recognized firefighter standard that many provinces/municipalities base their requisites on. For smaller communities that have paid-on-call services with lower call volumes or limited risk, it is extremely difficult to train their firefighters to this standard. The cost and time commitments combined with the physical distance to acquire the necessary training creates a prohibitive trend with volunteerism and has led to service level-based competencies.

As an example, British Columbia (BC) has enacted the "Structural Firefighters Competency and Training Playbook" through the Office of the Fire Commissioner. This document is applicable to

all fire and emergency services personnel in BC. This Playbook sets out the competencies required for specific service levels and the respective training and operational requirements that must be met by each fire department. Each Authority Having Jurisdiction (AHJ) is required to declare the level of service that they will accept for their community. The AHJ is normally the Council or Board of the applicable local government. The rational for this approach is to establish service levels through policy that includes the KSAs for the firefighters. The three levels of service are:

The three levels of service are:

- Full-Service Operations Level Firefighter
  - o Allows activities that are undertaken by firefighters and officers trained in the full spectrum of competencies outlined in NFPA 1001

- Interior Operations Level Firefighter
  - o Include entry into simple structures for the purpose of control and/or extinguishment of fires

- Exterior Operations Level Firefighter
  - o Firefighting activities restricted to the control and/or extinguishment of fire from a position external to the building or object in question

In comparison, Alberta OHS Code 2006 includes a "Code of Practice for Firefighters" which details the Code as it relates to the operations of Fire Departments in Alberta. This code establishes the minimum standards that a fire service must comply with.

Training of firefighters is addressed in Part 1 of the OHS Code under the definition of "competent" and in Section 15 of the OHS Regulation under "Safety Training."

Three characteristics are used to describe a worker as competent:

(1) Adequately qualified;

(2) Suitably trained, and;

(3) Sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

Furthermore, the Code of Practice includes the following:

(1) Each employer must determine exactly what emergency service(s) the fire department will be authorized to provide and identify the level or standard to which each service will be performed. This includes response to structural fires, wildland fires, and various rescue situations including technical rescue, dangerous goods and chemical, biological, radiological and nuclear (CBRN) incidents among others.

(2) Once these decisions have been made, this service level determination is usually committed to writing in the form of a bylaw, policy or guideline. The employer must then clearly communicate to firefighters what is expected from them as workers when responses are made. The means of communicating and maintaining this information is through the collection of guidelines, (commonly referred to as standard operating.

## 5.4.1   Industry Recommended Qualifications

The following section outlines industry recommended training standards. Training for these qualifications should be provided for members in the respective roles. Training courses outside of these standards would be provided at the discretion of the Chief of Training subject to the Fire Chief's approval.

**Deputy Chief and Fire Chief**
- NFPA 472 Dangerous Goods Operations
- NFPA 1001 Firefighter (Level 2)
- NFPA 1002 Pump Operator
- NPFA 1021 Fire Officer (Level 2)
- NFPA 1041 Instructor (Level 1)
- NFPA 1403 Standard on Live Fire Training Evolutions
- NFPA 1521 Incident Safety Officer

**Lieutenant(s)**
- -NFPA 472 Dangerous Goods Operations
- NFPA 1001 Firefighter (Level 2)
- NFPA 1002 Pump Operator
- NPFA 1021 Fire Officer (Level 1)
- NFPA 1041 Instructor (Level 1)

**Platoon Captain(s)/Captain(s)**
- NFPA 472 Dangerous Goods Operations
- NFPA 1001 Firefighter (Level 2)
- NFPA 1002 Pump Operator
- NPFA 1021 Fire Officer (Level 1)
- NFPA 1041 Instructor (Level 1)
- NFPA 1403 Standard on Live Fire Training Evolutions
- NFPA 1521 Incident Safety Officer

**Firefighter**
- NFPA 472 Dangerous Goods Operations
- NFPA 1001 Firefighter (Level 1)
- NFPA 1002 Driver/Pump Operator
- NFPA 1006 Vehicle extrication (Level 1)

**Operator**
- NFPA 472 Dangerous Goods Operations
- NFPA 1001 Firefighter (Level 1)
- NFPA 1002 Driver/Pump Operator
- NFPA 1002 Aerial Operator
- NFPA 1006 Vehicle extrication (Level 1)

**Training Officer**
- NFPA 1041 Instructor (Level 1)
- All Qualifications required to instruct firefighters and recruits
- NFPA 1403 Standard on Live Fire Training Evolutions

**Safety Officer**
- NFPA 1521 Incident Safety Officer

*Observation #17:* Given the increased initial and on-going training requirements for front-line firefighters, as well as the reluctance or inability of paid-on-call firefighters to commit to these obligations, there is limited pool of possible recruits living in Morinville to draw from.

Training resources should be concentrated on those individuals who are willing and able to commit to the NFPA 1001 journeyperson curriculum and attendance expectations. There may be other areas within the MFD that could utilize individuals, both active and new, who would be able to contribute in a positive way towards the goals of the service. An example could be POC public education and prevention officers.

### Recommendation #17: Identify non-operational support positions

*Suggested completion: 36-48 months*

It is recommended MFD Administration identifies areas or responsibilities that would benefit MFD, but not necessarily require the full NFPA 1001 journeyperson certification. Such areas or responsibilities may provide an increased public participation towards the service, and as well provide an avenue for active members who may not wish to, or be able to continue in the full firefighter scope of practice.

*Observation #18:* MFD currently requires all members to work towards achieving the qualifications required for NFPA 1001. This requires significant time and resources to achieve.

### Recommendation #18: Explore service level competencies for a maximum of 25% paid-on-call contingent as retention strategy

*Suggested completion: 36-48 months*

It is recommended that MFD adopt a similar approach to the BC Playbook and establish competencies for the expected service levels within Morinville's Standards of Cover. Not more than 25% of the paid-on-call contingents could be trained to exterior operations, which requires a lesser time commitment to achieve the KSAs. For clarity exterior operations means firefighters with this qualification cannot enter into a structure with an active interior fire. It is important to note that the Alberta Fire Chiefs are developing a similar competencies based approach for fire department service delivery.

## 5.5    Health and Wellness

The active pursuit of employee/member health and wellness is extremely important to an organization.  The benefits include:

- Decreased absenteeism
- Decrease in injuries during normal duties
- Decreased WCB premiums
- Employee career longevity
- Improved work/home balance
- Career longevity

The Town of Morinville Council and Administration has embraced the pursuit of their employees' health and wellness through programs and incentives.  The components of an employee health and wellness program for firefighters include programs such as:

- Critical Incident Stress (CIS) management program
- Fitness support or programs
- Smoking cessation
- Drug and alcohol addiction programs
- Employee Family and Assistance Program (EFAP)

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*Observation #19: Morinville has an established Health and Wellness program for their staff that provides $225.00 for fitness related expenses*

**Recommendation #19: Evaluate the Health and Wellness Program**

**Suggested completion: 0-36 months**

*MFD continue the practice of providing health and wellness benefits for active members of the service.  A process of tracking and evaluating the effectiveness of these bursaries with available options for the use of this resource should be implemented.*

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# SECTION 6
# CORE SERVICES

## 6.1  Community Service Considerations

The structure and development of a fire department must be in response to the needs of the citizens and the community.  Foresight and consistent risk analysis within the community assist in emergency planning that will impact preparedness and response.  Fortunately, many citizens will never have to call on the services provided by of their fire department. However, when the emergency occurs, individual expectations are high that the services provided will be good value for their tax dollars.

MFD provides a variety of emergency response functions.  The level of these services should be based on a policy decision approved by Council such as the Standards of Cover (SOC) policy previously identified in Section 3.4, Page 16.  This policy establishes the standards for the department to assess and guide its response capacity.  MFD's principal functions based on 2014–2018 response statistics include:

- Alarms response: 51%
- Medical first response: 18%
- Fire suppression (structural, vehicle, outside, investigate smoke): 13%
- Vehicle extrication: 10%
- Other service requests: 8%
    - Dangerous goods
    - Technical rescue
    - Citizen assist/rescue
    - Explosion
    - Gas leak
    - Electrical hazard
- Fire prevention, including public education, fire inspections and investigations
- Emergency Management Program and Emergency Operations Centre (EOC)

Alarms ringing responses make up a large percentage of MFD call volume.  It is not uncommon for many services to become apathetic to these calls and assume that they are false in nature with a minimal response.  This is an undesirable practice, as alarms are quite often the first alert to a fire.  Rather it would be advisable to treat these calls as a fire until the first arriving apparatus can determine that it is not the case.  Many initiatives can be implemented to minimize the frequency of false alarms.

Many other responses fall within the "Other" category, and while they do not make up a large percentage of the MFD call percentage, each possesses unique hazards that require sufficient resources and training to safely handle these types of calls.

Fire prevention activities are a service to the community to be pro-active on fire prevention initiatives to assist with minimizing the fire risks to their community.  Fire investigations are an obligatory role after a fire with property loss or human injury or death.

- MFD Administration is active participants in the Emergency Management programs for Morinville, County of Sturgeon and neighbouring communities.

- MFD has an extensive system of guidelines, policies and training standards for these functions.  They provide direction and ensure safety and clarity of roles for the department and staff.

As indicated in Section 3.4, Page 16, the Fire Chief should complete a Community Risk Assessment and SOC policy for Council approval. This policy is based upon the risk assessment framework, observations, recommendations and options contained in this report.  This SOC identifies benchmarks for each service level output and identifies the achievable performance measures within the allocated resources.

## 6.2    Core Service Specifics

### 6.2.1    Structural Fire Suppression

Structural fires, although may appear to be a lesser significant portion of MFD total response, are considered the most hazardous of responses and require significant resources to safely and effectively manage.

- Fire suppression encompasses a wide range of tactics for the control and extinguishment of fires originating from several sources.

- MFD is equipped and properly trained to respond to fires that originate within or outside a structure, allowing safe and effective rescue and suppression tactics for the control and extinguishment of fires.

- MFD maintains a modern fleet of emergency response vehicles and equipment along with a complement of paid-on-call firefighters to be available for emergency response.  These firefighters may be called upon anytime during the day or night seven days a week.

During the interviews conducted by Behr, several members expressed concern over the inability to ensure an adequate number of firefighters arrive at the station for the initial response, particularly during weekday normal work hours.  It is MFD policy that a fire apparatus will not respond until the arrival of a minimum qualified officer, operator and two firefighters to the station.

Structure fires that require entry into the building for fire suppression and rescue require many critical tasks to occur simultaneously for the safety of both the victims and the firefighters.  Each of these tasks may require one or more companies (teams) of firefighters to safely and effectively accomplish them.  Without enough companies of firefighters on scene, entry may not be possible until some of these tasks are completed.

A typical house fire requires these tasks to be initiated in close coordination:

- Command and size-up
- Securing and distribution of the water supply
- Ventilation
- Search and rescue

- Fire attack
- RIT
- Exposure protection
- Salvage
- Overhaul

Complex incidences may require one or more companies to accomplish each task. Simpler incidences may have these tasks completed by one company. NFPA 1720, Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer and POC Fire Departments, recommends a minimum of 15 staff respond to an urban area low hazard occupancy within nine minutes from the time of notification.

**Note:** *A low hazard occupancy example is a 2000 ft. two-storey, single family home without a basement and exposures.*

## 6.2.2   Industrial Firefighting and Response

Morinville contains a minimal amount of industrial sites/activities/companies within the community. MFD would be requested to respond in times of emergency. In some cases, there will be a specifically trained emergency response team with varying degrees of training, equipment and expertise at the various industrial sites.

Industrial fires pose unique challenges and risks to firefighters. Many facilities contain quantities of dangerous goods and chemicals. These facilities typically have larger footprints and multiple bays or divisions. Fires in these types of facilities can get out of control very fast and may lead to a more defensive strategy of containment.

Response and access to these types of facilities can be challenging due to the response distance and physical barriers commonly found in these areas. Confirmed working fires in industrial facilities usually require extensive firefighter resources, both initially and during the containment and extinguishment phase. It is further emphasized that when the Fire Chief completes the community fire risk assessment that it includes detailed response protocols based upon the respective risk factors contained in each site.

The water supply that may be required to extinguish industrial fires may be well beyond the capacity of the water system and require shuttling of water or relay pumping to the site. As previously recommended, the FUS analysis would include an assessment of the water supplies available for firefighting at Morinville's industrial sites.

### 6.2.3 Motor Vehicle Collisions

Vehicle collisions with or without trapped persons can pose unique hazards to both the victims and responders.  MFD has the training and capability to respond to emergencies involving vehicles ranging from small passenger cars to transport/commercial vehicles.  In addition, they have the training and equipment to perform Motor Vehicle Incident (MVI) response and extrication.

Morinville is serviced by Highway 2 with significant light and heavy vehicle traffic.  Emergency responses to vehicle incidents have accounted for 10% of MFD responses for the 2014-2018 periods.  MFD is often requested to MVC's in Sturgeon County as either first due or on a support role.

Vehicle extrication requires specialized training and equipment.  Extra resources and close coordination with other emergency services is necessary for the safety of both victims and responders.  Weather conditions and time of year contribute significantly to both the severity of the incident and the effectiveness of the response.

Many of modern vehicles have added risks to firefighters, such as airbag deployment and hybrid vehicles.  Vehicle collisions or events involving transport vehicles often pose the additional challenge of dangerous goods and or heavy equipment.

*Note: All MFD firefighters are trained and competent in vehicle firefighting and extrication.*

### 6.2.4 Medical First Response

Medical first response is a valuable service that MFD provides to their community in support of Alberta Health Services EMS.  While the number of staff required and duration of each call is usually smaller, the number of response requests demonstrates the value of this service.

Through policy, MFD will maintain all firefighters to a minimum level of "standard first aid" with CPR certification to a maximum of EMT (PCP).  Some of MFD staff have more advanced medical training and are directed to use the medical control protocols and direction as set out by AHS for the agreed level of service.

Data provided by MFD statistics indicate that 18% of their total calls volume for the Town of Morinville is "Mutual Aid/Assist Outside Agency" category calls for AHS.  Analysis also indicates that requests for this service ranges from life threatening (Delta and Echo category) to lower risk calls, including lift assists.

Many fire and emergency services in Alberta have similar agreements with AHS with the goal of enhancing the life-safety to their citizens.  Many Alberta fire and emergency services provide medical first response to their community, either as a primary EMS provider or in support of the AHS.

It is important that the medical first response service provided by MFD is intended to provide an enhanced level of pre-hospital care service in Morinville and Sturgeon County and is not a replacement for inadequate resources from the contracted EMS service.

## 6.2.5    Urban Wildland Interface Firefighting

Morinville is surrounded by large farmland areas, which poses an insignificant urban wildland interface threat to the community.  Nonetheless interface fires can occur and require a quick response from MFD.

MFD has a working agreement with the County of Sturgeon for cooperative response for assistance when required.

## 6.2.6    Dangerous Goods (DG) Response

Response capabilities should align with service levels defined in the NFPA 472: Standard for Competence of Responders to Hazardous Materials and Weapons of Mass Destruction Incidents service level matrix.  It essentially requires that departments without advanced hazmat training take only a limited role in hazmat response.

MFD trains to and maintains the NFPA 472 Awareness and Operations level, which allows for limited dangerous goods response limited to identification, isolation and containment of dangerous goods products.  More advanced or specialized services would be requested from the City of Edmonton, product manufacturer or private contractor where appropriate.

- The first level involves an operational awareness of hazardous materials that enables emergency response crews to operate and respond safely.  This level entails a primarily defensive response where crews may limit the spread of the leaking materials by diking and damming the flows.  It does not involve donning protective suits or conducting decontamination.
- The second level requires a more advanced hazardous materials response capability that involves considerably more technical training and equipment.  This level is referred to as a 'technician level,' with crews trained to don protective suits, enter the hot zone to stop the flow of the product, and establish a decontamination zone for responders and equipment.

Given the training and equipment required to achieve the second level of hazardous materials response, a department must carefully consider whether this level of response is necessary for the protection of the community.

Over the last 5 years, MFD has experienced 8 responses that could have been classified as DG incidents. These could be considered minor to moderate level events in terms of community impacts. Morinville's distance to neighbouring communities and fire and emergency services is a positive factor.

Many fire departments, which have significant dangerous goods products passing through their community, partner with carriers and producers or government to assist with advanced training and response equipment to offset the often-costly expenditures necessary to safely handle these types of emergencies.

