



2021

# Community Risk Assessment





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# Foreword

Community Risk Assessment is recognized as the first step towards the management of risk based on local “needs and circumstances”; Ontario Regulation 378/18 “Community Risk Assessments” came into affect on July 1, 2019.

The regulation states:

1. Every municipality, and every fire department in a territory without municipal organization must,
  - (a) Complete and review a community risk assessment provided by this Regulation: and
  - (b) Use its community risk assessment to inform decisions about the provisions of fire protection services.

The Community Risk Assessment is an in-depth and comprehensive assessment to inform fire protection service levels and requires the identification, analysis, evaluation and prioritizing of risk, based on nine mandatory profiles.

**Geographic Profile**

**Building Stock Profile**

**Critical Infrastructure Profile**

**Demographic Profile**

**Hazard Profile**

**Public Safety Response Profile**

**Community Services Profile**

**Economic Profile**

**Emergency Response Profile**



# Section 2

## Geographic Profile





# **South River Machar Fire Department**

## **Geographic Profile**

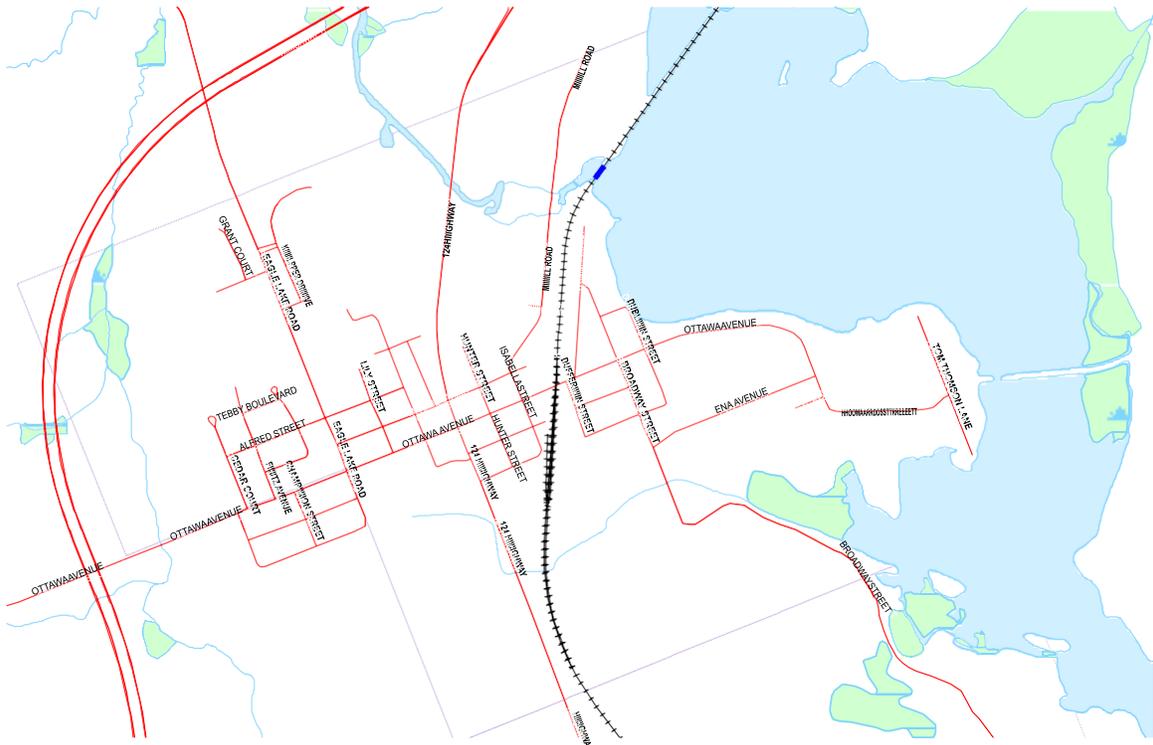
The purpose of the geographic profile is to describe the physical features of the community. Physical features may present their own risks or impact on fire service access or response time. The risks and impact can be affected seasonally or by significant weather events.

This profile will identify geographic features that:

1. Create a potential risk to inhabitants;
2. Create opportunities for work and recreation that may result in emergency response;
3. Affect fire department response to area; and
4. Identify areas that are more affected by significant weather events.

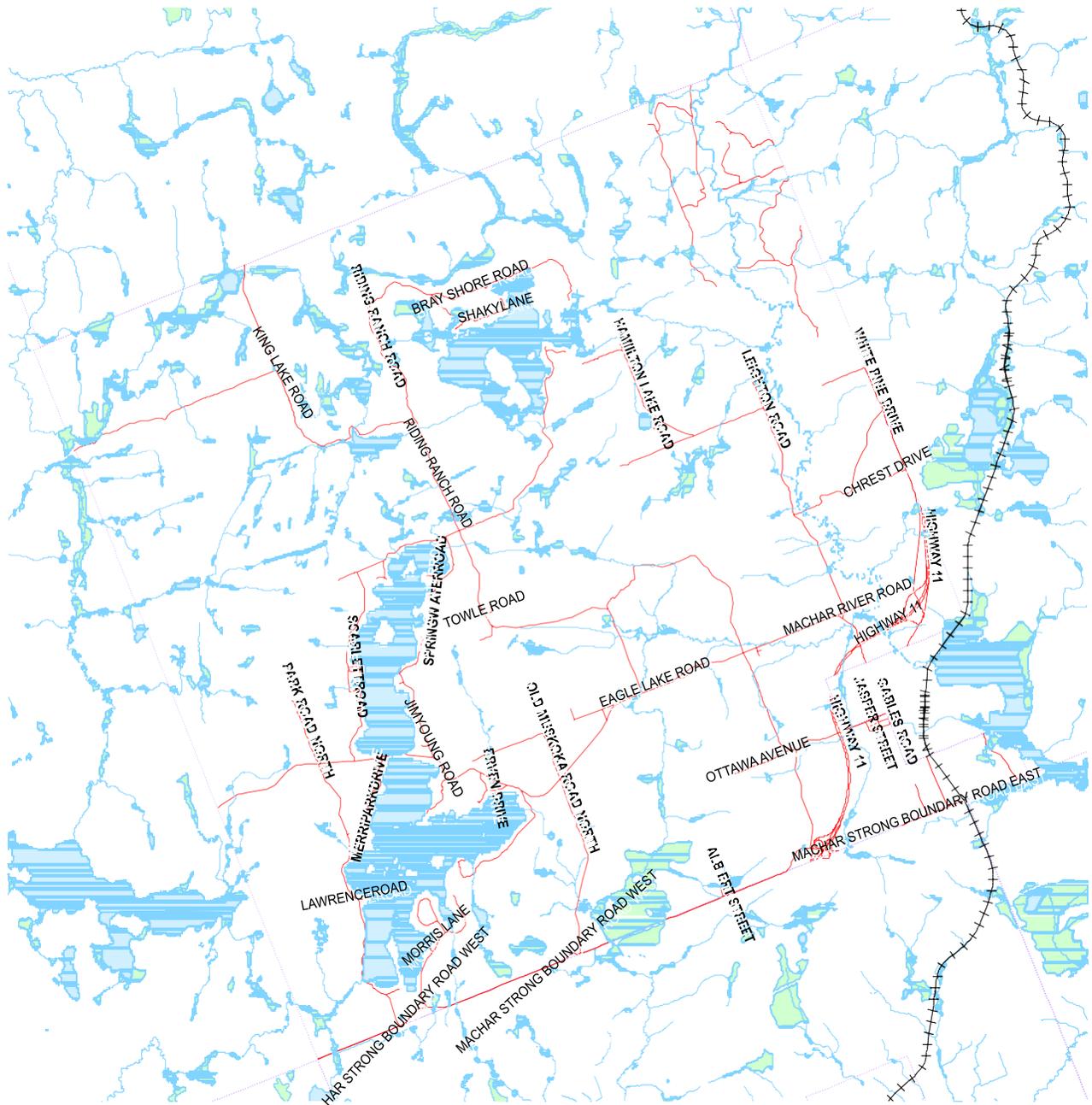
South River Machar Fire Department is responsible for fire protection services for the Village of South River and the Township of Machar. Additionally, the fire department provides supplemental fire protection services to the Township of Joly through a Fire Protection Agreement.

The Village of South River is located in the District of Parry Sound within the Township of Machar. The Village is approximately 4.15 km<sup>2</sup> in size with a population density of 268.3 persons per km<sup>2</sup>.



The Village of South River is approximately 339m above sea level and approximately 4 meters above the South River.

The Township of Machar is approximately 184 km<sup>2</sup> with a population density of 4.8 persons per km<sup>2</sup>. The Township borders on 2 unincorporated Townships; Lount Township is West and Laurier Township is East of Machar. Machar Township is the primary means of accessing properties in the majority of Lount Township.

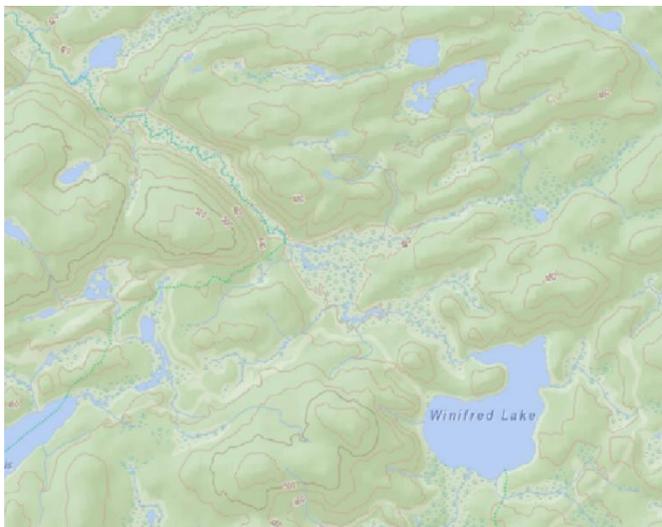


## Waterways

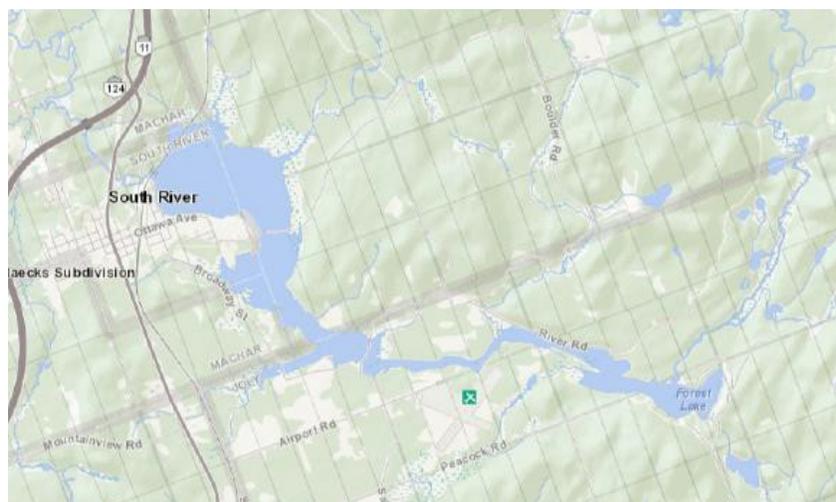
The South River and Machar area has numerous water ways that are used for recreation as well as providing the source for the Village of South River's drinking water.

### *South River Watershed*

The South River begins in Winifred Lake which is located in Algonquin Park, approximately 30 km east of the Village of South River. Craig Lake Creek and Smyth Creek both feed into the South River upstream of the Village both of which are dam controlled. Both Craig Lake and Smyth Lake dams are operated and maintained by Ontario Power Generation.



The South River feeds into Forest Lake in Joly Township then flows approximately 8.5 km to the Village of South River. The Village of South River

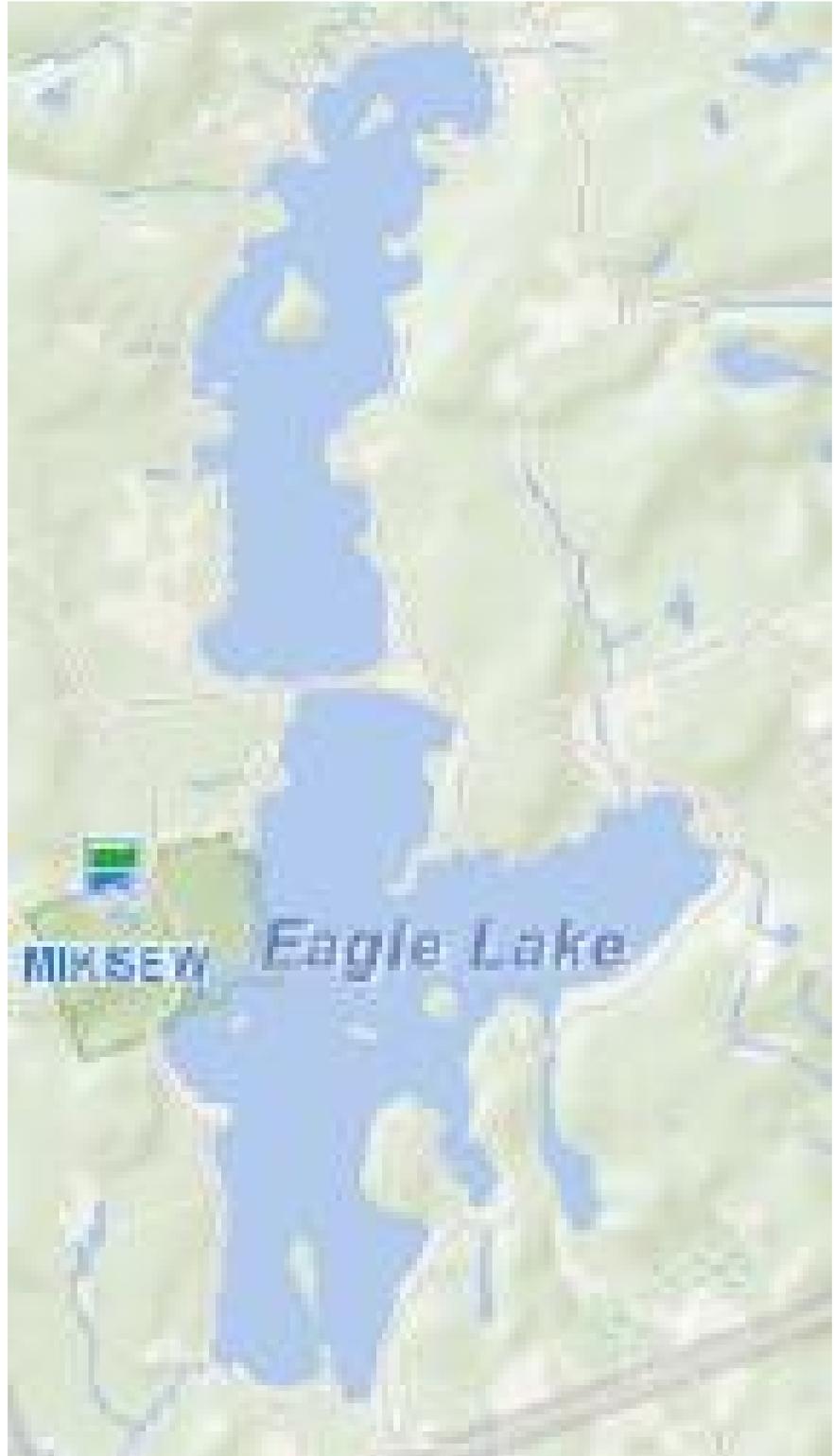


operates the Ministry of Natural resources and Forestry (MNR) dam located in South River. The Village of South River draws water from the South River for the municipal water distribution system with the intake coming from the channel on the south

side of Chemical Road. The South River flows north from the Village of South River crossing both Highway 124 and Highway 11. The river travels along the eastern side of the Township of Machar crossing under Thunderbridge Road.

## ***Eagle Lake***

Eagle Lake is located in the Township of Machar and is the head waters for the Distress River. Eagle Lake has over 44 km of shoreline making it the largest and most populated lake in Machar Township. There is a public beach located near the center of the lake and 1 public boat launch located on the south end of the lake. There are 4 properties located on islands on Eagle Lake, the remainder of the cottages are accessible by municipal and privately maintained roads. Main road access to Eagle Lake is by Eagle Lake Road and Machar Strong Boundary Road. Riding Ranch Road and Scarlet Road provides access from Eagle Lake Road to access the north end of the lake.



## ***Bray Lake***

Bray Lake is the second largest lake in Machar Township with approximately 33 km of shoreline and approximately 340 hectares in size.

Bray Lake is accessible by Hamilton Lake Road which is off Leighton Road as well as Bray Lake Road and Brayshore Road which are both accessed by Riding Ranch Road. Properties off Brayshore Road are some of the longest drive times for fire



department response in Machar Township. There is public access and a beach area off Bray Lake Road on the south side of the lake.

Water levels are dam controlled on Bray Lake with Bray Lake Creek feeding into the South River downstream of Gimbal Chutes as such it does not have any impact on spring flooding in the Leighton Road area.

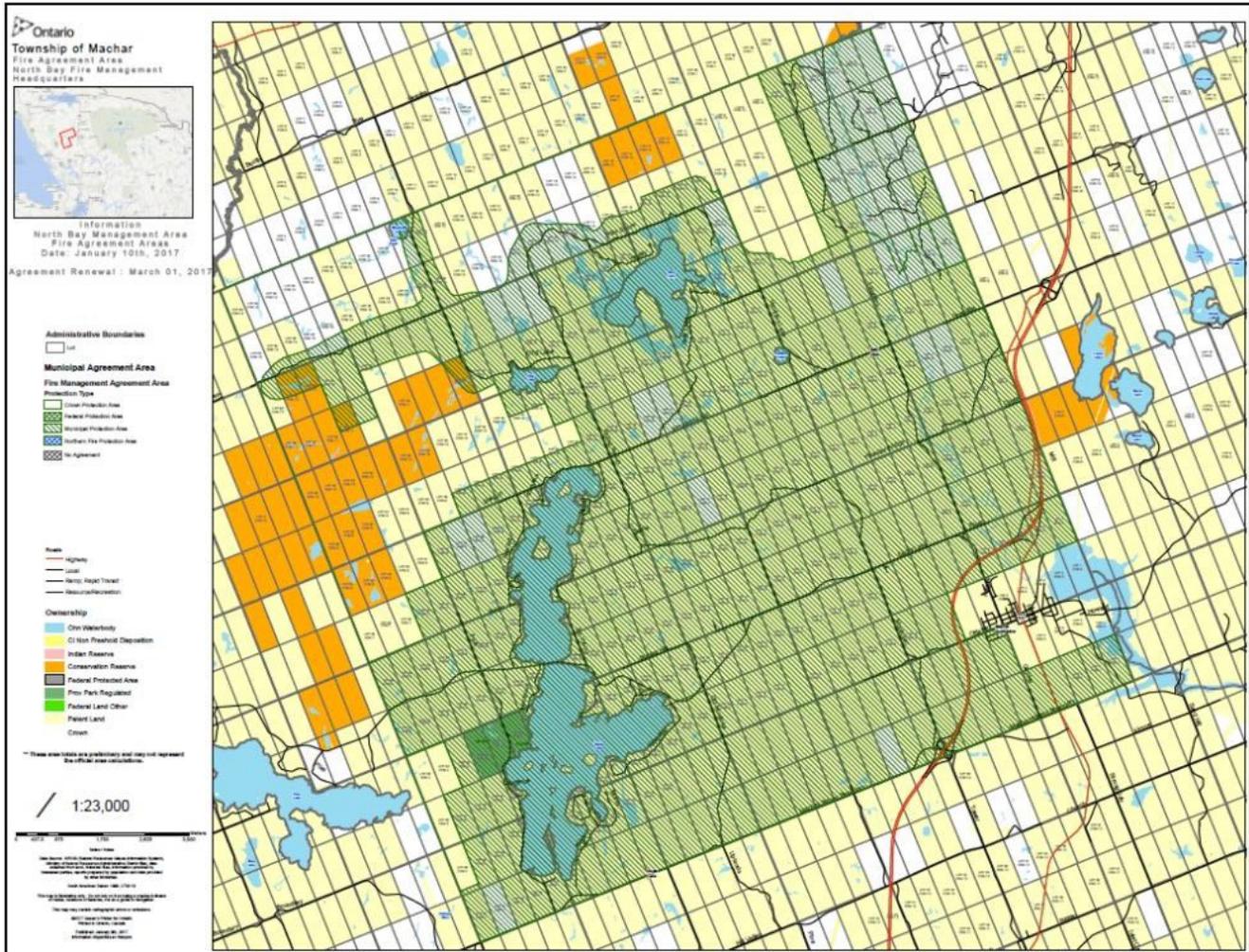
## ***King Lake***

King Lake is approximately 29 hectares in size with 3.4 km of shoreline making it one of the smaller developed lakes in the Township of Machar. It is located north of Eagle Lake and west of Bray Lake. There are 3 seasonal properties that are water access only. There is public access on the north end of the Lake off King Lake Road. The public access point on King Lake is approximately 15km from the South River Machar Fire Department.



# Forest and Vacant Land

Vacant forested areas in the Township of Machar are primarily hardwood bush with some mixed and conifer forest areas in lower elevations. There is very little in the way of agriculture fields in the Township. There is reasonable access

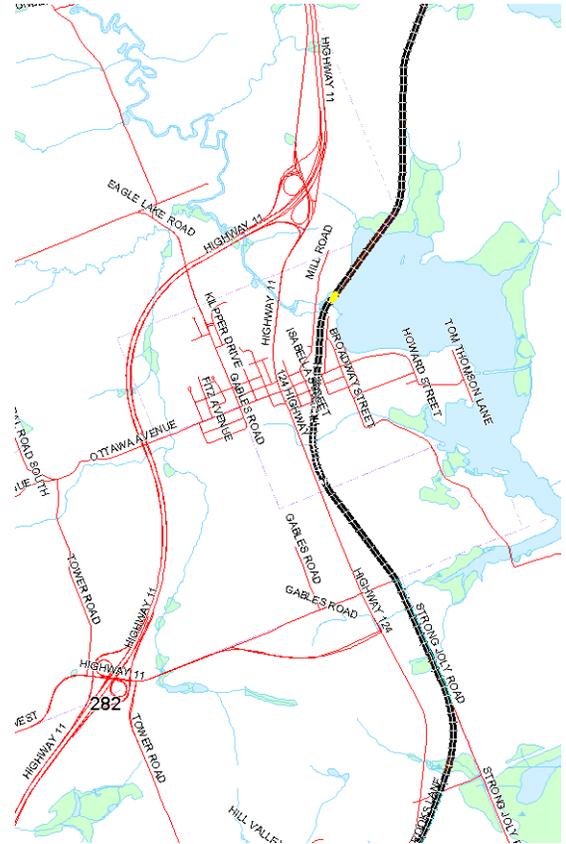


to surface water for firefighting purposes throughout the Township. The Township is primarily privately owned property with only 2092 hectares of crown land. The South River Machar Fire Department is responsible for forest fire protection for 14,197 hectares of the Township (Shaded in Green on the map) and the Ministry of Natural Resources and Forestry is responsible for 3,968 hectares.

# Transportation

## *CN Railway*

There is approximately 4 km of CN Rail that travels through the south east portion of Machar Township and through the Village of South River. The railway travels through the source water protection area near the South River. It crosses the South River near the South River Dam and then through the river on a causeway prior to entering Laurier Township.



There is 1 marked rail crossing in the Village of South River, in the event that this crossing is blocked it would delay emergency responses to the east side of the railway crossing by approximately 14 minutes. There is 1 non-signalized rail crossing on Machar Strong Boundary Road near the source water Protection area.



## ***Highway 11***

Highway 11 travels through 7.5 km of the Township of Machar with 2 on/off ramps exits 282 and 289 in the Township. South River Machar Fire Department also responds to 8 km of Highway 11 in Laurier Township and jointly responds with Sundridge Strong Fire Department for an additional 6.7 km south of Machar Township. Most emergency responses on Highway 11 are single vehicle accidents or collisions with wildlife. Most incidents that result in injury are a result of single vehicle roll over type accidents.



