



2024

A photograph of an emergency scene on a two-lane road. A red fire truck is parked in the center of the road with its emergency lights flashing. A red pickup truck is parked on the right shoulder with its driver-side door open. Orange traffic cones are placed along the road. The background shows a forested hillside under a clear blue sky.

Community Risk Assessment

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Foreword

Community Risk Assessment is acknowledged as the initial phase in risk management tailored to local "needs and circumstances." Ontario Regulation 378/18, titled "Community Risk Assessments," became effective on July 1, 2019. The regulation articulates:

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 involves a thorough and exhaustive evaluation aimed at informing fire protection service levels. It entails identifying, analyzing, evaluating, and prioritizing risks 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

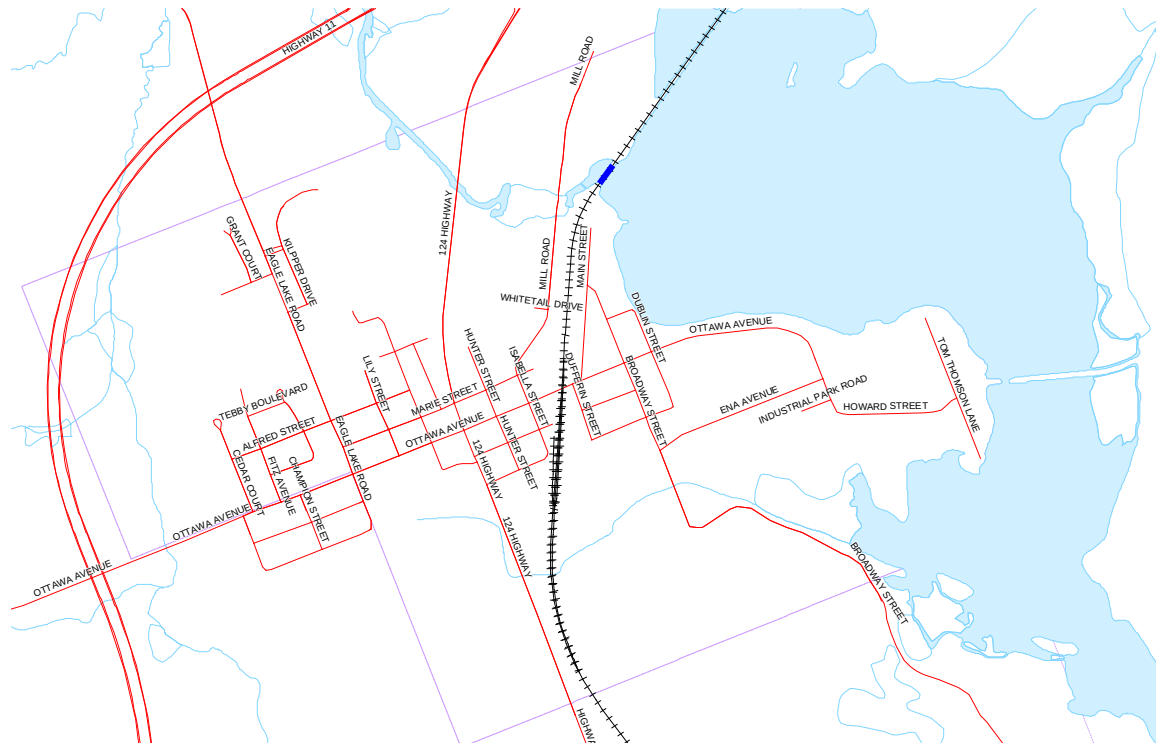
Geographic Profile

The aim of the geographic profile is to delineate the physical characteristics of the community. These features may pose inherent risks or influence fire service access and response times. The risks and impacts can vary seasonally or in the face of significant weather events. This profile seeks to pinpoint geographic features that:

1. Pose potential risks to residents;
2. Provide opportunities for work and recreation leading to potential emergency responses;
3. Impact the fire department's response to the area; and
4. Highlight areas more susceptible to the effects of significant weather events.

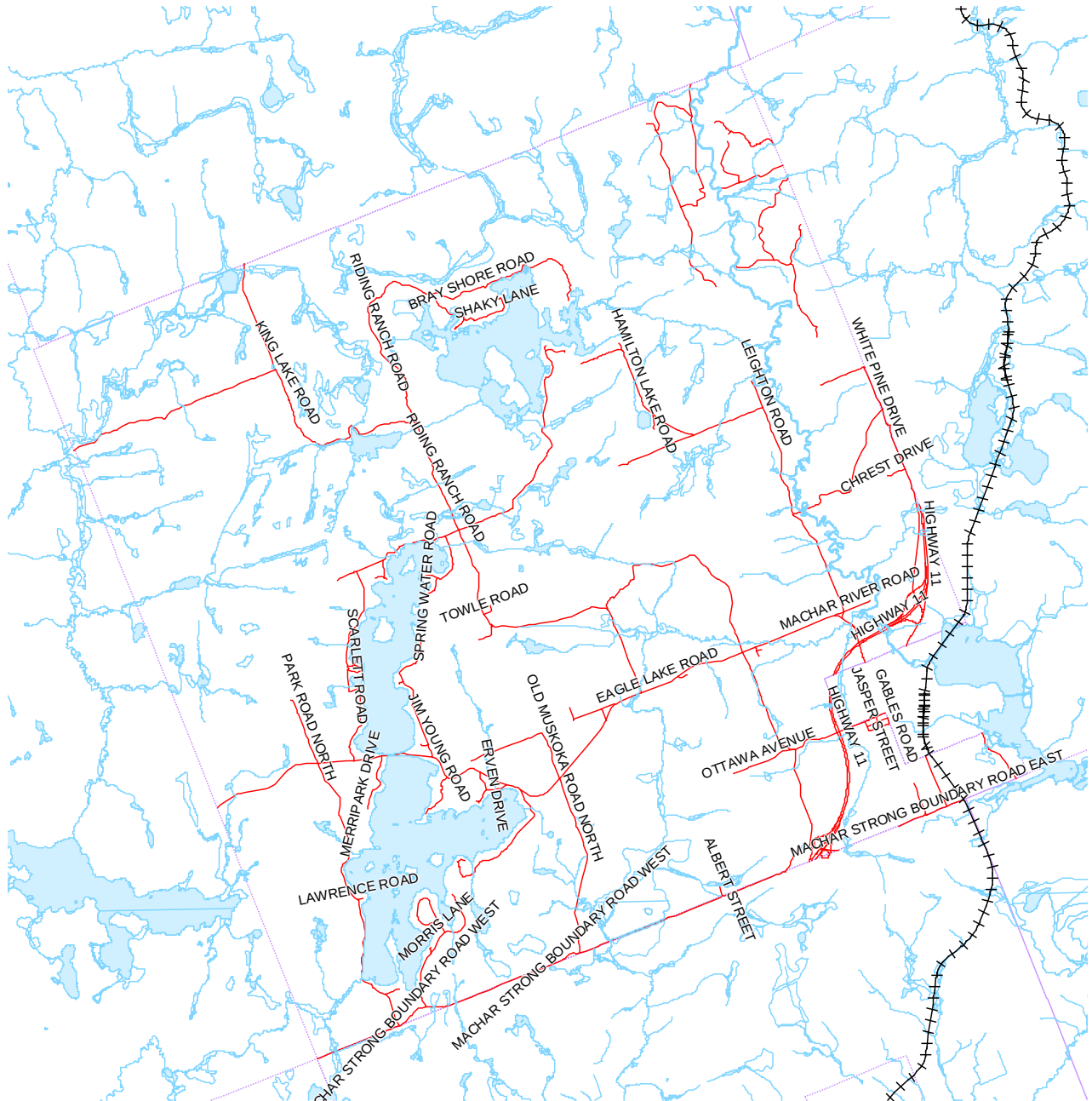
The South River Machar Fire Department is entrusted with the provision of fire protection services for both the Village of South River and the Township of Machar. Furthermore, the fire department plays a crucial role in supplying supplementary fire protection services to the Township of Joly through a Fire Protection Agreement.