## 6.2.7    Technical Rescue

Specialized rescue operations are unique situations task that require specialized equipment and training with constant monitoring to ensure the equipment and response expertise meets the necessary requirements and that all the members' skills meet the competencies required. MFD maintains training and equipment for more basic technical rescue to the types of potential rescue situations anticipated within their community.

- Vehicle extrication
- Surface water rescue
- Surface ice rescue
- Rope and slope rescue
- Technical rope rescue
- Confined space

*Note: These specialized areas each require extensive equipment and training to be maintained to ensure preparedness in the event of an emergency.*

The response statistics provided by MFD show only eight categorized technical rescues in the time period of 2015-2018. There may be instances where a component of technical rescue was required along with other types of emergency responses.

Local fire departments are often requested to respond to industrial sites in the event of a rescue situation that is beyond the site's Emergency Response Team (ERT) capabilities. There is a risk potential for this to occur in Morinville. Many fire departments have worked together with industry and government to assist with funding for equipment and training to a mutual benefit. Often local fire departments will be invited to actively participate in emergency exercises conducted by local industry or agencies, which is beneficial for all parties.

Given the difficulty, equipment and specialized training necessary to safely handle these types of emergency responses, it is prudent that enough numbers of firefighters are trained. MFD is looking to train all their firefighters to the minimum NFPA 1006 Awareness Level.

## 6.2.8    Natural Gas and Electrical

Morinville experienced 6 calls involving natural gas or electrical hazards.  MFD's role in these types of emergencies usually involves an identification and isolation of the hazard, while working very closely with experts in these areas to ensure a safe resolve.

## 6.2.9    Citizen Assist

Calls of this nature are usually of a lesser severity, however, are usually of high importance to the individuals involved.  These types of calls are usually more of a customer service or public relations nature.

## 6.3    Emergency Management Program and EOC

The Alberta Emergency Management Act legislates that all municipalities are responsible for managing the first response to an emergency event.  They are compelled to establish and have approved emergency response plans and programs.  In Morinville, this program is led and managed by the Chief Administrative Officer.  The backup EOC is at the Sturgeon County Protective Services building.  There has been training and exercises along with their partners within the last 5 years.

Town of Morinville actively participates in emergency management through partnership in the Sturgeon Regional Emergency Management Partnership (SREMP) and the Northeast Region Community Awareness Emergency Response (NRCAER) group.  The MFD Fire Chief remains to be an important contributor representing the Town of Morinville on planning and training.

## 6.4    Critical Task Analysis

A fire company is defined as the team of firefighters assigned to a fire apparatus.  An April 2010 report issued by the National Institute of Standards and Technology identifies the optimum number of members for a fire company for most effective operations over 22 essential fire ground tasks at a typical single-family house fire.  A four-member crew operating on a structure fire completed all the tasks on the fire ground (on average) seven minutes faster (nearly 30%) than the two-person crews.  The four-person crews completed the same number of fire ground tasks 5.1 minutes faster on average (nearly 25%) than the three-person crews.

On the medium-hazard residential structure fire, adding a fifth person to the crews did not decrease overall fire ground task times.  However, it should be noted that the benefit of a five-member crew was not documented. NFPA recommends that for a standard single-house residential fire that a minimum 16 firefighters are required for a full alarm assignment.  The tables below depict the typical critical tasks that need to be performed at the various MFD response types.

*Table 17: Low Risk (no exposures): Garbage, Vehicle – private, Grass, Investigate (external), Monitoring Alarm (w/o confirmation)*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Engine | 4 | Incident Command, safety, establish perimeter, pump operation, 2 FF with hand line, forcible entry, battery disconnect, product containment. | |
| Total Personnel | 4 | | |

*Table 18: Low Risk (no exposures): Shed, Detached Garage*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Engine | 4 | Incident Command, safety, establish perimeter, engine operation, 2 FF with hand line, forcible entry. | |
| Ladder | 4 | Perimeter Control, safety, water supply, RIT. | Automatic aid from Gibbons on confirmed working fires |
| Total Personnel | 8 | | |

*Table 19: Moderate Risk (with exposures): Grass/Wildland*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Bush Truck | 4 | Incident Command, safety, establish perimeter, engine operation, two FF with hand line, brooms. | |
| Water Tender | 2 | Water Supply | Automatic aid from Sturgeon County working fires |
| Engine | 4 | Manpower for operations | Struggle with addition of manpower during daytime response |
| Deputy or Fire Chief | 1 | Overall command based on incident size | Would liaison with Wildfire branch |
| Total Personnel | 11 | | |

*Table 20: Moderate Risk: Attached Garage, Single Family Residential (Detached/Duplex)*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Engine | 4 | Incident Command, safety, establishes perimeter, engine operation, forcible entry, search and rescue and/or suppression. | Nighttime response would change out of station times and would be dependent on POC responding |
| 2nd Engine | 4 | Water supply, laddering, RIT. | Automatic aid from GFD on confirmed working fires |
| Ladder | 3 | Ventilation, utilities, search and rescue and/or suppression. | |
| Deputy or Fire Chief | 1 | Overall Incident Command, safety, accountability, resource management. | May be tasked with truck officer role depending on POC numbers |
| **Total Personnel** | **12** | | |

*Table 21: High Risk: Commercial, Industrial, Strip Mall, Warehouse and Mid-Rise Residential*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Ladder | 4 | First Officer assumes Incident Command and forms attack team with second officer and four FF. Two driver/pump operators establish exterior water connections, water supply, pump operation. | Automatic aid from, GFD, Sturgeon County and SAFD on confirmed working fires |
| Engine/3rd Engine | 6 | Primary Search and Rescue | POC responder dependent |
| 3rd Engine | 4 | Exposure protection/RIT | |
| Deputy and Fire Chief | 1 | Overall Incident Command, safety, accountability, resource management. | |
| **Total Personnel** | **15** | | |

*Table 22: Moderate Risk: FMR Emergency, Vehicle vs. Pedestrian*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Rescue | 4 | Incident Command, safety, patient assessment, CPR, AED, oxygen, patient packaging | |
| Engine | 4 | Traffic Management | |
| **Total Personnel** | **8** | | |

*Table 23: Moderate Risk: Motor Vehicle Crash (1¬3 private vehicles)*

| Initial Deployment | No.  FF | Task Assignment | Comments |
|---|---|---|---|
| Rescue | 4 | Incident command and size-up, safety, establish outer perimeter, pump operation, 2 FFs prepare hand line. | |
| Engine | 4 | Establish inner perimeter, triage patients, patient care, extrication, patient packaging. | |
| **Total Personnel** | **8** | | |

*Table 24: Moderate Risk: Surface Water, Swift Water or Ice Rescue*

| Initial Deployment | No.  FF | Task Assignment | Comments |
|---|---|---|---|
| Engine | 4 | Officer of first engine on scene assumes command, size up, scene safety and communications.  1 FF victim contact.  2 FFs shore rescue if possible or Safety team for water rescue team activity. | |
| Rescue | 4 | Officer of rescue team is the sector officer, supervise and safety.  3 FFs prepare equipment for rescue. | |
| **Total Personnel** | **8** | | |

*Table 25: Low Risk: Carbon Monoxide Alarm, small spill cleanup, investigates smell, needle removal*

| Initial Deployment | No.  FF | Task Assignment | Comments |
|---|---|---|---|
| Engine | 4 | Incident Command, scene safety, establishes isolation perimeter, air monitoring, ventilation, or cleanup. | |
| **Total Personnel** | **up to 4** | | |

*Table 26: Moderate Risk: Small Quantity (<20 ℓ) of known product (gasoline, anti-freeze), open space natural gas smell or odor from unknown source*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Rescue | 4 | Site management and control identify problem. | **Comments** |
| Engine | 4 | | |
| Spill response Unit | 2 | • Hazard and risk evaluation<br>• Selection of personal protective equipment<br>• Information management and resource coordination<br>• Implement response objectives<br>• Decontamination and clean-up operations<br>• Terminate the incident | Mutual or Alternative response services – Alberta Environment |
| Deputy or Fire Chief | 1 | Overall Incident Command, safety, accountability, resource management. | |
| **Total Personnel** | **11** | | |

*Table 27: Special Risk: Quantities (between 20 and 75 ℓ) of known product (gasoline, anti-freeze), natural gas leak, indoor natural gas smell or odor*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Rescue | 4 | • Site management and control | |
| Spill Response Unit | 3 | • Decontamination of FF personnel | Used within the capabilities of MFD |
| Ladder | 4 | • Manpower and scene control<br>• Safety and emergency decontamination | POC response dependent |
| Dangerous Goods response from alternate agency | | • Identify problem<br>• Selection of personal protective equipment<br>• Implement response objectives<br>• Decontamination and clean-up operations<br>• Terminate the incident | Mutual Aid or alternative response service – Alberta Environment |
| Deputy and Fire Chief | 1 | • Hazard and risk evaluation<br>• Information management and resource coordination | |
| **Total Personnel** | **12** | | |

*Table 28: High Risk: Large Quantity (>75 ℓ) of known product, known hazardous product, unknown substance, large exposure, or train derailment*

| Initial Deployment | No. FF | Task Assignment | Comments |
|---|---|---|---|
| Rescue | 4 | • Site management and control | |
| Engine | 4 | | |
| Hazardous Materials response from alternate agency | 4 | • Identify problem<br>• Selection of personal protective equipment<br>• Implement response objectives<br>• Terminate the incident | Mutual Aid or alternative or response service – Alberta Environment |
| Rescues, ladder and tower | 6 | • Decontamination and clean-up operations | Mutual Aid from SAFD |
| Deputy and Fire Chief | 2 | • Hazard and risk evaluation<br>• Information management and resource coordination | Activate MFD EOC |
| **Total Personnel** | **+20** | | |

**Note:** *All secondary responses are subject to staff availability and responders to the fire station. Daytime (Monday-Friday) response will usually get an ERF of 4 firefighters followed by POC assignments in the next response units. After hour response times greatly increase due limitations of POC service.*

## 6.5 Fire Prevention Program

As departments increase their emphasis on fire prevention activities, communities are seeing a significant reduction in fire-related losses. In Canada alone, deaths caused by fire have been reduced over the last 100 years from 3500 deaths per year to 330 (or 1/100,000 each year). This trend in fire losses has plateaued over the last 20 - 25 years, unlike other more frequent response services such as EMS. Fire prevention is a key component of risk management and has gained a higher profile in how departments are allocating their resources as departments have come to recognize the return on investment in fire prevention activities.

Over time, effective fire prevention programs are reducing particular types of emergency responses in direct proportion to the resources committed to the program. However, the level of resources must be carefully chosen in order to be cost-effective. Goals must be set and then evaluated regularly to ensure the best value. Currently, there are few industry benchmarks or standards for prevention and public education programming. It is important that departmental benchmarks be established and then reviewed annually against community risk levels and available resources. Data collection and analysis will determine the effectiveness of these programs and their impact on the overall reduction of losses.

Fire prevention activities, public education programs and active involvement in the community are all important efforts that departments are focusing on to reduce the number of emergencies.

Fire prevention main objective is to realize an annual measurable reduction in the severity and number of incidents that result from fire. Statistics should be gathered and analyzed in order to identify trends and irregularities, record, track, and report information related to inspections, hazardous occupancies, fire-related damage and loss, complaints and other relevant information.

The Alberta Office of the Fire Commissioner maintains a statistical and trend analysis for the Province and initiates specific prevention campaigns based upon leading fire causes. Examples include cooking safety, smoke alarm maintenance, and fire prevention.

The Alberta Building Code (ABC) and the Alberta Fire Code (AFC) are based upon the National Model Building and Fire Code of Canada. The Alberta Codes set out the technical provisions regulating activities related to:

- Construction, use or demolition of buildings and facilities
- Condition of specific fire and life-safety elements of buildings and facilities
- Design or construction of facilities related to certain hazards
- Protection measures for the current or intended use of buildings

In all cases, it is the owner or owner's agent's responsibility to comply with the Codes.

Several municipalities enact local bylaws such as a 'Fire and Life-Safety Bylaw' that clarify and/or emphasize the requirements of the applicable Codes and provide the authority for enforcement. As previously recommended the Fire Chief establishes as an amendment to Bylaw #144/2015 to include a cyclical inspection program that focusses on the higher risk fire and life safety risk occupancies. This would include occupancies such as the Alberta Building Code Group A, B and F classifications.

## 6.5.1    Pre-Fire Plans

The MFD paid-on-call firefighters have conducted some pre-fire planning to determine access points, exit locations and other components to pre-plan or assist with firefighting operations. This program is not formalized, and an enhanced emphasis should be placed on the completion and implementation of the pre-fire plan program.

> ***Observation #20:*** *As noted in Section 3, the MFD does not have a risk inventory of all structures in the town. This inventory would also serve as the basis for a formal pre-fire plan process. Pre-fire plans include information regarding the construction type, occupancy, building status, emergency contacts, utility shutoffs, fire suppression and detection systems, exposure information, water supply availability, access problems and any other hazards.*
>
> ***Recommendation #20: Formalize pre-fire plan inventory***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that MFD establish a formal pre-incident planning program that documents significant building aspects in a hard copy or electronic database where it can be retrieved when responding to incidents.*

## 6.6 Public Education Program

Public education programming provides the opportunity for department members to interact with the citizens of their community in a non-emergency setting.

MFD works proactively to reduce the risk of injury and death by delivering programs focused on home safety for families, adults and seniors. This includes several programs such as:

- HOWLS luncheon (partnership with high school to celebrate Honor, Ownership, Wisdom Leadership and Safety
- Fire drills
- Dominos event (MFD follows pizza delivery, checks smoke alarm and provides free pizza if the unit is functional, or provide a new battery or unit
- Fire prevention open house
- Halloween patrol/hall
- Win a ride to school in a fire truck

## 6.7 Mutual Aid and Other Service Agreements

Morinville's distance from neighbouring communities and, fire and emergency services is of great potential benefit. Communities closely located together can share resources and/or respond to major events for support and response coverage.

Morinville has mutual aid agreements with Sturgeon County and Town of Gibbons. These agreements contain provision for mutual aid assistance in the event of fire situations beyond the capabilities of each service. In addition, Morinville is a member of the Capital Regional Emergency Preparedness Partnership.

## 6.8    Municipal Comparatives

Comparing the Morinville Fire Department to similar communities is a good way to identify benchmarks or trends.  It must be noted that all communities have different attributes such as risk factors and community profile.   For this reason, the comparative community analysis should be used as a base reference that is not intended to be replicated in Morinville.  These benchmarks include budgets, performance, effectiveness and efficiencies.

For the purposes of this municipal comparative review, we used 2014–2018 information in order to get common information from each community.  Although fire and emergency services ultimately have the same goal of protecting life and property, each community has its unique features in how to accomplish their goals.   Therefore, there are no ideal or identical comparatives for the Town of Morinville.  Our main criteria for collecting information were:

- Population
- Budgets
- Department size
- Type (full-time, part-time or combination)
- Department staffing

Additional information for evaluation was:

- Number of firehalls
- Call volume
- Call types

*Table 29: Participating Municipal Comparatives*

| Community | Province | Population | Land Area |
|---|---|---|---|
| Morinville | Alberta | 9,848 | 11.4 km$^2$ |
| Hinton | Alberta | 9,882 | 33.52 km$^2$ |
| Edson | Alberta | 8,476 | 29.72 km$^2$ |
| Blackfalds | Alberta | 9,616 | 16.44 km$^2$ |
| Whitecourt | Alberta | 12,853 | 26.44 km$^2$ |
| Olds | Alberta | 9,148 | 14.93 km$^2$ |
| Castlegar | British Columbia | 9,023 | 15.76 km$^2$ |
| Williams Lake | British Columbia | 10,508 | 33.13 km$^2$ |

### 6.8.1 Budgets

Department budgets are of specific concern to most communities. In some instances, budgeting for fire and emergency services make up a considerable portion of a community's operating budget. We evaluated the budgets for each community, and it is important to note that each is unique in how each municipality allocates their budgets.

Each community factors in overall community profile and risk factors. The Morinville Fire Department's cost per capita is well below the $106 average of the comparative communities however, we can't stress enough that no two communities are the same in this regard.