## ***Highway 124***

Highway 124 travels through the center of the Village of South River. Traffic lights control the Ottawa Avenue and Highway 124 intersection. The Highway travels through 7.5 km of the Township of Machar. There is an automatic aid agreement in place between the South River Machar Fire Department and the Sundridge Strong Fire Department for 7.5 km of Highway 124. The posted speed limit on Highway 124 is 80 kmh. Animal collisions and head-on collisions account for most of the injury related accidents on Highway 124 in the municipalities.



## ***Municipal Roads***

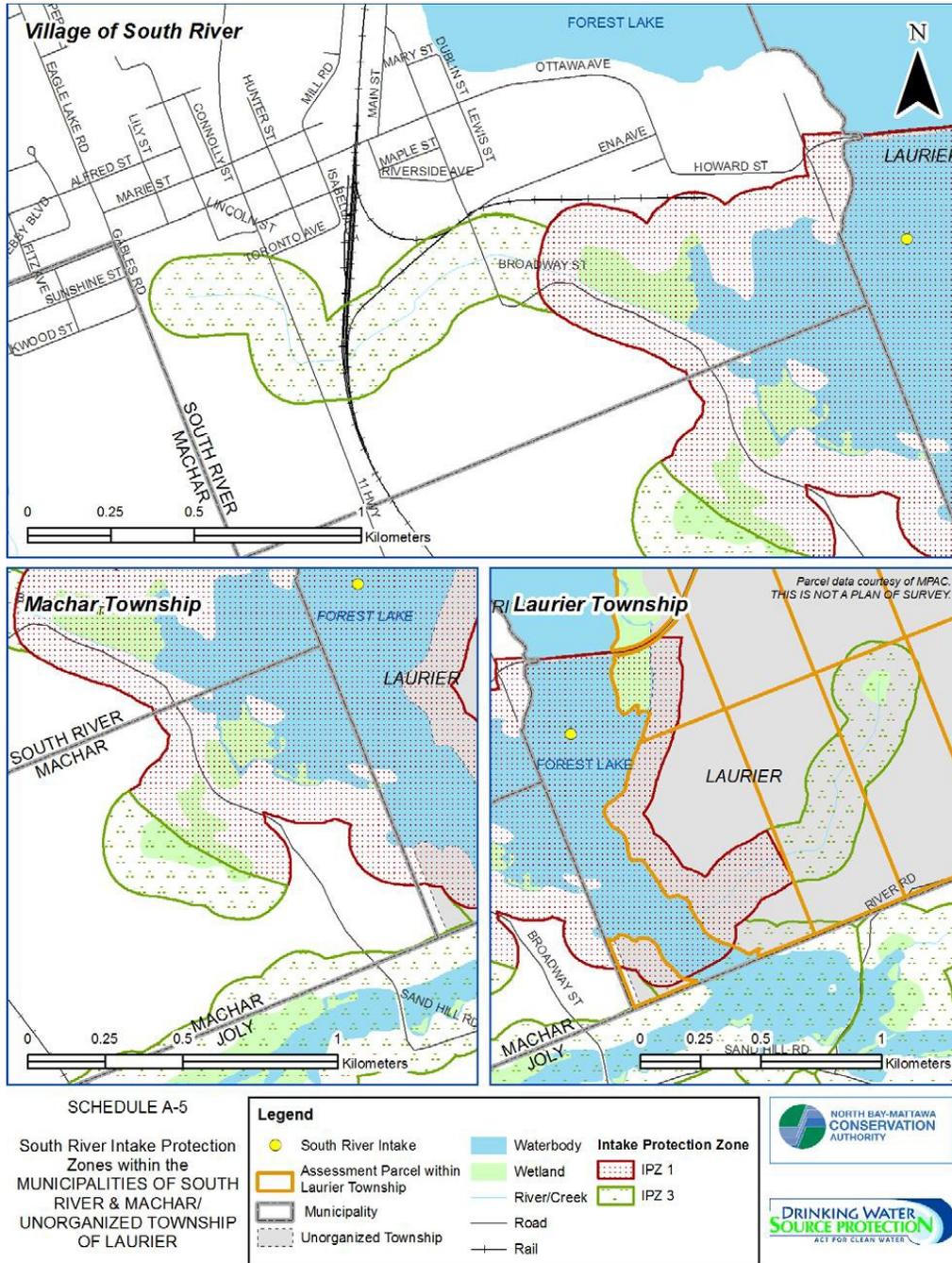
There are 32.2 kilometers of municipal roads in the Village of South River that are maintained by the South River Public Works Department. Posted speed limits in the Village is 40 km/h. Ottawa Avenue is the main artery that runs east and west through the Village ending at Howard Street. Ottawa Avenue and Howard Street provide access to Chemical Road. Algonquin Park

Kawawaymog (Round) Lake Access Point is located 20 km from the Village off Chemical Road. Additionally, Chemical Road serves as an access road for hauling timber resources from logging operations east of the Village.

The Township of Machar has 126 kilometers of road, 8.5 kilometers are seasonally maintained roads. The maximum posted speed limit in the Township is 80 km/h. Eagle Lake Road and Machar Strong Boundary Road are the 2 main access roads that run east and west. Both roads also serve as main access points to the unincorporated Lount Township. The Township of Machar Public Works Department is responsible for road maintenance including snow removal.

## Key Findings

- CN Railway, Highway 124, Broadway Avenue and Brennens Road pass through the source water protection area for the Village of South River's drinking water intake.



- The Leighton Road area is prone to flooding during spring freshet. Flooding isolates approximately 28-year-round properties that house approximately 75 residents.



- During Spring freshet many areas of the South River are classified as swift water. Areas such as Chemical Bridge, Brennans Road Bridge and the channel below the South River dam all become swift water during spring freshet and occasionally during significant rain events.
- Properties north of Eagle Lake have higher fire department response times for emergencies due to their distance from the fire hall and the secondary roads accessing them.
- There is only 1 rail crossing in the Village of South River, in the event it is compromised, emergency service response times to properties east of the railway are significantly increased.



# Part 3

## Building Stock Profile





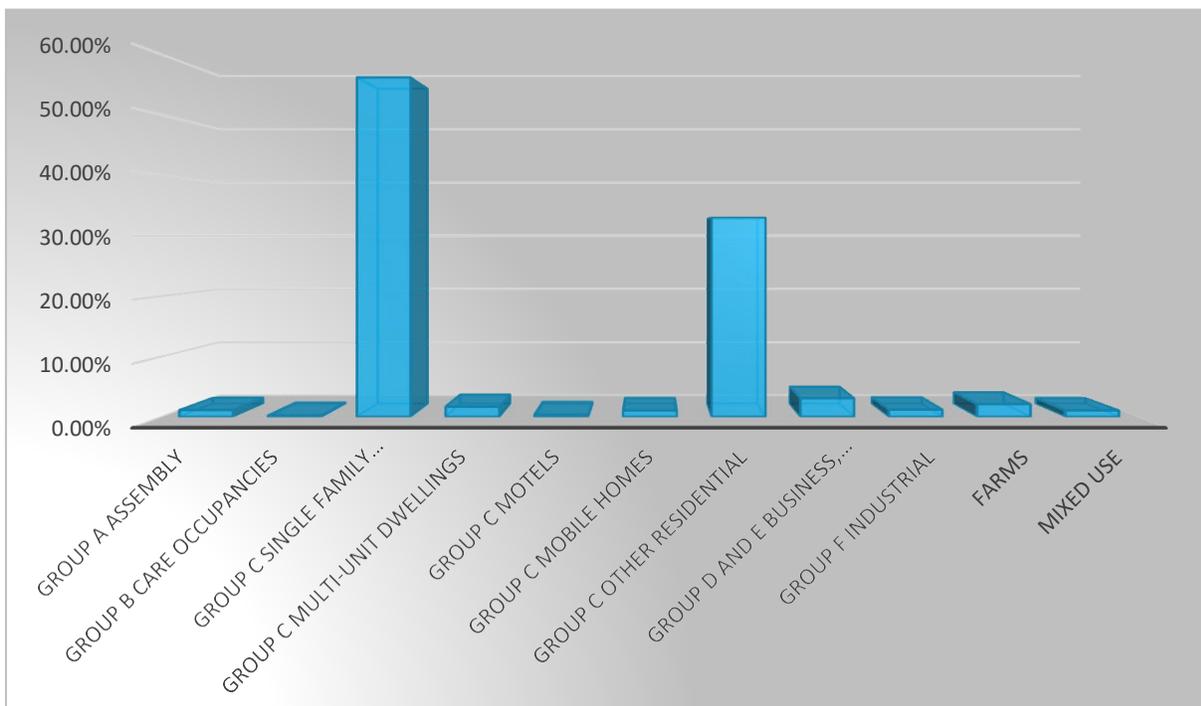
# **South River Machar Fire Department**

## **Building Stock Profile**

This profile looks at the number of buildings, their age, and their type of use (“major occupancy classifications” in the Ontario Building Code (OBC)). In doing so, potential concerns are highlighted given building use, type or community importance. This helps in developing programs and activities to address associated risks to public safety such as fire/explosion and structural failure.

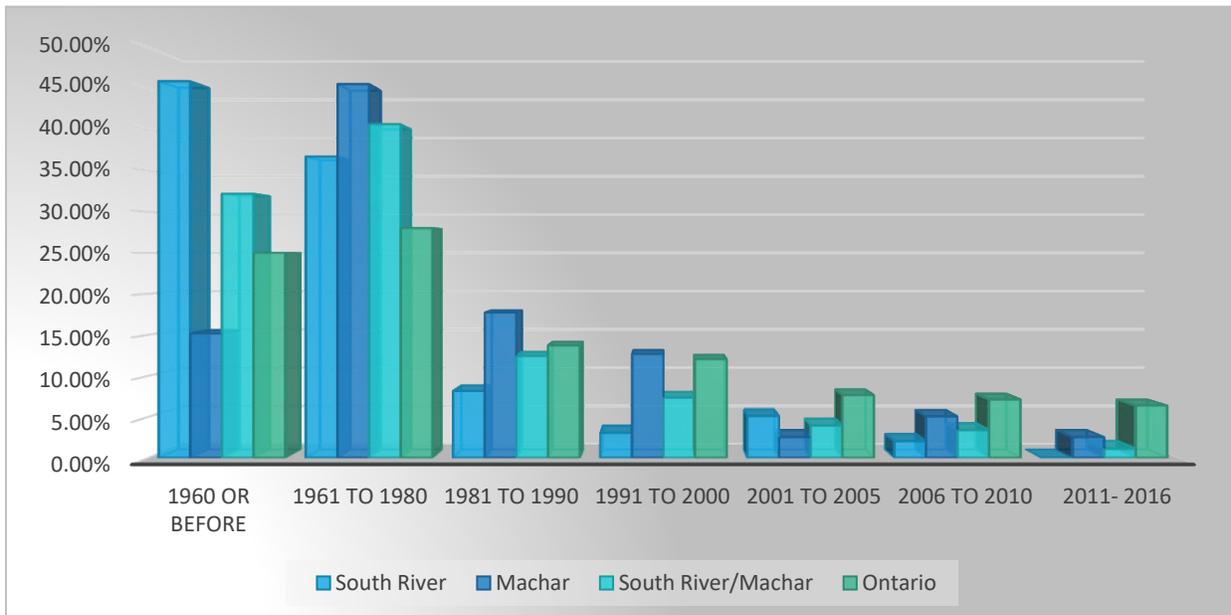
The following table shows a breakdown of the current building stock in the Village and the Township.

Occupancy Classification		Number of Occupancies
Group A	Assembly Occupancies	16
Group B	Care Occupancies	3
Group C	Single Family	886
Group C	Multi-Unit	24
Group C	Hotel/Motel	5
Group C	Mobile Homes	15
Group C	Other	490
Group D and E	Business & Mercantile Occupancies	44
Group F		17
All other buildings not classified by OBC, such as Farms		30
<b>Totals</b>		<b>1530</b>
<b>Total # of mixed occupancy</b>		<b>15</b>



Group C Residential buildings combined account for 93.3 percent of the building stock in the Village and the Township with Single Family Dwellings accounting for 56.2 percent of the buildings. Group C other account for an additional 33 percent of the building stock, these buildings are primarily seasonal properties.

The percentage of older single-family dwellings in the Village and the Township is significantly higher in comparison to the provincial building stock profile. In the Village, 82 percent of the single-family dwellings were constructed prior to 1980, 73 percent of the buildings in the Township were constructed in the same time period. In the Province only 53 percent of the dwellings were constructed prior to 1980. Ontario introduced the first Ontario Building Code in 1975 which means many of the current residential buildings in our area were constructed prior to the building code. Older buildings typically do not have the same fire safety systems and equipment required in newer buildings.



Within the Village and the Township approximately 1.7 percent of the buildings are multi residential. Many of these structures fall under Part 9 Retrofit of the Ontario Fire Code



which came into effect in 1992. With multiple self-contained dwelling units, multi residential buildings are at an increased risk of fire. The number of residents can also pose a significant challenge for fire suppression and rescue operations.

Approximately 4.1 percent of the Buildings in the municipalities are used commercially or for industry. Loss to any of these structures to fire is likely to have a significant impact on the local economy. Due to the size and occupancy,



Industrial properties pose a significant challenge for fire suppression operations. In most cases the buildings are unoccupied for extended periods of time which can result in significant delays in a fire being detected.

Within the Village and the Township there are 16 buildings that have an assembly occupancy within them. These buildings are typically larger buildings and may also be unoccupied for extended periods. Many of these buildings have significant emotional ties to the community.

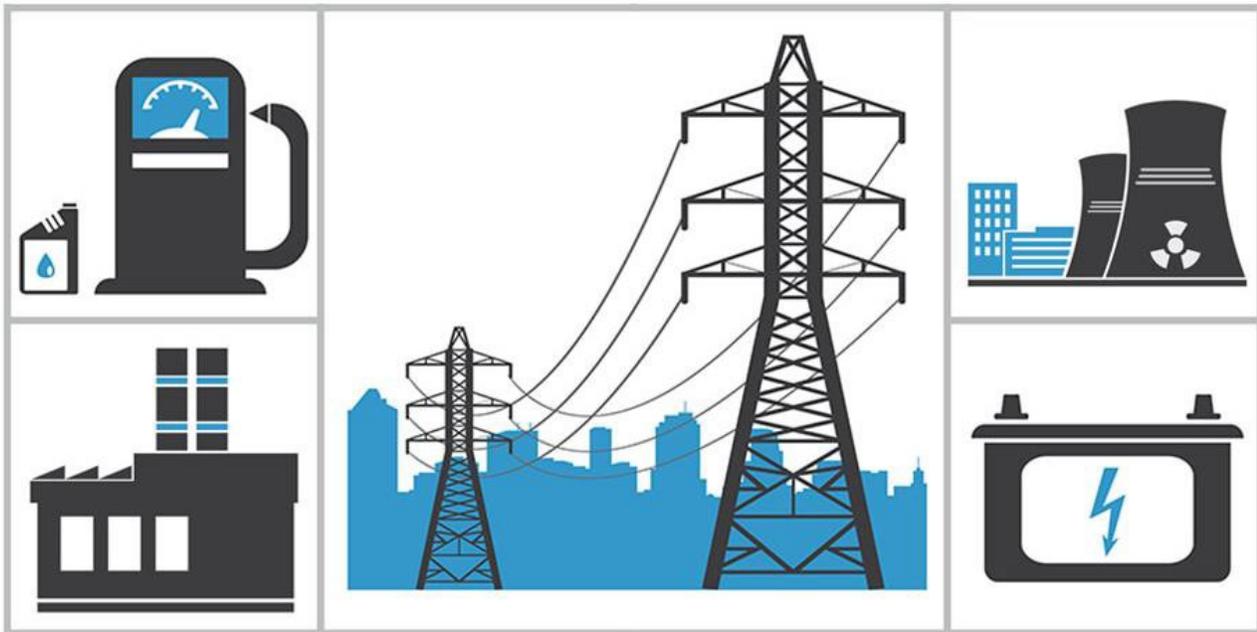


## **Key Findings**

- 33 Percent of the buildings in the Village and the Township are recreational properties. Rental agencies such as Airbnb have increased the use of these properties significantly. Additionally, many owners are occupying these properties for longer periods of time as a result of Covid-19.
- 46 Percent of the residential buildings in the Village were built prior to 1960. Many of the 2 story buildings are balloon frame construction.
- Due to the size, construction type and occupancy classification, many of the industrial properties require significantly more water for fire suppression than is typically available from the municipal water distribution system. These properties also require additional fire suppression personnel to effectively suppress fires and complete rescues.
- Many of the multi-residential buildings also require more water than is readily available for fire suppression. These buildings also require additional firefighters to complete rescue operations during a fire.



# Section 4





# **South River Machar Fire Department**

## **Critical Infrastructure Profile**

Critical Infrastructure is defined as interdependent, interactive, interconnected networks of institutions, services, systems and processes that meet vital human needs, sustain the economy, protect public health, safety and security, and maintain continuity of and confidence in government.

This profile identifies and explores the capabilities and limitations of critical infrastructure in the Village of South River and the Township of Machar; including electricity distribution, water distribution, telecommunications, fire stations, municipal offices and the South River Public School. These facilities and services contribute to the interconnected networks, services and systems that meet vital human needs, sustain the economy and protect public safety and security.

The presence/availability and capacity of infrastructure could have a significant impact on such things as dispatch, communications, suppression operations, overall health care or transportation for the community. They may also present unique risk concerns because of their size or design. A consideration of critical infrastructure helps to set priorities and develop strategies for how risk concerns are addressed in the community, including the development of public safety education, fire prevention and emergency response pre-planning.

# Important Municipal and Government Buildings

## *South River Machar Fire Hall*

The South River Machar Fire Department is located at 148 Ottawa Avenue at the intersection of Eagle Lake Road and Ottawa Avenue. The fire department is a single station department with all



of the fire departments fire suppression equipment, communication and administration resources housed at the fire hall. The fire department has 2 radio communication repeaters, 1 located on the Bell cellular tower on an easement off Roselawn Boulevard in the Village and the second on a Canadian Microwave tower located on the north end of Park Road. The fire hall is not sprinklered but does have a monitored security alarm with fire detection monitoring. In the event the fire hall was compromised by fire or other substantial damage, fire protection would be provided to the building by the Sundridge Strong Fire Department. As the fire hall is not staffed 24 hours per day, adding an automatic sprinkler system to the building would help reduce the building's vulnerability to fire.

## *Village of South River Municipal Office*

The Village of South River municipal office is located at 63 Marie Street at the intersection of Eagle Lake Road approximately 100 meters from the South River Machar Fire Department. In addition to providing administration operations for the Village, the building houses the Emergency Operations Center (EOC) for the Village. The South River Machar Public Library is located on the main level of the building. Office space is also rented out in the basement including a satellite office for Almaguin Highlands OPP. The building has a monitored security system which includes fire detection.



## ***Township of Machar Township Municipal Office***

The Township of Machar municipal office is located at 73 Municipal Road, approximately 4 km from the South River Machar Fire Department. The



The building is the Primary Emergency Operations Center for the Township. The building has back up power. There is a security alarm with fire detection that is monitored. There is not a water source on site for firefighting purposes.

## ***South River Public School***

South River Public School located at 139 Ottawa Avenue opened on September 1, 1969. The building is Type 2 construction and is 1846 m<sup>2</sup> (2,406 ft<sup>2</sup>) in size. Presently there are 152 students enrolled in



the school with 22 staff members. The building has a single stage fire alarm system and a monitored security alarm with fire detection. There are 2 fire hydrants that service the school; both are on a 150mm cast iron water main, one located at Lily Street and Ottawa Avenue and the second at Eagle Lake Road and Ottawa Avenue.

## *South River Water Treatment Plant*

The South River Water Treatment Plant located at 28 Howard Street was commissioned in May of 2000. The building is Type 2 construction approximately 550m<sup>2</sup> in size. The plant



provides full conventional treatment to raw water drawn from the South River. The water treatment facility consists of two (2) Conventional Napier Reid package plants. An in ground clear well reservoir located under the facility has the approximate capacity of 1,536 m<sup>3</sup> of useable storage. High lift pumps at the treatment facility run continually to maintain water pressure in the water distribution system piping.

Raw water is pumped from a low lift pumping station located at the south end of Tom Thomson Lane. The low lift station has an alarm monitoring system.



The treatment plant has a diesel-powered generator for emergency back-up power. The generator is housed in a separate building on the east of the water treatment plant. All 3 buildings have a monitored security system with fire detection monitoring.



# Utilities

## *Telecommunications*

The Bell Network hub is located at 8 Montreal Avenue. The building is approximately 130 m<sup>2</sup> in size and is in a hydrant protected area with 2 hydrants available both off a 150 mm water main.



Bell Mobility also has 2 cellular towers in the municipalities, one located between Johnson Drive and Roselawn Boulevard and the second site is on a Canadian Microwave tower located at the north end of Park Road in Machar Township. Rogers network has a tower off Tower Road in Strong Township, Bell Mobility Tower operates off Tower Road as well. Telecommunications has been impacted by vandalism and extended power interruptions on several occasions over the past 5 years.

## *Electricity*

There is one electric power generation station located on Mill Road in the Village of South River operated by South River Power Generation Corporation. The power generation station feeds back into the Hydro One grid, the generation station does not supply power to the grid when the main hydro feed to the Village is out. Transmission lines for the electrical grid in the Village and the Township are owned and maintained by Hydro One. The feed for the grid comes from the north through Chrest Drive to Leighton Road then splits feeding the Township and the Village with 3 phase power. There are switches to isolate all 3 phases to the Township located near 506 Eagle Lake Road. There are 3 switches to isolate all 3 phases to the Village located near 63 Marie Street.

## ***Natural Gas***

TransCanada pipeline passes through the southeast corner of Machar Township, west of the Village of South River. The pipeline crosses Whitepine Drive, Leighton Road, Eagle Lake Road, Ottawa Avenue, Tower Road and Machar Strong Boundary Road. The supply for Enbridge Gas distribution to the Village of South River is connected at the station located at 418 Ottawa Avenue. There are two post regulator stations in the Village; one located at Gables Road and Ottawa Avenue, the second at Lincoln Avenue and Ottawa Avenue.



## **Key Findings**

- None of the critical infrastructure buildings identified in this profile are protected by automatic fire sprinkler systems. Most however, have security alarms with fire detection monitoring.
- Most of the critical infrastructure buildings identified in this profile have adequate water supply for firefighting purposes through the Village's municipal water distribution system or by water shuttle using the fire department's resources including automatic aid resources.
- Telecommunications to the area are vulnerable to vandalism and extended power outages. The public's ability to contact emergency services can be compromised for extended periods of time. In these circumstances the fire department becomes the public's point of contact for all emergency services.
- The electrical feed comes in from the north and is the end of the feed coming from North Bay which can lead to extended power outages on wide spread storms.

# Demographic Profile





# **South River Machar Fire Department**

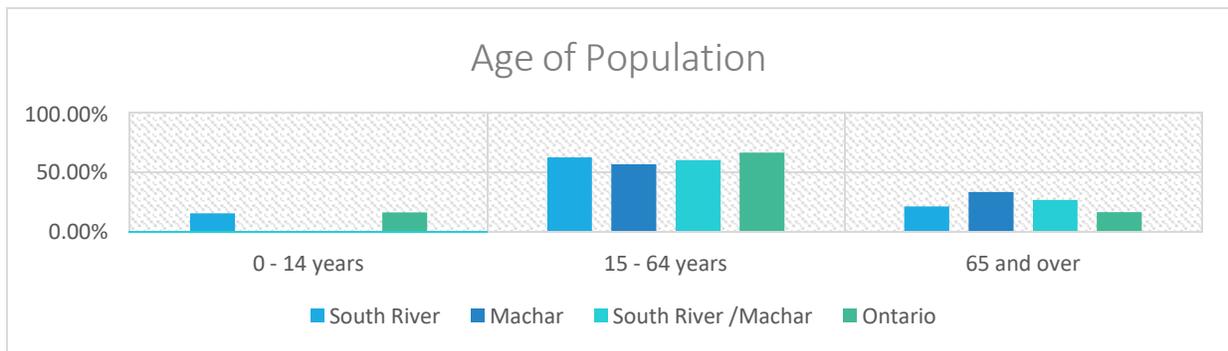
## **Demographic Profile**

This profile describes the Village of South River and the Township of Machar in terms of population size and distribution, age, gender, cultural background, level of education, socio-economic make-up, and transient population. This profile will help the fire department identify merging trends in in the demographics and help set priorities for fire protection services

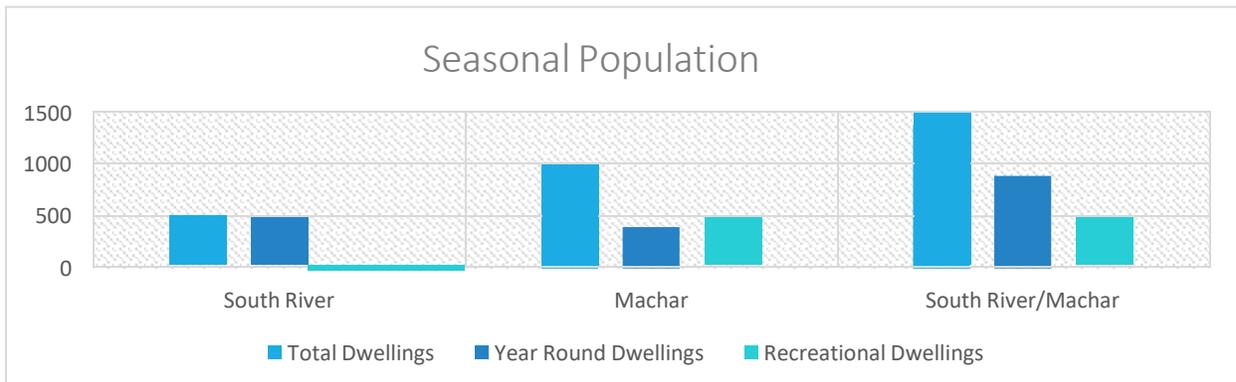
The data source for this profile was the 2016 census.