Situated within the District of Parry Sound, the Village of South River finds itself nestled within the borders of the Township of Machar. Covering an area of approximately 4.15 square kilometers, the Village boasts a population density of 268.3 individuals per square kilometer.



Geographically, the Village of South River sits at an elevation of approximately 339 meters above sea level and stands approximately 4 meters above the South River itself.

Machar Township, spanning an area of approximately 184 square kilometers, is characterized by a modest population density of 4.8 individuals per square kilometer. It shares its borders with two unincorporated Townships: Lount Township to the west and Laurier Township to the east. Notably, Machar Township serves as the primary access point for a significant portion of properties in Lount Township, underlining its essential role in facilitating regional connectivity and accessibility.

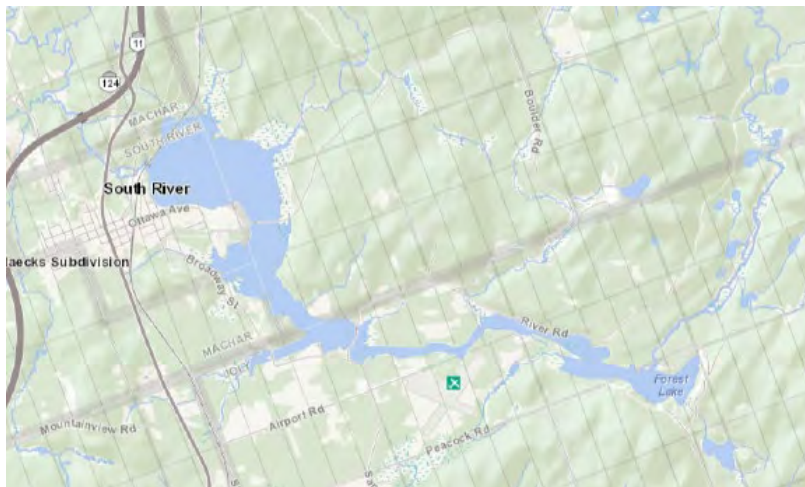


Waterways

The region, encompassing the South River and Machar area, boasts a multitude of waterways that not only serve as hubs for recreational activities but also serve as vital sources for the Village of South River's drinking water supply.

South River Watershed

The South River, originating from Winifred Lake within Algonquin Park, lies approximately 30 kilometers to the east of the Village of South River. Notably, this river's history is intertwined with the region's past. It's worth mentioning that Craig Lake Creek and Smyth Creek, both upstream of the Village, contribute to the South River's flow, regulated by dam systems. These dam structures, located at Craig Lake and Smyth Lake, are operated and maintained by Ontario Power Generation, reflecting the river's role in both natural and industrial contexts.



As the South River continues its journey, it converges into Forest Lake within Joly Township before meandering approximately 8.5 kilometers to grace the Village of South River. The Village operates the Ministry of Natural Resources and Forestry

(MNRF) dam, an integral part of the region's heritage. The Village of South River relies on the South River as a pivotal water source for its municipal distribution system, drawing water from the channel on the east side of Tom Thomson Lane. Notably, this river's course takes it northward from the Village, where it crosses both Highway 124 and Highway 11, traversing the eastern expanse of the Township of Machar before passing beneath Thunderbridge Road.

Eagle Lake

Eagle Lake, situated within the boundaries of Machar Township, holds the distinction of being the primary source for the Distress River. With an extensive shoreline that spans over 44 kilometers, it proudly claims the title of the largest and most populated lake in the Township. For recreational enthusiasts, there's a public beach conveniently located near the lake's center, and a public boat launch facility can be found at its southern tip. Notably, Eagle Lake is home to four properties situated on islands within its waters, while the remaining cottages are reachable via a network of municipal and privately maintained roads. Key access routes to Eagle Lake include Eagle Lake Road and Machar Strong Boundary Road, with additional access provided by Riding Ranch Road and Scarlet Road, facilitating entry to the northern reaches of the lake.



Bray Lake

Bray Lake, ranking as the second-largest body of water in Machar Township, showcases an extensive shoreline that spans approximately 33 kilometers, covering an expansive area of roughly 340 hectares. Access to Bray Lake is facilitated through various routes,



including Hamilton Lake Road, which branches off Leighton Road, as well as Bray Lake Road and Brayshore Road, both accessible via Riding Ranch Road. Notably, properties along Brayshore Road are situated in remote areas of Machar Township, resulting in relatively longer response times for the fire department, requiring approximately a 20-kilometer drive from the fire hall, translating to approximately 30 minutes for emergency response.

For those in search of public access and a picturesque beach area, Bray Lake Road on the lake's southern edge offers a convenient destination. It's essential to highlight that water levels in Bray Lake are regulated through dam control, with Bray Lake Creek contributing to downstream flow into the South River beyond the Gimbal Chutes. This management ensures that activities on the lake have no adverse impact on spring flooding in the Leighton Road area.