*Table 30: Participating Municipal Comparative Budget Ranking*

| Community | Population | Municipal Budget | Department Operating Budget | Cost per capita | Percentage of Municipal Budget |
|---|---|---|---|---|---|
| Morinville AB | 9,848 | $19,350,298 | $752,087 | $76.37 | 3.88 |
| Hinton AB | 9,882 | $27,853,375 | $710,033 | $71.85 | 3.9 |
| Edson AB | 8,476 | $22,197,956 | $508,558 | $59.99 | 2.29 |
| Blackfalds AB | 9,916 | $26,566,680 | $1,606,485 | $162.00 | 6.04 |
| Whitecourt AB | 12,853 | $38,543,968 | $1,730,125 | $134.61 | 4.48 |
| Olds AB | 9,184 | $28,400,870 | $1,077,060 | $117.73 | 3.79 |
| Castlegar BC | 9,023 | $27,819,000 | $795,850 | $88.20 | 2.86 |
| Williams Lake BC | 10,508 | $31,984,760 | $1,029,732 | $98.00 | 3.22 |

### 6.8.2 Department Profile

Department profile, staffing models and levels of service are based on community risk, risk tolerance and the ability for a community to pay for and sustain desired service levels

*Table 31: Participating Municipal Comparative Department Profile*

| Community | Department Type | No. of Firehall |
|---|---|---|
| Morinville AB | POC | 1 |
| Hinton AB | POC | 1 |
| Edson AB | POC | 1 |
| Blackfalds AB | POC | 1 |
| Whitecourt AB | POC | 1 |
| Olds AB | POC | 1 |
| Castlegar BC | POC | 1 + 1 Satellite |
| Williams Lake BC | POC | 1 |

*Table 32: Participating Municipal Comparative Department Profile – Organizational Structure*

| Municipality | Total Staff | Fire Chief | Deputy Chief | Support Staff | Full-time Firefighter | Paid-On-Call Firefighter |
|---|---|---|---|---|---|---|
| Morinville AB | 44 | 1 FT | 2 PT | 1 FT | | 40 |
| Hinton AB | 32 | 1 FT | 1 FT | 1 FT | 1 FT/ 2 WEPs | 26 |
| Edson AB | 41 | 1 FT | 1 POC | 1 (Shared) | | 38 |
| Blackfalds AB | 31 | 1 FT | | | | 30 |
| Whitecourt AB | 50 | 1 FT | 2 FT | 1 PT (Admin) 4 PT (Dispatch /Prevention) | | 42 |
| Olds AB | 41.8 | 1 FT | | .8 FT (Admin) | | 40 |
| Castlegar BC | 35.2 | 1 FT | 2 FT | .2 FT | | 32 |
| Williams Lake BC | 43 | 1 FT | 1 FT | | 1 FT | 40 |

*Full-time (FT) Part-time (PT)*

## 6.8.3 Response Data

For the purposes of this municipal comparative analysis, we used 2014–2018 information in order to get common information from each community. Breakdowns are divided into the two following categories:

*Table 33: Examples of Incident Types for Statistical Analysis*

| INCIDENTS BY TYPE | |
|---|---|
| **EMS Related Calls** | |
| Call Types | Pre-Hospital Care: Alfa, Bravo Charlie Delta Echo |
| | Lift Assist |
| | False Alarms |

| INCIDENTS BY TYPE | | |
|---|---|---|
| **Fire Related Calls** | | |
| Fire Emergency | Alarm<br>Burning Complaint<br>Structure Fire<br>Minor Fire<br>Smoke | Car Fire<br>Re-check<br>Wildfire – Grass, Brush, Outdoor<br>Oven/Pot on Stove<br>Explosion |
| MVI (Motor Vehicle Incident, a.k.a. MVC (Motor Vehicle Collision)) | Extrication | No Extrication |
| Rescue | Stalled Elevator<br>Lake/Marine Rescue<br>High Angle | Swift Water<br>Building Collapse<br>Ice |
| Hazmat/Dangerous Good | Highway Incident<br>Rail Incident | Industrial Incident<br>Resident Incident |
| Non-Emergency | Carbon Monoxide<br>Gas/Oil Smell/Spill<br>Power/Telephone/Cable Line Down<br>Natural Gas Leak | Aircraft Standby Incident<br>Bomb Threat<br>Hazardous Materials<br>Propane Leak/Smell |
| Other | Inspection<br>Burning Pile Inspection<br>Assist Other Agency<br>Public Service | Needle Pick-up<br>Flood Assessment<br>Water Problem (in structure) |

*Note: Description and category names may not be common terminology in all jurisdictions.*

The chart below details total calls, fire calls and medical calls for the comparative communities. Williams Lake and Castlegar are only shown on the chart but are not included in the averaging details that follow due to their anomalies of no medical responses (Williams Lake) and extraordinary higher call volumes (Castlegar).

The comparative communities of Hinton, Edson, Olds, Whitecourt, Morinville and Blackfalds had a five-year average of 261 calls annually. Morinville had the 3rd highest call volume of this group and was slightly above the five-year average at 267. The six compared community's average 43 medical calls over the five-year period however Morinville's average was well below at 27 calls or 10% of their historic yearly call volume.

*Table 34: Participating Municipal Comparative Response Call Volume*

| Community | | Alberta | | | | | | British Columbia | |
|---|---|---|---|---|---|---|---|---|---|
| | | **Morinville** | **Hinton** | **Edson** | **Olds** | **Whitecourt** | **Blackfalds** | **Williams Lake** | **Castlegar** |
| Total Call Volume | 2014 | 281 | 302 | 312 | N/A | 350 | 198 | 349 | 763 |
| | 2015 | 305 | 334 | 225 | 347 | 323 | 119 | 355 | 933 |
| | 2016 | 243 | 328 | 177 | 317 | 346 | 151 | 261 | 903 |
| | 2017 | 228 | 308 | 158 | 392 | 328 | 174 | 289 | 849 |
| | 2018 | 281 | 242 | 284 | 392 | 299 | 161 | 289 | 791 |
| Fire Related Calls | 2014 | 256 | 260 | 264 | N/A | 224 | 142 | 56 | 76 |
| | 2015 | 285 | 293 | 201 | 158 | 227 | 106 | 46 | 171 |
| | 2016 | 207 | 281 | 157 | 139 | 239 | 132 | 45 | 97 |
| | 2017 | 195 | 256 | 133 | 166 | 222 | 154 | 48 | 70 |
| | 2018 | 237 | 213 | 195 | 256 | 270 | 144 | 61 | 68 |
| EMS Related Calls | 2014 | 25 | 42 | 48 | N/A | 20 | 56 | 0 | 78 |
| | 2015 | 20 | 39 | 24 | 63 | 25 | 13 | 0 | 97 |
| | 2016 | 36 | 44 | 20 | 74 | 30 | 19 | 0 | 95 |
| | 2017 | 33 | 51 | 25 | 119 | 38 | 20 | 0 | 118 |
| | 2018 | 44 | 29 | 89 | 136 | 29 | 17 | 0 | 108 |
| Comments | | Includes limited response into Sturgeon County | Includes limited response into Yellowhead County | Includes limited response into Yellowhead County (2016) | Includes limited response into Mountain View County | Includes limited response into Woodlands County | Includes limited response into Lacombe County | Includes limited response into Cariboo Regional District | Includes limited response into West Kootenay Region |

# SECTION 7
# ASSETS AND FACILITIES

## 7.1    MFD Infrastructure

Infrastructure refers to fire stations and other fixed assets or facilities that MFD occupies and uses.

### 7.1.1    Fire Station Overview and Analysis

MFD operates out of one fire station that is centrally located within Morinville.  This facility houses the administration and operations for MFD.  Through conducted interviews and a tour of the facility, it is obvious that while this facility has been marginally serving the needs of MFD, there is no room for expanded activities within the current facility.

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*Observation #21: The current fire hall is overcrowded and has no capacity or facility to support the current operation.  Specific areas include the need for equipment and Personal Protective Equipment (PPE) decontamination and drying, additional space to develop/expand fitness and wellness programs, enhanced bay area to support second line units with internal charging and exhaust capture systems, and additional workshops for equipment maintenance.  A fire hall expansion needs to be strategically planned and consider community growth, regional and shared facilities and services opportunities, and potential changes in the MFD service delivery model.  Aspects such as new opportunities to accommodate Alberta Health Service's for ambulance, or if 24/7 full-time coverage becomes necessary to meet community service needs.*

   *Recommendation #21: Continue with fire hall upgrades*

   *Suggested completion: 0-36 months*

   *Given the current operations, projected municipal development and to accommodate the staffing increases, it is strongly recommended that the proposed renovation project for the fire hall continues as a priority.  We understand there is an expansion plan in place for 2022 which could allow for additional bays.  This plan needs to stay the course based on the current growth projections of the community coupled with the appropriate response requirements.*

---

| Address: | 10021-100 Street | | |
|---|---|---|---|
| Use: | Fire, Rescue, Administration | | |
| Bays: | 4, back-in only | Units: | 7 |
| Comments: | This facility serves as the hub for all apparatus and light-duty units and response personnel.  This facility also has capabilities for soft-skills and light duty training. House training capabilities with training/meeting room. | | |
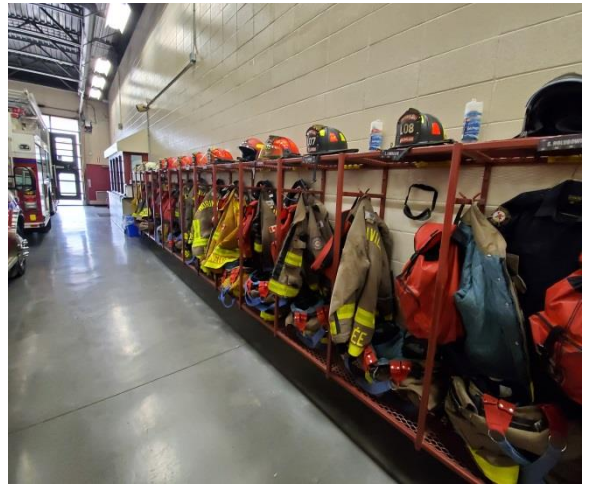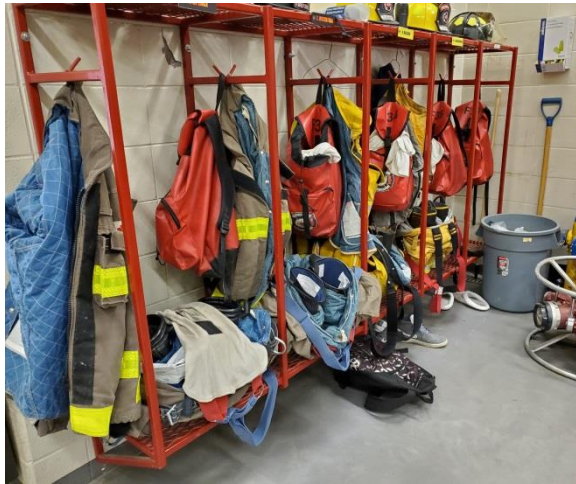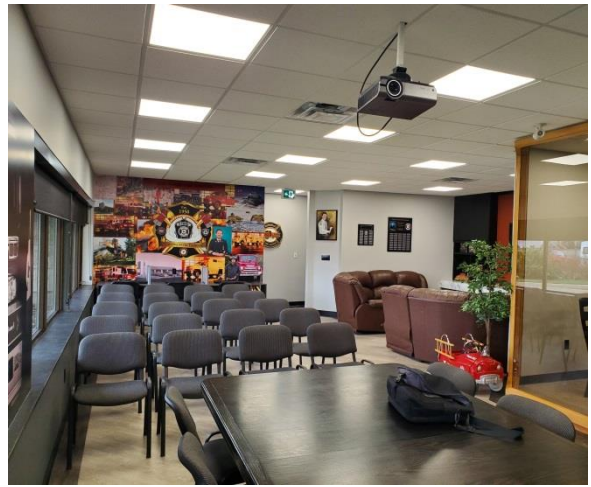
### 7.1.2    Fire Training Facility

MFD has secured and maintains their own training facility that is within the Town of Morinville. The location of this facility affords training opportunities while allowing for adequate response coverage to the community.   While this facility is relatively basic, it allows the necessary training for:

- Proper apparatus staging
- Search and rescue
- Hose operations
- RIT
- Crew coordination
- Vehicle extrication
- Simple dangerous goods response
- Other firefighter core competencies

*Observation #22: A limitation to the existing training facility is the ability to train in "live-fire" operations, which is a core competency of NFPA.  As a result, MFD members are required to travel to training facilities outside the community that can facilitate these necessary exercises, allowing them to safely and efficiently train their personnel.  Another limitation is that emergency vehicles should stay within the response area and as such MFD should not take their apparatus outside their jurisdiction for such training. Past practice has been to use the live fire training buildings at the military base or Leduc.*

*Recommendation #22: Research the building of a live-fire training facility*

*Suggested completion: 48-60 months*

*It is recommended that the Fire Chief researches live-fire training facilities such as the prefab, container style building that will allow for advance scheduling of necessary live-fire exercises.*

## 7.2    Equipment

### 7.2.1    Apparatus and Light Duty Vehicles

Apparatus and light-duty vehicles are typically the biggest asset expenditures for any department.  Purchasing and managing these assets require strong fiscal responsibility to endure public scrutiny.  Currently, MFD has several million dollars invested in vehicles and equipment.  Morinville has a fleet policy that identifies the life cycle of emergency response vehicles. There is also a capital asset long range financial plan that includes transfers to reserves based upon vehicle depreciation and replacement costs.

The lifespan of apparatus varies depending on its type and use. Current Underwriters Laboratories of Canada (ULC[8]) and NFPA 1901 Standard for Automobile Firefighting Apparatus Standards recommend using apparatus on the front line for up to 15 years, then as a backup for another 4 to 5 years. Of course, this timeline is dependent on the frequency of use, scheduled maintenance and budgets. The following standards are provided as a reference:

Replacement lifecycles for Fire Department vehicles are proposed to be generally consistent with lifecycles recommended by the Fire Underwriter's Survey (FUS) body reporting to the Canadian General Insurance (CGI). In addition to maintenance of a current fleet capable of reliably providing service, meeting insurance guidelines favourably impacts municipal insurance ratings.

*Table 35: Service Schedule for Fire Apparatus - Fire Insurance Grading Purposes*

| Apparatus Age (Yrs.) | Major Cities [3] | Medium Sized Cities [4] | Small Communities[5] and Rural Centres |
|---|---|---|---|
| 0 – 15 | First Line Duty | First Line Duty | First Line Duty |
| 16-20 | Reserve | 2nd Line Duty | First Line Duty |
| 20-25[1] | No Credit in Grading | No Credit in Grading or Reserve[2] | No Credit in Grading or 2nd Line Duty[2] |
| 26-29[1] | No Credit in Grading | No Credit in Grading or Reserve[2] | No Credit in Grading or Reserve[2] |
| 30+ | No Credit in Grading | No Credit in Grading | No Credit in Grading |

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

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

[3]Major Cities are defined as an incorporated or unincorporated community that has:
- a populated area (or multiple areas) with a density of at least 400 people per square kilometer; AND
- a total population of 100,000 or greater.

[4]Medium Communities are defined as an incorporated or unincorporated community that has:
- a populated area (or multiple areas) with a density of at least 200 people per square kilometer; and/or
- a total population of 1,000 or greater.

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[8] *Underwriters Laboratories of Canada (ULC) is an independent product safety testing, certification and inspection organization. www.canada.ul.com*

<sup>5</sup>*Small Communities are defined as an incorporated or unincorporated community that has:*

- *no populated areas with densities that exceed 200 people per square kilometer; AND*

- *does not have a total population in excess of 1,000.*

- Engines: 16-20 years frontline (FUS & NFPA), but can be reduced due to high usage

- Rescue Truck: 15 years frontline (NFPA) but can be reduced due to high usage

In addition, the National Fire Protection Association Standard (NFPA) 1901: Standard for Automotive Fire Apparatus recommends the following:

### *D.1 General*

*To maximize fire fighter capabilities and minimize risk of injuries, it is important that fire apparatuses be equipped with the latest safety features and operating capabilities.*

*In the last 10 to 15 years, much progress has been made in upgrading functional capabilities and improving the safety features of fire apparatus. Apparatuses more than 15 years old might include only a few of the safety upgrades required by the recent editions of the NFPA fire department apparatus standards or the equivalent Underwriters Laboratories of Canada (ULC) standards. Because the changes, upgrades, and fine tuning to NFPA 1901 have been truly significant, especially in the area of safety, fire departments should seriously consider the value (or risk) to fire fighters of keeping fire apparatus more than 15 years old in first-line service. It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard (See Section D3 of Standard). This will ensure that, while the apparatus might not totally comply with the current editions of the automotive fire apparatus standards, many of the improvements and upgrades required by the current editions of the standards are available to the fire fighters who use the apparatus. Apparatuses that were not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced.*

The current fleet of apparatus and equipment is deemed appropriate for the type of service the department provides. With the exception of the Pump3 replacement there are no foreseeable issues.