## Population

The 2016 census report lists the population of the Village of South River at 1,114 an increase of 65 from the 2011 census profile. The 2016 census profile for the Township of Machar is 882, 41 fewer than the 2011 profile showed. The median age for the Village and the Township is 51 years which is 10 years over the provincial median age. The average household size for the Village of South River and the Township of Machar is 2.4 persons per household.



According to the 2016 census report there are 528 residential dwellings in the Village of South River with 490 of them being occupied by permanent residents. The Township of Machar has 848 residential dwellings with 396 being occupied by permanent residents. This equates to 35.61% of the residential buildings in the municipalities being used primarily as a recreational property with an estimated population fluctuation of 1,176 people which represents a 58.9% potential increase population. Mikisew Provincial Park with 259 campsites and Hockey Opportunity Camp with 240 campers and 100 staff have an additional potential population increase of 840 making the total estimated population fluctuation 2,016 which is slightly over a 100 percent increase.

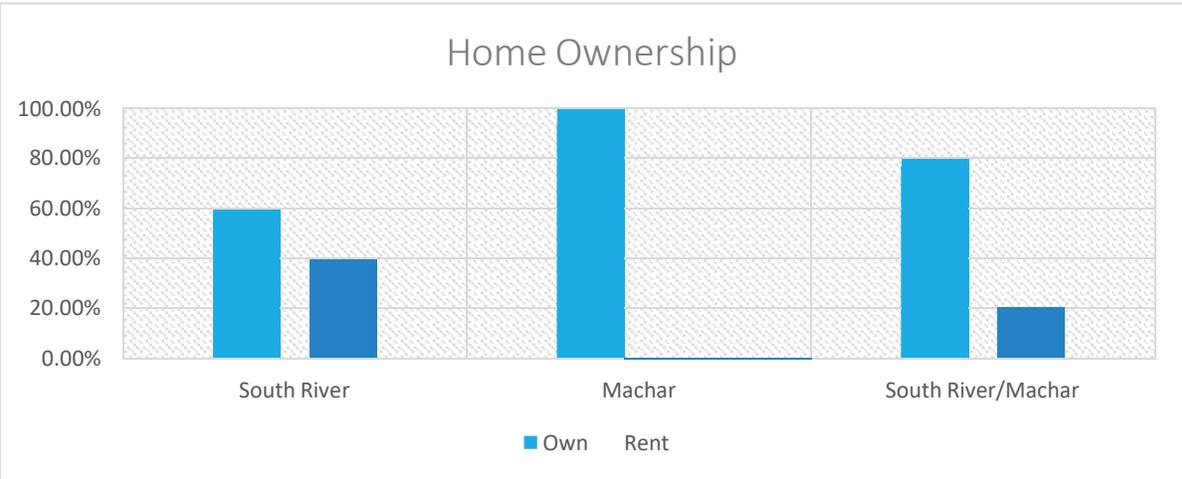


***Vulnerable Populations***

Currently there are 2 separate group homes that provide care for people with exceptional needs who require assistance in daily living as well as 1 small privately owned retirement home. In the Village there are 3 four plexes geared to retirement living and there is 1 community in the Township with 2 triplex units and 2 duplex units.

***Housing***

The Village of South River has a significantly higher number of rental properties with 39% of the residents renting their home, compared to only 6 percent in the Township of Machar. The average monthly rental cost is 791 dollars per month which is 318 dollars lower than the provincial average. Both the Village and the Townships average property values are significantly below the provincial average of 506,549 dollars. The average property value in the Village is 182,655 dollars and the Townships average is 308,904 dollars.



***Income***

The median household income for the Village of South River and the Township of Machar is significantly lower than the Provincial average. The Provincial median household income is 74,287 dollars and the average household income for South River and Machar is 51,520 dollars. The average unemployment rate for the Village and the Township is also 5.35% higher than the provincial rate of 7.4%.

## ***Cultural Background***

The Village of South River and the Township of Machar are overwhelmingly English-speaking. Other cultural considerations for service delivery development include the rural nature of the local culture and how cultural activities (work, recreation, traditional activities) impact the likelihood and consequence of risks to public safety and the need for fire protection services. The fire service has noted increasing linguistic and cultural diversity in the tourist population, including significant urban visitors.

## **Key Findings**

- Population fluctuations can increase by as much as 100 percent during peak summer tourism season.
- As a result of Covid-19 a trend to working from home resulted in many staying extended periods at their seasonal properties, it is uncertain if this practice will continue post Covid-19.
- With the median age of residents being 10 years above the provincial median age medical first response calls are expected to increase.
- Recruiting firefighters will be an ongoing challenge with limited industry attracting younger families. With the average age of residents being significantly higher than the province indicates a higher percentage of retirees living in the communities.

# Economic Profile





# **South River Machar Fire Department**

## **Economic Profile**

This profile examines the economic drivers of the Village of South River and the Township of Machar. Consideration should be given to the impact of the potential loss of these economic drivers in assessing risks to public safety. Some of the economic drivers reviewed in this profile include;

- Tourism
- Industrial
- Commercial/Retail
- Home and Small Business

## Tourism

The South River and Machar area markets the area to tourism. The welcome sign to the Village captions “*Natures Playground*” while the Township’s sign reads “*Always in Season*”. Both municipalities market the natural beauty of the area as a reason to spend time in the community. As indicated in the demographic profile the area sees an increase in summertime population of approximately 60 percent. Some of the tourism businesses in the area identified below.

### *Hockey Opportunity Camp*

Hockey Opportunity Camp is located at 961 Park Road South on the south end of Eagle Lake. The camp has a capacity of 240 campers per week with a staff of 100 staff (1 staff to 2.5 campers). The camp has over 30 individual buildings and offers both a hockey school and a wide range of traditional camp activities such as water skiing, climbing wall, kayaking and team sports.



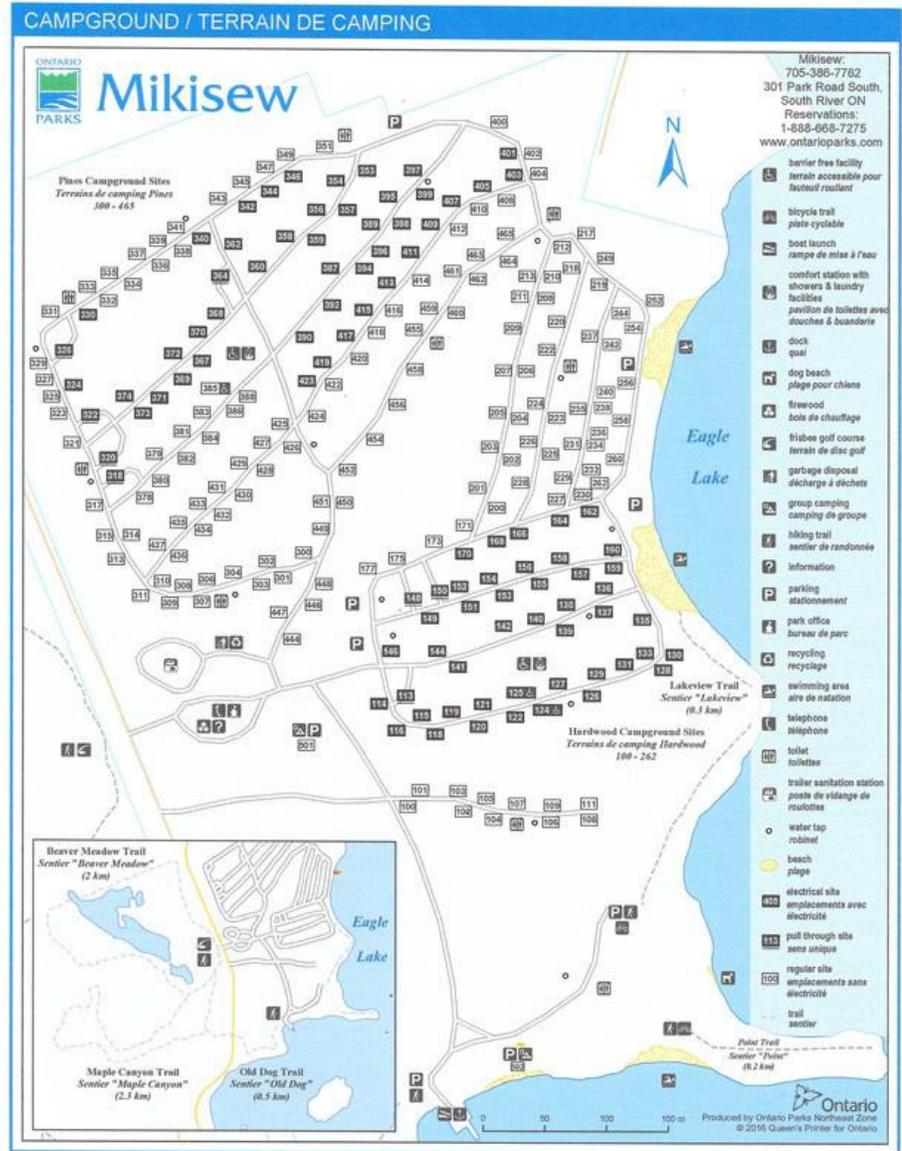
### *Algonquin Motel*

Algonquin Motel is located at 11191 Highway 124 and has 2 motel buildings with a total of 14 units. The main building is approximately 527 m<sup>2</sup> in size and the second building is approximately 250m<sup>2</sup> in size. The motel is a popular place for snowmobilers in the winter months. The motel also offers seasonal campsites for mobile homes.



## Mikisew Provincial Park

Mikisew Provincial Park which is located on the west shore of Eagle Lake at 301 Park Road South. The Park is open from mid June to mid October. The park is a popular spot for cross country skiing and snowshoeing during the off season. Mikisew is 130 hectares in size with 259 campsites. There are 2 beaches inside the park and 1 boat launch. The Park also offers hiking trails on the west side of Park Road.



## ***Eagle Lake Golf Course***

Eagle Lake Golf Course is a unique golf course with its 12-hole design. It's located approximately 10 km west of South River on Eagle Lake Road. The golf course is open to the public and has a full pro shop and club house.



## **Industry**

There are three manufacturing plants in the Village of South River; the Bear Chair, Swift Canoe and Waveform Plastics. There are also 2 sawmills, 1 in the Village on Ena Avenue and 1 in the Township on Bunker Hill Road.

### ***The Bear Chair***

The Bear Chair operates out of a 3000 m<sup>2</sup> wood framed building located at 19 Howard Street, South River. They manufacture classic Muskoka/Adirondack Chair in a ready to assemble form. The factory is staffed with up to 40 workers. They manufacture approximately 450 chairs per day when operating 2 shifts.



### ***Swift Canoe***

Swift Canoes and Kayaks are manufactured in a 1400m<sup>2</sup> building located at 14 Howard Street in South River. They manufacture complete Kevlar and Carbon Fibre canoes and kayaks with a staff of 38. Swift Canoe also operates a retail and rental shop located on Highway 124 in the Village of South River.



### ***Waveform Plastics***

Waveform Plastics Technologies is a manufacturer of custom thermoformed products. They have a diverse customer base, with customers in the automotive, medical, marine, consumer products, electronics and instrumentation, advertising and POP industries.



They operate out a wood frame building that is approximately 1169m<sup>2</sup> (12,500ft<sup>2</sup>) in size. They employ approximately 10 workers.

## *Almaguin Forest Products*

Almaguin Forest Products is a manufacturer of hardwood forest products located in South River, Ontario, producing approximately 4.5 million fbm per year. They produce hardwood lumber and sawmill residues. We also sell logs of various kinds. The mill employs 13 workers.



## **Commercial and Retail**

### *Restaurants*

Currently there are 3 restaurants in the Village: Antonios Grill, Ediths Country Kitchen and Wongs Delight. There is also 1 chip truck that operates during the summer months in the Village of South River.

### *Automotive Services*

There is a Shell fuel station located at 314 Hwy 124 in the Village and 1 independent fuel station located at 2370 Eagle Lake Road at the Eagle Lake Narrows Country Store.

There are 2 auto repair business operating in the Village of South River. Griffith Bros is located at 284 Hwy 124. They offer general repair to passenger vehicles and commercial trucks as well as towing services including heavy wrecker services. East End Auto is located at 9 Ena Avenue in the Village. East End provides general automotive repairs to passenger vehicles and small engine repairs. Bedards Towing operates a towing and salvage business located at 37 Industrial Road in Machar Township. In the Township there is a marina that is located near Eagle Lake which offers boat storage and maintenance services.

### *Retail*

Freshmart, located at 298 Highway 124, is the only grocery store in the municipalities and is approximately 660m<sup>2</sup> in size. There is 1 convenience store in the Village, South River Kwik Way which is located at 1 Montreal Avenue. There is one LCBO outlet, 1 Beer Store, 1 Micro Brewery with event hall and 1 wine making business. There is only one clothing store in the Village located on Ottawa Avenue. There is also a newly constructed Pharmacy located on Highway 124.

## *Services*

There is one credit union located at 83 Ottawa Avenue. There is also a Coldwell Banker realty office located on Hwy 124. Canada Post has an outlet located at 89 Ottawa Avenue in the Village. Adjacent to Canada Post there is an insurance office that operates out of a residential/commercial building. There is a commercial business complex that houses a dental office, hair dresser and office space for a tourist operator that serves Algonquin Park.

## **Key Findings**

- There are approximately 100 jobs in the manufacturing sector in the municipalities.
- There is very limited retail business in the municipalities, many people travel to North Bay for retail shopping.
- There are several small home-based businesses in the municipalities.
- Due to the limited number of businesses operating in the area any loss of a business to fire would have a significant impact on the local economy.
- Fire suppression requirements to some of the industrial properties could overwhelm the fire suppression resources of the fire department.



# Section 7

## Emergency Response Profile





# **South River Machar Fire Department**

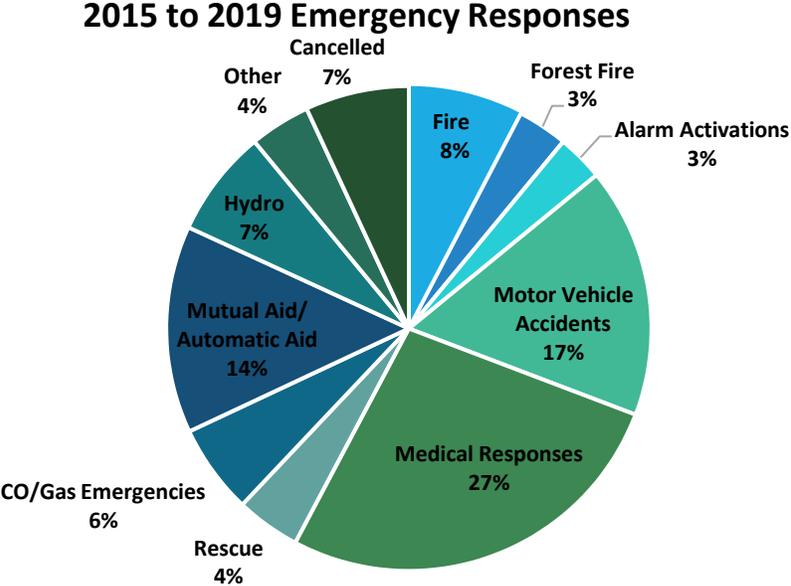
## **Emergency Response Profile**

This profile examines the South River Machar Fire Department's past emergency response experience, including the following analysis:

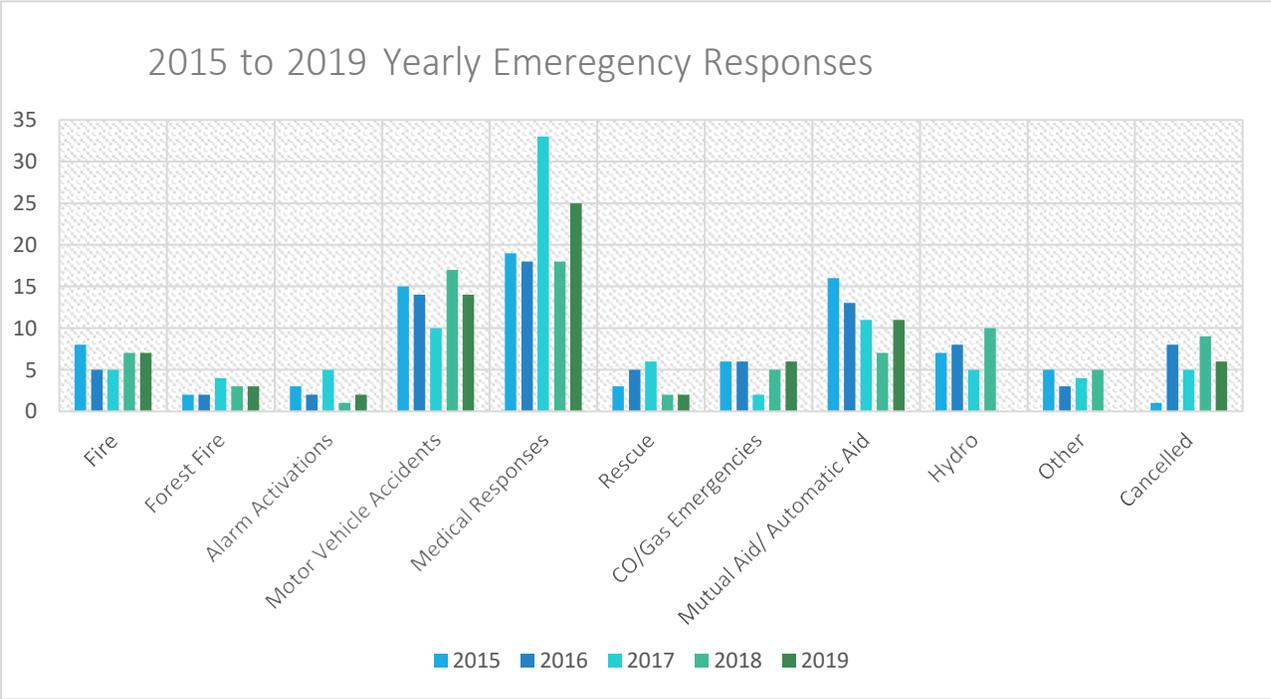
1. The number and type of emergency responses, injuries, deaths and dollar losses.
2. The times in which the fire department's respond to emergencies.
3. The fire department's response to specific emergencies.
4. Identify potential trends in emergency responses.

The analysis of past emergency responses will assist in making decisions regarding the delivery and prioritize fire protection services.

South River Machar Fire Department responded to 419 emergency calls for service from 2015 to 2019, an average of 83.5 calls per year. The following pie chart shows the breakdown of emergency responses for the past 5 years.



The following chart illustrates the breakdown of emergency responses on a yearly basis from 2015 to 2019.

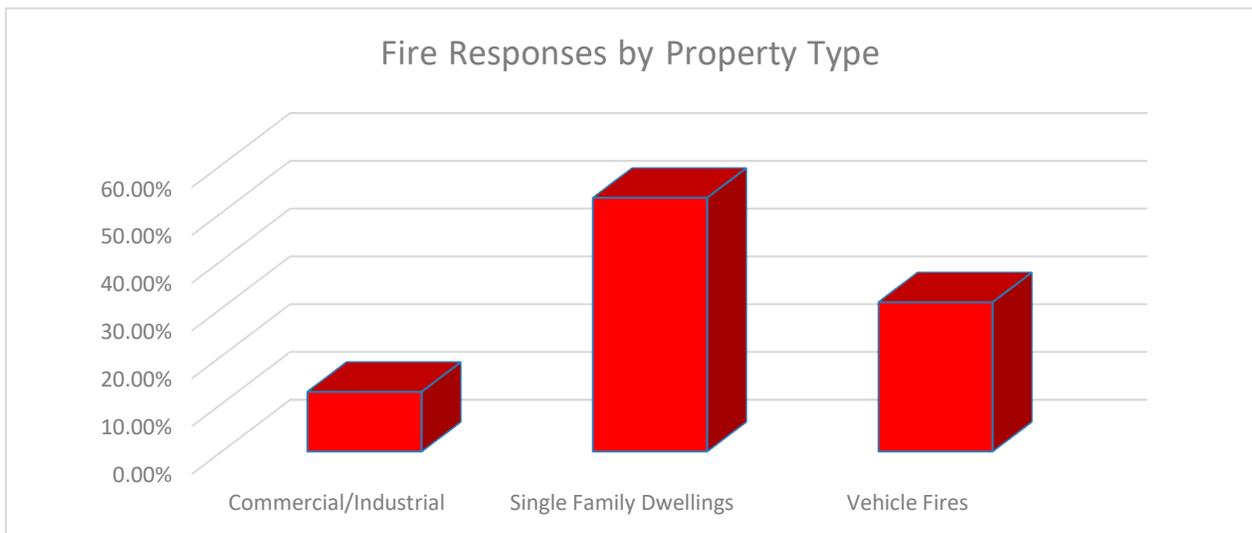


## Fire Responses

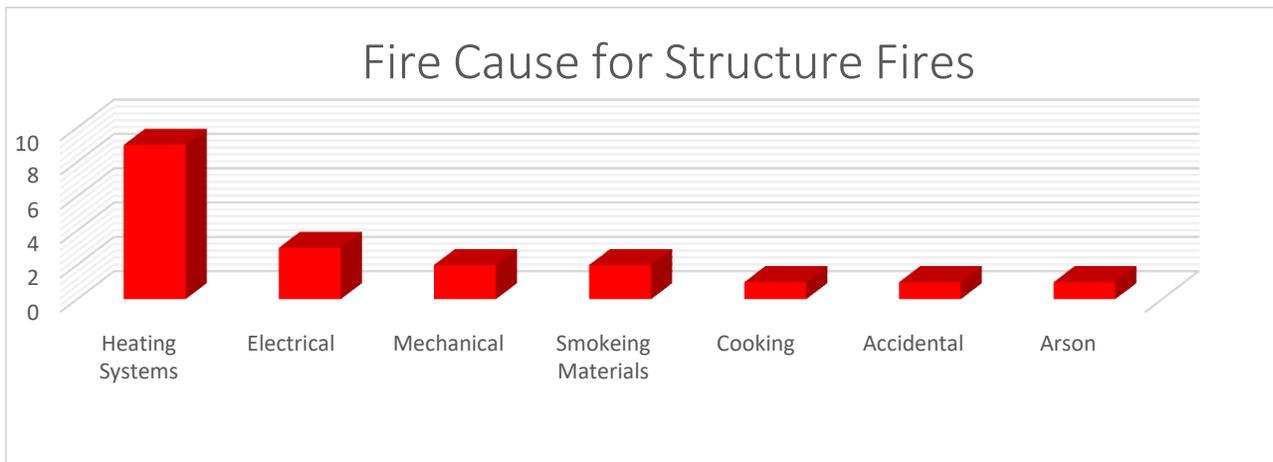
Fire responses to structures and vehicles accounted for 8 percent of the fire department's total emergency responses. Responses to alarm activations accounted for an additional 3 percent of the emergency responses. The total estimated property loss to fire for the Village of South River and the Township of Machar for the past 5 years was 391,100 dollars. South River Machar Fire Department had an average response time of 10 minutes and 27 seconds for fire responses from 2015 to 2019. This time is calculated from the time the call is received to the time the first fire apparatus arrives on scene.