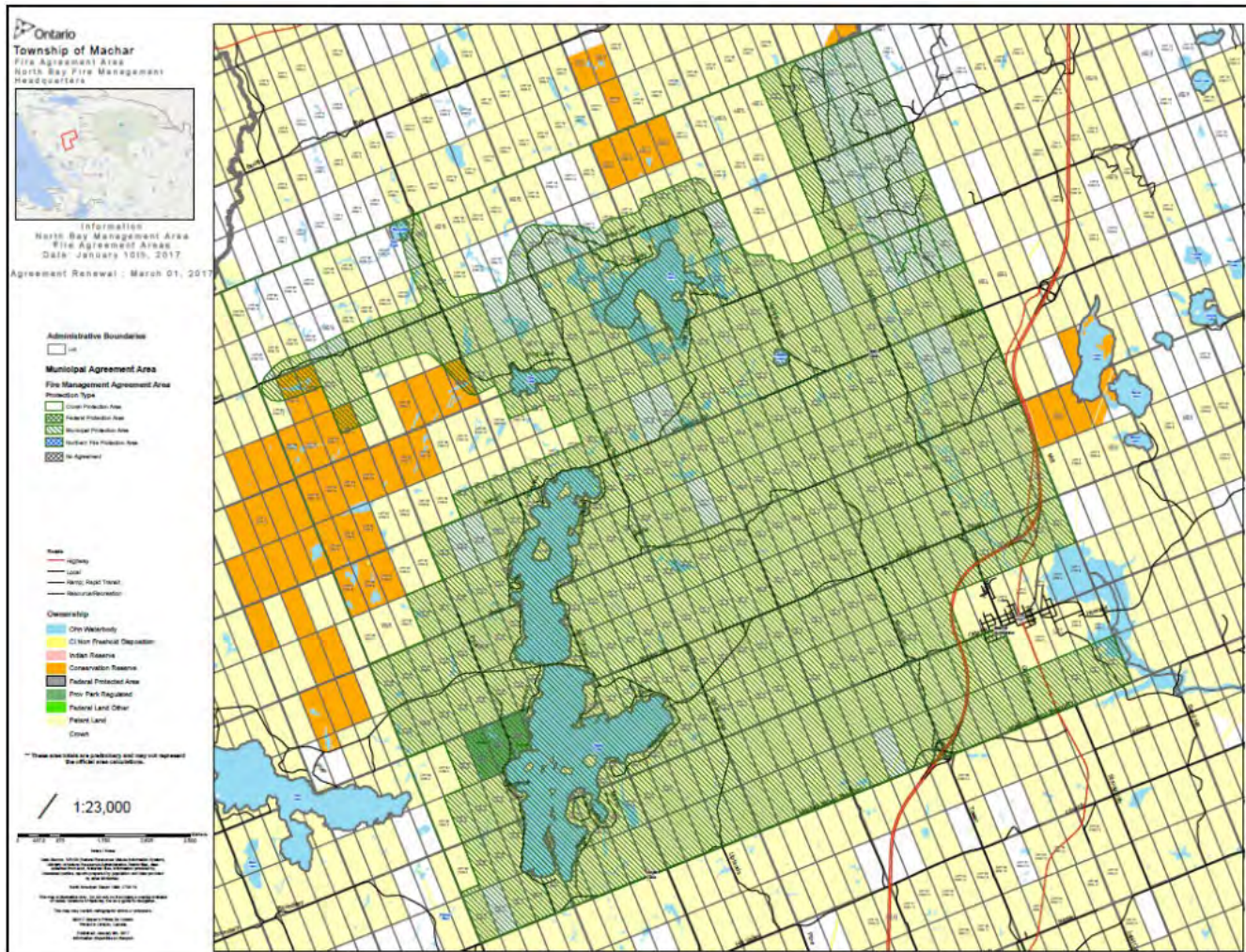
King Lake

King Lake, encompassing an area of approximately 29 hectares with a shoreline stretching 3.4 kilometers, stands as one of the smaller developed lakes within Machar Township. Situated to the north of Eagle Lake and to the west of Bray Lake, King Lake offers a serene escape. Notably, three seasonal properties on the lake can only be reached by water access. For those looking to enjoy its natural beauty, a public access point awaits at the north end of the lake, accessible via King Lake Road. Worth mentioning, this public access point lies approximately 15 kilometers away from the South River Machar Fire Department, providing important context for emergency response considerations.



Forest and Vacant Land

The Township of Machar encompasses vacant forested areas, predominantly featuring hardwood bush, along with some mixed and conifer forest sections in lower-lying regions. Agricultural fields are scarce within the township, and it

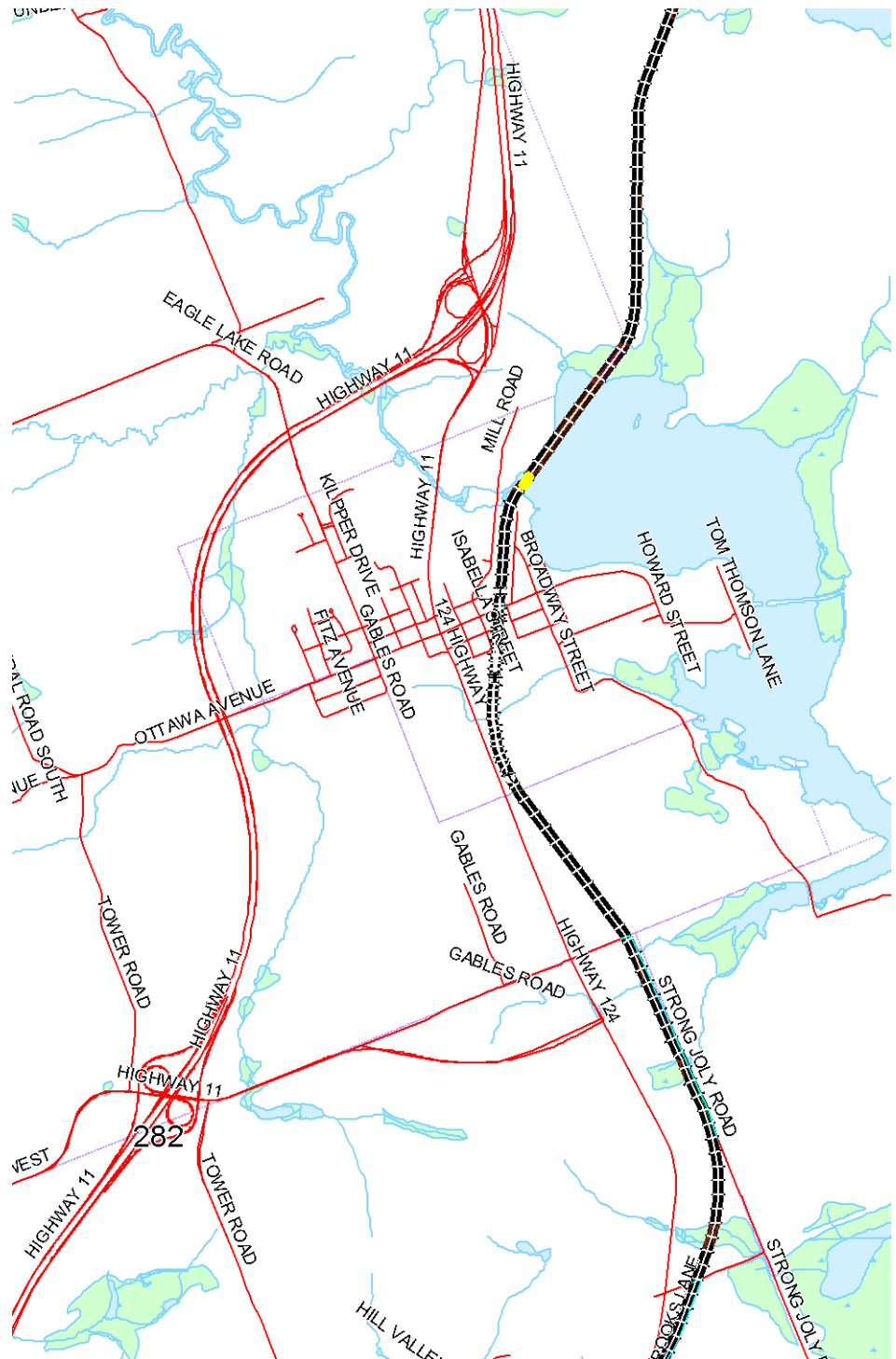


benefits from accessible surface water sources for firefighting needs across its expanse. Primarily privately owned, the township possesses a modest 2,092 hectares of crown land. Notably, the South River Machar Fire Department shoulders the responsibility of forest fire protection for a substantial portion, covering 14,197 hectares (highlighted in green on the map), while the Ministry of Natural Resources and Forestry oversees an additional 3,968 hectares of this landscape.

Transportation

CN Railway

Approximately 4 kilometers of CN Rail traverses the southeastern region of Machar Township, extending through the heart of the Village of South River. Notably, this railway passage intersects with the source water protection area near the South River Dam and continuing over a causeway before entering Laurier Township.



Within the Village of South River, there is one designated rail crossing, and any blockage of this crossing could potentially result in a significant delay of approximately 14 minutes for



emergency response efforts on the eastern side of the railway crossing. Additionally, a non-signaled rail crossing is present on Machar Strong Boundary Road, located in proximity to the source water protection area.