---

***Observation #23:*** *MFD Pump 3 will be 17 years old in 2020. NFPA 1901 indicates that changes, upgrades, and fine tuning to NFPA 1901 have been truly significant, especially in the area of safety, fire departments should seriously consider the value (or risk) to fire fighters of keeping fire apparatus more than 15 years old in first-line service.*

***Recommendation #23: Replace fire apparatus Pump 3***

***Suggested completion: 0-36 months***

*It is recommended that the capital replacement for Pump 3 be approved in the Town of Morinville Capital Budget for 2020. In addition, Pump 3 should be retained as a second line unit and use to maintain response capacity during periods when frontline units are unserviceable, out of service for maintenance, and can be deployed for sustained operations or operations beyond the Morinville response area such as training*

---

The following tables summarize MFD's current apparatus and light-duty equipment.

| Vehicle Description | |
|---|---|
| Unit Number: | **ATP 7** |
| Year/Make: | 2016 Dodge 3500 4X4 |
| Type: | All Terrain Pump |
| Pump Capacity: | 47 L/min. |
| Tank Capacity: | 940 L Foam |
| Usage: | Spring/Summer months for wildland fires.  During Winter months, Pump is removed and used as a utility vehicle. |



| | |
|---|---|
| Unit Number: | **Unit 8** |
| Year/Make: | 2004 Ford F550 (4X4) |
| Type: | Light Rescue / Air Bottle Support |
| Pump Capacity: | N/A |
| Tank Capacity: | N/A |
| Usage: | Used as a light rescue, air bottle support and personnel carrier. |



| | |
|---|---|
| Unit Number: | **Car 1** |
| Year/Make: | 2011 Chevrolet Tahoe |
| Type: | Chief's Command Vehicle |
| Pump Capacity: | N/A |
| Tank Capacity: | N/A |
| Usage: | Used as first response unit |



| | |
|---|---|
| Unit Number: | **Morinville Engine 2 (County)** |
| Year/Make: | 2010 Freightliner |
| Type: | Pumper Truck |
| Pump Capacity: | 4000 L/Min. @ 1000 KPA 2000 L/Min. @ 1700 KPA |
| Tank Capacity: | 3780 L Water 113 L Foam (Foam Pro System) |
| Usage: | Used at front line truck for all county fire responses, motor vehicle collisions as well as medical events |

| Vehicle Description |
|---|



| Unit Number: | **Pump 3** |
|---|---|
| Year/Make: | 2003 Freightliner Condor |
| Type: | Pumper Truck |
| Pump Capacity: | 6000 L/Min. @ 1000 KPA<br>3000 L/Min. @ 1700 KPA |
| Tank Capacity: | 1890 L Water<br>113 L of Foam (Foam Pro System) |
| Usage: | Used as front-line truck for all fire response as well as medical events |



| Unit Number: | **Ladder 4** |
|---|---|
| Year/Make: | 2010 Pierce Quantum |
| Type: | Ladder Truck |
| Pump Capacity: | 7987 L/Min. @ 1000 KPA<br>4046 L/Min. @ 1700 KPA |
| Tank Capacity: | 1118 L Water |
| Usage: | 100 ft. Aluminum ladder with elevated master stream. Bucket may be used for high angle rescue. |

| Vehicle Description |
|---|



| Unit Number: | **Rescue 5** |
|---|---|
| Year/Make: | 2013 Pierce Quantum |
| Type: | Heavy Rescue |
| Pump Capacity: | N/A |
| Tank Capacity: | N/A |
| Usage: | Used as heavy rescue, water rescue, ventilation, vehicle extrication, also may be used as a command post |

## 7.3    Ancillary Equipment

Equipment needed for field response operations such as breathing apparatus, vehicle extrication tools and blowers are current and adequate for the needs of MFD.  The ancillary equipment is designed and maintained to meet the department's current core service, goals and objectives.  As the response needs change or grow, additional equipment to match the service must be considered.

## 7.4    Personal Protective Equipment

MFD personnel are supplied with the latest NFPA, NIOSH and CSA approved Personal Protective Equipment (PPE) including turnout or bunker gear, gloves, helmets, boots and any specialized gear for specific rescue and EMS operations.  The PPE provided is current, appropriate and designed to meet the department's goals and objectives.

## 7.5    Specialized Operations Equipment

Sometimes an effective and efficient response to an incident requires equipment designed for a specific purpose.   MFD responds with specialized equipment to incidents involving motor vehicles, DG incidents, water, confined spaces and situations requiring rope rescue.   The equipment appears to meet the goals and objectives of the department and requires no further action at this this time.

## 7.6    Asset Management

MFD currently has processes in place to identify and track assets manually.  Lifecycles policies and capital replacement budget plans are in place.

> ***Observation #24:*** *The Town of Morinville does not have a centralized asset management program that creates an inventory of all tangible assets, life cycles, maintenance, depreciation and replacement costs.  This program is considered important to strategically manage the MFD fleet and future acquisitions.*
>
> ***Recommendation #24: Implement a comprehensive Asset Management Program with advanced equipment management software***
>
> ***Suggested completion: 36-48 months***
>
> *It is recommended that the Town procures an asset management program.  This would ensure that preventative maintenance could be diligently tracked to avoid early retirement/replacement of assets.  This software will also provide valuable data for possible failure analysis.  This, combined with more rigorous and documented asset management practices, will ensure that the MFD maintains optimal utilization of its apparatus and equipment.*

### 7.6.1  Equipment and Apparatus Maintenance

MFD does not have a dedicated maintenance department.  MFD staff manages the routine maintenance for all ancillary equipment and personal protective equipment.  This includes hand tools, breathing apparatuses, thermal imaging cameras, turnout gear and extrication tools.  Apparatus maintenance including scheduling regular inspections, tests, preventative maintenance, replacement, and emergency repair is completed by a contract with the Sturgeon County Fleet Maintenance Division.

# SECTION 8
# SUMMARY

In creating this Plan, we analyzed a number of factors to determine the effectiveness and efficiency of the Morinville Fire Department (MFD).  We evaluated the operational and administrative aspects of the department, as well as the ability of the department to work as a cohesive unit.  Additionally, we evaluated the operational relationship/agreement with Sturgeon County.  We then reviewed MFD's response data and its current resources and assessed their alignment with both existing and projected risks and levels of demand.

There are several aspects of the department along with recommendations in this Plan that needs to be considered in order to improve the effectiveness and efficiencies for MFD.  During a thorough review of MFD's services, we identified 24 observations and recommendations for consideration.  Although each recommendation has a corresponding timeframe, it is important to note this Plan needs to be re-visited on a regular or annual basis in order to stay on pace with the dynamic activities and economy of the community.

MFD has a long and proud history with the Town of Morinville.  While honoring their past, they remain focused on continuous improvement with emphasis on firefighter and public safety.  Implementation of the recommendations outlined in this Plan will better position MFD to mitigate community risk factors, accommodate community growth and activity, while maintaining excellent community relationships and value for money.

# APPENDIX 'A'
# GLOSSARY OF TERMS

| Apparatus | Any vehicle provided with machinery, devices, equipment or materials of the Fire Department for firefighting as well as equipment used to transport firefighters or supplies. |
|---|---|
| Assembly Time | From the time the notification sounds in the fire station until the first vehicle leaves the station. In a full-time department this is expected to be within 80 seconds but for volunteer departments the time to collect a response crew can vary widely depending on location and time of emergency as well as all the factors that impact travel time. |
| Chute Time | See Assembly Time |
| Dangerous Goods | This term is synonymous with the terms hazardous materials and restricted articles. The term is used internationally in the transportation industry and includes explosives and any other article defined as a combustible liquid, corrosive material, infectious substances, flammable compressed gases, oxidizing materials, poisonous articles, radioactive materials, and other restrictive articles. |
| Discovery | This is the time between the start of the emergency and when someone or an engineered system has detected the incident. |
| Dispatch Time | This is the time required to extract the necessary information from the caller to allow the proper response to be initiated. The dispatcher identifies the correct fire location and initiates the dispatch by paging the appropriate fire station. |
| Emergency Call | This is the period between discovery and the actual notification of emergency services. |
| Emergency Communications Centre (ECC) | A facility dedicated to service receives calls, processes them and then dispatches emergency units to the correct location in the appropriate time-period. |
| Emergency Operations Centre (EOC) | The protected sites from which civil officials coordinate, monitor, and direct emergency response activities during an emergency or disaster. |
| Emergency | Any occasion or instance that warrants action to save lives and to protect property, public health and safety. A situation is larger in scope and more severe in terms of actual or potential effects. |
| Fire Chief | The person responsible for the efficient management of the Fire Department and the condition of all buildings, apparatus and equipment under the Fire Chief's control. |
| Fire Suppression | The application of an extinguishing agent to a fire at a level such that an open flame is arrested; however, a deep-seated fire will require additional steps to assure total extinguishment. |

| Hazard Analysis | A document, which identifies the local hazards that have caused, or possess the potential to adversely affect public health and safety, public and private property, or the environment. |
|---|---|
| Impact | The effect that each hazard will have on people such as injury and loss, adverse effects on health, property, the environment and the economy. |
| Incident | A situation that is limited in scope and potential effects. |
| Intervention Time | The time from fire reporting to the point where the first arriving pumper, or other apparatus providing comparable functions, arrives at the fire scene and directs an extinguishing agent on the fire. |
| Mutual Aid Agreement | An agreement between jurisdictions to assist each other during emergencies by responding with available manpower and apparatus. |
| National Fire Protection Association | The National Fire Protection Association (NFPA) is an internationally recognized trade association established in 1896 that creates and maintains standards and codes for usage and adoption by local governments to reduce the worldwide burden of fire and other hazards.  This includes standards and guidelines to which many fire departments utilize to carry on day-today operations. |
| Response | Those measures undertaken immediately after an emergency has occurred, primarily to save human life, treat the injured, and prevent further injury and losses.  They include response plan activation, opening and staffing the EOC, mobilization of resources, issuance of warnings and direction, provision of aid, and may include the declaration of a State of Local Emergency. |
| Risk | The chance or likelihood of an occurrence based on the vulnerability and known circumstances of a community. |
| Setup Time | This is the time necessary on site to evaluate the necessary actions, position the required resources and commence the intervention.  In the case of a fire; completing size-up, assigning the necessary tasks and deploying resources can provide delays on scene.  A well-trained crew can minimize these delays while providing a safe, successful response. |
| Standard Operating Guidelines (SOG) | A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely, which can be varied due to operational need in the performance of designated operations or actions. |
| Standard Operating Procedures (SOP) | A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely for the performance of designated operations or actions. |
| Travel Time | Once a vehicle leaves the station, it must negotiate the best route between that point and the location of the emergency.  Factors to consider for travel time are driver skill, weather, traffic, topography, road conditions and vehicle capabilities. |

# APPENDIX 'B'
# LIST OF FIGURES, MAPS, IMAGES, AND TABLES

# APPENDIX 'C'
# INTERVIEW GUIDE

**General**

1. Do you think the public feels they are getting value for their tax dollars?

2. What would you perceive the public understanding of the fire department's services and capabilities?

**Risks**

3. What do you believe to be the greatest risks to your community?
   (Fire, Explosion, MVC, Natural Disasters)

4. How do you see levels or types of risk changing?
   (Future development, Industry, loss of response resources)

5. Do you believe the community is adequately protected? If not why?

6. Based on the economic growth of the community, do you feel the department can keep up to the current and future demands?

7. Are there any plans for annexation?

8. What plans has the community adopted for alternate risk reduction strategies for fire and rescues? (fire sprinklers, increased life-safety inspection, etc.).

**Response**

9. Has Senior Management and Council established clear levels of service expectations?
   (Performance standards, core service expectations, etc.).

10. Is the department involved in the planning of new communities in the event of an emergency?

11. What performance/service outputs are you tracking (turnout times, response times, call volume, dispatch, fire inspections, public education, etc.)? Do you see areas for improved efficiency or effectiveness?

12. How do you see the department's demands for service growing in the future?

13. Do you believe the department's current response model, in terms of time and manpower, adequate?

14. What do you believe are ideal effective staffing levels for response?

15. In your opinion, are medical responses over tasking the emergency response system capacity?
    If so are there any situations or examples that come to mind?

16. In your opinion, is the current response system sustainable? Why or why not?

**Staffing, Recruiting and Retention**

17. How effective is your current recruiting program? Could it be improved?

18. Do you feel the department is adequately staffed for response?

19. Do you feel the department is adequately staffed for administration or support?

20. Does/has the department experienced a high rate of turnover?
    If so, why and what can be done to change this?

**Training**

21. Do you feel the current level of training is adequate for the service expectations?

22. How many weeks does a recruit spend at orientation before they go to the floor?

23. In your opinion, are there deficiencies in the department's recruit training and incumbent training program?  (scheduling, course delivery (online, classroom))

24. What improvements, if any, would you like to see based on your experience with training overall?

**Equipment**

25. Do you feel the department is adequately resourced?
    (light duty and heavy apparatus, lose equipment and consumables)

26. Does the department have an apparatus life-cycle program?

27. Is there a reserve fund for apparatus purchases?

**Asset Management and Maintenance**

28. What performance measures are in place related to asset maintenance and management (vehicles, equipment & infrastructure)?

29. Are there deficiencies in the current asset management program?

30. Does the current vehicle fleet provide the capacity/capability necessary to meet the demands and types of responses and risks?

31. What improvements would you suggest?

**Infrastructure and Facilities**

32. In your opinion, is the current station functional in meeting the operational requirements of the department?

33. Do you feel the current station location provide adequate geographic coverage?

34. What other facilities (i.e. training, dispatch) does the department have?  Do they meet industry design standards and the department's specific needs?

35. Are there future plans for additional facilities?
    (Training, Firehall, etc.).

36. Has a multi-use facility been considered?
    (Fire + Police, Fire + EMS, Fire + EOC, etc.).

**Technology**

37. Has the department kept pace with leading technology/practices?
    (Records management, Auto & Mobile CAD, Predictive Modeling, training systems, critical task analysis, dynamic and risk based deployments etc.).

38. Is the department using emergency vehicle traffic signal pre-emption during response (i.e. Opticom)? Why or why not?

**APPENDIX 'D'**
**WORK EXPERIENCE PROGRAM**



Work Experience Programs

CHRIS CORMACK– BIG WHITE FIRE DEPARTMENT

Overview

▶ History
▶ What do WEP members do?
▶ How Work Experience Programs work?
▶ Advantages / Disadvantages
▶ Keys to success
▶ The future
▶ Q & A

# Work Experience Programs -History Big White Fire

▶ The Evolution
  ▶ Devise a Plan to Recruit and Retain Firefighters
  ▶ Existing POC Crew Training Time (2 Years Average 1001 Level 2)
  ▶ Methods of Recruiting well trained Fire Fighters
  ▶ Where are we now?
    ▶ Average over 60 Applicants for 7 positions
    ▶ Program entering into its 17 year
    ▶ 2013 First International Student
    ▶ 97 FF since 2001- 72 Hired Career-13 POC
    ▶ Our department is represented all over Canada

# WEP – The Basics

▶ What do they do?

The work of a career fire fighter!

  ▶ Station duties
  ▶ Train
  ▶ Fire prevention
  ▶ Fire and life safety presentation
  ▶ Volunteer in the community
  ▶ Fundraisers
  ▶ Respond to calls outs
  ▶ They do it all with a strong work ethic and a great attitude

## WEP – The Basics

► How do they work?