Single family dwellings accounted for 53.1 percent of the fire department's fire responses while commercial and industrial properties accounted for 12.5 percent from 2015 to 2019.



The South River Machar Fire Department investigates all fires within the Village of South River and the Township of Machar and when required, requests the assistance of the OFMEM Fire Investigators. This process helps identify trends in fire safety issues. Heating systems, which include chimney fires and any other primary heat source for buildings, account for 9 percent of all structure fires for the past 5 years. Fires as a result of improperly handled smoking materials account for 14 % of all fire loss involving buildings.

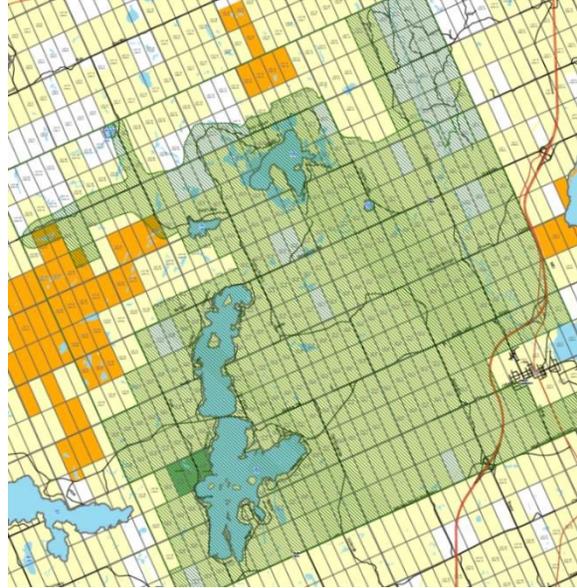


### **Alarm Activations**

South River Machar Fire Department responded to 13 Alarm Activations with an average response time of 8 minutes and 22 seconds. Currently there is not a service fee charged for false alarms in the Establishing Regulating By-Law for the fire department.

## **Forest Fire**

Forest fires accounted for 3 percent of the emergency responses for the past 5 years. Currently the South River Machar Fire Department is responsible for forest fire responses in the Township of Machar that are shaded green on the map. Ministry of Natural Resources and Forestry are responsible for forest fire responses in the remainder of the Township. The majority of the fires that the fire department has responded to in the past 5 years have been contained to 0.1 hectares in size.



## **Motor Vehicle Accident Responses**

Motor vehicle accidents are the second highest emergency response and account for 17 percent of the fire department's emergency responses from 2015 to 2019. The average response time for the fire department to motor vehicle accidents is 11 minutes and 21 seconds. There were 39 injuries of the 131 occupants involved in accidents the fire department responded to in the past 5 years. From the 39 injured, 10 occupants required extrication.



## **Medical First Response**

South River Machar Fire Department has a tiered response agreement with Parry Sound EMS where the fire department responds to the following medical emergencies in the Village of South River and the Township of Machar:

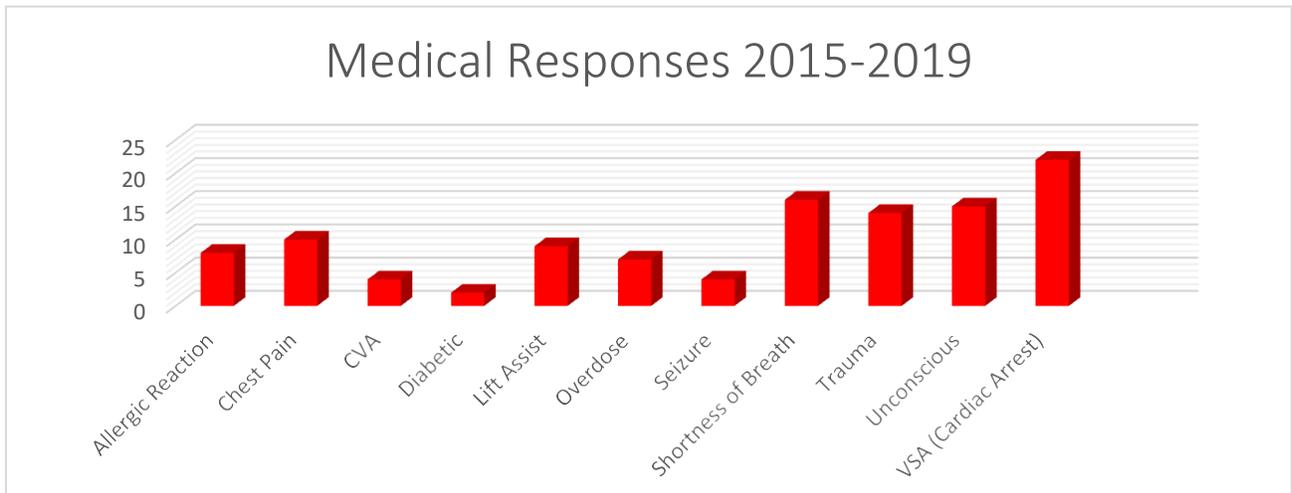
- All cardiac arrest (VSA)
- All unconscious patients

- All allergic reactions
- All industrial accidents
- All medical emergencies at South River Public School

The fire department will also respond to the following medical emergencies when there is a delay in a normal response from EMS.

- Shortness of breath
- CVA or TIA (Stroke)
- Active seizures
- Uncontrolled bleeds
- Allied agency request
- VSA's (Vital Signs Absent)

Medical emergencies represent 27 percent of the fire departments emergency responses which is significantly lower than most fire departments. The following table is an illustration of the medical emergencies the fire department responded to from 2015 to 2019.



The average response time for medical first response calls for 2015 to 2019 was 9 minutes and 23 seconds. The number of overdose responses is increasing which is not clearly shown in the above chart as several of the VSA responses were related to overdoses.

## **Rescue**

Although Rescue calls only account for 4 percent of the fire department's emergency responses, they account for a significant impact on the protection of life.

Remote rescue calls represent the majority of rescues the fire department is called to. From 2015 to 2019 the fire department completed 16

rescues. In addition to remote rescue the fire department has also responded to 3 water related rescue calls for service from 2015 to 2019.



## **Carbon Monoxide and Gas Emergencies**

South River Machar Fire Department responded to 25 Carbon Monoxide or Gas Emergencies from 2015 to 2019. For 24 percent of the responses there was either CO or Gas present when the fire department arrived on scene. In over half of the fire department's responses to CO or Gas emergencies there was an issue with the CO alarm.

## **Hydro Line Emergencies**

Hydro line emergencies represent approximately 7 percent of all emergency responses the fire department responded to from 2015 to 2019.

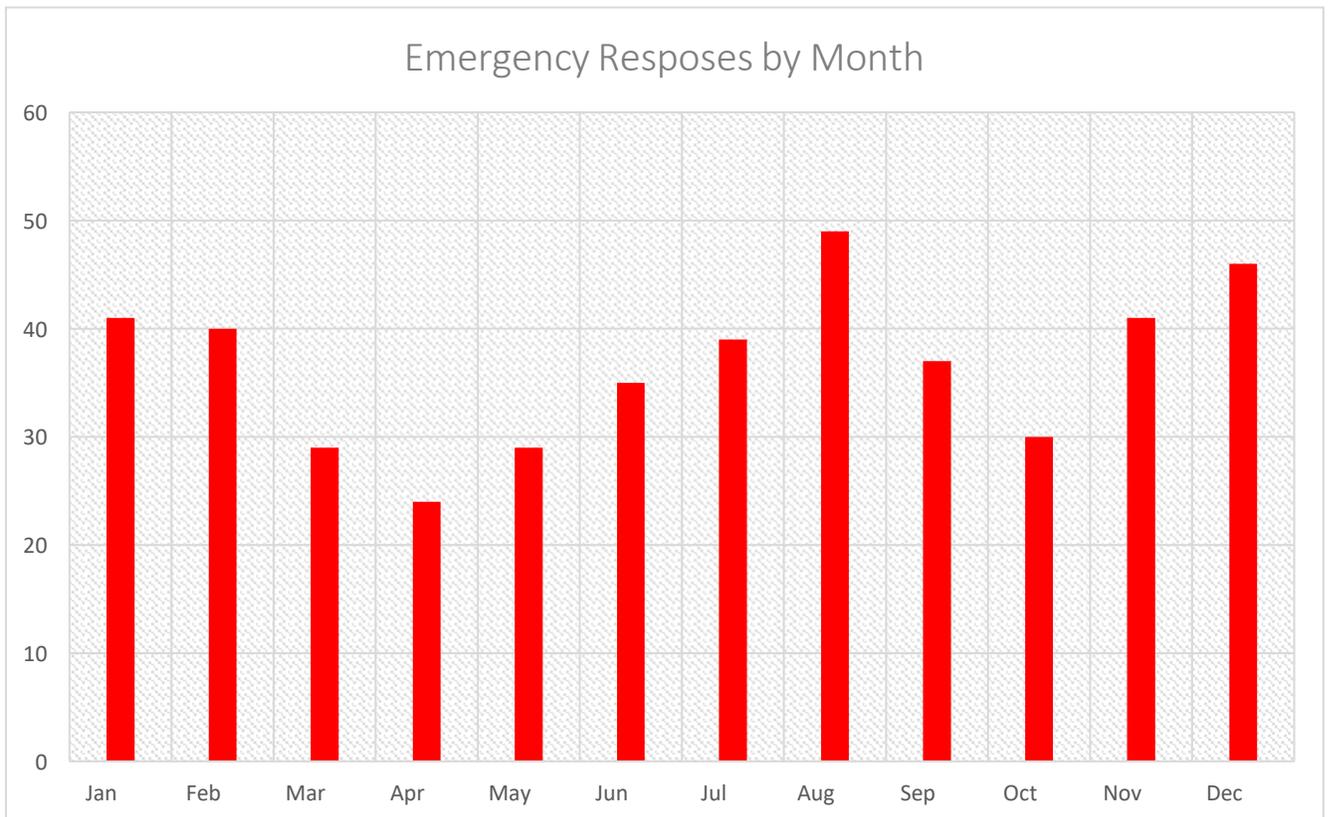


## **Other Emergencies**

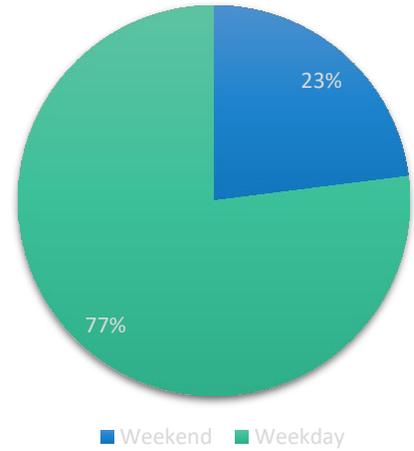
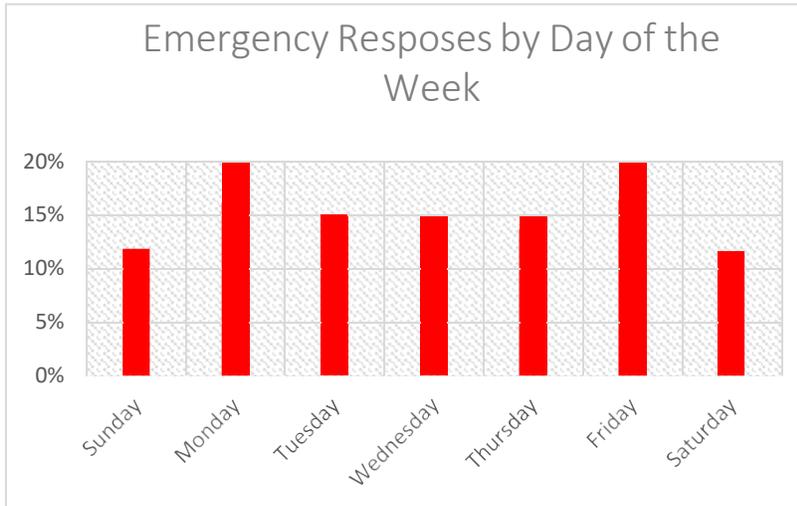
Other emergencies that are not outlined below include hazardous materials responses, storm related responses, missing persons and other perceived emergencies. This type of all hazard's responses accounted for 4.1 percent of the emergency responses for the five years included in this profile.

## **Emergency Responses by Time of Occurrence**

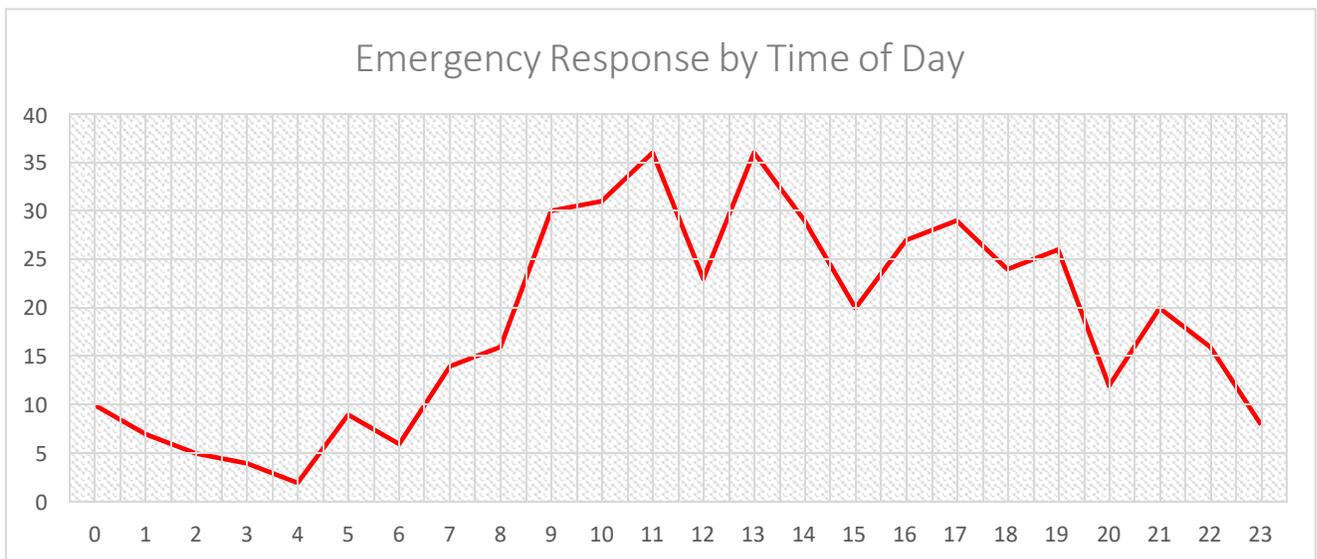
The following chart displays when the South River Machar Fire Department responded to emergencies over a 5-year period. The months of April and October have the fewest emergency responses by the fire department which is attributed to the change of seasons. August is typically the busiest month for emergency responses for the fire department.



The following 2 charts display emergency responses by day of week based on the last 5 years. As indicated on the pie chart the majority of emergency responses occur during the week with Monday and Friday having the highest number of emergency responses.



The following table illustrates emergency responses by time of day. Based on the average emergency responses for the past 5 years 56.3 percent of the emergency calls for service occur between the hours of 8 am to 4 pm with 11 am and 1 pm accounting for the highest calls for service and with 3 am and 4 am being the lowest. The hours from 5 pm to midnight account for 30.7 percent of the calls for service.



## **Key Findings**

- The current Establishing and Regulating By-Law for the fire department Appendix B “Core Services” adequately covers the calls for service the fire department responded to from 2014 to 2019.
- The current medical directives for the fire department cover 69 percent of the fire department's medical first response calls.
- All rescue related calls the fire department responded to for the time period of this report are included in the Appendix B Core Services.
- Weekday normal business hour staffing levels should remain a priority to ensure adequate staffing to emergency responses are maintained during the time frame with the highest number of calls for service.
- Although heating appliances make up the highest number of fire responses for the South River Machar Fire Department, provincial trends should also be monitored to help set fire safety priorities due to the relatively small data base for the Village and the Township.

# Section 8

## Public Safety Response Profile





# **South River Machar Fire Department**

## **Public Safety Response Profile**

This profile outlines the types of incidents responded to by all first response agencies and their response capabilities. These are public safety response agencies (such as fire, police, ambulance, rescue) that might be tasked to, or able to help in some way with, emergency response or with addressing the impact of an emergency.

This profile assists with an understanding of incident-related data. Data from these other public safety response entities helps in developing an understanding of the potential interdependencies of the fire service; and the mutual benefit of tiered or joint response in addressing risks to public safety. This description and analysis may help to identify opportunities to further explore the treatment of risk based on shared responsibilities.

## ***South River Machar Fire Department***

South River Machar Fire Department is responsible for fire protection services for the Village of South River and the Township of Machar. The Fire Department operates under an Establishing Regulating By-Law that sets the level of service provided by the fire department. The core services provided by the fire department include;



- Fire suppression services may be delivered in both an offensive and defensive mode and may include search and rescue operations, forcible entry, ventilation, protecting exposures, salvage and overhaul as appropriate.
- Specialty Rescue services include performing automobile and/or equipment extrication, ice water rescue (static water), low angle rope, remote rescue and hazardous materials response (operations level), in accordance with available resources.
- Emergency pre-hospital care responses and medical acts or other first aid/CPR services as per local Medical Directives and instituted as per the latest Tiered Response Agreement.

The fire department operates out of one fire station located at 148 Ottawa Avenue in the Village of South River. It utilizes 2 pumper apparatus, 1 tanker, 1 light rescue unit, 1 heavy rescue unit and 1 UTV. Staffing consists of 1 full time fire chief, 1 volunteer deputy fire chief, 1 part time fire prevention officer, 6 captains and 16 volunteer firefighters.

## ***Fire Department Automatic Aid***

South River Machar Fire Department has an automatic aid agreement with Sundridge Strong Fire Department and Magnetawan Fire Department. Sundridge Strong Fire Department is located at 146 Ontario Street (Hwy 124), 8.5 km from the South River Machar Fire Department. Under the current automatic aid agreement, the Sundridge Strong Fire Department will assist South River Machar Fire Department with 3 fire apparatus and up to 10 firefighters. The agreement covers all structure fires within each department's area of jurisdiction on a reciprocal basis. Magnetawan Fire Department is 35 km from the South River Machar Fire Department located at 81 Albert Street Magnetawan. South River

Machar Fire Department provides tanker support to Magnetawan Fire Department to structure fires along Highway 124 and in the Village. Magnetawan Fire Department provides reciprocal tanker support to non-hydrant protected areas in the Village of South River and the Township of Machar.

### ***Mutual Aid***

The fire department is a participant in the Mutual Aid Plan in the Nipissing East Parry Sound District. Mutual Aid is defined in the current Mutual Aid Plan as a program to;



- provide / receive assistance in the case of a major emergency/significant event in a municipality, non-municipal community or area; and
- provide a mechanism that can be used to activate responses to incidents that exceed the capability of the participant or non-municipal participant.

The Province of Ontario Mutual Aid Plan has many times demonstrated its value to communities. Large fires, hazardous material incidents, as well as wind and ice storms, are some examples of where emergency events have had the effect of overwhelming resources of fire departments, and where mutual aid was called upon to assist in mitigating the incident.

Although the fire department is part of the Nipissing East Parry Sound District resources can be requested or supplied to anywhere in the Province. Additional resources such as Heavy Urban Search and Recue (HUSAR) and Hazmat teams are available for significant events through the Mutual Aid Plan.

### ***Parry Sound EMS***

The Town of Parry Sound holds the license for the delivery of ambulance service for the District of Parry Sound. The Town contracts the delivery of ambulance services to the West Parry Sound Health Center which administers Parry Sound EMS. Parry Sound EMS has one base in South River located at 203 Highway 124. The South River base is staffed 24 hours a day 7 days a week with one ambulance crew.



There is an approved night landing helipad located at the base. Parry Sound EMS operates two other bases along the Highway 11 corridor;

one in Powassan and one in Burks Falls. The Powassan base is located at 14 King Street, 30 km North of South River. The Powassan base is also staffed 24 hours with one ambulance crew. The Burks Falls base is also staffed 24 hours with one crew and is located at 105 Main Street, 28 km South of South River. Parry Sound EMS is staffed with 70 primary care paramedics. Parry Sound EMS has two emergency support trailers; one is located on the west side of the district and one is stored inside the Powassan Fire Department Station 1 for the east side of the district.

### ***Ontario Provincial Police***

Almaguin Highlands Detachment of the OPP is located at 46 Highway 520 in Burks Falls. Almaguin Highlands Detachment is staffed 24 hours. The detachment operates a satellite office located in the basement of the Village of South River Municipal Office. Almaguin Highlands Detachment is staffed with 28 uniformed officers divided into 4 platoons.



### ***Ministry of Natural Resources and Forestry***

North Bay Fire Management Headquarters located at 40 Voodoo Crescent, North Bay, oversees forest fire operations for Parry Sound District. MNR is responsible for primary forest fire response to 3,968 hectares of the Township of Machar under a fire protection agreement. North Bay Fire Management typically staffs with 7 crews of 4 firefighters from early April to mid October. Air resources such as water bombers and helicopters are moved throughout the province as needed and may be staged in North Bay at times.



### ***9-1-1 Public Emergency Reporting Service***

OPP Communications is the Primary PSAP for the Village of South River and the Township of Machar. Currently the fire department is a secondary PSAP operating its own stand-alone dispatch for fire department emergency dispatching. North Bay Central Ambulance Communication Center located on Ferris Drive is responsible for ambulance dispatching for the South River area.

## **Key Findings**

- South River Machar Fire Department is the only emergency service under direct control of the Municipalities. Both OPP and Parry Sound EMS charge a levy to the municipalities but are not under direct contract with the municipalities.
- EMS staff one crew at the South River Station, when that crew is deployed to an emergency or standby to cover another area there is a delay in response to emergencies in the municipalities by approximately 20 minutes.
- The current automatic aid agreement makes it possible for the fire department to maintain its current level of fire suppression. In the event a significant event overwhelmed the capacity of the fire department, Mutual Aid support could be requested.
- Under the current agreement with the MNRF the South River Machar Fire Department is responsible for the majority of the forest fire suppression in the Township and in some cases has been deployed to assist MNRF crews outside of our municipal boundaries.
- Next generation enhanced 911 may pose some logistical challenges for the fire department's current dispatching system.



# Section 9

## Community Services Profile





# **South River Machar Fire Department**

## **Community Service Profile**

This profile describes the types of services provided by other entities in the community and those entities' service capabilities. The focus will be on how the community service groups can assist in emergency preparedness and support for the community. These community services also have the potential to reduce risks to public safety by providing a means of delivering public education and prevention programs.

## ***North Bay Parry Sound District Health Unit***

North Bay Parry Sound District Health Unit provides services to over 120,000 residents within an area consisting of most of Nipissing District and all of Parry Sound District. The health unit's catchment area includes 31 municipalities, four unorganized areas, and nine First Nation reserves.



The programs covered by the health unit include;

- Promote healthy lifestyles including nutrition, active living, reproductive, sexual and dental health, and child development
- Prevent tobacco use, substance and alcohol misuse and injuries. Prevent diseases through clinical services for immunization, dental, and sexual health
- Protect our communities from infectious diseases and environmental hazards in food, water, air, and soil
- Prepare for, respond to and support recovery from major emergencies

## ***Parry Sound Community Paramedicine***

Parry Sound EMS Community Paramedicine program is a unique branch of Paramedic Services that involves additional collaboration with community stakeholders (such as the hospitals, Family Health Teams and Nurse Practitioner-led clinics, community agencies, and district programs) to improve access to primary healthcare, reduce non-urgent 911 calls, and provide preventative healthcare and education to patients. Existing Primary Care Paramedics and specially-trained Community Paramedics participate in various aspects of this program.

## ***Religious Services***

Within the Village and the Township there are 6 active churches and 1 that is used seasonally. In 2020 the United Church located on Ottawa Avenue closed.