Presently, the CN rail tracks exclusively serve freight transportation purposes. However, it's worth noting that there are imminent plans for the Ontario Northland to reintroduce passenger rail services to the area in the near future. This development could



potentially bring significant changes and opportunities for both transportation and community connectivity in the region.

Highway 11

Highway 11 spans a distance of 7.5 kilometers within the Township of Machar, featuring two accessible on/off ramps at exits 282 and 289.

Additionally, the South River Machar Fire Department extends its coverage to encompass 8 kilometers of Highway 11 within Laurier Township, while also collaborating with the Sundridge Strong Fire Department to jointly respond to a stretch of 6.7 kilometers south of Machar Township. Notably, the majority of emergency responses along Highway 11 primarily involve single-vehicle accidents or collisions with wildlife. It's important to highlight that incidents resulting in injuries often stem from single-vehicle rollover accidents.



Highway 124

Highway 124 cuts through the heart of the Village of South River, traffic lights regulate the intersection at Ottawa Avenue and Highway 124. Extending its path further, the highway extends over 7.5 kilometers within the Township of Machar. Notably, there exists an automatic aid agreement between the South River Machar



Fire Department and the Sundridge Strong Fire Department, encompassing the entire 7.2-kilometer stretch of Highway 124 from Toronto Street in South River to Union Street in Sundridge . The posted speed limit for this roadway is set at 80 km/h. It's important to highlight that animal collisions and head-on collisions are

the predominant causes of injury-related accidents occurring along Highway 124 within these municipalities.

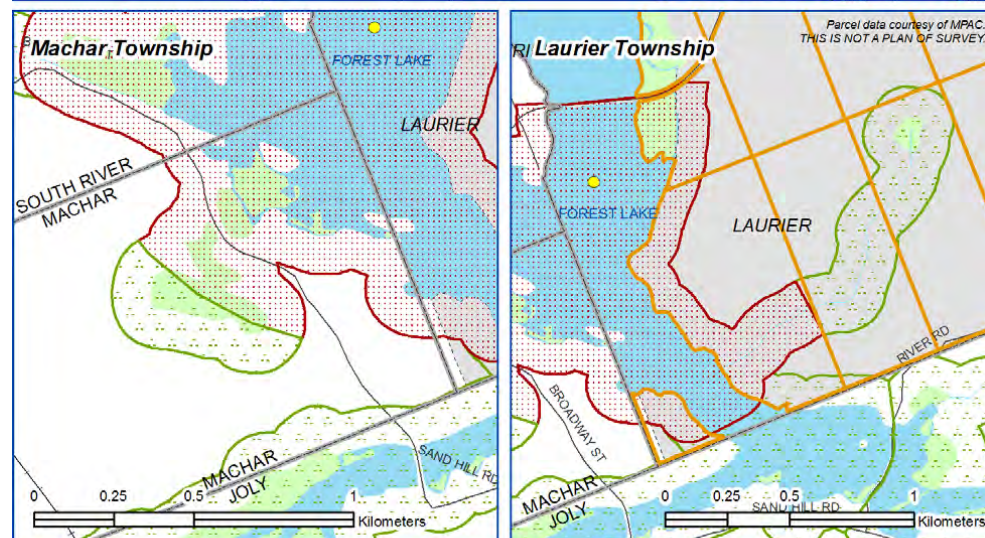
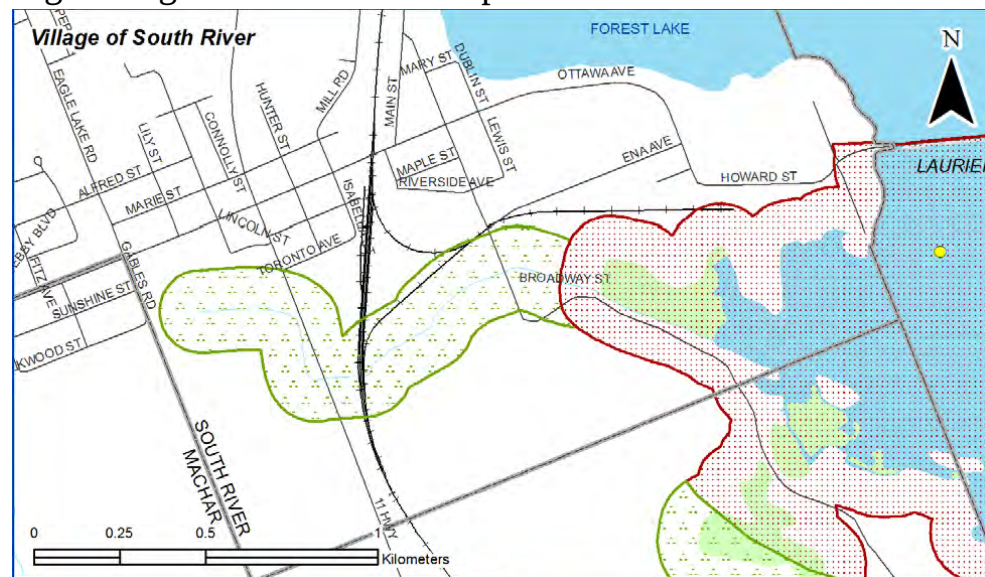
Municipal Roads

Within the Village of South River, a network of 32.2 kilometers of municipal roads that are maintained by the South River Public Works Department. Speed limits within the Village are 40 km/h. Notably, Ottawa Avenue serves as the primary thoroughfare, extending from east to west and concluding at Howard Street. Both Ottawa Avenue and Howard Street offer access to Chemical Road, which, in turn, leads to the Algonquin Park Kawawaymog (Round) Lake Access Point, situated 20 kilometers from the Village. Additionally, Chemical Road functions as a vital access route for the transportation of timber resources from logging operations located east of the Village.

In the Township of Machar, an extensive road network spanning 126 kilometers is overseen, with 8.5 kilometers being seasonally maintained. The highest posted speed limit within the township stands at 80 km/h. Eagle Lake Road and Machar Strong Boundary Road serve as the two principal east-west access routes, also providing key entry points into the unincorporated Lount Township. The Township of Machar Public Works Department bears the responsibility for road maintenance and snow removal operations throughout the Township.

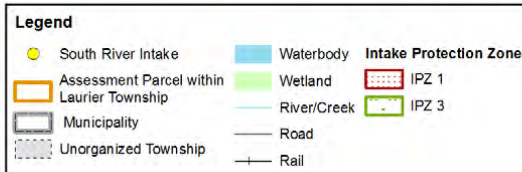
Key Findings

- CN Railway, Highway 124, Broadway Avenue, and Brennans Road all traverse the critical source water protection area that safeguards the drinking water intake for the Village of South River. This protection area is essential for ensuring the safety and quality of the Village's drinking water supply, in accordance with the Clean Water Act, which places significant emphasis on safeguarding water sources from potential contamination and hazards.



SCHEDULE A-5

South River Intake Protection Zones within the MUNICIPALITIES OF SOUTH RIVER & MACHAR/ UNORGANIZED TOWNSHIP OF LAURIER



- The Leighton Road area is susceptible to annual spring freshet-related flooding. This recurring issue impacts roughly 28 year-round properties, housing approximately 75 residents. The flooding not only poses challenges to these residents but also significantly hinders the delivery of essential services, including fire protection, as well as emergency responses from the Ontario Provincial Police (OPP) and Emergency Medical Services (EMS).