- ► Recruitment, Word of Mouth, Magazines, Websites, Local Promoting
- ► Application & Screening Process (Point System)
- ► FF1001 Level 2 Minimum requirement to apply
- ► Start Date June 1st, 11 month program.
- ► When can they respond
- ► Many courses throughout the program
- ► Quarterly Evaluations

## Current BC WEP Programs

### 1) Sun Peaks Fire Rescue – 4-5 Members

➢ Runs – May 1st – Oct 31st (6 months)

➢ 1 month of training before crews start responding

➢ (Includes….7 day boot camp, EMR, EVO)

➢ Train 2 full days a week, 1 practice night

➢ Live in staff accommodations

➢ Allowed to work part or full time

➢ Can apply to other departments while part of the program

➢ POC - $15/call $20/practice night

➢ Fire Chief Colin Cannon, Supervisor - Capt Joss Advocaat

# Current BC WEP Programs

## 2) Merritt Fire Rescue Department – 5-6 members

- Ongoing (12 months)
- 4 week boot camp, fire, FR, Auto-Ex, Rope Rescue
- 6 training sessions a week (12 hours/wk)
- Live at the fire hall
- No part or full time work allowed
- Can apply to other departments while part of the program
- $3600 Ed Allowance/living exp, pass to the aquatic centre & gym, POC calls and training
- Fire Chief David Tomkinson, Supervisor – Lt. Carl Johnston

# Current BC WEP Programs

## 3) Creston Fire Rescue – 5 members

- WEP Started fall of 2014
- Runs - Nov 1st – Oct 31st (12 months)
- 1 month of training before crews start responding
- Live at the fire hall
- No part or full time work opportunities
- Can apply to other departments while part of the program ?
- $2400 Ed Allowance, pass to the local rec centre, $100/mn janitorial, POC pay
- Fire Chief Mike Moore, Supervisor – Asst Chief Jared Riel

## Current BC WEP Programs

### 4) Big White Fire Dept. – 7 members

➢ WEP Started 2001

➢ Runs - June 1st – Apr 15th (11 months)

➢ 1 month of training before crews start responding

➢ Live at the fire hall (1.3 million addition completed 2017)

➢ No part or full time work opportunities

➢ Can not apply to other departments while part of the program

➢ POC pay $18/hr 2 hr min, $18/hr 2 hr practice, Ski Pass

➢ Fire Chief Jamie Svendsen, Supervisor – DC Chris Cormack

## WEP – The Basics (continued)

▶ How to start?

  ▶ Why would you want to start a program

    ▶ Staffing Requirements

    ▶ Response Times

    ▶ Truck and Equipment Maintenance

    ▶ More Community Involvement

    ▶ Increase POC membership

    ▶ Increase Department moral

    ▶ Increase Day Time Turnout

## WEP – The Basics (continued)
▶ How much do they cost?
  ▶ Big White 2017 Budget $35,000.00
  ▶ 2017 Figures
    ▶ Advertising and recruiting $300.00
    ▶ Living Supplies $2,500.00
    ▶ Uniform/Bunker Gear $8,700.00
    ▶ Lunches/BBQ $1,500.00
    ▶ Physical Fitness $3,000.00
    ▶ Training Courses $8,000.00
    ▶ Manuals/Office Supplies $700.00
    ▶ Ski Passes $0.00  ($700 x 7)
    ▶ Ride-a-Longs $1,500.00
    ▶ Graduation Ceremonies $3.200.00
    ▶ Electricity/Water/Sewer $3,200.00

## WEP – The Basics (continued)

▶ Costs not reflected in previous slide

  ▶ 60% of DFC Wages are spent running the Program
  ▶ 20% Fire Chief Wages Admin/Training
  ▶ 15% of DFC FPO are spent assisting with Training/Fire Prevention/Pub Ed
  ▶ Some Training costs and wages absorbed in the Volunteer training and call out budget.
  ▶ POC Wages
  ▶ Most WEP see their cost as an extension of their education ($3,000 - $5,000 out of pocket)

## Advantages

▶ The Obvious
  ▶ More firefighters
  ▶ More work
▶ Maybe not so Obvious…
  ▶ Image
  ▶ Culture

## Disadvantages

▶ Amount of time to oversee program (7 FF 24/7 x 11 months)
▶ Living in close Proximity with each other for 11 months
▶ Takes them away from family, girlfriends, wife, for 11 months
▶ Leaving the program for interviews, fitness (CPAT) family matters
▶ Reference checks
▶ POC not making trucks, becoming complacent, lose interest
▶ DFC devoted to 4 months of training 4-5 days a week
▶ Wear and Tear on equipment
▶ You become a parent, assist with personnel matters, Life Long Mentors
▶ Little or no time off November to April

Q & A



Thank you!

# APPENDIX 'E'
# STURGEON COUNTY AGREEMENT

Sturgeon County – Town Of Morinville

Fire Services Agreement 2018- 2020

BETWEEN:

The Town of Morinville
("Town")

- and -

Sturgeon County
("County")

**PREAMBLE:**

The County, is authorized under Municipal Government Act, R.S.A. 2000, c. M-26 (the "MGA"), to enter into agreements on or in connection with matters under the County's administration;

As authorized under the *Municipal Government Act*, the Town may provide a service that the Town provides in the Town to another municipality with the agreement of that other municipality.

The County desires to enter into an agreement with the Town whereby the Town will provide certain emergency call handling and firefighting services to the County;

The Town has agreed to provide certain emergency call handling and firefighting services to the County.

The County and the Town have agreed to enter into this Agreement for their mutual benefit and desire to set out the terms and conditions thereof, this Agreement witnesses that the Parties agree as follows:

**Interpretation**

1. In this Agreement:

   (a) "Agreement" means this agreement and includes Schedules "A", "B" and "C";

   (b) "Fire Hall" means the building that houses all fire department related equipment and vehicles and is located at 10021-100 Street in the Town;

   (c) "Call Handling Services" means those activities reasonably required for the receipt of all emergency calls within the Fire Service Area in accordance with the Town's call-handling procedures as they exist from time to time;

   (d) "Fire Service Area" means the geographic area within which the Town will provide Call Handling Services and Firefighting Services under this agreement as determined by the County in its sole discretion but excluding the area within the municipal boundaries of the Town;

   (e) "Firefighter(s)" means the firefighter(s) or rescue technician(s) who are, from time to time, members of the Morinville Fire Department;

   (f) "Firefighting Services" means those measures and activities which are reasonably necessary and incidental to the provision of fire extinguishment and rescue services and can be reasonably performed by the Town under this Agreement, including fire protection services, rescue services, medical and response to incidents;

   (g) Force Majeure" means any cause not within reasonable control of the Town including, without limitations, the inability to assemble sufficient volunteer personnel to adequately respond to a call for assistance, interruption of telecommunications, gas, electric or other utility services, acts of God, strikes. Lockouts, or other industrial disturbances, acts of public enemy, wars, blockades,

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insurrections, riots, epidemics, landsides, earthquakes, fires, lightning, storms, floods, high water, washouts, inclement weather, orders or acts of military authority, civil disturbances and explosions

(h) "Materials" includes all software and other personal property produced by the County and Town in the delivery of the Services;

(i) "Mutual Aid" means assistance, firefighting services, provided by the County, either by paid on call/volunteer or full-time staff, into the Towns boundaries

(j) "Parties" means the parties to this Agreement, being the Town and the County;

(k) "Record" means a record of information in any form and includes notes, images, audiovisual recordings, books, documents, maps, drawings, photographs, letters, vouchers and papers and any other information that is written, photographed, recorded or stored in any manner, but does not include software or any mechanism that produces records;

(l) "Personal Information" means recorded information about an identifiable individual as defined in the *Freedom of Information and Protection of Privacy Act*, as may be amended from time to time;

(m) "Stood Down While Assembling" means when the fire department is dispatched to an incident and this incident is concluded before any member or apparatus departs the fire hall;

(n) "Stood Down On-Route" means when the fire department is dispatched to an incident and apparatus departs the fire hall and are stood down before arriving on scene; and

(o) Standard Operating Guidelines (SOG's) means standard operating guidelines issued, updated and or amended that are published and distributed by the County Fire Chief in relation to Fire Fighting Services within the County.

**Town's Contact, Delegation**

2. The Town designates the Director of Corporate Operations or his or her designate as the Town's representative under this Agreement and as the prime contact who is authorized to communicate the Town's position to the County on matters pertaining to this Agreement.

3. The County designates the County Fire Chief/Manager of Protective Services or his or her designate as the County representative under this Agreement and as the prime contact who is authorized to communicate the County's position to the Town on matters pertaining to this Agreement.

4. The Town may, in the Town's absolute discretion, delegate any duties, powers or functions relating to the provisions of Services to the Town Fire Chief or his or her designate.

**Period of Contract**

5. The Town shall provide services pursuant to the terms of this Agreement commencing February 1, 2018 and terminating December 31, 2020.

**Town Obligations**

6. The County hereby engages the Town to provide Call Handling Services and Firefighting Services both within the Fire Service Area (Schedule C) and in such other areas of the County, which the Parties may agree on from time to time, in a timely, efficient and economic manner and to provide such services in accordance with Schedule "A" of this Agreement.

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7.  In addition, the Town will provide to the County, use and access of the existing Fire Hall (or a replacement building if the Fire Hall is destroyed) for storage of the County's equipment and parking of fire apparatus.

8.  In consideration for the Services, the County will pay the fees set out in schedule "B" to this agreement. The County shall be invoiced by the Town annually no later than June 30.

9.  The County acknowledges, accepts and agrees that in the event where a Town incident is deemed to be a priority by the Town Fire Chief or his or hers designate, the Town may be unable to provide the Services within the Fire Services Area. The County shall have no claim for damages or compensation arising out of the failure or refusal of the Town to provide the Services under this agreement in the Fire Service Area due to a conflicting requirement for such Services.

10. The Town agrees to pay for all costs associated with maintaining a Fire Hall building including but not limited to utilities, phone, fax, internet and building repairs.

11. The Town agrees to maintain insurance and registration on the Town's Firefighting and Emergency Services apparatus and Fire Hall. The Town agrees to pay all vehicle, equipment maintenance, replacement and fuel costs associated with Town Firefighting Equipment that may be used in the County from time to time.

12. County Firefighting Equipment may be used by the Town from time to time to provide assistance to an incident within the Town. The Town agrees to pay for any damages, repairs and or replacement of County apparatus or equipment arising from use within the Town limits, upon mutual agreement, payable upon invoice from the County.

13. The Town agrees to maintain the same contracted emergency dispatch service as utilized by the County to provide Call Handling Services and be responsible for all associated costs; or

    The Town agrees that any change in Call Handling Services will be communicated prior to any change to ensure there are no breaks in service or interruption in communication with other partnering departments.

14. The Town agrees to communicate to the contracted emergency dispatcher protocols as to how dispatching of additional resources and apparatus will be handled for Town events.

15. The Town is responsible for all for its members' firefighter insurance policies and or benefits ie: Volunteer Firemen's Insurance Services (VFIS).

**County's Obligations**

16. The County shall obtain, maintain and keep in good standing, during the term of this Agreement, general public liability and property damages insurance coverage.

17. Town Firefighting Equipment may be used by the County from time to time to provide assistance to an incident within the County. The County agrees to pay for any damages, repairs and or replacement of equipment arising from use within the County limits, upon mutual agreement, payable upon invoice from the Town.

18. The County shall bear the costs of all repairs to any vehicles and equipment comprising a part of the County's Firefighting Equipment when being utilized within the County. The County agrees to maintain insurance and registration on the County's Firefighting Equipment.

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19. The County shall equip all vehicles forming a part of the County's Firefighting Equipment with operational communications equipment capable of properly providing communications facilities for use within the Fire Services Area.

20. The County shall provide the Town with complete use of all communications towers, antennae, cabling system repeater equipment and any other related equipment regardless of location, for the purpose of discharging the obligations of the Town hereunder. The County shall bear the costs of all repairs, insurance, and registrations associated with the communication towers and equipment.

21. The County agrees to maintain the required radio licenses for all radios including Town fire department radios (hand held portables, base station and apparatus mobiles).

22. The County agrees to maintain the same contracted emergency dispatch service as utilized by the County to provide Call Handling Services and be responsible for all associated costs; or

    The County agrees that any change in Call Handling Services will be communicated prior to any change to ensure there are no breaks in service or interruption in communication with other partnering departments.

**Occupational Health and Safety - Workers' Compensation**

23. The County and the Town will comply with the *Occupational Health and Safety Act,* the *Workers' Compensation Act* and all other laws in force in Alberta relevant to the provision of the Services where applicable. On request, the County will provide the Town with a certificate from the Workers' Compensation Board showing the County is registered and is in good standing with the board, if applicable. The Town shall be responsible for providing Worker's Compensation Coverage for the Morinville Fire Department and its employees and volunteers, where applicable, and on request the Town will provide the County a certificate of good standing.

**Indemnity and Insurance**

24. The County agrees to indemnify and hold harmless the Town from any and all third party claims, demands, and actions or costs (including the Town's costs on a solicitor-client basis) for which the County is responsible arising out of negligence or wilful acts by the County or the County's employees or agents.

    This clause shall survive this Agreement.

25. The Town agrees to indemnify and hold harmless the County from any and all third party claims, demands, and actions or costs (including the County's costs on a solicitor-client basis) for which the Town is responsible arising out of negligence or wilful acts by the Town or the Town's employees or agents.

    This clause shall survive this Agreement.

**Safety and Security**

26. Subject to the Town's reasonable security requirements, the Town will provide the County with access to its facilities and systems, as necessary to enable the County to fulfill its obligations under the Agreement. The County, the County's employees, subcontractors and agents, when using any of the Town's buildings, premises, equipment, electronic hardware and software must comply with all safety and security policies, regulations and directives relating to those buildings, premises, equipment, electronic hardware and software.

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**Records Management, Access, Copyright and FOIP**

27. The Town shall treat all Records and information provided or made available by the County to the Town for the purpose of fulfilling the County's or the Town's obligations under this Agreement as privileged and confidential. The Town shall not use or disclose such Records or information for any other purpose without the written consent of the County.

28. The County shall ensure any software record keeping system changes are coordinated with the Town`s IT personnel and that all cost including but not limited to: licencing cost, equipment changes, staff training are covered by the County.

29. The Town acknowledges that this Agreement and all Records received, collected, produced or stored by the Town pursuant to this Agreement, with the exception of the Town's own administrative, financial or human resource management records, belong to and shall remain under the control of the County and are subject to the access and privacy provisions of the *Freedom of Information and Protection of Privacy Act* ("FOIP"). Upon notification by the County's designate identified in paragraph 6 of this Agreement of receipt of an access to information request, the Town shall provide to the county, at the Town's expense, copies of all Records specified by the County's designate within 5 days of the notification.

   The County acknowledges that the Town may release this Agreement and attachments according to the provisions of the FOIP Act.

   This clause shall survive this Agreement.

**Accountability**

30. Both the County and Town agree to maintain Records in respect of the Services, fees and expenses related to this Agreement, including Records necessary to demonstrate compliance with the Agreement, and shall make those Records available for inspection by either party or their representatives at all reasonable times upon reasonable notice. Both municipalities shall have the right to take copies at the County and or Town offices, at that parties' expense, of any such Records or parts there of.

**Invoicing for Services**

31. Invoices for services shall be in accordance with Schedule B of this agreement and shall be forwarded within 60 days (outside of extenuating circumstances) of the incident to the County or Town as applicable and shall be paid within 60 days from the invoice date. Invoices are to be submitted to:

   -    Sturgeon County          or    -   Town of Morinville
         9613-100 Street                    10125 – 100 Avenue
         Morinville, Alberta, T8R 1L9       Morinville, AB T*R 1L6

32. The County shall only be liable to pay the Town for Services rendered under the terms of this Agreement up to and including the date of termination of this Agreement.

33. All Services provided by the Town under this Agreement are being purchased by the County and where applicable may be subject to the Goods and Services Tax (GST), with the exception of out of pocket expenses.

   Invoices for Fire Hall rental shall be submitted annually by June, or as otherwise agreed to, by the County and shall be paid within 60 days from the invoice date. Invoices are to be submitted to:

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Sturgeon County
9613-100 Street
Morinville, Alberta, T8R 1L9

34. The County shall be liable to pay the Town for rental of the Fire Hall under the terms of this Agreement up to and including the date of termination of this Agreement and are not subject to the Goods and Services Tax (GST).

**Notices**

35. Any and all notices permitted or required to be given under this Agreement must be delivered in writing to the offices of the parties listed below.

TO THE TOWN:

Town of Morinville
10125 – 100 Avenue
Morinville, AB T8R 1L6
Attention: Morinville Fire Chief

TO THE COUNTY:

Sturgeon County
9613 100 Street
Morinville, Alberta, T8R 1L9
Attention: Fire Chief/Manager of Protective Services

Either party hereto may, upon notice to the other party, change its address for payments and notices under this Agreement.