### ***South River Lions Club***

The first South Lions Club was formed in 1943 during the second world war. The club currently has approximately 30 members. South River Lions Club has and is supporting over the years hospitals, schools, youth sports, South River Machar Arena, South River Machar Fire Department, many youth programs and disasters (fire, tornadoes and hurricanes). This support is continuing currently in the community.



### ***South River Friendly Circle***

South River Friendly Circle is a senior's social group with approximately 60 members. The group offers a variety of activities such as line dancing, yoga, cards and quilting. They operate from



their building located at 10 Isabella Street in South River. Their building is a single-story wood frame building approximately 200m<sup>2</sup> in size with full basement. The building has a back up generator and full kitchen.

### ***Red Cross***

The Canadian Red Cross North Bay Branch is located in North Bay at 1275 Main Street West. Red Cross may provide emergency and disaster services in partnership with first responders, emergency managers, public officials, and in collaboration with other voluntary sector organizations. These services may include emergency lodging, reception and information, emergency food, emergency clothing, personal services and family reunification.



## *District of Parry Sound Social Services Administration Board*

The District of Parry Sound Social Services Administration Board is a corporation that was formed by the District Social Services Administration Boards Act in February 1999. The board is represented by Municipalities

and unincorporated areas within the geographic area of the District of Parry Sound through the appointment of 15 Board members. The board has an office with child care services in a 1200m<sup>2</sup> building located at 16 Toronto Street South River.



They offer a range of social programs regarding child services, housing, Ontario Works as well as women's shelters.

## *East and West Parry Sound Victim Services*

East and West Parry Sound Victim Services provide a 24/7, 365 days per year crisis line. Victims can contact this line directly if they feel they need immediate emotional support. This crisis line is also the best contact for referral services by Police, EMS, Fire, and any other social service agencies.



The West Parry Sound VCARS expanded its service delivery area in 2006 and became the District of Parry Sound Victim Crisis Assistance and Referral Service (referred to as East & West Parry Sound Victim Services). The organization now provides services to the entire District of Parry Sound with offices in Parry Sound and Burk's Falls.

## **Key Findings**

- There are very limited immediately available resources available to assist the fire department during emergencies.
- Often firefighters are tasked with assisting families after mitigating the emergency due to significant delays in getting support from outside agencies.
- Maintaining strong partnerships with local community groups will assist the fire department in delivering public safety messaging as well as accessing resources during emergency responses.



# Part 10

## Hazard Profile





# **South River Machar Fire Department**

## **Hazard Profile**

This profile describes the hazards in the community, including natural hazards and hazards caused by human and technological sources. Specifically, these are hazards to which South River Machar Fire Department may be expected to respond to. This helps set priorities for prevention, mitigation, preparedness and emergency response levels.

The risks were analyzed utilizing methodology from Emergency Measures Ontario Hazard Identification and Risk Assessment Program examining the frequency and consequences to determine the impacts of the risk. The information for identifying the risks was sourced from the previous profiles in this risk assessment.

## Structure Fires

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Structure Fire Hazard Score			132	Very High
Frequency	6	Certain	From 2015 to 2019 structure fires accounted for 8 % of the fire department's emergency responses	
Life Safety	3	High	Structure fires pose a significant risk to life if residents do not self-evacuate. Based on modern materials and light weight construction the time available for escaping from fire is rapidly reducing	
Evacuation	2	Moderate	Single family dwelling units represent the majority of the fire responses as well as the majority of the building stock. Typically, only 1 family is displaced. Fires in multi-residential units would have a higher impact	
Psychological Social	2	Moderate	Structure fires typically will only affect 1 family. The psychological impacts to the family would be significant but not wide spread throughout the community	
Property Damage	2	Moderate	Fires pose a significant risk to individual properties and immediate exposures, wide spread damage from a structure fire is unlikely	
Critical Infrastructure	2	Moderate	Fire at the water treatment plant could impact the delivery of potable water to approximately 500 homes in addition to impacting the availability of water for firefighting purposes. Fires at natural gas distribution facilities could have a significant impact to the area	
Environmental	1	Low	Structure fires may have some environmental risk but, in most cases, will be localized and reversible	
Economic	3	High	92% of the building stock is residential buildings, 4% of the building stock is commercial or industrial properties. Fire to a commercial or industrial property would have a significant economic impact	
Reputational	1	Low	Structure fires are likely to have limited short term and localized reputational or legal impacts	

Structure fires are the highest risk identified in the municipalities. The Fire Protection and Prevention Act establishes the minimum level of municipal responsibilities for fire protection services as follows;

**2 (1)** Every municipality shall,

**(a)** establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and

**(b)** provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

The Fire Protection and Prevention Act outlines the methods in which a municipality can provide the minimum level of service.



**2. (2)** In discharging its responsibilities under subsection (1), a municipality shall,

**(a)** appoint a community fire safety officer or a community fire safety team; or

**(b)** establish a fire department.

The minimum level of fire protection services a fire department can provide is outlined in the Act as well as:

**5. (1)** A fire department shall provide fire suppression services and may provide other fire protection services in a municipality, group of municipalities or in territory without municipal organization.

The above references from the Fire Protection and Prevention Act are the basis for the 3 lines of defense being; Public Education, Fire Safety Inspection and Fire Suppression.

### **Fire Prevention**

Fire Prevention is the first line of defense. Changing behaviours around fire safety and reducing the numbers of structure fires is in essence a method of helping a municipality avoid some of the risk to fire. Reducing the numbers of structure fires is an effective means of protecting the community and firefighters and helps

maintain the local economy. Fire Prevention is a legislated municipal responsibility.

Currently the fire prevention programs emphasize fire safety for children, youth and seniors. They are available to the community and those who are often the most vulnerable to the dangers of a fire.

- Fire Safety messaging through handouts and social media
- Education through school visits and presentations
- Smoke Alarm programs, inspect alarms on emergency calls and targeted home inspections
- Seasonal safety tips
- Fire station visits
- Special events

### **Fire Inspection**

Fire safety inspections help building owners identify and correct fire safety deficiencies and help reduce the likelihood of fire. Currently the Fire Department meets the minimum level of fire inspections by responding to complaints and requested inspections. Under the Ontario Fire Code building owners are responsible for compliance with the regulation. Enhancements to fire safety inspections can help reduce the likelihood of fires as well as assist the fire department preparing and planning for emergency responses. Fire safety inspections help reduce gaps in fire suppression especially to larger industrial, commercial and multi-residential properties.

### **Fire Suppression**

As outlined in the current Establishing and Regulating By-Law the South River Machar Fire Department provides both offensive interior firefighting and rescue operations and defensive exterior firefighting efforts based on fire conditions and resources available at the time.

## **Hazardous Materials Emergencies**

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

<b>Hazmat Hazard Score</b>			<b>108</b>	<b>High</b>
<b>Frequency</b>	<b>4</b>	<b>Probable</b>	<b>Most hazardous material emergency responses are a result of MVC's. Fuel leaks from commercial vehicles are the most frequent hazardous materials incidents</b>	
<b>Life Safety</b>	<b>3</b>	<b>High</b>	<b>Based on the amount of dangerous goods that pass through the area by rail and on our highways and the unknown of the exposures the life hazard is high</b>	
<b>Evacuation</b>	<b>3</b>	<b>High</b>	<b>With some of the known hazardous materials in the municipality as well as the unknown dangerous goods traveling through there could be a significant impact on the municipality in the event there was a leak or fire</b>	
<b>Psychological Social</b>	<b>3</b>	<b>High</b>	<b>Hazmat incidents may have significant impacts on large portions of the community. Due to the high life safety hazard and possible long-term implications these incidents can cause significant mental health concerns</b>	
<b>Property Damage</b>	<b>2</b>	<b>Moderate</b>	<b>In most cases hazardous material incidents severe property damage would be localized. The incident may negatively affect larger areas but the severe damage is typically localized</b>	
<b>Critical Infrastructure</b>	<b>2</b>	<b>Moderate</b>	<b>Hazmat incidents that affect the source water protection area could impact the municipal water treatment and distribution system for the Village</b>	
<b>Environmental</b>	<b>3</b>	<b>High</b>	<b>Based on known and unknown dangerous goods passing through the Municipalities, it is quite possible that there could be severe environmental impacts that could have significant long-term implications</b>	
<b>Economic</b>	<b>3</b>	<b>High</b>	<b>Ongoing long-term costs for mitigating hazardous materials incidents have a potential to negatively impact the municipalities' tourism economy as well as put strain on municipal budgets if cost recovery is not possible</b>	
<b>Reputational</b>	<b>2</b>	<b>Moderate</b>	<b>Hazardous material incidents pose significant impact to health and safety of residents and can have significant impact on property values as well. These impacts can expose the fire department and the municipality to ongoing litigation challenges</b>	

Hazardous materials emergencies represent the second highest risk in the municipalities. The majority of the hazardous materials incidents that the fire department responds to are a result of transportation of dangerous goods and involve motor vehicle collisions. The NFPA references four levels of hazardous materials service being; awareness, operations, operations mission specific and technician level. They are defined as follows:



**Awareness Level Personnel** who in, the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction and who are expected to recognize the presence of the hazardous materials/weapon of mass destruction, protect themselves, call for trained personnel and secure the scene.

**Operations Level Personnel** respond to hazardous materials/weapons of mass destruction incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment or property from the effects of the release.

**Operations Mission Specific Personnel** are assigned by the authority having jurisdiction (AHJ) to perform additional tasks to support the response, expected tasks include; Personal protective equipment, mass decontamination, technical decontamination, evidence protection and sampling, product control, detection monitoring, victim rescue and recovery and illicit laboratory incidents.

**Technician Level Personnel** are those personnel who respond to hazardous materials/weapons of mass destruction incidents using a risk-based response process by which they analyse a problem involving hazardous materials/weapons of mass destruction plan a response, evaluate progress of the planned response and assist in terminating the incident.

The fire department currently provides operations level hazardous materials response and is capable of dealing with small leaks of petroleum products. With a limited rescue component involving other materials where structural firefighting gear with SCBA offers adequate protection for limited exposure.

## Motor Vehicle Collison's

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

MVC Hazard Score			108	High
Frequency	6	Certain	Based on the emergency responses from 2015 to 2019 the Fire Department responded to 69 MVC's involving 84 vehicles	
Life Safety	3	High	From 2015 to 2019 the Fire Department assisted 131 persons involved in MVC's, 39 suffered injury and the Fire Department had to extricate 10 occupants	
Evacuation	1	Low	Motor vehicle collisions do not pose any significant evacuation concerns unless they involve hazardous materials	
Psychological Social	2	Moderate	Motor vehicle collisions typically will only affect 1 to two family units. The psychological impacts to the families would be significant to the individual family units but not wide spread throughout the community	
Property Damage	1	Low	Motor vehicle collisions pose little risk to property damage beyond the vehicles involved in the collision	
Critical Infrastructure	1	Low	The most significant critical infrastructure at risk from motor vehicle collisions would be hydro transmission lines and telecommunication lines	
Environmental	1	Low	Due to the relatively small amounts of hazardous materials in passenger vehicles the environmental risks from motor vehicle collisions are minimal	
Economic	1	Low	MVC's do not pose significant economic risks to the municipalities	
Reputational	2	Moderate	MVC's are likely to have limited short term and localized reputational or legal impacts	

The majority of the motor vehicle collisions the Fire Department responds to are on Highway 11 and Highway 124. Single vehicle collisions and animal collisions are the most common types of accidents the fire department responds to. The fire department responds to all motor vehicle accidents that are reported to have injuries or the injuries are unknown.



Response to motor vehicle collisions is a shared responsibility with EMS and OPP.

The fire department is currently trained and equipped to perform advanced auto extrication techniques utilizing battery powered hydraulic extrication tools. The fire department is also capable of some lifting with airbags. The department responds to motor vehicle collisions with 3 apparatus, Rescue 2, Pump 4 followed by Tank 1. Rescue 2 crews' primary role is vehicle stabilization, extrication and patient care. Pump 4 crew is responsible for fire suppression, initial traffic management and assist with extrication as required. Tank 1 crew is responsible for traffic management and is used as a blocker vehicle.

The fire department is also responsible for traffic management while firefighters are working and also assist OPP with traffic management while they investigate the collision and the vehicle is being recovered. Section 21



Guidance Note 6-10, traffic control requires that blocker vehicles be used when the posted speed limit is greater than 80 km/h. Additionally, it is required that there be one clear lane around the accident as a safe working area. This results in single lane closures being common at motor vehicle accidents on Hwy 11.

## Remote Rescue

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Remote Rescue			78	Moderate
Frequency	6	Certain	Based on the emergency responses from 2015 to 2019, the fire department responded to 15 Remote Rescue calls	
Life Safety	3	High	Approximately 50 percent of the Remote Rescue calls the fire department responded to from 2015 to 2019 involved either serious injuries or fatalities	
Evacuation	0	None	Emergencies requiring Remote Rescue are not likely to cause for any evacuation of residents	
Psychological Social	2	Moderate	The Psychological impacts from Remote Rescue calls is typically limited to the individuals involved or exposed to the event. The stresses on individuals are often increased due to increased time required for rescues and isolated nature of the emergencies	
Property Damage	1	Low	Remote emergencies involving off road vehicles can cause moderate property damage	
Critical Infrastructure	0	None	Remote emergencies do not pose a threat to any critical infrastructure	
Environmental	0	None	Remote emergencies do not pose any significant environmental risks	
Economic	0	None	Remote emergencies do not pose any significant economic risks	
Reputational	1	Low	Remote Rescues are not likely to cause significant legal implications	

Remote rescue incidents include rescues in a wilderness setting as defined in NFPA 1006. (a setting in which the delivery of services including search, rescue, and patient care by



response personnel is adversely affected by logistical complications, such as an environment that is physically stressful or hazardous to the patient, response personnel, or both; remoteness of the patient's location, such that it causes a delay in the delivery of care to the patient; anywhere the local infrastructure has been compromised enough to experience wilderness-type conditions, such as lack of adequate medical supplies, equipment, or transportation; remoteness from public infrastructure support services; poor to no medical services or potable water; compromised public safety buildings, public utilities or communications systems; city, county, state, provincial, tribal, or national recreational areas or parks with mountains, trails; areas they define as wilderness.)

Some of the incidents the fire department has responded to include snow machine accidents, ATV accidents, hiking injuries and medical emergencies at remote locations. Currently the fire department operates at an operations level and limited technician level for wilderness rescues in accordance with NFPA 1670. The fire department provides remote rescue service in all seasons utilizing a UTV with medical transport box. The unit is equipped with tracks for winter operations. To facilitate effective rescues crews deployed to complete rescues are equipped to operate for 8 hours in the field unsupported.

The fire department completed 12 rescues from the 15 calls for service from 2015 to 2019.

## Medical Emergencies

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Medical Emergencies			66	Moderate
Frequency	6	Certain	Medical First Response calls for service accounted for approximately 27% of the emergency responses the Fire Department responded to from 2015-2019	
Life Safety	3	High	Based on the current tiered response Agreement the Fire Department only responds to high priority life threatening medical emergencies. Approximately 20% of the First response Calls were for Vital Signs Absent patients	
Evacuation	0	None	Medical emergencies are not likely to result in any community evacuations	
Psychological Social	1	Low	The psychological impacts from medical calls are typically limited to the patient and the patient's family	
Property Damage	0	None	Medical emergencies do not pose a significant threat to property damage	
Critical Infrastructure	0	None	Medical emergencies do not pose a significant threat to any critical infrastructure	
Environmental	0	None	Medical emergencies do not pose any significant environmental risks	
Economic	0	None	Medical emergencies do not pose any significant economic risks	
Reputational	1	Low	Medical emergencies are not likely to cause significant legal implications	

The fire Department responds to all of the following medical emergencies within the Village and the Township;

- Real or suspected cardiac arrest, where the patient would benefit from early defibrillation provided by the Fire Department.
- All unconscious patients
- All possible allergic reaction calls
- All motor vehicle collisions including all-terrain vehicles and snow-machines.
- All industrial accidents including farm accidents.
- All medical emergencies at the South River Public School, located at 137 Ottawa Avenue, South River Ontario.



Additionally, the Fire Department responds to the following calls when there is a delay in normal response from EMS;

- Shortness of breath
- Possible CVA or TIA calls
- Active seizures
- Uncontrolled bleeding
- Allied Agency request

The fire department is trained and equipped on the following skills and operate under Medical Directives of the department's base hospital physician to deliver the following medical interventions:

- Defibrillation
- Oxygen Administration
- CPR
- Airway Management
- Epinephrine Administration
- Narcan Administration
- Bleeding Control
- Patient Assessment
- Cardiac Monitoring
- ASA Administration

## Pandemic

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Pandemic			72	Moderate
Frequency	4	Probable	Based on current trends including Covid-19, SARS, H1N1 it is Probable to expect other pandemics to occur in the municipalities	
Life Safety	3	High	Life safety is dependent on the illness that causes the Pandemic, for example had Ebola made it to Ontario there would have been a significant health risk to the community and the firefighters	
Evacuation	2	Moderate	Based on protocols established to deal with Covid-19 mitigation strategies to deal with future Pandemics are likely to include some form of lockdown of the general public as well as quarantining persons that are ill	
Psychological Social	3	High	Mental health issues increased significantly during the lockdowns during the Covid-19 Pandemic. In the event the Pandemic involves an illness with a higher mortality rate the psychological affects would be significantly higher	
Property Damage	0	None	Pandemics are not likely to directly cause any significant property damage	
Critical Infrastructure	1	Low	Although Pandemics will not directly affect critical infrastructure they can and likely will affect staff required to operate and maintain critical infrastructure	
Environmental	0	None	Pandemics do not pose any significant environmental risks	
Economic	2	Moderate	The economic impacts from a Pandemic are directly affected by duration and severity of the Pandemic	
Reputational	1	Low	Pandemics are not likely to cause significant legal implications for the municipalities	

The fire department does not provide primary response to pandemics. Public Health and EMS are the lead agencies on pandemic responses. The fire department provides a support role to both agencies in the event that either agency becomes overwhelmed.

During the Covid-19 Pandemic the Fire Department continued to provide medical first response coverage. In the event that the Covid-19 assessment center was opened by the Health Unit firefighters would have been assigned to assist in the operation of the center. The fire department also provided assistance to local businesses to meet public health requirements.

## Wildland Fires

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Wildland Fires			66	Moderate
Frequency	6	Certain	The Fire Department responded to 14 wildland fires from 2015 to 2019	
Life Safety	1	Low	Based on the forest type and access to forested areas most wildland fires are detected early and remain relatively small in size. This reduces the speed in which fires will travel reducing the life safety risk	
Evacuation	1	Low	The majority of the wildland fires the fire department has responded to are .1 hectares in size. Current suppression resources are adequate for containing most wildland fires in the municipalities	
Psychological Social	1	Low	Most psychological impacts from wildland fires are a result of significant project fires in Northern Ontario Boreal Forests	
Property Damage	2	Moderate	Although most wildland fires in the municipalities are small, they still pose a significant risk to localized severe property damage	
Critical Infrastructure	1	Low	The most significant critical infrastructure at risk from wildland fires is hydro transmission lines and telecommunication lines	
Environmental	1	Low	Wildland fires can alter the aesthetics of the landscape but can actually benefit certain forested area and assist in forest regeneration	
Economic	1	Low	As most wildland fires in our area are small in size, they are not likely to have any significant short- term or long-term economic impacts on the community	
Reputational	1	Low	Based on current mitigation strategies and local conditions wildland fires are not likely to cause any significant legal implications for the municipalities	

The fire department currently is responsible for forest fire protection for the majority of the Township of Machar. By utilizing the remote rescue vehicle to assist the department in accessing remote areas of the Township the amount the department pays the MNRF has reduced by over 50 percent.



Currently the fire department is equipped with 2 Mark 3 forestry pumps and 1 smaller Mercedes Wick 100 forestry pump. The fire department has 460 meters (1,500 feet) of 38 mm forestry hose.

The majority of wildfires the fire department responds to are relatively accessible and often suppressed utilizing structural firefighting equipment and apparatus. Due to early detection and rapid response most, fires are extinguished quickly and do not grow beyond 0.1 hectares in size.

There is an open-air burning By-law in place that regulates all open air burning with a permit system for brush burning. Forest fire hazard ratings are set by the fire department utilizing weather and forest conditions obtained from the MNRF from a weather monitoring station near Eagle Lake.

## CO Emergencies

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

CO Emergencies			66	Moderate
Frequency	6	Certain	Carbon Monoxide calls for service accounted for approximately 6 percent of the emergency calls for service from 2015-2019. Some CO calls for service are handled through fire prevention during normal business hours and not included in the 6% emergency calls	
Life Safety	3	High	CO is a deadly asphyxiant that has no odour or colour. Without adequate detection systems in place CO can lead to serious illness or death	
Evacuation	1	Low	CO emergencies typically only affect 1 building and is not likely to create larger evacuation risks for the community	
Psychological Social	1	High	As CO incidents typically only affect single building, the psychological impacts are not typically wide spread	
Property Damage	0	None	CO emergencies do not cause significant property damage	
Critical Infrastructure	0	None	CO emergencies do not pose any significant risk to critical infrastructure	
Environmental	0	None	CO emergencies do not pose any significant environmental risks	
Economic	0	Moderate	CO emergencies do not pose any significant economic risks	
Reputational	0	Low	CO emergencies do not pose any significant reputational risks	

In approximately 46 percent of the fire departments emergency calls from 2015 to 2019 for Carbon Monoxide (CO) emergencies there were hazardous levels of CO present. The remainder of the calls involved faulty detectors or battery issues.

The most common sources for the CO were heating systems and generators installed too close to buildings. Emergency calls for CO alarms increase during power outages which is attributed to auxiliary heating appliances, improper generator uses and faulty backup batteries for the alarms themselves.

Firefighters are also exposed to dangerous levels of CO and Hydrogen Cyanide during overhaul and fire investigations at structure fires. These deadly gases are referred to as the deadly twins. Hydrogen Cyanide is carcinogenic and is a major contributor to firefighter cancer rates being 3 times higher than that of the public. Increased CO levels in the blood puts firefighters at an increased risk of heart attack which is compounded by the physical demands of structural firefighting.



## Windstorms

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

<b>Windstorms/Microburst/Tornados</b>			<b>72</b>	<b>Moderate</b>
<b>Frequency</b>	<b>5</b>	<b>Probable</b>	<b>For this hazard only storms that result in the fire department responding to emergencies related to the storm were considered</b>	
<b>Life Safety</b>	<b>1</b>	<b>Low</b>	<b>Most risks from microburst occur during clean up or CO or electrical issues after the storm. Higher life hazards would be applied if more serious tornados were more frequent in our area</b>	
<b>Evacuation</b>	<b>2</b>	<b>Moderate</b>	<b>In the event that multiple homes are structurally affected it could pose a significant evacuation challenge for the municipalities</b>	
<b>Psychological Social</b>	<b>2</b>	<b>Moderate</b>	<b>Storms can have a significant psychological impact on persons affected. More severe wind storms such as tornados are likely to have longer lasting psychological impacts on residents</b>	
<b>Property Damage</b>	<b>2</b>	<b>Moderate</b>	<b>Property damage from windstorms is dependent on the severity of the storm. Based on past history more powerful tornados are not as common in our area</b>	
<b>Critical Infrastructure</b>	<b>3</b>	<b>High</b>	<b>Power transmission lines are susceptible to wind storms and serious storms could lead to extended power outages</b>	
<b>Environmental</b>	<b>0</b>	<b>None</b>	<b>Windstorms pose very little environmental concerns along the South River</b>	
<b>Economic</b>	<b>1</b>	<b>Low</b>	<b>Windstorms can impact municipal expenses especially during the recovery phase. Based on past event history these impacts have been minimal</b>	
<b>Reputational</b>	<b>1</b>	<b>Low</b>	<b>Windstorms are not likely to cause any significant legal implications for the municipalities</b>	

The climate change report released by the government of Canada confirms that environmental changes are having significant impacts - heavy rainstorms are triggering catastrophic flooding, summer heatwaves are becoming longer and hotter, and extreme weather events are occurring more frequently. Severe wind events such as Microbursts are occurring more frequently in our area. Often, they are accompanied by significant rainfall and thunderstorms which add to the damage.