- The onset of spring freshet transforms several sections of the South River into swift water areas. Locations such as Chemical Bridge, Brennans Road Bridge, and the channel below the South River dam undergo this swift water transition during spring freshet, and during substantial rain events. Notably, it's



important to highlight that the South River Machar Fire Department (SRMFD) does not currently provide swift water rescue services, and such services are not available within the district.

- Properties situated to the north of Eagle Lake experience prolonged fire department response times during emergency situations, primarily due to their significant distance from the fire hall and the limited access provided by secondary roads. This delay in response times can have critical consequences, potentially resulting in increased property damage and heightened safety risks for residents in these areas.
- There exists only one railway crossing within the Village of South River. Should this crossing become compromised, the emergency service response times to properties situated east of the railway would experience a notable increase.

Part 3

Building Stock Profile



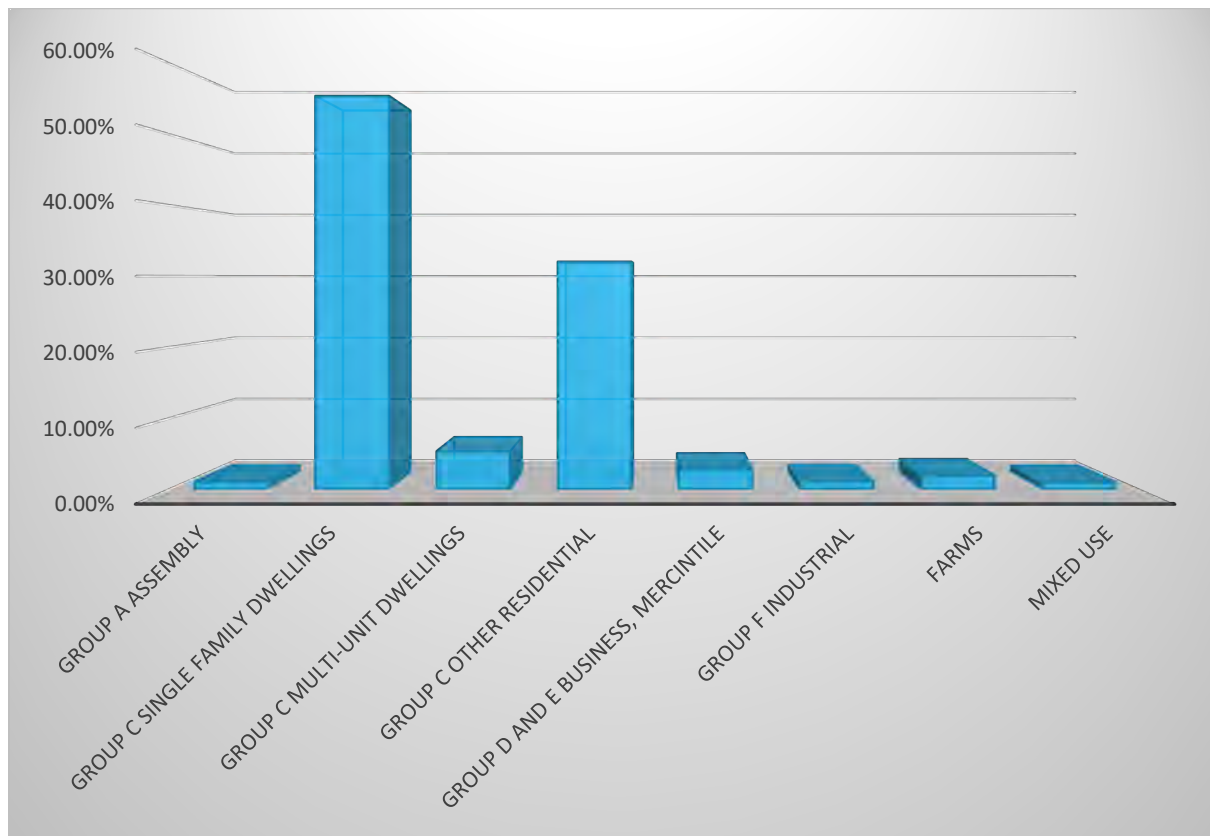
South River Machar Fire Department

Building Stock Profile

This profile evaluates the quantity of buildings, their ages, and their designated use categories, known as "major occupancy classifications" in the Ontario Building Code (OBC). Through this analysis, potential issues regarding building use, type, or community significance are identified. This data is essential for creating programs and initiatives aimed at mitigating associated risks to public safety, including concerns such as fire/explosion and structural failure.

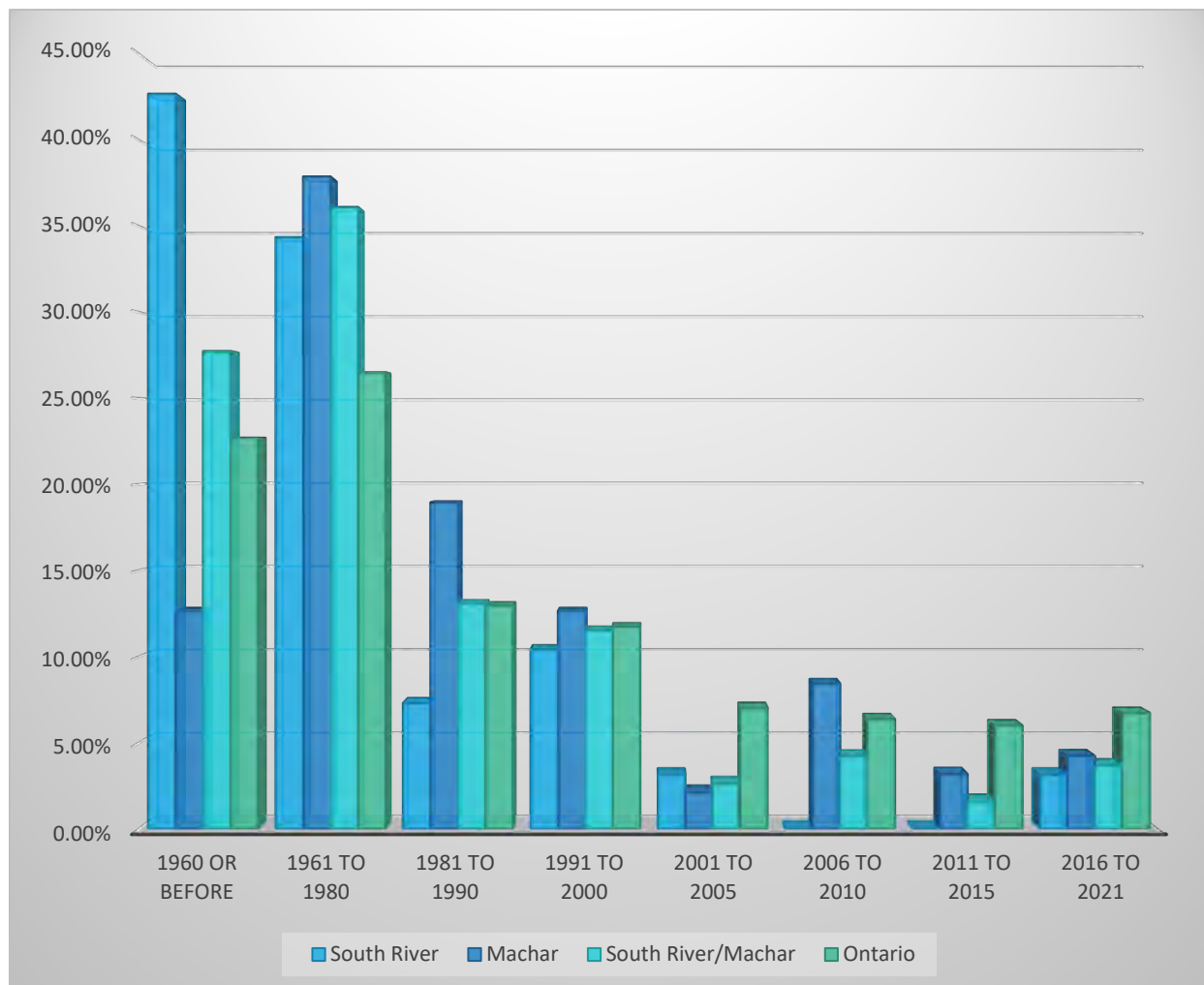
The following table shows a breakdown of the current building stock in the Village and the Township.