**Termination**

36. Either party may terminate this Agreement in full or in part at any time by giving a minimum of six months' notice, in writing to the other party of its intention to do so, unless otherwise agreed to. Upon termination the Town shall submit an invoice for Services rendered but not previously invoiced.

37. Upon receipt of a notice of termination, the Town shall prepare and deliver to the County a written report, if required, on the Services rendered prior to the termination of the Agreement.

This clause shall survive this agreement.

38. If either the Town or the County is in default of any obligation or provision of this Agreement and if after receipt by the defaulting party of written notice from the non-defaulting party specifying in reasonable particularity, the nature of such default, the defaulting party fails within ten (10) business days to remedy the default or if by the nature of the default it cannot with the diligence of the defaulting party, be cured within such ten (10) business day period and the defaulting party fails to proceed with diligence to cure same, then the non-defaulting party may elect to terminate this Agreement by providing a further 30 days written notice to the defaulting party.

**Conflict of Interest and Ethical Conduct**

39. The County must immediately notify the Town in writing of any conflict of interest the County, or any employee, agent or other resource used by the County under this Agreement, has or may reasonably have respecting the Services to be provided by the County under this Agreement. Such notification must be given before beginning any work under this Agreement, or upon becoming aware of any such existing or potential conflict of interest during the term of this Agreement. The

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County warrants that it does not have any interests that conflict with the County's obligations to the Town under this Agreement.

(a)    The County shall ensure that there is not a conflict of interest or an apparent conflict of interest on the part of the County or the County's employees, subcontractors or agents in relation to the Services, and all Services shall be performed in accordance with high ethical standards, including without limitation the following:

(i)     The County shall not influence, or seek to influence, nor otherwise take part in a decision of the Town knowing that the decision might further the County's interest;

(ii)    where the Services involve providing advice, making recommendations to the Town or exercising discretionary authority regarding a right, permission, privilege, status, contract or benefit, then such advice, recommendations or discretion must be provided, made or carried out impartially and without bias;

(iii)   The County shall not have any financial interest in the business of a third party that causes, or would appear to cause, a conflict of interest in connection with the performance of the Services; and

(iv)    The County, upon request by the Town, shall deliver copies of all written ethical standards, conflict of interest policies and codes of conduct established or observed by the County in relation to the County employees and volunteers.

(b)    In the event the County becomes aware of any matter that causes or is likely to cause a conflict of interest in relation to the County's performance of the Services, the County shall immediately disclose such matter to the Town in writing. Upon such disclosure, the County shall not commence or continue performance of the Services without the prior written consent of the Town. If the Town is of the opinion the County is in a conflict of interest, the Town may terminate this Contract without notice.

40.   The Town must immediately notify the County in writing of any conflict of interest the Town, or any employee, agent or other resource used by the Town under this Agreement, has or may reasonably have respecting the Services to be provided by the Town under this Agreement. Such notification must be given before beginning any work under this Agreement, or upon becoming aware of any such existing or potential conflict of interest during the term of this Agreement. The Town warrants that it does not have any interests that conflict with the Town's obligations to the County under this Agreement.

(a)    The Town shall ensure that there is not a conflict of interest or an apparent conflict of interest on the part of the Town or the Town's employees, subcontractors or agents in relation to the Services, and all Services shall be performed in accordance with high ethical standards, including without limitation the following:

(i)     The Town shall not influence, or seek to influence, nor otherwise take part in a decision of the County knowing that the decision might further the Town's interest;

(ii)    where the Services involve providing advice, making recommendations to the County or exercising discretionary authority regarding a right, permission, privilege, status, contract or benefit, then such advice, recommendations or discretion must be provided, made or carried out impartially and without bias;

(iii)   The Town shall not have any financial interest in the business of a third party that causes, or would appear to cause, a conflict of interest in connection with the performance of the Services; and

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(iv)    The Town, upon request by the County, shall deliver copies of all written ethical standards, conflict of interest policies and codes of conduct established or observed by the Town in relation to the Town employees and volunteers.

(b)  In the event the Town becomes aware of any matter that causes or is likely to cause a conflict of interest in relation to the Town's performance of the Services, the Town shall immediately disclose such matter to the County in writing. Upon such disclosure, the Town shall not commence or continue performance of the Services without the prior written consent of the County. If the County is of the opinion the Town is in a conflict of interest, the County may terminate this Agreement without notice.

**General Terms**

41.    Time is of the essence in this Agreement.

42.    The terms of this Agreement are severable and any term or condition determined to be void or enforceable in whole or in part shall not be deemed to affect or impair the validity of this agreement or any other term or condition of it.

43.    The validity and interpretation of this Agreement, and of each clause and part thereof, shall be governed by the laws of the Province of Alberta and the Parties agree to the exclusive jurisdiction of the Courts of the Province of Alberta. This clause shall survive this agreement

44.    This Agreement inures to the benefit of and be binding upon the parties hereto, their respective successors and permitted assigns. Neither party may assign its rights and obligations under this Agreement without the express written consent of the other party.

45.    This Agreement supersedes any previous representations, warranties, terms, conditions, or other agreements made between parties with respect to the engagement of the County. It is agreed that this written instrument embodies the entire Agreement of the parties hereto with regard to the matters dealt with herein, and that no understandings or agreements, verbal or otherwise, exist between the parties except as herein expressly set out. This Agreement and Schedules are complementary, however; in the event of conflict within or between the body of the Agreement and the Schedules, the provisions in the body of the Agreement shall govern.

46.    No term or condition of this Agreement shall be deemed to be waived unless the waiver is in writing. Any waiver of default committed by either of the parties in the observance or performance of this Agreement shall not extend or be deemed to extend or affect any other default.

47.    If any time during the continuance of this Agreement, the parties consider it necessary to amend this Agreement, they may do so by a written document signed by each party or by exchange of letters signifying mutual agreement between the parties and all amendments in such written document or letters shall be adhered to and have the same force and effect as if they had been originally embodied in and formed part of this Agreement.

48.    The Town and County acknowledges that neither party has an obligation to renew, extend or offer a new contract at the end of the term of this Agreement.

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The parties have executed this Agreement, each by its duly authorized representative, on the respective dates shown below.

**TOWN OF MORINVILLE**

Date: _____     _____

Barry Turner, Mayor

_____

Andy Isbister, CAO

_____

David Schaefer, Director Corporate Operations

_____

Bradley Boddez, Fire Chief

**STURGEON COUNTY**

Date: _____     _____

Alanna Hnatiw, Mayor

_____

Bill Minnes, Interim CAO

_____

Pat Mahoney
Fire Chief/Manager of Protective Services

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**Schedule "A"**
**Town Obligations Call Handling/Fire Services**

A.   Keep and maintain in readiness the Firefighting Equipment, including the proper storage and housing of the same;

B.   Notify the affected parties of any damage and required repairs to any items and vehicles comprising a part of the Firefighting Equipment;

C.   Dispatch as required, or requested, the Firefighting Equipment (whether Town or County owned) in accordance with County SOG's, where applicable, to any location within the Fire Service Area and any other County Fire Service Area providing mutual aid, and take all steps reasonable in the circumstances to provide timely, efficient and quality firefighting and emergency services;

D.   Fires and other emergencies shall be responded to in an expeditious manner to minimize death, injury and property damage.  Good workmanship and quality control will be exercised at all times.

E.   Provide the Services to the County to the same standard that similar Services would be provided to the Town on a year-round, 24-hour per day basis, each day during the term.

F.   The Town agrees to supply, purchase, maintain and replace at the Town's expense, all Town fire department portable radios.  The Town acknowledges that it is their responsibility to supply and maintain at its own expense mobile radios used in Town owned vehicles;

G.   Carry out its obligations pursuant to this Agreement in compliance with all Bylaws, Statutes, and Regulations passed by any competent authority having jurisdiction;

H.   Keep and maintain proper County records with respect to the provision of the Services including but not limited to total calls received and services provided as outlined by the County;

I.   In the event of a motor vehicle collision in the County on a Provincial Highway or County roadway, the Town is responsible for all invoicing of its own Town vehicles to Alberta Transportation or the County.  The Town is not to issue any charges or fees to County residents or businesses for services rendered on personal or privately owned property in the County.

J.   Will ensure all members are fit tested in accordance with Occupational Health and Safety Standards annually at the Town's expense; and

K.   Will ensure all members when responding into the County are equipped with proper Personal Protective Equipment (PPE) that is maintained in accordance with National Fire Protection Association Standards (NFPA).  All costs associated with purchasing, maintaining and replacement of PPE is at the Town's expense.

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## Schedule "B"
## FEES & CONTRIBUTIONS

A. Incident remuneration will be compensated by the County to the Town, for individuals who respond on an apparatus to an incident at the following rates:

a. $28.00 per Officer-in-Charge (OIC) per hour; and

b. $20.00 per Firefighter per hour

*Note:* OIC's and Firefighters are compensated a minimum of two (2) hours for all calls under two hours in duration. Remuneration will be processed on a monthly basis and paid to the Town.

B. The County pays the Town per year for storage of County owned apparatus and equipment as outlined:

Year 1 - $3750.00/vehicle, Year 2 – $3850.00/vehicle, Year 3 - $3950.00/vehicle.

C. The County will provide to the Town access to Training Courses and to the County Firefighter Training Grounds upon request, availability. Fees may be applied based on type of course and associated costs.

D. The County agrees to provide the Town $5000.00 in each year of this agreement toward the purchase and maintenance of firefighter Personal Protective Clothing, payable upon invoice from the Town. The County reserves the right to request from the Town a breakdown of how this contribution was spent.

E. The County agrees to pay the town per year for standby/administration as outlined below:

i). Year 1- $6000.00       ii). Year 2- $6500.00       iii). Year 3- $7000.00

F. The County agrees to pay the Town per cubic meter of water utilized during County incidents at the commercial rate set by the Town, payable upon invoice from the Town.

G. The County agrees to pay the Town the outlined per hour rate when the following Town owned fire apparatus is utilized during County incidents to transport personnel and equipment. The exception is motor vehicle collisions on Provincial Highways or County Roadways for which the Town is responsible to invoice directly the Province or private insurance companies as applicable:

1) Ladder Truck - $500.00 per hour year one (1)
        $750.00 per hour year two (2); and
        $1000.00 per hour year three (3)

2) Ladder Truck – One (1) hour flat rate when stood down on way to scene/call;

3) Ladder Truck - $0.00 when stood down before leaving fire hall;

4) Rescue Truck- $150.00 per hour year one (1);
        $175.00 per hour year two (2); and
        $200.00 per hour year three (3);

5) Rescue Truck - One (1) hour flat rate when stood down on way to scene/call;
6) Rescue Truck - $0.00 when stood down before leaving fire hall;

7) Unit 7 (ATP 7) - when used in wildland/urban interface capacity - $75.00 per hour, $0.00 if stood down on way to scene/call;

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**Note \*\*** Manpower is not included in these rates, pay will be remunerated automatically by the County as recorded within the Fire Department Management System (FP2).

H.  The Town agrees to pay the County the outlined hourly rate when County owned units are requested by the Town for Mutual Aid within its boundaries, all fees payable upon invoice:

- County Engine(s)/County Tenders - $150.00 per hour;

    $175.00 per hour year two (2); and

    $200.00 per hour year three (3);

- County Engine(s)/Tenders - One (1) hour flat rate when stood down on way to scene/call;

- County Engine/County Tender - $0.00 when stood down before leaving fire hall County;

- Rapid(s)/Command Vehicle(s) when used in wildland/urban interface capacity - $75.00 per hour, $0.00 if stood down on way to scene/call;

- Command/Support Trailer, Wildland Trailer, Dangerous Goods Trailer - $150.00 per hour plus costs to replace any materials used, $0.00 if stood down on way to scene/call;

- Off Highway Vehicles - $25.00 per hour; and

**Note \*\*** Manpower is not included in these rates, compensation of firefighters will be payable by the Town to the County upon invoice.

I.  Re-filling of Town Air Cylinders - $10.00 per bottle payable by the Town to the County upon invoice;

J.  Re-filling of County Air Cylinders - $10.00 per bottle payable by the County to the Town upon invoice.

K.  Washing of Town owned Personal Protective Clothing (Bunker Gear) – $30.00 per set, payable by the Town to the County upon invoice.

L.  Washing of County owned Personal Protective Clothing (Bunker Gear) - $30.00 per set, payable by the County to the Town upon invoice.

M.  Washing of Town owned Personal Protective Clothing (Bunker Gear) – $30.00 per set, payable by the Town to the County upon invoice.

Schedule "C"
2018-2020 Morinville Fire Services Agreement Boundary

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# APPENDIX 'F'
# TOWN AND COUNTY EVENT PROTOCOLS

*Event Protocols – Town of Morinville Updated (January 2019)*

| Event Type | Event Type Description / Comments | Recommended Units | Mutual Aid |
|---|---|---|---|
| 51 | AIRCRAFT EMERGENCY - ALL | 1P, 1R, 1L, 1U8, 1ATP7 C1 | X |
| | | | |
| 52B01 | ALARMS - RESIDENTIAL (SINGLE) | 1P, 1R | |
| 52B02 | ALARMS - NON-DWELLING BUILDING/STRUCTURE | 1P, 1R | |
| 52C01 | ALARMS - HIGH LIFE HAZARD | 1P, 1R, 1L | |
| 52C03 | ALARMS - COMMERCIAL/INDUSTRIAL BUILDING | 1P, 1R, 1L | |
| | | | |
| 53 | CITIZEN ASSIST / SER CALL | 1P | |
| 53C02 | CITIZEN ASSIST / SER CALL - SERVICE CALL (MULTIPLE UNITS) | 1P, 1R | |
| | | | |
| 54 | CONFINED SPACE/STRUCTURE COLLAPSE | 1P, 1R, 1U8, C1 | |
| | | | |
| 55 | ELECTRICAL HAZARD - ALL | 1P, 1R | |
| 55B01 | ELECTRICAL HAZARD - ELECTRICAL ARCING/WIRES DOWN | 1P, 1R, 1U8 | |
| | | | |
| 56 | ELEVATOR/ESCAPE RESCUE -ALL | 1P, 1R | |
| | | | |
| 57B01 | EXPLOSION - VEHICLE EXPLOSION | 1P, 1R, 1 C1 | |
| 57B03 | EXPLOSION - UNKNOWN SITUATION (INVESTIGATION) | 1P, 1R, 1 C1 | |
| 57D01 | EXPLOSION - HIGH LIFE HAZARD | 1P, 1R, 1L, 1U8, 1ATP7, C1 | X |
| 57D04 | EXPLOSION - COMMERCIAL/INDUSTRIAL BUILDING | 1P, 1R, 1L, 1U8, 1ATP7, C1 | X |
| 57D05 | EXPLOSION - RESIDENTIAL (SINGLE/MULTIPLE) | 1P, 1R, 1L, 1U8, 1ATP7, C1 | X |
| | | | |
| 58 | EXTRICATION/ENTRAP (MACH, VEH) - MINOR | 1P, 1R | |
| 58D01 | EXTRICATION/ENTRAP (MACH, VEH) - MAJOR | 1P, 1R, 1U8 | |
| | | | |
| 59B01 | FUEL SPILL - CONTAINED/UNCONTAINED SMALL SPILL | 1P, 1R | |
| 59C01 | FUEL SPILL - CONTAINED/UNCONTAINED LARGE SPILL | 1P, 1R, 1U8, C1 | |
| | | | |
| 60 | GAS LEAK (NAT/LP GASES) - PROPANE/BBQ TANK -SINGLE RESIDENCE | 1P, 1R | |
| 60B01 | GAS LEAK (NAT/LP GASES) - OUTSIDE RESIDENTIAL LINE | 1P, 1R | |
| 60B02 | GAS LEAK (NAT/LP GASES) - OUTSIDE TANK < 5 G / 20 L | 1P, 1R | |
| 60C01 | GAS LEAK (NAT/LP GASES) - RESIDENTIAL (SINGLE) | 1P, 1R | |
| 60C02 | GAS LEAK (NAT/LP GASES) - OUTSIDE COMMERICAL LINE | 1P, 1R, 1L, 1U8, 1ATP7, C1 | |