Currently the fire department does not provide Urban Search and Rescue. During windstorms the fire department responds to hydro related emergencies, CO alarms, medical first response calls and in some cases assist in accessing patients. The fire department can also be utilized to help clear fallen trees from roadways to assist EMS and OPP in accessing properties when required.



## Water Rescue

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

<b>Water/ Ice Water Rescue</b>			<b>60</b>	<b>Low</b>
<b>Frequency</b>	<b>5</b>	<b>Likely</b>	<b>From 2015 to 2019 the fire department responded to 3 Water Rescue/Ice Water Rescue calls for service and completed 4 rescues</b>	
<b>Life Safety</b>	<b>3</b>	<b>High</b>	<b>Approximately 100 people drown in Ontario each year. Completing successful rescues is extremely challenging based on timelines to complete rescues</b>	
<b>Evacuation</b>	<b>0</b>	<b>None</b>	<b>Water Rescue emergencies are not likely to cause for any evacuation of residents</b>	
<b>Psychological Social</b>	<b>2</b>	<b>Moderate</b>	<b>The psychological impacts from Water Rescue calls is typically limited to the individuals involved or exposed to the event. The stresses on individuals are often increased due to increased time required for rescues and isolated nature of the emergencies</b>	
<b>Property Damage</b>	<b>0</b>	<b>None</b>	<b>Water Rescue emergencies do not pose a risk to any property damage</b>	
<b>Critical Infrastructure</b>	<b>0</b>	<b>None</b>	<b>Water Rescue emergencies do not pose a threat to any critical infrastructure</b>	
<b>Environmental</b>	<b>0</b>	<b>None</b>	<b>Water Rescue emergencies do not pose any significant environmental risks</b>	
<b>Economic</b>	<b>0</b>	<b>None</b>	<b>Water Rescue emergencies do not pose any significant economic risks</b>	
<b>Reputational</b>	<b>1</b>	<b>Low</b>	<b>Water Rescue emergencies are not likely to cause significant legal implications</b>	

Under the current Establishing and Regulating By-Law the fire department provides water and ice water rescue on static water only. The department is trained and equipped for water entry ice water rescue and will soon be capable of vessel-based rescue as well. Ice water rescue training also supports the fire department's remote rescue training to better protect the firefighters during complex remote rescue evolutions.



Ice water rescue skills have also been incorporated in several motor vehicle collisions over the years. In the incident pictured here, firefighters had to complete auto extrication on a partially submerged vehicle and also search the area for possible occupants. The addition of the vessel-based component will greatly assist the fire department's efficiency in more complex water and ice water rescues.

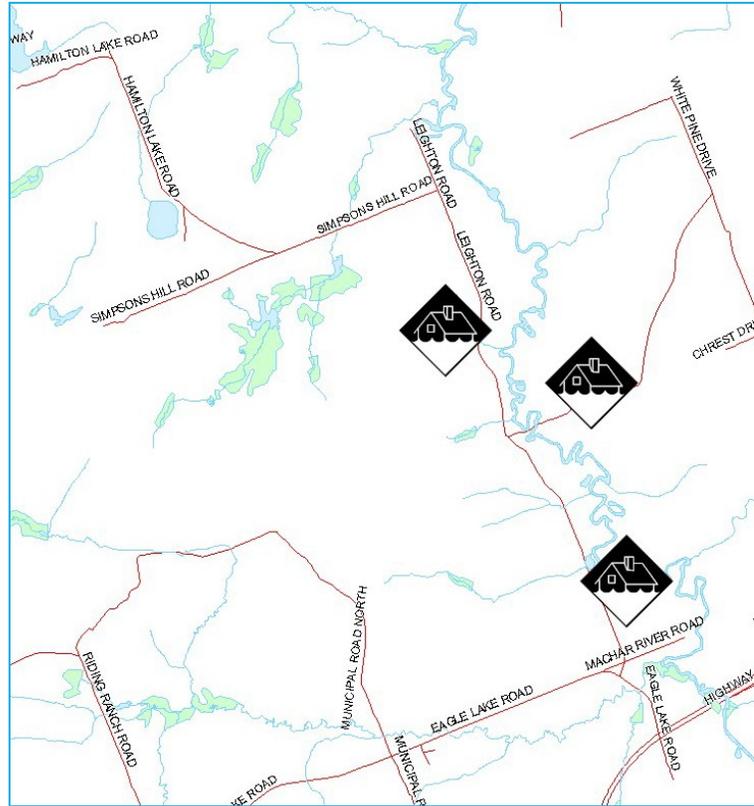


## Flooding

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Flooding			56	Low
Frequency	4	Probable	Freshet flooding can affect Leighton Road area isolating approximately 70 residents	
Life Safety	1	Low	Flooding primarily affects resident's access to medical treatment to properties accessed from Leighton Road	
Evacuation	2	Moderate	The impact from flooding in the Leighton Road area primarily affects resident's ability to access their properties by road, many are able to shelter in place as their homes are not compromised	
Psychological Social	1	Low	As flooding primarily only affects the Leighton Road area the psychological impacts are not wide spread throughout the community	
Property Damage	2	Moderate	Property damage to flooding is limited to the Leighton Road area. Due to the frequency that flooding occurs many homes are resilient to typical freshet flooding	
Critical Infrastructure	2	Low	The low lift pumping station for the Village's Municipal Water system could potentially be affected by severe freshet flooding or Craig Lake dam failure	
Environmental	2	Low	Flooding poses very little environmental concerns along the South River	
Economic	1	Low	Flooding does not pose any significant economic impacts to the municipalities	
Reputational	1	Low	Flooding does not cause any significant legal implications for the Municipalities	

The adjacent map indicates areas susceptible to freshet flooding in the Leighton Road area. Thunderbridge Road is most susceptible to flooding but it does not significantly impact residents or the delivery of emergency services. Leighton Road is most prone to flooding north of Machar River Road and when flooded it isolates approximately 70 residents. During flooding the fire department can not access affected properties sufficiently to be able to deliver interior structural firefighting operations. Flooding to this area typically occurs during spring freshet. The fire department is able to access the area utilizing its remote rescue vehicle by a trail system off Hamilton Lake Road.



Areas closer to the South River would be classified as swift water with areas further away being treed creating significant hazards for rescue operations along the river.



The highest risk to any critical infrastructure from flooding would be the low lift pumping station that pumps water from the South River to the water treatment plant. The pumping station has not been impacted by previous freshet flooding but would likely be impacted by dam failure at Craig Lake.

The fire department's primary role during flooding issues affecting Leighton Road is to support EMS and Police in accessing properties when required. In the event that the area required to be evacuated, the fire department would be the lead agency for the evacuation.

## High Angle Rescue

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

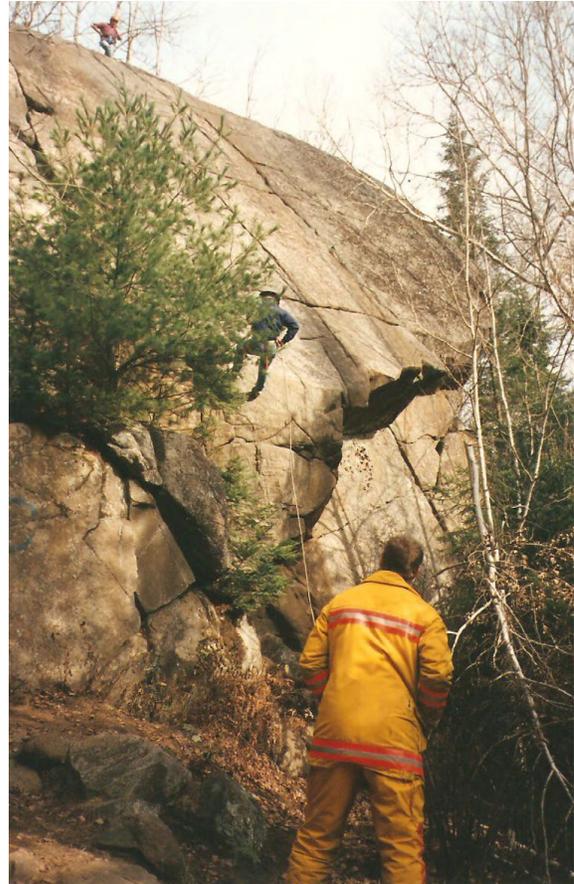
High Angle Rescue			55	Low
Frequency	5	Likely	High and Low angle rescue calls that the fire department has been called to assist for include construction injuries, hunters injured in tree stands and some motor vehicle accidents	
Life Safety	3	High	The life hazard to high and low angle rescue calls for service is high as typically there is significant underlying medical emergency that is contributing to the need for the rescue	
Evacuation	0	None	High and Low angle emergencies are not likely to cause for any evacuation of residents	
Psychological Social	1	Low	The psychological impacts from High and Low angle rescue emergencies are typically limited to the individuals involved or exposed to the event	
Property Damage	0	None	High and Low angle rescue emergencies do not pose a risk to any property damage	
Critical Infrastructure	0	None	High and Low angle rescue emergencies do not pose a threat to any critical infrastructure	
Environmental	0	None	High and Low angle rescue emergencies do not pose any significant environmental risks	
Economic	0	None	High and Low angle rescue emergencies do not pose any significant economic risks	
Reputational	1	Low	High and Low angle rescue emergencies are not likely to cause significant legal implications	

NFPA 1670 defines high and low angle rescue as;

High Angle, refers to an environment in which the load is predominantly supported by the rope rescue system.

Low Angle, refers to an environment in which the load is predominantly supported by itself and not the rope rescue system (e.g., flat land or mild sloping surface).

Currently the fire department only provides low angle rescue and is not trained or equipped for high angle rescues. The most common calls involving low angle rescue occur on motor vehicle accidents and remote rescues where patients are located down steep embankments. Other low angle emergencies often include ladder rescues to access patients on roofs.



## Winter Storms

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Winter Storms			40	Low
Frequency	4	Probable	Based on current weather trends our area could expect to see a significant severe winter storm every 20 years	
Life Safety	1	Low	Most of the life hazards related to winter storms are attributed to delayed access to emergency services or improper use of portable heaters and generators during extended power outages	
Evacuation	2	Moderate	In the event a winter storm caused prolonged power outages could create a significant evacuation challenge for the municipalities	
Psychological Social	1	Low	Winter storms are not likely to cause significant long term psychological impacts on the community	
Property Damage	1	Low	Winter storms could contribute to some minor property damage from falling trees and in some cases structural failure in buildings	
Critical Infrastructure	2	Moderate	Power transmission lines are susceptible to wind storms and severe storms could lead to extended power outages	
Environmental	0	None	Winter storms pose very little environmental concerns	
Economic	1	Low	Winter storms can impact municipal expenses especially during the recovery phase. Based on past event history these impacts have been minimal	
Reputational	0	None	Winter storms are not likely to cause any significant legal implications for the Municipalities	

Winter storms can greatly impact the fire department's response to emergencies. They negatively impact the time it takes for firefighters to respond to the fire hall for fire apparatus to respond to the scene. Both extreme cold events and snow events impact the firefighter's response.

Winter storms put increase strain on fire suppression equipment as well as the firefighters. In addition to having equipment freezing up it also takes significantly longer to set up rural static water supplies for fire suppression.

Severe winter weather also puts firefighters at increased risk at motor vehicle collisions as reduced visibility and traction increase the risk of secondary collisions.

During severe winter storms the fire department also responds to more medical emergencies to help assist EMS in accessing patients as well as extricating them from their homes.



Some measures the fire department has put into place to assist in responding to emergencies during the winter include one 4-wheel drive pumper, one 4-wheel drive light rescue with studded snow tires. The fire department also has tire chains for the remaining fire apparatus. In extreme events the remote rescue vehicle could be utilized to extricate residents from isolated areas.

## Swiftwater Rescue

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

Swiftwater Rescue			33	Low
Frequency	3	Unlikely	During freshet there is a significantly higher chance for swift water emergencies	
Life Safety	3	High	Successful rescues in swiftwater are rare. In our area the amount of swift water increases during freshet where there is also a reduced chance of survival for the victim due to the effects of hypothermia.	
Evacuation	0	None	Swiftwater emergencies do not pose any evacuation risks for the Municipalities	
Psychological Social	1	Low	The psychological impacts from Swiftwater emergencies are typically limited to the individuals involved or exposed to the event	
Property Damage	0	None	Swiftwater emergencies do not pose any property damage risks for the Municipalities	
Critical Infrastructure	0	None	Swiftwater emergencies do not pose a threat to any critical infrastructure	
Environmental	0	None	Swiftwater emergencies do not pose any significant environmental risks	
Economic	0	None	Swiftwater emergencies do not pose any significant economic risks	
Reputational	1	Low	Swiftwater emergencies are not likely to cause significant legal implications	

Swift water is defined as water moving at a rate greater than one knot (1.85 km/hr). Presently the fire department does not provide swiftwater rescue service as it is not listed as a core service in the establishing and regulating by-law.

During the summer and winter months the amount of swiftwater in our area is minimal.

During freshet many area waterways become swiftwater hazards. For example, the water under the Chemical Bridge during normal summer time flows is not considered to be swiftwater. However, during freshet pictured here the velocity of the water



surpasses 1 knot. The risks increase greatly when the area around the bridge is ice covered as it can easily trap persons under the ice.

## Confined Space/Trench Rescue

The following table is expanded from the Hazard Assessment Tool from Appendix "B".

<b>Confined Space / Trench Rescue</b>			<b>22</b>	<b>Very Low</b>
<b>Frequency</b>	<b>2</b>	<b>Unlikely</b>	<b>The South River Machar Fire Department has not responded to any confined space or trench rescue calls in the past 40 years</b>	
<b>Life Safety</b>	<b>3</b>	<b>High</b>	<b>In the event of a confined space or trench rescue the risk to life is high, currently there are no local fire departments that have confined space rescue capability</b>	
<b>Evacuation</b>	<b>0</b>	<b>None</b>	<b>Confined Space emergencies do not pose any evacuation risks for the Municipalities</b>	
<b>Psychological Social</b>	<b>2</b>	<b>Low</b>	<b>The psychological impacts from Confined Space emergencies are typically limited to the individuals involved or exposed to the event</b>	
<b>Property Damage</b>	<b>0</b>	<b>None</b>	<b>Confined Space emergencies do not pose any property damage risks for the Municipalities</b>	
<b>Critical Infrastructure</b>	<b>0</b>	<b>None</b>	<b>Confined Space emergencies do not pose a threat to any critical infrastructure</b>	
<b>Environmental</b>	<b>0</b>	<b>None</b>	<b>Confined Space emergencies do not pose any significant environmental risks</b>	
<b>Economic</b>	<b>0</b>	<b>None</b>	<b>Confined Space emergencies do not pose any significant economic risks</b>	
<b>Reputational</b>	<b>1</b>	<b>Low</b>	<b>Confined Space emergencies are not likely to cause significant legal implications</b>	

Confined space is defined as a space that is large enough and so configured that a person can enter and perform assigned work, that has limited or restricted means for entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, and pits), and that is not designed for continuous human occupancy.

Confined space incidents pose a high life safety hazard but due to the low frequency of confined space emergencies in our area the overall risk is very low.

Currently the fire department is not trained or equipped for confined space or trench rescues operations.



## **Key Findings**

- The current Establishing and Regulating By-Law for the fire department Appendix B “Core Services” adequately addresses all risks identified that are rated from Moderate to Very High.
- With the exceptions of High Angle Rescue, Swiftwater Rescue and Confined Space Rescue all risks with a High Life Safety Risk are covered in the fire department's core services.
- Structure fires pose the highest overall risk to the municipalities; currently the fire department suppression capacity adequately addresses fires in single family dwellings. Larger commercial, industrial and multi-residential properties could be addressed with enhanced fire safety inspection program to help reduce the strain those buildings would pose on current fire suppression levels.
- Consideration should be given to expanding the capacity of the fire department's hazardous materials response capability to include other common dangerous goods as well as the amount of spills control materials available. The focus should be on initial containment to allow time for additional support to arrive.
- The fire department’s response to Motor Vehicle Collisions has had significant impact in improving the outcome for persons involved in the collision. The department has also likely prevented secondary collisions with current traffic management at accident scenes.
- The current technical rescue components of Ice Water, Remote and Low Angle Rescue compliment each other in both training and equipment; the remote rescue vehicle is also often utilized in wildfire suppression.



# Part 11

## Summary





# **South River Machar Fire Department**

## **Summary**

The purpose of the Community Risk Assessment is to assist Municipalities in making informed decisions to ensure that the fire protection needs of the municipality are being met. This report should be used to make decisions on service delivery options. This summary assessed the current level of fire protection services and anticipated needs of the community.

## Staffing

Staffing will always pose a significant challenge for all volunteer-based fire departments. Our firefighters work hard to maintain and improve their skills as a firefighter while balancing their family and work life. Recruitment and retention of firefighters should remain a top priority to ensure that the fire department is consistently able to adequately meet the needs of the community.

<b>Background</b>	
<b>From 2015 to 2019 the average number of initial response firefighters for emergency calls for service was 6 with an average total number of 8.6 firefighters reporting to the call.</b>	
<b>Consideration</b>	<b>Resources</b>
Increase the roster of firefighters to 30.	<ul style="list-style-type: none"> <li>• Additional costs for personal protective equipment.</li> <li>• Additional costs for compensation and employee expenses.</li> <li>• Additional space for lockers, likely requiring addition to the fire hall.</li> </ul>
<b>Background</b>	
<b>Monday to Friday during normal business hours has consistently had the highest call volume. During the same time period there is a significant increase in interaction between the fire department and the community.</b>	
<b>Consideration</b>	<b>Resources</b>
Maintain onsite daytime staffing during the week.	<ul style="list-style-type: none"> <li>• Increase hours for fire prevention officer to be on shift during fire chief's allotted vacation time.</li> </ul>
<b>Background</b>	
<b>Dispatchers play a critical role in effective emergency responses. The role of dispatcher is becoming increasingly complex and requires specialized skills. Utilizing firefighters for this role reduces the number of firefighters available for the emergency responses.</b>	
<b>Consideration</b>	<b>Resources</b>
Create new dispatch positions.	<ul style="list-style-type: none"> <li>• Renovations to the dispatch room to allow for additional capacity of a second dispatch console.</li> <li>• Increase number of radios for dispatchers.</li> <li>• Additional costs for compensation and employee expenses.</li> <li>• Training for dispatchers.</li> </ul>

<b>Background</b>	
<b>Currently the fire department's capacity adequately addresses single family dwelling fires. To reduce the staffing requirements of fires in larger buildings the risk can be reduced by targeted fire safety inspection program to larger buildings.</b>	
<b>Consideration</b>	<b>Resources</b>
Reduce the risk of major fires in larger buildings.	<ul style="list-style-type: none"> <li>• Targeted fire safety inspection program to industrial properties.</li> <li>• Targeted fire safety inspections of multi-residential buildings.</li> <li>• Plans review for new construction of commercial, industrial and multi-residential.</li> </ul>

**Service Level**

The Fire Protection and Prevention Act permits municipalities to set the appropriate level of fire protection for the municipality. The level of fire protection services for the fire department are outlined in the Establishing and Regulating By-Law.

<b>Background</b>	
<b>Hazardous Materials emergencies is the second highest risk in the municipalities. Currently the fire department is equipped for small petroleum spills that occur typically as a result of motor vehicle collisions. Additional resources to assist with hazardous materials incidents are over 1 hour away.</b>	
<b>Consideration</b>	<b>Resources</b>
Improve the capacity of the fire department's initial hazardous materials response.	<ul style="list-style-type: none"> <li>• Increase training for firefighters on hazardous materials response to operations mission specific level.</li> <li>• Add hazardous materials response trailer with additional spills control measures for initial response to hazardous materials incidents.</li> <li>• Increased personal protective equipment for most common hazardous materials.</li> </ul>

<b>Background</b>	
<b>From 2015 to 2019 the fire department interacted with 155 persons during rescue and auto extrication calls, 45 of the individuals required rescue or extrication interventions.</b>	
<b>Consideration</b>	<b>Resources</b>
Maintain existing rescue and auto extrication capacity of the fire department.	<ul style="list-style-type: none"> <li>• Include rescue and auto extrication equipment on long range capital replacement plan.</li> <li>• Monitor types of rescues being performed to ensure the level of service is continuing to meet the needs of the community.</li> </ul>
<b>Background</b>	
<b>The manufacturing sector employs approximately 100 people in the community. Due to the size and type of occupancy the buildings pose significant fire suppression challenges for the fire department.</b>	
<b>Consideration</b>	<b>Resources</b>
Improve the fire protection service delivery to larger industrial buildings.	<ul style="list-style-type: none"> <li>• Increase fire safety inspections and develop pre-incident plans for all industrial properties.</li> <li>• Increase fire suppression training for industrial properties.</li> <li>• Continue to improve on apparatus design and equipment options to increase the efficiency of fire suppression crews.</li> </ul>
<b>Background</b>	
<b>Modern construction methods and the types of materials found in the contents in todays homes has significantly reduced the amount of time to evacuate from a home that is on fire. In Ontario the overwhelming majority of the fatal fires the fire department had a response time of 3 minutes or less.</b>	
<b>Consideration</b>	<b>Resources</b>
Improve the fire protection service delivery to areas with the longest fire department response time	<ul style="list-style-type: none"> <li>• Increase home fire safety inspections to properties that have longer response times.</li> <li>• Continue to utilize mini-pumper with 2 firefighter crew to reduce response time to remote locations and deploy transitional attack strategies.</li> <li>• Due to the geographic challenges of a second station, it is not likely that a volunteer-based substation would significantly reduce response times.</li> <li>• Increase the number of firefighters on the department.</li> </ul>

## Capital Investments

In order for the fire department to deliver effective fire protection services to the municipalities on going capital investments will be required. Due to the limited amount of tax dollars available it is essential all investments in fire protection must be carefully planned to ensure the most efficient use of funds available.

<b>Background</b>	
<b>Hydrant and non-hydrant protected areas require significantly different apparatus to effectively deliver fire protection services. Additionally, to maintain current fire insurance ratings the fire department must be equipped with a frontline pumper that is not older than 10 years.</b>	
<b>Consideration</b>	<b>Resources</b>
Ensure that fire apparatus and equipment are designed and deployed to best address both hydrant and non-hydrant protected areas.	<ul style="list-style-type: none"> <li>• Develop long range capital planning for apparatus replacement of Pumper units being replaced on a 20-year replacement cycle, 10 years apart.</li> <li>• Maintain a mini-pumper as an attack pumper for the non-hydrant protected areas and a larger pumper tanker unit for hydrant protected areas.</li> <li>• Include a minimum of 3000 imperial gallon tanker on 20-year replacement cycle.</li> </ul>
<b>Background</b>	
<b>The current fire hall is limited in its capacity to support the fire department current and future requirements. The current location of the existing hall is well suited to protect the communities with 54.2% of emergency calls are within 5km of the fire hall and 69.8% are within 10 km of the fire hall.</b>	
<b>Consideration</b>	<b>Resources</b>
Renovate the existing fire hall to be able to accommodate immediate and long-term requirements.	<ul style="list-style-type: none"> <li>• Renovations and addition to the fire hall to improve the hall.</li> <li>• Add addition to east end of building for meeting room, office space and storage rooms.</li> <li>• Add single bay to the west end of the fire hall or possibly bays on east end of the fire hall.</li> </ul>

<b>Background</b>	
<b>Firefighters are exposed to significant carcinogens which increases their likelihood of developing cancer by as much as three times. Firefighters PPE can be a significant source of exposure to carcinogens.</b>	
<b>Consideration</b>	<b>Resources</b>
Remove firefighter personal protective equipment from apparatus bays.	<ul style="list-style-type: none"> <li>• Utilize existing meeting room as a locker room, moving firefighter’s equipment away from diesel exhaust. Having the room negatively pressurized would reduce firefighter’s exposure to carcinogens.</li> <li>• Add addition to east end of building for meeting room, office space and storage rooms.</li> </ul>
<b>Background</b>	
<b>Under social distancing requirements, the existing training room is only large enough for 8 firefighters to be training at a time. In order to be able to deliver effective training additional space is required. Additionally, when the fire hall is staffed for significant events additional space is required.</b>	
<b>Consideration</b>	<b>Resources</b>
Increase training space available for firefighters.	<ul style="list-style-type: none"> <li>• Add training room to a second level to allow for maximum space for training and staffing when required.</li> </ul>
<b>Background</b>	
<b>Due to the size of the apparatus bay and lack of additional service and storage areas limits access to equipment and apparatus. In order to deploy the remote rescue unit 3 apparatus, need to be moved. Due to the available space apparatus have to be custom designed to be able to fit in hall.</b>	
<b>Consideration</b>	<b>Resources</b>
Add apparatus bay for remote rescue unit and additional storage	<ul style="list-style-type: none"> <li>• Add single full- length bay to the west side of the fire hall to house remote rescue unit.</li> <li>• Alternatively add bays to east end of hall to allow for hazmat and remote rescue trailer storage.</li> </ul>

# Glossary





**“Automatic Aid”** means any agreement under which a municipality agrees to provide an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department is capable of responding more quickly than any fire department situated in the other municipality; or a municipality agrees to provide a supplemental response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of providing the quickest supplemental response to fires, rescues and emergencies occurring in the part of another municipality.