Occupancy Classification		Number of Occupancies
Group A	Assembly Occupancies	16
Group B	Care Occupancies	2
Group C	Single Family	869
Group C	Multi-Unit	80
Group C	Hotel/Motel	1
Group C	Mobile Homes	5
Group C	Other	502
Group D and E	Business & Mercantile Occupancies	44
Group F		17
All other buildings not classified by OBC, such as Farms		30
Totals		1566
Total # of mixed occupancy		15



Group C Residential buildings collectively make up 92.85 percent of the building stock in both the Village and the Township, with Single Family Dwellings constituting 55.5 percent of these structures. An additional 32 percent of the building stock falls under Group C other, mainly comprising seasonal properties.

The proportion of older single-family dwellings in the Village and the Township is notably higher compared to the provincial building stock profile. Specifically, 64 percent of the single-family dwellings were constructed before 1980, whereas the provincial figure is 53 percent. It is worth noting that Ontario introduced its first Ontario Building Code in 1975, implying that many current residential buildings in the Village and the Township were constructed prior to the implementation of the building code. As a result, older buildings often lack the fire safety systems and equipment mandated in newer constructions.



In the Village and the Township, about 5.3 percent of the buildings are classified as multi-residential. Due to having multiple self-contained dwelling units, these multi-residential buildings face an elevated risk of fire. The size and the number of residents in such structures can also present a significant challenge for fire suppression and rescue operations.



Industrial buildings are sparse within the Village and the Township. The potential loss of any of these structures to fire is likely to exert a significant impact on the local economy. The size and occupancy characteristics of industrial properties present a considerable challenge for fire suppression operations. Moreover, these buildings are often unoccupied for extended periods, leading to potential delays in detecting a fire.



Within the Village and the Township, there are 16 buildings hosting assembly occupancies. Typically larger in size, these structures may also stay unoccupied for extended periods, potentially allowing fires to escalate significantly before detection, thereby increasing the risks for firefighters combating the blaze. Many of these buildings hold significant emotional ties to the community.



Key Findings

- Thirty-two percent of the buildings in the Village and the Township are recreational properties. The utilization of these properties has seen a notable increase, with platforms like Airbnb contributing to the rise in their use, in addition to traditional cottage rentals.
- Forty-six percent of the residential buildings in the Village were constructed before 1960. Numerous two-story buildings utilize balloon frame construction.
- Due to their size, construction type, and occupancy classification, many industrial properties require significantly more water for fire suppression than what the municipal water distribution system typically provides. However, this gap was significantly reduced as a result of watermain upgrades in 2022 and 2023. Additionally, these properties necessitate extra fire suppression personnel to adequately combat fires and carry out rescues.
- Multi-residential buildings also strain the municipal water distribution system. Moreover, these buildings necessitate additional firefighters to conduct rescue operations during a fire due to their size, complexity, and the potential number of occupants during emergencies.

Section 4

Demographic Profile



South River Machar Fire Department

Demographic Profile

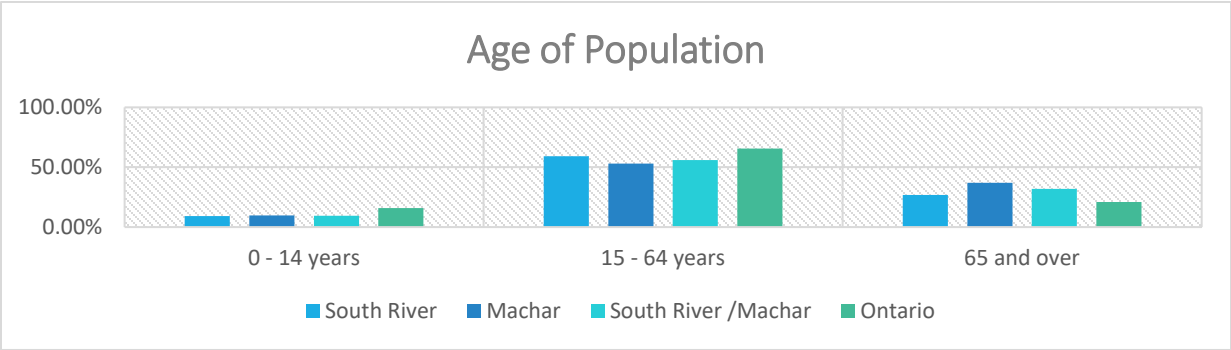
This profile provides an overview of the Village of South River and the Township of Machar, encompassing various demographic factors such as population size and distribution, age distribution, gender distribution, cultural background, level of education, socio-economic makeup, and transient population.

The data used for this profile was sourced from the 2021 census, providing the most up-to-date information available.

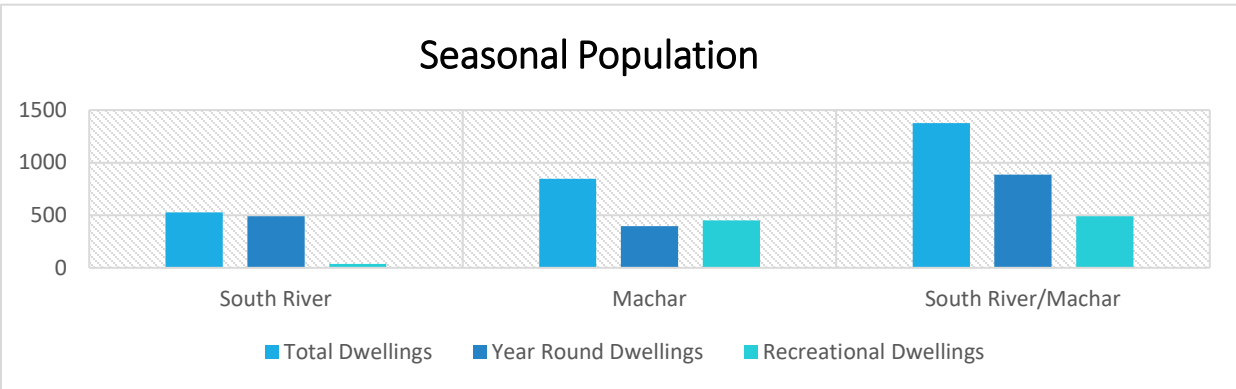
By analyzing this profile, the fire department can identify emerging trends in demographics, enabling them to prioritize and tailor fire protection services to meet the specific needs of the community. Understanding the demographic makeup of the area helps the fire department allocate resources efficiently and effectively, ensuring the safety and well-being of residents and visitors alike.