| Event Type | Event Type Description / Comments | Recommended Units | Mutual Aid |
|---|---|---|---|
| 60C03 | GAS LEAK (NAT/LP GASES) - OUTSIDE TANK => 5 G / 20 L | 1P, 1R, 1L, 1U8, 1ATP7, C1 | |
| 60D01 | GAS LEAK (NAT/LP GASES) - HIGH LIFE HAZARD/COMMERCIAL/INDUSTRIAL | 1P, 1R, 1L, 1U8, 1ATP7, C1 | X |
| 60D04 | GAS LEAK (NAT/LP GASES) - RESIDENTIAL (MULTIPLE) | 1P, 1R, 1L, 1U8, 1ATP7, C1 | X |
| | | | |
| 61B01 | HAZMAT - SMALL SPILL (<= 5 GALLONS/20 LITERS) | 1P | |
| 61C01 | HAZMAT - CONTAINED HAZMAT | 1P, 1R, 1L, 1 C1 | |
| 61D02 | HAZMAT - UNCONTAINED HAZMAT | 1P, 1R, 1L, 1 C1 | |
| | | | |
| 62D01 | HIGH ANGLE RESCUE - HIGH ANGLE RESCUE | 1P, 1R, 1L, 1 C1 | |
| 62D03 | HIGH ANGLE RESCUE - HIGH ANGLE RESCUE WITH SINGLE INJURED PERSON | 1P, 1R, 1L, 1 C1 | |
| 62D04 | HIGH ANGLE RESCUE - HIGH ANGLE RESCUE WITH MULTIPLE INJURED PERSONS | 1P, 1R, 1L, 1 C1 | |
| | | | |
| 63B01 | LIGHTNING STRIKE (INV) - RESIDENTIAL (SINGLE) | 1P, 1R, 1L | |
| 63B03 | LIGHTNING STRIKE (INV) - SM NON-DWELLING STRUCTURE (SHED DETACHED GARAGE) | 1P, 1R | |
| 63B05 | LIGHTNING STRIKE (INV) - OUTSIDE LIGHTNING STRIKE | 1P, 1R | |
| 63B06 | LIGHTNING STRIKE (INV) - VEHICLE | 1P, 1R | |
| 63C01 | LIGHTNING STRIKE (INV) - HIGH LIFE HAZARD | 1P, 1R, 1L, 1 C1 | |
| 63C03 | LIGHTNING STRIKE (INV) - COMMERCIAL/INDUSTRIAL BUILDING | 1P, 1R, 1L, 1 C1 | |
| | | | |
| 65A01 | MUTUAL AID TO INCIDENT (SINGLE/MULTIPLE UNITS -- COLD) | 1P | |
| 65B01 | MUTUAL AID TO INCIDENT (SINGLE UNIT -- HOT) | 1P | |
| 65B02 | ASSIST OUTSIDE AGENCY (SINGLE UNIT -- HOT) | 1P | |
| 65D01 | MUTUAL AID TO INCIDENT (MULTIPLE UNITS -- HOT) | 1P, 1R | |
| 65D02 | ASSIST OUTSIDE AGENCY (MULTIPLE UNITS -- HOT) | 1P, 1R | |
| | | | |
| 66 | ODOR (STRANGE / UNKNOWN) | 1P, 1R | |
| | | | |
| 67 | OUTSIDE FIRE - SMALL | 1P, 1ATP | |
| 67F | FIRE PIT COMPLAINT - QUICK ACCEPT | 1P | |
| 67G | BRUSH/GRASS - QUICK ACCEPT | 1P, 1ATP | |
| 67B01B | OUTSIDE FIRE - SMALL OUTSIDE FIRE - BUILDINGS (NON-RESIDENTIAL) | 1P, 1ATP | |
| 67B03 | OUTSIDE FIRE - UNKNOWN SITUATION | 1P, 1R, 1 ATP | |
| 67C01 | OUTSIDE FIRE - SMALL BRUSH / GRASS FIRE | 1P, 1ATP | |
| 67D01 | OUTSIDE FIRE - GRASS/WILDLAND FIRE LARGE | 1P, 1R, 1 ATP | |
| 68 | SMOKE INVESTIGATION (OUTSIDE) | 1P | |

# APPENDIX 'G'
# THEORETICAL RESPONSE MAPPING METHODOLOGY

Response travel times are directly influenced by station location and can be varied based upon a cost/risk analysis and the development of performance targets.

**Base Data Layers Requested**

- Hydrology
- Single line road/transportation network
- Railways
- Municipal boundaries
- Parks
- Projection file
- Orthophoto (GeoTIFF, Mr.SID), if available
- Emergency services locations

**Data Formats**

- Preference of ESRI Shapefiles

**Purpose of Files**

A. Hydrology
    i. Identify needs for response to water locations (if dependant on a water response unit)
    ii. Can be identified and analysed with the rail network to locate spill contaminations, as well as containment for overland flow & flooding to water spills
    iii. Locations of bridge crossings which can convert to varying incidents, as MVC/MVA, spill contaminants, etc.
    iv. Assists in the definition of the map for locational awareness by others
    v. Completes the map

B. Single Line Road/Transportation Network
    i. Used to determine response times from emergency locations to determine a network based on road speeds
    ii. Roads are created into a network for response

C. Railways
    i. Identified risk areas for impeding response time when crossing a roadway or proximity to municipal areas will also determine the response and apparatus used for a derailment response or other rail emergency or risks, such as chemical spill evacuations

D. Municipal Boundaries

i.    Identifies the limits to response for mutual aid and responsibilities when overlaps occur within a response area.  Also identifies sub areas for specific mapping and identification of municipal and regional response zones.  Provides information for gap analysis for future state locations or refinement of locations.

E.  Parks

i.    Identifies the potential risk areas due to accessibility issues for tracts of land, as well as constraints and opportunities for new locational analysis for or against new stations within a municipality.  Ability to determine development of new locations due to proximity. Parks are identified as local, regional, provincial, and national.

F.  Projection File

i.    To ensure that we have the same data set up as being used by the Municipality or Client, measurements (both distance and time) and spatial location are correct when determining analysis.

G.  Orthophoto (GeoTIFF, Mr.SID), if available

i.    We typically do not use the ortho on the output maps, but the analysis sometimes needs clarification of what is on the ground and we use it to quickly ground truth locations and information needed prior to asking clients for clarification, or to substantiate clarification of an area.

ii.   Is a nice to have, yet hard to use, as it takes up a lot of memory/space, and is difficult to ship/transfer.

H.  Emergency Services Locations

i.    Identify the actual location rather than a theoretical location based on an address match to ensure that the data location is as correct as possible and no mis-locations are identified on the initial running of the theoretical response times.

ii.   Locations may be moved from within a parcel to the front of the parcel whereby it touches the road network.  Ensures the response from the station is captured. There are no corrections made to the movement of station to time, as it is typically within 50 metres.

**Theoretical Response Zone**

A.  Assumptions

i.    Weather is average – no storms, rain, snow etc.

ii.   Roadway segments contain a node/junction at intersections

- If not available, road network needs to be cleaned and fixed

iii.  Roadways need to sometimes extend beyond some municipalities

iv.   Emergency responders are trained on response vehicles

v.    Response vehicles are in good condition

vi.   Roads are dry and in good condition

vii.  Left turns are not reduced by a time %

viii.   Road speeds are provided by client, if not

- Road class table used to populate speeds based on road classification
- Road speeds are reduced from the posted sign, typically no more than 5%

ix.   Traffic volume is average, there is no congestion or there is a free flowing lane to be used

x.   Rail crossings are free to cross and do not impede response

xi.   Time of day is based on an average time from 9 am – 9 pm

xii.   Opticoms (or similar product for traffic light manipulation) are present to allow for free moving response

xiii.   Intersections of roads are not reduced (the roads are reduced from other project limits and averaged over time for generality of best fit)

xiv.   School zones are not adjusted unless identified, then changes to road net are made

B.   Response Time

i.   Customized response based on Emergency Services Input

ii.   Response time includes in 80% of all calls for service

- Total drive time along roads (determined above by road speeds) with:

iii.   Variances are identified and are tweaked based on known data or other trends

C.   Response Polygons

i.   Identify general area of response from the outer most limits driven

ii.   Also identify response zones for mutual aid

iii.   Identify gaps in response

iv.   Aid in the development of Fire Zones for response

v.   Assist in the identification of new stations

- Also identifies needs to move stations to another location, as required

**Additional Analysis**

A.   Out of Scope Analysis (needs further discussion with client)

i.   Transition from project to operationally based

- Specific distance and travel
- Based on time of day
- Based on time of year
- Call Volume
- Call Types
- Modeling
- Scripting for batch work

B.  Data Availability

   i.  When data is available from clients is detailed enough, it is used

   ii.  Not all data is detailed enough and assumptions are made

C.  Analysis

   i.  Additional analysis can be performed (as reduction of road speeds to an intersection)

- For above example, identification of intersections can be complex, and data not always available:
  - Stop Sign
  - Three Way Stop
  - Yield
  - Lights
  - Flashing Light

   ii.  Tends to be time consuming

    a.  Clients not willing to engage cost of this project

    b.  Levels of data may not be accessible

    c.  Missing detail

    d.  Usually is a one off project and new data is typically not leveraged

# APPENDIX 'H'
# POWERPOINT PRESENTATION

## FIRE SERVICE MASTER PLAN

Morinville

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### What will a Fire Service Master Plan do?

*Town of Morinville*
*Fire Service Master Plan*

The Master Plan will serve as Morinville Fire Department's blueprint for Fire, Rescue, Medical Mutual Aid, Fire Prevention and Public Safety services, and will:

- Address local needs and circumstances based on municipal goals, fiscal realities and other competing demands
- Identify and assess the nature and sources of risk in the community
- Evaluate the resources available to address these risks
- Identify gaps between risks and resources
- Provide recommendations for how to address the gaps

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## Master Planning Process
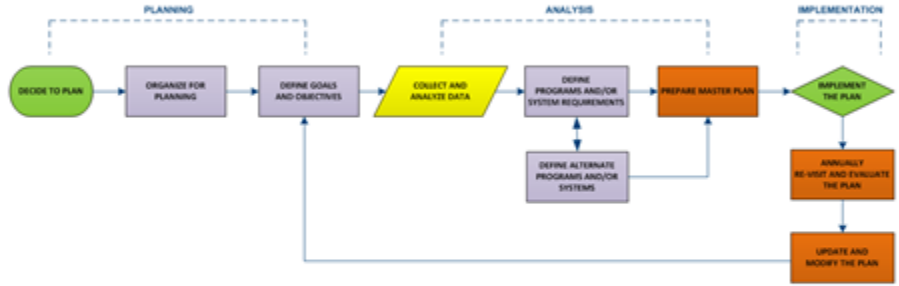
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## Department Overview

The Morinville Fire Department currently provides the following services:

- Fire Suppression
- Emergency Medical Mutual Aid
- Technical Rescue
- Vehicle Extrication
- Hazardous Material Response
- Urban Wildfire Interface
- Fire Inspections
- Fire Investigations
- Public Education

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## Paid-On-Call/Volunteer Challenges & Limitations

*Town of Morinville*
*Fire Service Master Plan*

- Volunteerism
- Recruitment
- Retention
- Training
- Response Times
- Effective Response Force (ERF)

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## Community Risk Overview

*Town of Morinville*
*Fire Service Master Plan*

Community Profile Risk Factors:

- Industrial and Commercial activities
- Transportation Corridors
- Urban Wildland Interface
- Limitations of a Paid-On-Call Fire Service
- Growth Projections
- Responses in Sturgeon County

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## Response Statistics - All Call Types

| 2018 | Town of Morinville | Sturgeon County |
|---|---|---|
| Average Number of Firefighters On-scene | 8.87 | 7.94 |
| Average Number of Staff Available to Respond | 14.84 | 14.48 |

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## Overview Map

### Morinville Overview Map



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## Response Map

### 11:40 Minute Actual Response Time
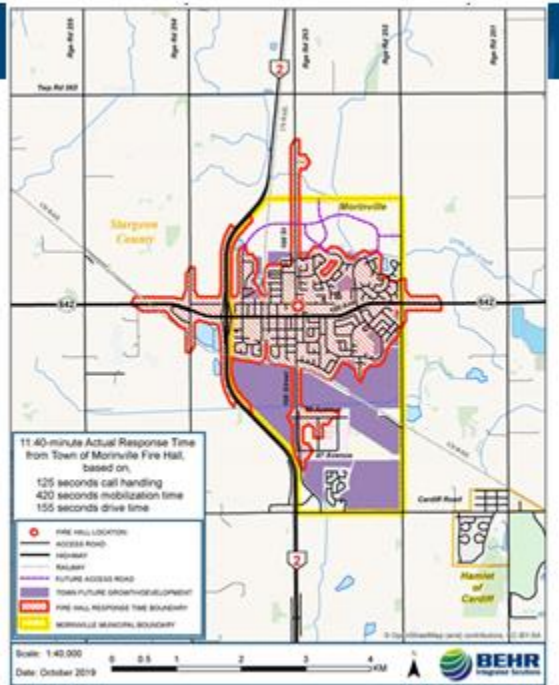
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## Response Map

### 10 Minute High Intensity Residential Fire (HIRF) Map
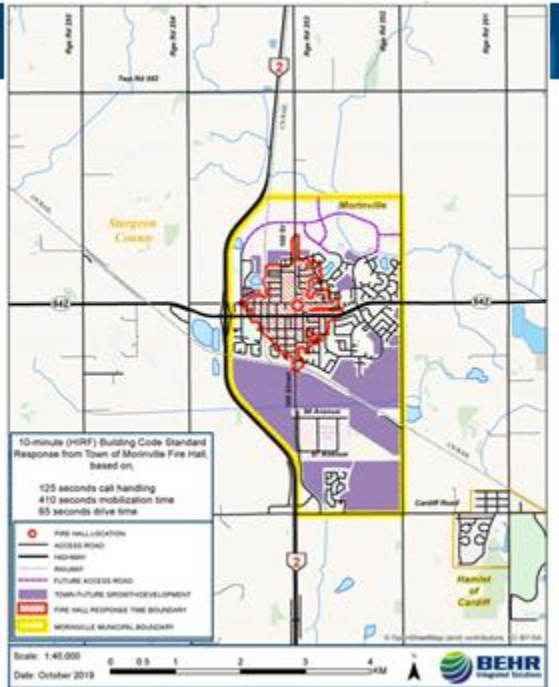
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## Response Map

### 9 Minute
### NFPA 1720
### Response Map
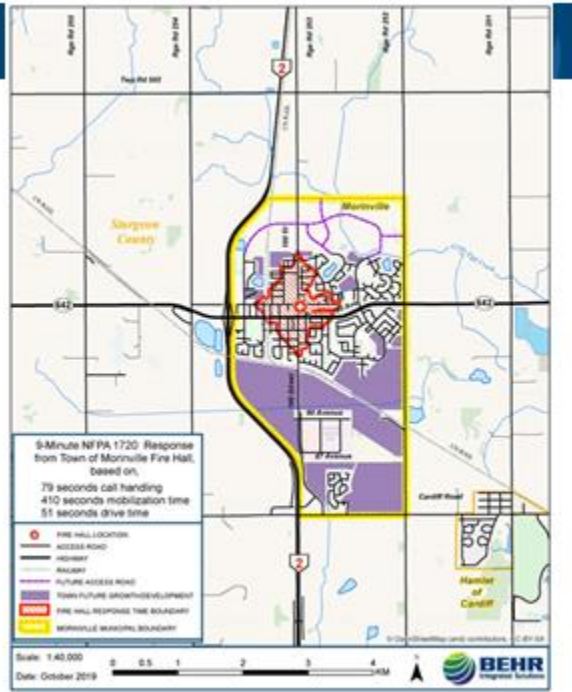
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### Response Map