**“Council”** means the Council of the Corporation of the Village of South River and the Council of the Corporation of the Township of Machar;

**“Crown Protection Area”** means the area(s) within the limits of the Township of Machar designated in the current Municipal/MNRF Forest Fire Agreement where the MNRF has prime responsibility for suppressing outdoor fires.

**“Fire Chief”** means the person appointed by Council to act as Fire Chief for the Corporation and is ultimately responsible to Council as defined in the FPPA;

**“Fire Code”** means Ontario Regulation 213/07, as amended, and any successor regulation.

**“Fire Department”** means the South River Machar Fire Department

**“FPPA”** means the Fire Protection and Prevention Act, 1997, S.O., c 4, as may be amended from time to time, or any successor legislation, and any regulation made there under;

**“Fire Protection Agreement”** is a contract between municipalities, other agencies, individuals, or a company that clearly defines the responsibilities, terms, conditions, and all other aspects of the fire services purchased, provided and/or required.

**“Fire Protection Services”** includes fire suppression, rescue and emergency services, fire prevention, public fire safety education, mitigation, prevention and safety education of the risk created by unsafe levels of carbon monoxide, communications, training of personnel involved in the provision of Fire Protection Services, and the delivery of all those services.

**“Municipal Protection Area”** means the area(s) within the limits of the Township of Machar designated in the current Municipal/MNRF Forest Fire Agreement where the South River Machar Department has prime responsibility for suppressing outdoor fires.

**“Mutual Aid”** means a plan established pursuant to section 7 of the Fire Protection and Prevention Act under which fire departments that serve a designated area agree to assist each other on a reciprocal basis in the event of a major fire or emergency.

**“Owner”** means any person, firm or corporation having control over any portion of the building or property under consideration and includes the persons in the building or property.

**“Rope Rescue”** means an environment (open or confined space, high angle or low angle) in which the load is predominately supported by a rope rescue system;

**“Specialty Rescue”** shall mean rescue response to high angle/low angle rope rescue, ice/water rescue (land-based entry level), remote rescue, auto extrication, hazardous materials response in accordance with available resources.

**“Transitional Attack”** means an Offensive fire attack initiated by an exterior indirect handline operation, into the fire compartment, to initiate cooling while transitioning into interior direct fire attack in coordination with ventilation operations.

# Appendix A

## Community Risk Assessments O Reg 378/18



# Fire Protection and Prevention Act, 1997

## ONTARIO REGULATION 378/18 COMMUNITY RISK ASSESSMENTS

**Consolidation Period:** From July 1, 2019 to the [e-Laws currency date](#).

No amendments.

*This is the English version of a bilingual regulation.*

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<a href="#">1.</a>	Mandatory use
<a href="#">2.</a>	What it is
<a href="#">3.</a>	When to complete (at least every five years)
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<a href="#">Schedule 1</a>	Mandatory profiles

#### Mandatory use

1. Every municipality, and every fire department in a territory without municipal organization, must,
  - (a) complete and review a community risk assessment as provided by this Regulation; and
  - (b) use its community risk assessment to inform decisions about the provision of fire protection services.

#### What it is

2. (1) A community risk assessment is a process of identifying, analyzing, evaluating and prioritizing risks to public safety to inform decisions about the provision of fire protection services.
  - (2) A community risk assessment must include consideration of the mandatory profiles listed in Schedule 1.
  - (3) A community risk assessment must be in the form, if any, that the Fire Marshal provides or approves.

#### When to complete (at least every five years)

3. (1) The municipality or fire department must complete a community risk assessment no later than five years after the day its previous community risk assessment was completed.
  - (2) If a municipality, or a fire department in a territory without municipal organization, comes into existence, the municipality or fire department must complete a community risk assessment no later than two years after the day it comes into existence.
  - (3) A municipality that exists on July 1, 2019, or a fire department in a territory without municipal organization that exists on July 1, 2019, must complete a community risk assessment no later than July 1, 2024.
  - (4) **Subsection (3) and this subsection are revoked on July 1, 2025.**

#### When to review (at least every year)

4. (1) The municipality or fire department must complete a review of its community risk assessment no later than 12 months after,
  - (a) the day its community risk assessment was completed; and
  - (b) the day its previous review was completed.
  - (2) The municipality or fire department must also review its community risk assessment whenever necessary.
  - (3) The municipality or fire department must revise its community risk assessment if it is necessary to reflect,
    - (a) any significant changes in the mandatory profiles;
    - (b) any other significant matters arising from the review.

(4) The municipality or fire department does not have to review its community risk assessment if it expects to complete a new community risk assessment on or before the day it would complete the review.

5. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION).

#### SCHEDULE 1 MANDATORY PROFILES

1. Geographic profile: The physical features of the community, including the nature and placement of features such as highways, waterways, railways, canyons, bridges, landforms and wildland-urban interfaces.
2. Building stock profile: The types of buildings in the community, the uses of the buildings in the community, the number of buildings of each type, the number of buildings of each use and any building-related risks known to the fire department.
3. Critical infrastructure profile: The capabilities and limitations of critical infrastructure, including electricity distribution, water distribution, telecommunications, hospitals and airports.
4. Demographic profile: The composition of the community's population, respecting matters relevant to the community, such as population size and dispersion, age, gender, cultural background, level of education, socioeconomic make-up, and transient population.
5. Hazard profile: The hazards in the community, including natural hazards, hazards caused by humans, and technological hazards.
6. Public safety response profile: The types of incidents responded to by other entities in the community, and those entities' response capabilities.
7. Community services profile: The types of services provided by other entities in the community, and those entities' service capabilities.
8. Economic profile: The economic sectors affecting the community that are critical to its financial sustainability.
9. Past loss and event history profile: The community's past emergency response experience, including the following analysis:
  1. The number and types of emergency responses, injuries, deaths and dollar losses.
  2. Comparison of the community's fire loss statistics with provincial fire loss statistics.

Note: Each profile is to be interpreted as extending only to matters relevant to fire protection services.



# Appendix B

## Hazard Assessment Tool





## Hazard Assessment Tool

	Frequency Score	Life Safety	Evacuation	Pycho-Social	Property Damage	Critical Infrastructure	Environmental	Economic	Reputational	Consequence Score	Frequency x Consequence	Level of Risk
Structure Fires	6	3	2	2	2	2	1	3	1	22	132	Very High
Hazmat	4	3	3	3	2	2	3	3	2	27	108	High
Motor Vehicle Accidents	6	3	1	2	1	1	1	1	2	18	108	High
Remote Rescue	6	3	0	2	1	0	0	0	1	13	78	Moderate
Pandemic	4	3	2	3	0	1	0	2	1	18	72	Moderate
Medical Emergency	6	3	0	1	0	0	0	0	1	11	66	Moderate
Wildland Fires	6	1	1	1	2	1	1	1	1	11	66	Moderate
CO	6	3	1	1	0	0	0	0	0	11	66	Moderate
Water Rescue	5	3	0	2	0	0	0	0	1	12	60	Low
Flooding	4	1	2	1	2	2	2	1	1	14	56	Low
High Angle Rescue	5	3	0	1	0	0	0	0	1	11	55	Low
Windstorms	4	1	2	2	2	3	0	1	0	13	52	Low
Winter Storms	4	1	2	1	1	2	0	1	0	10	40	Low
Swiftwater Rescue	3	3	0	1	0	0	0	0	1	11	33	Low
Confined Space Rescue	2	3	0	1	0	0	0	0	1	11	22	Very Low
										0	0	
Level of Risk Score					151-180			Extreme				
Level of Risk Score					121-150			Very High				
Level of Risk Score					91-120			High				
Level of Risk Score					61-90			Moderate				
Level of Risk Score					31-60			Low				
Level of Risk Score					0-30			Very Low				

<b>Score</b>	<b>LIFE SAFETY:</b> Injuries or loss of life due to community and/or responder exposure to life threatening situations. This category has a 3x weight attached to it.	<b>EVACUATION:</b> Potential for formal evacuation, shelter-in-place orders, or people stranded.	<b>PSYCHO-SOCIAL:</b> Unusual or uncharacteristic behavior's such as mental health issues, hoarding.
<b>None 0</b>	Not likely to result in injuries or fatalities. No life safety issues.	Not likely to result in an evacuation, shelter-in-place orders, or people stranded.	Not likely to result in significant impacts to individuals' mental and emotional wellbeing.
<b>Low 1</b>	Medical treatment required, but no fatalities. Minor treatment or limited hospitalization.	A small or localized portion of the population is evacuated, sheltered-in-place, or stranded.	Moderate and/or generally short-term impacts to one or more individuals' mental and emotional wellbeing.
<b>Moderate 2</b>	Extensive injuries, significant hospitalization and/or a fatality.	A moderate and generally localized portion of the population evacuated, sheltered-in-place, or stranded.	Significant impacts to one or several individuals' mental and emotional wellbeing, including long-term impacts.
<b>High 3</b>	Extensive injuries, significant hospitalization and/or a fatality.	A large or widespread portion of the population is evacuated, sheltered-in-place, or stranded.	Widespread community impacts to mental and emotional wellbeing, including long-term impacts.

# Hazard Assessment Tool

Score	<b>PROPERTY DAMAGE:</b> Monetary losses relating to private and public buildings, property content, irreplaceable assets, significant historic/symbolic landmarks and critical infrastructure.	<b>CRITICAL INFRASTRUCTURE:</b> The negative consequences of a hazard on processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the functioning of government.	<b>ENVIRONMENTAL:</b> Harm to human and non-human (i.e.wildlife, fish and vegetation) species of life and general decline in quality of life within the community or ecosystem due to air/water/soil contamination. The negative consequences of a hazard on the environment, including the soil, water, air and/or plants and animals.
<b>None</b> 0	Not likely to result in property damage.	Not likely to disrupt assets or services.	Not likely to result in environmental damage.
<b>Low</b> 1	Could cause minor to moderate damage.	Could cause minor disruption of assets or services.	Could cause localized and reversible damage. Quick clean up possible.
<b>Moderate</b> 2	Localized severe damage.	Could cause major but localized or short-term disruptions to critical infrastructure services.	Could cause major but reversible damage. Clean up difficult.
<b>High</b> 3	Widespread severe damage or severe damage to multiple properties	Could cause widespread, severe, ongoing disruption of assets or services.	Could cause severe, irreversible damage. Clean up not possible.

## Hazard Assessment Tool

Score	<b>ECONOMIC:</b> Disruptions to businesses and financial activities, monetary losses due to impacts from the event and other negative consequences for the community or regional economy. The negative economic consequences of a hazard, including on businesses, industries or regional economies.	<b>REPUTATIONAL:</b> The perception of one or more organizations or jurisdictions, in the minds of its stakeholders, the public, and others who are vital to its success.
<b>None</b> <b>0</b>	Not likely to disrupt business/financial activities.	Not likely to result in significant legal, political or reputational impacts.
<b>Low</b> <b>1</b>	Minor disruption of business/financial activities or the economy of the local area.	Likely to result in limited or short-term legal, political or reputational impacts.
<b>Moderate</b> <b>2</b>	Could result in some losses for one or more businesses or other negative consequences for the regional or community economy.	Likely to result in some significant or long-term legal, political or reputational impacts.
<b>High</b> <b>3</b>	Could result in losses for an industry, or severe economic impact in the community or region.	Likely to result in significant and/or lasting legal, political or reputational impacts.

## Hazard Assessment Tool

Likelihood is calculated using past emergency response data that the South River Machar Fire Department has responded to over the past 5 years. Additional consideration is also given to evidence trending to predict future responses. For example, increased industry to an area may impact the frequency of and type emergency responses the fire department may be required to respond to.

<b>Likelihood</b>			
<b>Frequency</b>	<b>Category</b>	<b>Percent Chance</b>	<b>Description</b>
<b>1</b>	<b>Rare</b>	<b>Occurs every 100 years</b>	<b>Less than 1% chance of occurring</b>
<b>2</b>	<b>Very Unlikely</b>	<b>Occurs every 50 - 99 years</b>	<b>Between 1 - 2% chance of occurring</b>
<b>3</b>	<b>Unlikely</b>	<b>Occurs every 20 - 49 years</b>	<b>Between 2 - 5% chance of occurring</b>
<b>4</b>	<b>Probable</b>	<b>Occurs every 5 - 19 years</b>	<b>Between 6 - 20% chance of occurring</b>
<b>5</b>	<b>Likely</b>	<b>Occurs every 1-4 years</b>	<b>Over 20% chance of occurring</b>
<b>6</b>	<b>Certain</b>	<b>Occurs annually</b>	<b>100% chance of occurring</b>



# Appendix C

## Establishing and Regulating By-Law



**THE CORPORATION OF THE VILLAGE OF SOUTH RIVER**

**BY-LAW NO. \_\_\_\_\_**

**BEING A BY-LAW TO ESTABLISH AND REGULATING THE FIRE  
DEPARTMENT,  
AND TO REPEAL BY-LAW NO. 12-2015,**

**WHEREAS** the Municipal Act, 2001, S.O. 2001, c.25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under the Act;

**AND WHEREAS** the Municipal Act provides that sections 8 and 11 shall be interpreted broadly so as to confer broad authority on municipalities to (a) enable municipalities to govern their affairs as they consider appropriate and, (b) enhance their ability to respond to municipal issues;

**AND WHEREAS** the Fire Protection and Prevention Act, (FPPA) 1997, S.O., c4, as amended, requires every municipality to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention and to provide such other Fire Protection Services as it determines may be necessary in accordance with its needs and circumstances;

**AND WHEREAS** the FPPA permits a municipality, in discharging these responsibilities, to establish a fire department;

**AND WHEREAS** the FPPA permits a Council of a municipality to establish, maintain and operate a Fire Department for all or any part of the municipality;

**AND WHEREAS** the FPPA requires a municipality that establishes a Fire Department to provide fire suppression services and permits the Fire Department to provide other Fire Protection Services in the municipality;

**AND WHEREAS** the FPPA requires a municipality that establishes a Fire Department to appoint a Fire Chief;

**AND WHEREAS** the FPPA authorizes a municipality to enter into an automatic aid agreement to provide or receive the initial or supplemental response to fires, rescues and emergencies.

**AND WHEREAS** the FPPA authorizes a municipality to, under such conditions as may be specified in the agreement, enter into an agreement to, provide such fire protection services as may be specified in the agreement to lands or premises that are situated outside the territorial limits of the municipality; receive such fire protection services as may be specified in the agreement from a fire department situated outside the territorial limits of the municipality.

**AND WHEREAS** the FPPA authorizes a council of a municipality to pass by-laws under the FPPA to regulate fire prevention, to regulate the setting of open-air fires and to designate private roads as fire routes.

**NOW THEREFORE**, THE COUNCIL FOR THE CORPORATION OF THE TOWNSHIP OF MACHAR ENACTS AS FOLLOWS:

## **1. DEFINITIONS**

1. In this By-law:

**“Administering Clerk Administrator”** means the Clerk Administrator for the Village of South River

**“Approved”** means approved by Council of the Village of South River and the Township of Machar

**“Automatic Aid”** means any agreement under which a municipality agrees to provide an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department is capable of responding more quickly than any fire department situated in the other municipality; or a municipality agrees to provide a supplemental response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of providing the quickest supplemental response to fires, rescues and emergencies occurring in the part of another municipality.

**“Clerk Administrator”** means the Clerk Administrator for the Village of South River

**“Corporation”** means the Corporation of the Village of South River and the Corporation of the Township of Machar;

**“Council”** means the Council of the Corporation of the Village of South River and the Council of the Corporation of the Township of Machar;

**“Crown Protection Area”** means the area(s) within the limits of the Township of Machar designated in the current Municipal/MNRF Forest Fire Agreement where the MNRF has prime responsibility for suppressing outdoor fires.

**“Deputy Fire Chief”** means the person appointed by **Council** to act on behalf of the **Fire Chief** in the case of an absence or a vacancy in the office of the **Fire Chief**;

**“Emergency Control Group”** means the Mayor with designated Senior Officials who coordinate and deploy resources to mitigate the impact of a municipal or other large-scale emergency incident.

**“Emergency Management Committee”** means the group of municipal officials that are responsible to ensure that local programs and committees are developed as required to enable the emergency management process in accordance with the requirements of the Emergency Management and Civil Protection Act.

**“Fire Chief”** means the person appointed by **Council** to act as Fire Chief for the Corporation and is ultimately responsible to **Council** as defined in the **FPPA**;

**“Fire Committee”** means the South River Machar Fire Committee, formed by council representatives from the Village of South River and the Township of Machar as may be established to deal with a specific issue pertaining to Fire Protection Services.

**“Fire Code”** means Ontario Regulation 213/07, as amended, and any successor regulation.

**“Fire Coordinator”** means the person appointed by the Fire Marshal, under the authority of the Fire Protection and Prevention Act, 1997 to coordinate the mutual aid plan, or the person appointed by the Fire Marshal to act in the absence of the Fire Coordinator;

**“Fire Department”** means the South River Machar Fire Department

**“Firefighter’s Association”** means the South River Machar Firefighters Association

**“FPPA”** means the Fire Protection and Prevention Act, 1997, S.O., c 4, as may be amended from time to time, or any successor legislation, and any regulation made there under;

**“Fire Protection Agreement”** is a contract between municipalities, other agencies, individuals, or a company that clearly defines the responsibilities, terms, conditions, and all other aspects of the fire services purchased, provided and/or required.

**“Fire Protection Services”** includes fire suppression, rescue and emergency services, fire prevention, public fire safety education, mitigation, prevention and safety education of the risk created by unsafe levels of carbon monoxide, communications, training of

personnel involved in the provision of Fire Protection Services, and the delivery of all those services.

**“Indemnification Technology®”** means Fire Department Incident reporting, data collection and property insurance policy wording interpretation to maximize billing opportunities on behalf of fire departments by invoicing insurance companies for costs of fire department attendance with respect to insured perils.

**“Limited Service”** means a variation of service significantly differentiating from the norm as a result of extenuating circumstances, such as deployment of Volunteer Firefighters in insufficient numbers to safely carry out the delivery of Fire Protection Services, environmental factors, remote properties, impeded access, private roadways, lanes and drives, obstructions, or extraordinary hazards or unsafe conditions

**“Member”** means any person employed by, appointed to, or volunteering for the Fire Department and assigned to undertake Fire Protection Services, and includes Officers, full-time and Part-time Firefighters, Volunteer Firefighters, Auxiliary Members, Chaplains, and administrative staff.

**“Municipal Act”** means the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, and any successor legislation.

**“Municipal Protection Area”** means the area(s) within the limits of the Township of Machar designated in the current Municipal/MNRF Forest Fire Agreement where the South River Machar Department has prime responsibility for suppressing outdoor fires.

**“Mutual Aid”** means a plan established pursuant to section 7 of the Fire Protection and Prevention Act under which fire departments that serve a designated area agree to assist each other on a reciprocal basis in the event of a major fire or emergency.

**“Officer”** means any member with the rank of Captain or higher.

**“Owner”** means any person, firm or corporation having control over any portion of the building or property under consideration and includes the persons in the building or property.

**“Personnel Committee”** means a committee of representatives of the Village of South River Council established to provide guidance, oversight and support to management as it develops and implements employee staffing, performance management and compensation systems.

**“Rope Rescue”** means an environment (open or confined space, high angle or low angle) in which the load is predominately supported by a rope rescue system;

**“Specialty Rescue”** shall mean rescue response to high angle/low angle rope rescue, ice/water rescue (land-based entry level), remote rescue, auto extrication, hazardous materials response in accordance with available resources.

## 2. ESTABLISHMENT

- 2.1 A department for the Village of South River and the Township of Machar, to be known as the South River Machar Fire Department, is hereby established and continued under this By-law and the head of this Department shall be known as the Fire Chief.
- 2.2 The goals of the **Fire Department** shall be those contained in Appendix “A”.

## 3. COMPOSITION

- 3.1 The **Fire Department** shall consist of **1 Fire Chief, 1 Deputy Fire Chief, up to 7 Captains, up to 16 Firefighters** and any other person(s) as may be authorized or considered necessary from time to time by **Council** on recommendation from the **Fire Chief** for the **Fire Department** to perform **Fire Protection Services**.
- 3.2 The **Fire Chief** shall be appointed by By-law of the **Council**.
- 3.3 The **Deputy Fire Chief** shall be appointed by By-law of the **Council**.

## 4. EMPLOYMENT

- 4.1 The **Fire Chief** may recommend for appointment, any qualified person as a **Member** of the **Fire Department**, if the position is authorized by the **Council** and is subject to the approved hiring policies of the **Fire Department** in compliance with **Section 4.4** of this by-law.
  - (i) “Qualified” person shall be:
    - a) at least 18 years of age
    - b) of good character
    - c) medically fit to be a firefighter as certified by a physician
- 4.2 A person appointed as a member of the **Fire Department** shall be on probation for a minimum of six (6) months, during which time he/she shall take such special

training and examinations as may be required by the *Fire Chief*. The probation period may be extended at the discretion of the *Fire Chief*

- 4.3 Any probationary *Member* may be discharged for any just cause upon recommendation by the *Fire Chief* and to the *Council* in compliance with **Section 4.4** of this by-law.
- 4.4 All recommendations for appointments, promotions, demotions, suspensions and terminations will be reported to the *Administrating Clerk Administrator* by the *Fire Chief* to be recommended to be ratified by *Council*.
- 4.5 The remuneration of all members of the *Fire Department* shall be recommended by the *Personnel Committee* to and approved by *Council* or other administrative and legal process as appropriate.
- 4.6 A *member* shall not be dismissed without being afforded the opportunity for a hearing before the *Personnel Committee*, if he/she makes a written request for such hearing within seven days after receiving his/her proposed dismissal.

## **5. TERMS AND CONDITIONS OF EMPLOYMENT**

- 5.1 Subject to any applicable collective agreement(s), the remuneration and other terms and conditions of employment or appointment of the members and administrative support staff that comprise the *Fire Department* shall be determined by the *Personnel Committee* in accordance with policies and programs established and approved by Council of the Village of South River.

## **6. ORGANIZATION**

- 6.1 The *Fire Department* may be organized into Divisions such as Administration, Emergency Operations, Support Services, Communications, Training, Fire Prevention and Public Education.
- 6.2 The *Fire Chief* may re-organize or eliminate Divisions or establish other Divisions or may do all or any of these things or any combination of them as may be required to ensure the proper administration and efficient operation of the *Fire Department* and the effective management of *Fire Protection Services* for the Corporation.
- 6.3 The *Fire Chief* may assign or re-assign such members to a Division to assist him in the administration and operation of that Division.

## **7. CORE SERVICES**

- 7.1 The Fire Department shall provide such Fire Protection Services and programs as approved by Council in accordance with Appendix “B”

- 7.2 Nothing in this By-law will restrict the *Fire Department* to providing only core services or limit the provision of *Fire Protection Services*.