Population

As per the 2021 census report, the Village of South River has a population of 1,114, marking a decrease of 13 residents since the 2016 census. Conversely, the Township of Machar recorded a population of 969 in the 2021 census, reflecting an increase of 87 individuals compared to the 2016 data. The median age for the Village is 49.2, while for the Township, it stands at 59.6, surpassing the provincial median age of 41.6. The average household size for both the Village of South River and the Township of Machar is 2.2 persons per household.



According to the 2021 census report, the Village of South River boasts 510 residential dwellings, with 482 being occupied by permanent residents. Meanwhile, the Township of Machar features 875 residential dwellings, with 459 being inhabited by permanent residents. This indicates that approximately 32.1% of the residential structures in the municipalities primarily serve as recreational properties, contributing to an estimated population fluctuation of 976 people, signifying a potential increase of 47.1%. Additionally, Mikisew Provincial Park, hosting 259 campsites, and the Hockey Opportunity Camp, accommodating 240



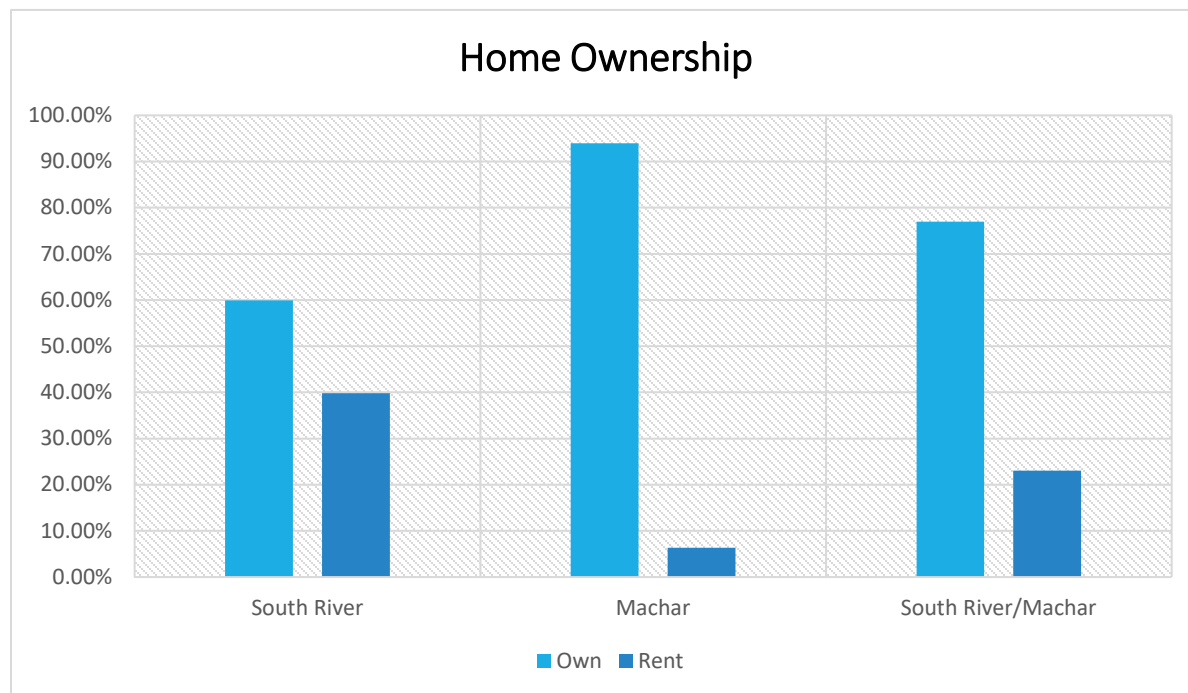
campers and 100 staff, contribute to an additional potential population increase of 840. In total, the estimated population fluctuation reaches 1885, marking a 91 percent increase in the population dynamics of the area.

Vulnerable Populations

At present, there are two group homes providing essential support for daily living to individuals with exceptional needs. Moreover, within the Village, three fourplexes are specifically designed for retirement living. Simultaneously, in the Township, there is a community comprising two triplex units and two duplex units, enhancing the range of housing options for residents.

Housing

South River Village stands out with a significantly higher percentage of rental properties, as 39.4% of residents are renting, in sharp contrast to the Township of Machar, where only 6.5% of residents opt for rental homes. The average monthly rental cost is \$865, marking a notable 9 percent increase from the 2016 census.



Income

The median household income in both the Village of South River and the Township of Machar is significantly lower than the provincial average. While the provincial median household income is \$91,000, the combined average household income for South River and Machar is \$65,600.

Cultural Background

English holds a dominant position in both the Village of South River and the Township of Machar. When formulating services, it is essential to take into account cultural factors, such as the rural characteristics of the local culture. The cultural activities, including work, recreation, and traditional practices, play a significant role in influencing the likelihood and severity of risks to public safety, emphasizing the need for effective fire protection services.

The fire service has noted a rising linguistic and cultural diversity within the tourist population, with a noticeable presence of urban visitors. This diversity highlights the crucial nature of adapting and improving fire protection services to meet the changing needs of the community. This involves considering the diverse backgrounds and activities of both residents and visitors.

Key Findings

- Population fluctuations can witness an increase of up to 91 percent during the peak summer tourism season.
- Since the 2016 census report, the overall population has increased by 3.76 percent, and during the same period, emergency service calls have seen an 18 percent rise from 2016 to 2023. The majority of the increased calls are related to medical first response.
- With the median age of residents being 12.8 years higher than the provincial median age, there is an expectation of a rise in medical first response calls. This situation also poses a significant challenge in recruiting firefighters.
- Consistently attracting firefighters will be challenging due to a restricted industry attracting younger families. The added mandatory certification for firefighters will compound this challenge, as any missed opportunities in recruiting potential firefighters will have a substantial impact.

Section 5

Economic Profile



South River Machar Fire Department

Economic Profile

This profile explores the economic pillars of the Village of South River and the Township of Machar. Assessing risks to public safety necessitates a thoughtful examination of the potential impact of losing these key economic drivers. The profile delves into various sectors, including Tourism, Industrial, Commercial/Retail, and Home and Small Business.

Tourism

Exploring tourism in South River and the Township of Machar not only offers visitors a tranquil retreat or an exciting adventure but also brings about substantial local economic benefits. The region's enchanting natural beauty, with its lush forests and pristine lakes, serves as a magnet for tourists seeking respite or adventure. As visitors immerse themselves in the scenic landscapes, they contribute to the local economy by patronizing businesses and community events. This symbiotic relationship between tourism and the community spirit not only enhances the overall visitor experience but also fosters economic growth and sustainability within South River and the Township of Machar.

Some of the identified tourism businesses in the area are listed below.

Hockey Opportunity Camp

Situated at 961 Park Road South on the south end of Eagle Lake, the Hockey Opportunity Camp in South River is a highly regarded facility offering a comprehensive and immersive hockey experience. With a well-established reputation, the camp draws in 240 enthusiastic participants each week, supported by a dedicated staff of 100 (maintaining a staff-to-camper ratio of 1 to 2.5). The expansive campus encompasses over 30 individual buildings, providing not only a hockey school but also a diverse array of traditional camp activities, including water skiing, a climbing wall, kayaking, and team sports. The camp's commitment to excellence ensures a holistic and enriching experience for all involved.