### 10 Minute
### NFPA 1710
### Response Map
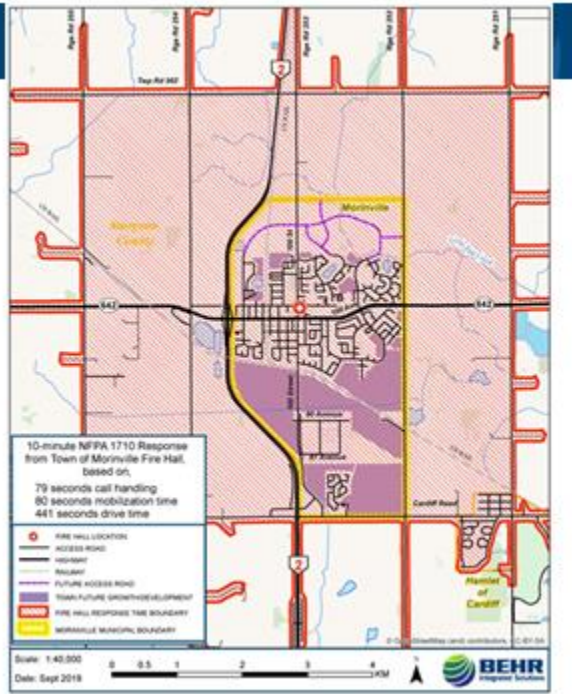
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## Municipal Comparators

| Community | Province | Population | Land Area |
|---|---|---|---|
| Morinville | Alberta | 9,848 | 11.4 km² |
| Hinton | Alberta | 9,882 | 33.52 km² |
| Edson | Alberta | 8,476 | 29.72 km² |
| Blackfalds | Alberta | 9,616 | 16.44 km² |
| Whitecourt | Alberta | 12,853 | 26.44 km² |
| Olds | Alberta | 9,148 | 14.93 km² |
| Castlegar | British Columbia | 9,023 | 15.76 km² |
| Williams Lake | British Columbia | 10,508 | 33.13 km² |

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## Municipal Comparatives

| Community | Population | Municipal Budget | Department Operating Budget | Cost per capita | Percentage of Municipal Budget |
|---|---|---|---|---|---|
| Morinville AB | 9,848 | $19,350,298 | $752,087 | $76.37 | 3.88 |
| Hinton AB | 9,882 | $27,853,375 | $710,033 | $71.85 | 3.9 |
| Edson AB | 8,476 | $22,197,956 | $508,558 | $59.99 | 2.29 |
| Blackfalds AB | 9,916 | $26,566,680 | $1,606,485 | $162 | 6.04 |
| Whitecourt AB | 12,853 | $38,543,968 | $1,730,125 | $134.61 | 4.48 |
| Olds AB | 9,184 | $28,400,870 | $1,077,060 | $117.73 | 3.79 |
| Castlegar BC | 9,023 | $27,819,000 | $795,850 | $88.20 | 2.86 |
| Williams Lake BC | 10,508 | $31,984,760 | $1,029,732 | $98.00 | 3.22 |

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## Municipal Comparatives

| Community | Department Type | No. of Firehall |
|---|---|---|
| Morinville AB | POC | 1 |
| Hinton AB | POC | 1 |
| Edson AB | POC | 1 |
| Blackfalds AB | POC | 1 |
| Whitecourt AB | POC | 1 |
| Olds AB | POC | 1 |
| Castlegar BC | POC | 1 + 1 Satellite |
| Williams Lake BC | POC | 1 |

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## Municipal Comparatives

| Municipality | Total Staff | Fire Chief | Deputy Chief | Support Staff | Fulltime Firefighter | Paid-On-Call Firefighter |
|---|---|---|---|---|---|---|
| Morinville AB | 44 | 1 FT | 2 PT | 1 FTE | | 40 |
| Hinton AB | 32 | 1 FT | 1 FT | 1 FT | 1 FT/ 2 WEPs | 26 |
| Edson AB | 41 | 1 FT | 1 POC | 1 (Shared) | | 38 |
| Blackfalds AB | 31 | 1 FT | | | | 30 |
| Whitecourt AB | 50 | 1 FT | 2 FT | 1 PT (Admin) 4 PT (Dispatch /Prevention) | | 42 |
| Olds AB | 41.8 | 1 FT | | .8 FTE (Admin) | | 40 |
| Castlegar BC | 35.2 | 1 FT | 2 FT | .2 FTE | | 32 |
| Williams Lake BC | 43 | 1 FT | 1 FT | | 1 FT | 40 |

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## Leading Practices & Standards

NFPA's Standard 1720: Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by a Paid-On-Call Fire Department

| Demand Zone | Demographics | Minimum Staff to Respond | Response Time (minutes) | Meets Objective (%) |
|---|---|---|---|---|
| Urban Area | >1000 people/mi² | 15 | 9 | 90 |
| Suburban Area | 500-1000 people/mi² | 10 | 10 | 80 |
| Rural Area | <500 people/mi² | 6 | 14 | 80 |
| Remote Area | Travel distance >8 mi | 4 | Directly dependent on travel distance | |
| Special Risks | Determined by AHJ | Determined by AHJ based on risk | AHJ | |

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## Leading Practices & Standards

| Intervention Time Urban: Population >1000 people/mi² | | | | | |
|---|---|---|---|---|---|
| | | Time Values | | | |
| Notification | | Intervention Time | | | |
| Discovery | Emergency Call | | Enroute Time | | Set-up |
| | | Dispatch Time (Call Handling) | Assembly or Chute Time | Total Response (Including Travel) | |
| Time Unknown | | Included | Included | 540 sec @ 90% | 120 sec |
| | | | Min. Staffing | | |
| | | | 15 | | |
| Time indirectly manageable | | Time directly manageable | | | |
| Reflex time | | | | | |

Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Upon assembling the necessary resources at the emergency scene, the fire department shall have the capability to safely commence an initial attack within 2 minutes 90 percent of the time.

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## Leading Practices & Standards

Alberta High Intensity Residential Fires (HIRF) Requirements

- Make homes safer from the spread of fire
- Provide more time for occupants to escape
- Provide appropriate time for firefighters to respond when there is a fire
- Alberta Building Code specifies a '10 minute' total response time must be achieved for 90 percent of the incidents

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## Observations & Recommendations

A timeframe within 0-60 months has been assigned to each recommendation, recognizing that the start and completion of any recommendation is based on annual corporate priorities, and Council approved budget allocations.

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

*Recommendation #1: Develop a building inventory program and establish a cyclical fire inspection program for higher risk fire and life safety occupancies (0-36 Months)*

1. *Develop an inventory of all building structures to be classified, documented, and maintained using the Alberta Building Code Major Occupancy Classification system.*

2. *The Fire Chief establish an amendment to Bylaw #144/2015 and a cyclical inspection program that focusses on the higher risk fire and life safety risk occupancies.*

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

*Recommendation #2: Develop a Standards of Cover policy defining service levels for Morinville (0-36 months)*

*MFD undertake a comprehensive risk analysis of the community and develop a Standard of Cover (SOC) to effectively manage risks.*

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## Observations & Recommendations

### Recommendation #3: Fire Chief to research the weekday staffing challenge and provide Council with preferred option(s) for their consideration (0-36 months)

There are several options to address the staffing shortfall during normal weekday work hours. The options that are considered the most viable for consideration:

- Establish 4 full-time firefighter positions for weekdays
- Expand Hall Coordinator's program
- Establish the Work Experience Program (WEP)

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## Observations & Recommendations

### Recommendation #4: Review response and compensation agreement with Sturgeon County (36-48 months)

1. Fire Chief conduct an impact analysis of the County's call volume to include the total time, number of staff and sequential calls for service while deployed to emergencies.
2. A detailed financial analysis should be conducted to determine if the Town is being adequately compensated for the services provided to the County.

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## Observations & Recommendations

*Town of Morinville
Fire Service Master Plan*

### Recommendation #5: Establish a more detailed category of responses to identify trends and mitigation strategies (0-36 months)

1. The Fire Chief establish a more detailed inventory of response categories in order to identify trends and establish mitigation/prevention strategies.

2. On a recurring basis provide a summary of this data to the Town's Senior Leadership Team and Council.

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## Observations & Recommendations

*Town of Morinville
Fire Service Master Plan*

### Recommendation #6: MFD Administration conduct a critical task assessment on the types of calls typically encountered to develop an effective resource management protocol for both apparatus and staff (36-48 months)

1. Develop a resource management protocol that will assist in ensuring proper types of apparatus with optimal number of firefighters forming an effective company on each dispatched call given the critical tasks anticipated on each type of call. E.g.: Residential house fire with the NFPA recommended staffing to achieve 15 firefighters on scene within nine minutes (90% of the time).

2. Maintain a balance between the number of trained and experienced members with newer inexperienced members.

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## Observations & Recommendations

### Recommendation #7: Conduct a town growth area community development analysis (48-60 months)

*The Planning and Economic Development Division conduct a detailed analysis of the areas identified for future growth and consider the HIRF requirements, MFD's actual response capacity, and the railway restriction. It is anticipated that the town will have options such as:*

- *Construction of a second fire hall south of the railway corridor in order to meet the HIRF and eliminate the risk of a train obstructing the emergency vehicle response, and;*
- *All future residential developments in Morinville be designed in accordance with the ABC or provided with additional fire protection, such as non-combustible siding, no side-yard windows and sprinkler systems.*

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## Observations & Recommendations

### Recommendation #8: Enhance fire department receipt of notification protocols (0-36 months)

*The Fire Chief work closely with the Parkland ECC to develop enhanced receipt of notification protocols that include consistent use of pre-alerts and other procedures that reduces the current 125 seconds fire department notification process.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #9: Enhanced collection of response data (0-36 months)

*MFD fully implement their data collection and records management system in order to take full advantage of the systems capabilities.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #10: Reduce Alarms Ringing Responses (36-48 months)

1. *MFD conduct an in-depth analysis to determine the current trends of false alarms with the view to initiate preventative measures to reduce the occurrence and costs of false alarms.*

2. *Effective public education, as well as proper enforcement of fees for nuisance alarms, will assist with minimizing unnecessary draw on MFD resources.*

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

*Recommendation #11: MFD continue to work closely with AHS in the delivery of the Medical First Responder Program (Ongoing)*

*MFD continues to work closely with AHS to ensure their medical first response service is utilized in the most effective and efficient manner using careful monitoring and communication while ensuring that requests for service are made within accepted guidelines.*

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

*Recommendation #12: Establish performance target reports and dashboard (36-48 months)*

*MFD develop a data reporting process such as a dashboard and/or written report to demonstrate the quarterly or annual performance of MFD against identified objectives.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #13: Re-classify the Deputy Chief of Training to a full-time position from the current 25% part-time position (0-36 months)

*One Deputy Fire Chief (Training and Logistics) be re-classified to a full-time position to enhance the administrative responsibilities to support Training, Safety Codes (fire inspections, prevention and investigations) as well as management and administrative requirements.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #14: Research retention opportunities of senior members (36-48 months)

*The Fire Chief research opportunities to retain senior and/or retiring members in non-operational roles, such as coaching, mentoring, and administrative roles.*

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## Observations & Recommendations

### Recommendation #15: Create a plan for advancement and succession (36-48 months)

*The Fire Chief create a sustainable succession plan to ensure enough firefighters are trained and ready to assume all roles, including Officer and/or Chief roles as required.*

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## Observations & Recommendations

### Recommendation #16: Enhance the use of on-line delivery of training, educational materials and records management (0-36 months)

*MFD work with the Town of Morinville Human Resources to procure an on-line training/learning environment software program to significantly enhance the delivery, and records management of the training/educational program for all MFD staff.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #17: Identify non-operational support positions (36-48 months)

*MFD Administration identify areas or responsibilities that would benefit MFD, but not necessarily require the full NFPA 1001 journeyperson certification.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #18: Explore service level competencies for a maximum of 25% paid-on-call contingent as retention strategy (36-48 months)

*MFD adopt a similar approach to the BC Playbook and establish competencies for the expected service levels within Morinville's Standards of Cover, including not more than 25% of the paid-on-call contingents to be trained to exterior operations, which requires a lesser time commitment to achieve the KSAs.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #19: Evaluate the Health and Wellness Program (0-36 months)

*MFD continues the practice of providing health and wellness benefits for active members of the service.*

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## Observations & Recommendations

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #20: Formalize pre-fire plan inventory (36-48 months)

*MFD establish a formal pre-incident planning program that documents significant building aspects in a hard copy or electronic database where it can be retrieved when responding to incidents.*

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #21: Continue with fire hall upgrades (0-36 months)

*Given the current operations, projected municipal development, and to accommodate future staffing increases, it is strongly recommended that the proposed renovation project for the fire hall continues as a priority.*

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**Observations & Recommendations**

*Town of Morinville*
*Fire Service Master Plan*

### Recommendation #22: Research the building of a live-fire training facility (48-60 months)

*The Fire Chief research live-fire training facilities such as the prefab, container style building that will allow for advance scheduling of necessary life-fire exercises.*

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## Observations & Recommendations

### Recommendation #23: Replace fire apparatus Pump 3 (0-36 months)

The capital replacement for Pump 3 be approved in the Town of Morinville Capital Budget for 2020.

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## Observations & Recommendations

### Recommendation #24: Implement a comprehensive Asset Management Program with advanced equipment management software (36-48 months)

The Town procures an asset management program to ensure that preventative maintenance could be diligently tracked to avoid early retirement/replacement of assets.

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## Costing Scenarios

- 'Cost Neutral' refers to the use of internal staff through a normal workday schedule. Additional costs may apply if overtime is required.
- Undertaking of these cost neutral recommendations are contingent upon the staffing increases identified in this Plan.
- Recommendations identified as 0-36 months are considered to be critical priorities.

| Short Term | Intermediate | Long Term |
|---|---|---|
| 0 – 36 months | 36-48 months | 48-60 months |

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## Implementation Resources and Costs

| | Recommendation | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Source | Est. Cost | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Develop a Building Inventory Program and Establish a System File Inspection Program for higher risk Fire and Life Safety Occupancies | | • | • | • | | | | Staff time | Cost neutral | |
| 2 | Develop a Standard of Cover policy defining service levels for Morinville | | • | • | • | | | | | | |
| 3 | Fire Chief to research the various staffing strategies and provide Council with preferred option[s] for their consideration | | • | • | • | | | | Staff time | Cost neutral | Cost will be dependent upon analysis and preferred option |
| 4 | Review response and compensation agreement with Sturgeon County | | | | • | • | | | Staff time | Cost neutral | |
| 5 | Develop a more detailed category of responses to identify trends and mitigation strategies | | • | • | • | | | | Staff time | Cost neutral | |
| 6 | MFD administration conduct a critical task assessment on the types of calls typically encountered to develop an effective resource management protocol for both apparatus and staff | | | | • | • | | | Staff time | Cost neutral | |
| 7 | Conduct a town growth area community development analysis | | | | • | • | • | • | Staff time | Cost neutral | |
| 8 | Enhance fire department review of notification protocols | | • | • | • | | | | Staff time | Cost neutral | |
| 9 | Improve collection of response data | | • | • | • | | | | Staff time | Cost neutral | |
| 10 | Reduce Alarms Ringing Responses | | | | • | • | | | Staff time | Cost neutral | |
| 11 | MFD work closely with AHS to ensure that medical aid service requests are limited to high severity assistance only | | | | | | | | Staff time | Cost neutral | Ongoing |
| 12 | Establish Performance Target Reports and Dashboards | | | | • | • | | | Staff time | Cost neutral | |

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## Implementation Resources and Costs

*Town of Morinville
Fire Service Master Plan*

| | Recommendation | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Source | Est. Cost | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | Reclassify the Deputy Chief of Training to a full-time position from the current 15% part-time position | | • | • | • | | | | Operational Budget | Fire Officer (2020) $75,495 Deputy Chief $118,559 | |
| 14 | Research retention opportunities of senior members | | | | • | • | | | Staff time | Cost neutral | |
| 15 | Create a plan for advancement and succession | | | | • | • | | | Staff time | Cost neutral | |
| 16 | Enhance the use of on-line delivery of training, educational materials and record management | | • | • | • | | | | Operational Budget | $5,000 p/yr. | |
| 17 | Identify non-operational support positions | | | | • | • | | | Staff time | Cost neutral | |
| 18 | Establish service level competencies for a maximum of 15% Paid-On-Call contingent as retention strategy | | | • | • | • | | | Staff time | Cost neutral | |
| 19 | Evaluate the Health and Wellness Program | | • | • | • | | | | Capital Budget | | |
| 20 | Formalize pre-fire plan inventory | | | | • | • | | | Staff time | Cost neutral | |
| 21 | Fire Hall Upgrades | | • | • | • | | | | Capital Budget | $ 3.4 million | |
| 22 | Research the building of a live-fire training facility | | | | • | • | • | | Capital Budget | Cost neutral | Research feasibility. Procurement of prefab live fire training building: Est. $100K |
| 23 | Replace the apparatus Pump 1 | | • | • | | | | | Capital Budget | $ 1.1 million | |
| 24 | Implement a comprehensive asset management program with advanced equipment management software | | | | • | • | | | Operational budget | TBD | Depends upon type of system for Corporate application |

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## Questions and Comments

*Town of Morinville
Fire Service Master Plan*

# Questions?

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