## 8. RESPONSIBILITIES AND AUTHORITY OF FIRE CHIEF

- 8.1 The *Fire Chief* shall be the head of the *Fire Department* and is ultimately responsible to Council as set out in subsection 6 (3) of the *Fire Protection and Prevention Act* for the proper administration and operation of the Fire Department, including delivery of *Approved* services and programs.
- 8.2 The *Fire Chief* shall be a fully contributing member of the Corporation's Senior Management Team reporting to the *Administrating Clerk Administrator* and will perform the duties of *Emergency Control Group* member as required.
- 8.3 The *Fire Chief* shall be authorized to make such general orders, policies, procedures, rules and regulations and to take such other measures as the *Fire Chief* may consider necessary for the proper administration and efficient operation of the *Fire Department* and the effective management of *Fire Protection Services* for the *Corporation* and for the prevention, control and extinguishment of fires, the protection of life and property and the management of emergencies and without restricting the generality of the foregoing;
- a) For the care and protection of all property belonging to the *Fire Department*;
  - b) For arranging for the provision and allotment of strategic staffing and proper facilities, apparatus, equipment, materials, services and supplies for the *Fire Department*;
  - c) For arranging and implementation of *Automatic Aid, Mutual Aid* and other negotiated fire protection and emergency service agreements within the Corporation's borders and/or within the municipal borders of adjoining municipalities;
  - d) For determining and establishing the qualifications and criteria for employment or appointment and the duties of all members and administrative support staff of the *Fire Department*;
  - e) For the conduct and the discipline of members of the *Fire Department*;
  - f) For preparing and upon approval by *Council*, implementing and maintaining a departmental fire service plan and program for the *Corporation*;
  - g) For assistance, as a contributing member of the *Emergency Management Committee*, in the preparation, implementation and maintenance of any emergency plans, organizations, services or measures established or to be established by the *Corporation*;
  - h) For reporting to the appropriate crown attorney or other prosecutor or law enforcement officer or other officer the facts upon the evidence in any case in which there is reason to believe that a fire has been the

result of criminal intent or negligence or in which there is reason to believe an offence has been committed under the *FPPA*;

- i) For keeping an accurate record, in convenient form for reference, of all fires, rescues and emergencies responded to by the *Fire Department* and reporting of same to the Office of the Fire Marshal and Emergency Management;
  - j) For keeping such other records as may be required by the *Corporation* and the *FPPA*;
  - k) For preparing and or presenting monthly reports of the *Fire Department*;
  - l) For preparing and or presenting the annual estimates of the *Fire Department to Council* and for exercising control over the budget approved by *Council* for the *Fire Department*, provided that such general orders, policies, procedures, rules, regulations and other measures do not conflict with the provisions of this By-law or any other By-law of the *Corporation*, including, without limitation, those requiring the prior approval of or notice to *Council* or the satisfaction of certain conditions, general or otherwise, specified by *Council* before such measures can be implemented, or with the provisions of the *FPPA*
- 8.4 The *Fire Chief* shall be responsible for the administration and enforcement of this By-law and all general orders, policies, procedures, rules and regulations made under this By-law and for the enforcement of any other By-laws of the Corporation respecting *Fire Protection Services*, and shall review periodically such By-laws, including this By-law, recommend to *Council* such amendments as the *Fire Chief* considers appropriate and, in the case of general orders, policies, procedures, rules, and regulations made under this By-law, revise or terminate any of them if the *Fire Chief* considers it appropriate.
- 8.5 The *Fire Chief* shall have all powers, rights, and duties assigned to a Fire Chief under the *FPPA* including, without limitation, the authority to enforce compliance with the *Fire Code*. Further, the *Fire Chief* shall be afforded the ability to take all proper measures for the prevention, control and extinguishment of fires and for the protection of life and property and shall be able to enforce all municipal by-laws respecting fire prevention.
- 8.6 The *Fire Chief* may liaise with any Association representing firefighters.
- 8.7 The *Fire Chief* may liaise with the Office of the Fire Marshal and Emergency Management and any other office or organization (local, regional, provincial or federal) as required by *Council* or as considered necessary or advisable by the *Fire Chief* for the proper administration and efficient operation of the *Fire Department* and the effective management of *Fire Protection Services* for the *Corporation*.
- 8.8 The *Fire Chief* is authorized to contribute to and assist in the formulation of

*Automatic Aid* and emergency service agreements or response plans with other emergency response agencies and further, is authorized by *Council* to perform the duties of *Fire Coordinator* as required.

- 8.9 The *Fire Chief* may utilize such *Members* and administrative support staff of the *Fire Department* as the *Fire Chief* may determine, from time to time, to assist in the performance of his duties and/or perform the role as required of a *Chief Fire Official* or other designate in such a manner as to include, but not be limited to, the following;
- a) Provide administrative support and customer assistance for facilities and services provided by the *Fire Department*;
  - b) Prepare Divisional and overall Departmental budget(s) and exercise budgetary control;
  - c) Prepare the payroll data of the Department as required, to initiate requisitions and acquire materials and services and certify all accounts of the Department;
  - d) Maintain personnel records as required in conjunction with the direction of the Corporation's Corporate Services Department;
  - e) Arrange for the provision of new facilities, equipment, and apparatus;
  - f) Carry out the general administrative duties of the *Fire Department*;
  - g) Liaise with the local *firefighters associations*;
  - h) Liaise with other emergency response and safety agencies;
  - i) Liaise with other Departments within the Corporation and participate on committees or be involved in functions as required;
  - j) Provide emergency communications/dispatch, firefighting and emergency response duties and/or assist at emergency or life supporting incidents as required by the *Fire Chief* to prevent, control, and extinguish fires, and further prevent fire and life safety tragedy;
  - k) Conduct investigations of fires by *Fire Department* personnel in concert with Investigators of the Office of the Fire Marshal and Emergency Management and the Police or other allied agencies in order to determine cause, origin, and circumstances of a fire incident;
  - l) Perform specialized emergency and/or rescue response such as vehicle/auto/machinery extrication, land based static water/ice rescue, hazardous materials response (emergency decontamination), high/low angle rope and confined space rescue, render emergency patient care and other life saving measures as per *Fire Department* policies;
  - m) Conduct, facilitate and participate in training at fire stations or other approved sites and keep clear and concise records of said training to Provincial standards;
  - n) Research and/or develop new technologies and strategies to maintain safe operating efficiency and effectiveness in emergency or routine operations;
  - o) Prepare and conduct examinations of *Fire Department* staff members as required;

- p) Conduct in-service fire prevention audits, visits, inspections and/or other pre-planning familiarization inspections of premises and occupancies on a complaint, request or proactive basis as required;
- q) Enforce all legislation pertaining to fire prevention and the Ontario Fire Code and respond to all fire and life safety complaints and/or concerns as appropriate;
- r) Provide fire and life safety education and distribution of educational materials as appropriate;
- s) Perform apparatus and equipment maintenance cleaning, checks, inspection and testing at stations or other as required;
- t) Co-ordinate and address joint health and other safety issues within the Fire Department itself;
- u) Ensure the Joint Health and Safety Committee performs, meets, and provides recommendations to Administration as required by legislation, and further that all staff conform and abide by safety practices to ensure a safe workplace;
- v) Assist in the preparation and implementation of Departmental emergency plans and contingencies in conjunction with the Corporation's Emergency Plan;
- w) Perform other duties as assigned and shall comply with all other requirements of the job description and abide by all orders, policies, procedures, rules and regulations as provided.

## 9. SUPERVISION – GENERAL DUTIES AND RESPONSIBILITIES

- 9.1 The ***Deputy Fire Chief*** shall be the second ranking officer of the ***Fire Department*** and shall be subject to and shall obey all orders of the ***Fire Chief*** and shall perform such duties as are assigned to him or her by the ***Fire Chief*** and shall act on behalf of the ***Fire Chief*** in case of absence or vacancy in the office of Fire Chief.
- 9.2 The members and administrative support of the ***Fire Department*** while on duty shall be under the direction and control of the ***Fire Chief*** or the next ranking officer present in any place.
- 9.3 When the ***Fire Chief*** designates a member to act in place of an ***Officer*** in the ***Fire Department***, such member, when so acting, has all the powers and shall perform all the duties of the ***Officer*** replaced.
- 9.4 The ***Fire Chief*** and all other ***Officers*** of the ***Fire Department*** shall protect and guard all property entrusted to their care, all ***Officers*** and all ***Members***, insofar as lies in their power, shall take proper measures to protect all ***Members*** of the ***Fire Department*** from accident, injury or death as a result of duty.
- 9.5 All matters pertaining to or affecting the ***Fire Department*** proposed or

contemplated by staff members must be submitted to the **Fire Chief** before any action is taken, and staff members are strictly forbidden to take any part in any proposition contemplating any effect, directly or indirectly, upon the **Fire Department** or its operation, except after consultation with the **Fire Chief**.

- 9.6 Every member and administrative support staff person shall conduct themselves in accordance with the general orders, policies, procedures, rules and regulations made by the **Fire Chief** and shall give their whole and undivided attention while on duty to the efficient operation of the **Fire Department** and shall perform the duties assigned to them to the best of their ability in accordance with the **FPPA** and any collective agreement or other written agreement that may be applicable.
- 9.7 The **Fire Chief** may reprimand, suspend or terminate any **Member** of the **Fire Department** for insubordination, inefficiency, misconduct, tardiness, or for non-compliance with any of the provisions of this By-law, departmental policies or procedures, guidelines or the general orders and departmental rules that, in the opinion of the **Fire Chief**, would be detrimental to the discipline and efficiency of the **Fire Department**. The **Fire Chief** shall submit a report to the **Administering Clerk Administrator** regarding the reprimand or suspension handed out to the staff member. Any such disciplinary action shall be in accordance with the Disciplinary Procedures.

## 10. PROPERTY

- 10.1 No person shall supply any apparatus, equipment or other property of the **Fire Department** for any personal or private use without the express permission of the **Fire Chief**.
- 10.2 No person shall willfully damage or render ineffective or inoperative any apparatus, equipment or other property belonging to our used by the **Fire Department** or any emergency vehicle of a public safety agency engaged by the **Fire Department** to attend to a fire or emergency incident within the municipality.

## 11. FIRE SUPPRESSION

- 11.1 The **Fire Department** may suppress any fire or other hazardous condition by extinguishing it or by other reasonable action and, for this purpose, may enter private property, if necessary, to do so.
- 11.2 The **Fire Department** may pull down or demolish any building or structure when considered necessary to prevent the spread of fire and for the time after it has been extinguished to render the location and vicinity safe from fire or other hazards.

- 11.3 The **Fire Department** may request other appropriate persons or agencies present at a fire to assist in extinguishing fires, pulling down or demolishing buildings or structures to prevent the spread of fire, initiate crowd and traffic control or suppression of fires or other hazardous conditions in other reasonable ways.

## 12. REFUSAL TO LEAVE

- 12.1 No person present at a fire or other emergency scene shall refuse to leave the vicinity or enter the vicinity when directed to do so by the **Fire Department** or the Ontario Provincial Police.

## 13. CONDUCT AT FIRES AND EMERGENCIES

- 13.1 During a fire or emergency incident and for the time after it has been extinguished and is required to remove the apparatus and equipment of the **Fire Department** and render the location and vicinity safe from fire or other hazards, no person, either on foot or with a vehicle of any kind shall enter or remain upon or within;
- a) The portion of any street or lane upon which the site of the fire or emergency scene that abuts or upon any street or lane for a distance of fifteen (15) metres on each side of the property damaged by fire or;
  - b) Any additional street or lane or part of a street or any additional limits in the vicinity of the fire or emergency as may be prescribed by the **Fire Chief** or the next ranking officer present at the fire or emergency incident.
  - c) The provisions of section 13.1(a) shall not apply to a resident of any street or lane or within any prescribed additional limit or to any person so authorized to enter or remain by an officer of the **Fire Department**.

## 14. RECOVERY OF COSTS – ADDITIONAL EXPENSES

- 14.1 The **Fire Chief** may require occupancy **Owners**, corporations or persons within or outside the municipality to pay costs or fees for fire and emergency response or other administrative services provided to them. Invoicing for response services or recovery of fees will be conducted in accordance with the **Fire Departments** User Fees and Rates Appendix of this By-Law as amended.
- 14.2 If as a result of a **Fire Department** response to a fire or emergency incident, the **Fire Chief** or his designate determines that it is necessary to incur additional expenses, retain a private contractor, rent special equipment not normally carried on a fire apparatus or use more materials than are carried on a fire apparatus (the “Additional Service”) in order to suppress or extinguish a

fire, preserve property, prevent a fire from spreading, control and eliminate an emergency, carry out or prevent damage to equipment owned by or contracted to the Corporation, assist in or otherwise conduct fire cause investigation or determination or otherwise carry out the duties and functions of the **Fire Department** and/or to generally make “safe” an incident or property, the owner of the property requiring or causing the need for the Additional Service or expense shall be charged the full costs to provide the Additional Service including all applicable taxes. Property shall mean personal and real property.

- 14.3 Fire Response Fees/Recovery of Costs-**Indemnification Technology**®  
Fire Department incident reporting, data collection and property insurance policy wording interpretation to maximize billing opportunities on behalf of fire departments by invoicing insurance companies for costs of fire department attendance with respect to insured perils. Current User Fees and Rates Appendix of this By-Law as amended for each and every call.

## 15. EMERGENCY RESPONSES OUTSIDE LIMITS OF THE MUNICIPALITY

- 15.1 The **Fire Department** shall not respond to a call with respect to a fire or an emergency incident outside the limits of the municipalities except with respect to a fire or an emergency;
- a) that in the opinion of the **Fire Chief** threatens property in the municipality or property situated outside the municipality that is owned or occupied by the municipality;
  - b) in a municipality with which an agreement has been entered into to provide fire protection services, which may include automatic aid;
  - c) on property with respect to which an approved agreement has been entered into with any person or corporation to provide fire protection therefore;
  - d) at the discretion of the Fire Chief or designate, to a municipality authorized to participate in any county, district or regional mutual aid plan established by a fire coordinator appointed by the Fire Marshal or any other similar reciprocal plan or program;
  - e) at the discretion of the **Fire Chief** to assist other municipal or provincial resources as required where a formal agreement may or may not be established.
  - f) on those highways that are under the jurisdiction of the Ministry of Transportation or other agency within the District, where the District has a rescue system, or;
  - g) on property beyond the municipal boundary where the **Fire Chief** or his designate determines that immediate action is necessary to preserve and protect life and the correct department is notified (where applicable) to respond and/or assumes command or establishes alternative measures.
  - h) response due to a request for special assistance as required through a

declaration of a provincial or federal emergency and such request has been approved by the *Fire Chief*.

## **16. INTERFERENCE**

16.1 No person shall impede or interfere with or hinder the *Fire Department* in the performance of its duties.

## **17. FIRE ALARM**

17.1 No person shall prevent, obstruct, or interfere in any manner whatsoever with the communication of a fire alarm to the *Fire Department* or with the *Fire Department* responding to a fire alarm that has been activated.

## **18. CONFLICT**

18.1 Where this By-law may conflict with any other By-law of the Corporation, this Bylaw shall supersede and prevail over that other By-law to the extent of the conflict.

## **19. SHORT TITLE**

19.1 This By-law shall be known as the **ESTABLISH AND REGULATING THE FIRE DEPARTMENT**

## **20. PENALTY**

20.1 Any person who violates any provisions of this By-law is, upon conviction, guilty of an offence and shall be liable to a fine, subject to the provisions of the Provincial Offences Act, R.S.O. 1990, c. P.33, as amended.

## **21. REPEAL OF BY-LAWS**

21.1 By-law No. 12-2015 is hereby repealed.

## **22. Force and EFFECT**

22.1 This By-law shall come into force and effect on the day it is passed and shall be reviewed during each term of council.

**READ a 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> TIME and FINALLY PASSED** this 13th day of April 2015.

## APPENDIX “A” TO BY-LAW NO. \_\_\_\_\_

### **Mission of the Fire Department**

The Primary mission of the South River Machar Fire Department is to provide a range of programs to protect the lives and property of the inhabitants of the Village of South River and the Township of Machar from the adverse effects of fires, sudden medical emergencies or exposures to dangerous conditions caused by man or nature.

### **Vision of the South River Machar Fire Department**

The vision of the South River Machar Fire Department is to be a well planned, well trained and a well-equipped emergency response agency where the safety and wellbeing of all involved in any emergency response is paramount.

### **Primary Objectives of the South River Machar Fire Department**

In order to meet the objectives of the fire department, necessary funding must be in place.

The primary Objectives of the Fire Department is to;

- Identify and review annually the fire service requirements of the municipalities.
- Provide appropriate public fire and life safety education and other fire prevention programs and measures as legislated by the FPPA,
- Provide exceptional training to its members through well planned programs followed by appropriate testing and documentation,
- Provide effective, timely and adequately staffed emergency response and assistance as appropriate to the needs and circumstances of the municipality and as required by the FPPA and other applicable legislation,
- Provide an administrative process consistent with the needs of the fire department.
- Provide a maintenance program to ensure that all firefighting apparatus and equipment is maintained and ready to be deployed for emergency responses.
- Develop a good working relationship with all federal, provincial and municipal departments, utilities and agencies, related to the protection of life and property.
- Interact with other municipal departments respecting the aspects of fire on any given property.

**APPENDIX “B” TO BY-LAW NO. \_\_\_\_\_**

**CORE SERVICES**

**FIRE SUPPRESSION AND EMERGENCY RESPONSE**

1. Structural firefighting, for the purpose of this Schedule, “Structural Firefighting” shall have the same meaning as Structural Firefighting as defined by NFPA 720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.
  - (a) Interior Search and Rescue – Shall be provided when possible and as appropriate in accordance with the following:
    - Service shall be provided to search for and rescue endangered, trapped or potentially trapped persons within the structure.
    - Service shall be provided only when, in the opinion of the Fire Chief or most senior Officer in charge, all of the following are true:
      - i. A scene risk assessment has been completed, and the level of risk reasonably justifies entry into the structure;
      - ii. Building integrity permits entry into the structure;
      - iii. Sufficient Trained Firefighter staffing is deployed at the fireground;
      - iv. Reliable water supply with adequate flow can be sustained;
      - v. Adequate fireground supervision and support is provided.
  - (b) Interior Fire Suppression (Offensive Operations) – Shall be provided when possible and as appropriate in accordance with the following:
    - Service shall be provided to contain the fire and prevent further loss of property.
    - Service shall be provided only when, in the opinion of the Fire Chief or most senior Officer in charge, all of the following are true:
      - i. A scene risk assessment has been completed, and level of risk reasonably justifies Firefighter entry into the structure;
      - ii. Building integrity permits entry into the structure;

- iii. Sufficient Trained Firefighter staffing is deployed at the fireground;
  - iv. Reliable water supply with adequate flow can be sustained;
  - v. Adequate fireground supervision and support is provided
- (c) Exterior Fire Suppression (Defensive Operations) – Shall be provided when possible and as appropriate, in the opinion of the Fire Chief or most senior Officer in charge, in accordance with the following:
- There shall be no expected rescue component with this service.
  - Service shall be provided to prevent fire spread to adjacent areas.
  - Service shall be provided when Interior Fire Suppression is not possible or appropriate.
  - Service shall be provided as water supply permits.
- (d) Rural firefighting operations using tanker shuttle service shall be provided in areas without municipal water supply and best efforts shall be exercised to conform to NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*.
- The Fire Department shall maintain Superior Tanker Shuttle Service accreditation by Fire Underwriters Survey or other recognized accreditation body.
2. In consideration of the reliance by the Fire Department on the response of Volunteer Firefighters, whose deployment to emergencies in sufficient numbers cannot in all instances be guaranteed, adverse climate conditions, delays or unavailability of specialized equipment required by the Fire Department, or other extraordinary circumstances which may impede the delivery of Fire Protection Services, any Approved service set out in Appendix "B" may from time to time be provided as a Limited Service as defined in this by-law, as determined by the Fire Chief, his or her designate, or the highest ranking Officer in charge of a response.
  3. Suppressing outdoor fires including forest fires, grass fires located within the ***Municipal Protection Area*** and assisting ***MNRF*** as required in suppressing outdoor fires in ***Crown Protection Area***
  4. Emergency responses to water access properties including islands and to those properties accessed via private roads, private lanes or private driveways subject to the following limitations.

- a) Emergency Response to water access properties will be limited to safe travel and environmental conditions. If in the opinion of the **Fire Chief** or his/her designate unsafe environmental conditions exists no services shall be provided. With the exception of the Remote Rescue Vehicle, Fire Department vehicles shall not enter onto frozen bodies of water (ie. lakes, rivers, streams) at any time.
  - b) Emergency response to properties accessed via private roads, private lanes or private driveways may be limited by the condition of such road, land or driveway including:
    - (i) the ability or such road, lane or driveway to support and accommodate fire department equipment, vehicles and apparatus; and
    - (ii) the failure of the owner of the lands upon which the road, lane or driveway is located or the user of such road, land or driveway to maintain such road, lane or driveway in a condition that is passable by fire department equipment, vehicles and apparatus.
5. Fire suppression services may be delivered in both an offensive and defensive mode and may include search and rescue operations, forcible entry, ventilation, protecting exposures salvage and overhaul as appropriate.
  6. Emergency pre-hospital care responses and medical acts or other first aid/CPR services shall be maintained as per local Medical Directives and instituted as per the latest Emergency Services Agreement (nee tiered response agreement) and appropriate to the needs of the municipality as recommended by the Fire Chief and as agreed.
  7. **Specialty Rescue** services shall include performing automobile and/or equipment extrication using hand tools, air bags, and heavy hydraulic tools as required, ice water rescue (static water), low angle rope, remote rescue and hazardous materials response (operations level), in accordance with available resources.

Other specialized rescues (such as HUSAR, trench rescue, technical level hazardous materials response technician level, confined space etc.) **shall not be provided** by the South River Machar Fire Department. Notwithstanding, the South River Machar Fire Department may contract other agencies to provide this service in an emergency incident and will provide command and assistance as appropriate to the level of skills and training afforded at the awareness level or its current capability.

8. The International Fire Service Training Association “Essentials of Firefighting”, NFPA standards and other related industry training standards and reference materials may be used as reference guides for the South River Machar Fire Department training as approved by the Fire Chief. All training will comply with the Occupational Health and Safety Act, NFPA and applicable provincial legislation.

## **FIRE PREVENTION**

1. Inspections arising from complaint, request, or self- initiated and fire investigations and inspections shall be provided in accordance with the *FPPA* and policies of the *Fire Department*.
2. The NFPA standards and the Municipal Affairs and Housing Act. shall be used as a reference guide for fire prevention training.

## **FIRE AND LIFE SAFETY EDUCATION**

1. Distribution of fire and life safety information and public education programs shall be administered in accordance with the *FPPA* and policies of the *Fire Department*.
2. A residential home fire safety and smoke alarm awareness program shall be ongoing.
3. Smoke alarms for residential occupancies shall be provided to those in need.
4. Fire and life safety communiqués shall be distributed using media tools and other outlets as appropriate.

## **EMERGENCY DISPATCHING AND COMMUNICATIONS**

1. The NFPA standard shall be used as a reference guide for emergency dispatching and communications.
2. The Communications system will provide emergency call taking (as well as “after hour” call taking) and dispatching of emergency vehicles as appropriate. This service may be provided to other municipalities in the event of mutual aid assistance or by established agreements. This service may be contracted out as required at the discretion and direction of the *fire chief*.

<b>South River Machar Fire Department Cost Recovery</b>	
<b>Equipment and Staffing</b>	
<b>Equipment</b>	<b>Cost</b>
Apparatus	480 dollars per hour per unit, 1 hour minimum, billed in ½ hour increments
Generator	50 dollars per hour, billed in ½ hour increments
Portable Pumps	50 dollars per hour, billed in ½ hour increments
Air bottle refilling	10 dollars per bottle
Firefighter	30 dollars per firefighter, 1 hour minimum, billed in ½ hour increments
<b>Consumables</b>	
<b>Item</b>	<b>Cost</b>
Class A Foam	220 dollars per pail
AFFF Foam	250 dollars per pail
Absorbent	30 dollars per bag
Leak Stop Materials	300 dollars per leak minimum
Haz-Mat Suits	300 dollars per suit
<b>Administration Costs</b>	
<b>Expense</b>	<b>Cost</b>
Third Party Inspection	40 dollars per Inspection
Liquor License Inspection	100 dollars per Inspection
Special Events Inspection	100 dollars per Inspection
File Search	100 dollars per search
Fire Report	100 dollars per report
Communications Fee	200 dollars per incident
<b>Equipment Damaged</b>	
All equipment that is owned or contracted by the fire department that is damaged while the fire department is performing its duties in accordance with By-law No. will be billed at the exact replacement or repaired cost including all applicable taxes.	
<b>Equipment and Services Contracted</b>	
All equipment and services contracted by the Fire Department in accordance with By-law No. will be billed at the actual cost including all applicable taxes.	