Algonquin Motel

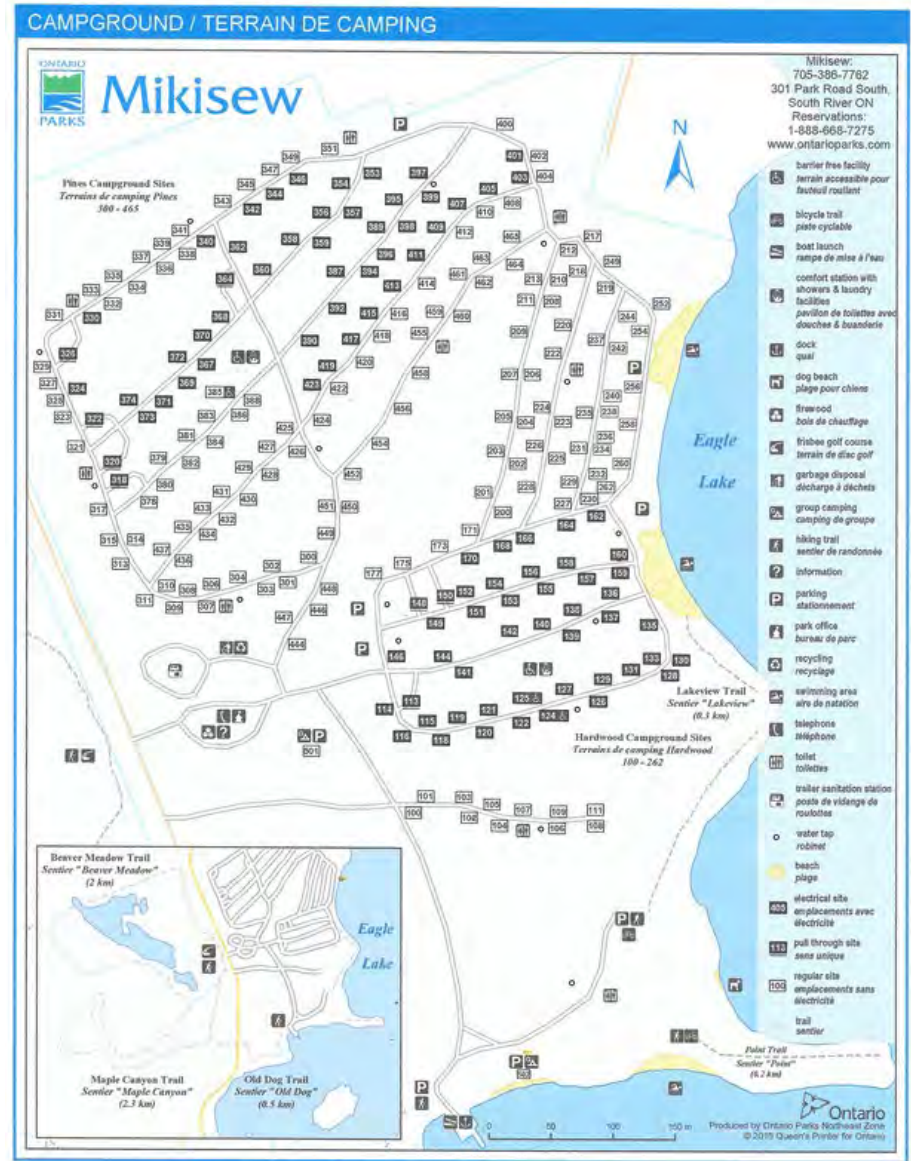
Situated at 11191 Highway 124, the Algonquin Motel comprises two buildings with a combined total of 14 units. The main building boasts an approximate size of 527 square meters, while the second building spans around 250 square meters. Particularly popular among snowmobilers during the winter months, the motel caters to the seasonal needs of outdoor enthusiasts. Additionally, the Algonquin Motel extends its offerings to include seasonal campsites for mobile homes, providing a diverse range of accommodation options to suit various preferences.



Mikisew Provincial Park

Nestled on the west shore of Eagle Lake at 301 Park Road South, Mikisew Provincial Park is a captivating natural retreat. Operating from mid-June to mid-October, the park transforms into a winter wonderland, drawing enthusiasts for activities like cross-country skiing and snowshoeing during the off-season. Spanning 130 hectares, Mikisew features 259 campsites, offering a serene escape for campers. Within its expanse, the park hosts two scenic beaches and

a convenient boat launch, providing opportunities for water-based recreation. Additionally, hiking trails grace the west side of Park Road, inviting visitors to explore the park's diverse landscapes and natural beauty.



Eagle Lake Golf Course

Eagle Lake Golf Course stands out with its distinctive 12-hole layout. Situated roughly 10 km west of South River along Eagle Lake Road, this golfing destination offers a unique experience. Open to the public, the course features a fully equipped pro shop and clubhouse, providing golf enthusiasts with all the amenities they need for an enjoyable day on the green.



Outdoor Adventures ATV

Outdoor Adventures ATV provides guided ATV experiences, with their main operations based at South River Air Park, specifically at 521 Airport Road in the Township of Joly. Additionally, they operate a seasonal storefront and rental office in the Village of South River, situated at 281 Highway 124. Their ATV experiences primarily entail traversing through the Township of Joly and the Unincorporated Townships of Laurier and Ballantyne.



Industry

The economic landscape in the Village of South River and the Township of Machar is characterized by limited industrial activity. The absence of a diverse industrial base means that any setbacks or losses experienced by the existing industries would carry substantial economic implications for the region.

Given the limited industrial presence, these local businesses play a crucial role in sustaining the economic vitality of the community. Their contributions extend beyond mere economic transactions; they are integral to the livelihoods of residents and the overall financial health of the area.

The Bear Chair

The Bear Chair is situated in a 3000 m² wood-framed facility at 19 Howard Street, South River. Specializing in the production of classic Muskoka/Adirondack Chairs, they offer them in a convenient ready-to-assemble format. With a workforce of up to 40 employees, the factory operates two shifts and produces approximately 450 chairs per day.



Swift Canoe

Swift Canoes and Kayaks are crafted in a 1400m² facility located at 14 Howard Street in South River. Within this space, the manufacturing process encompasses the creation of complete Kevlar and Carbon Fibre canoes and kayaks, manufactured by a staff of 38. Furthermore, Swift Canoe operates a retail and rental shop conveniently situated at the factory, offering customers a seamless experience from production to purchase or rental.



Moore Propane

The Moore Propane facility is situated at 291 Highway 124 in the Village of South River. It boasts a substantial infrastructure, including a 60,000 US gallon bulk storage tank and a 2000 US gallon dispensary tank. The facility operates with five fuel delivery trucks during the peak winter season. Additionally, there are two diesel fuel tanks located at the rear of the building: one containing 1000 gallons of dyed diesel and the other holding 500 gallons of clear diesel.



Moreover, Moore Propane manages a 500m² self-storage complex featuring 41 units. Access to these units is limited to normal business hours when staff are present. The office building, encompassing approximately 375m², serves as the administrative hub of the facility.

Almaguin Forest Products

Almaguin Forest Products, situated in South River, Ontario, specializes in manufacturing hardwood forest products, yielding around 4.5 million fbm per annum. Their offerings include hardwood lumber, sawmill residues, and a variety of logs. The mill operates with a team of 13 dedicated workers.



In early 2019, Almaguin Forest Products became a part of The Haliburton Forest Group. This move followed years of collaboration with the Micallef Family, culminating in the decision to assume ownership and management of this prosperous hardwood lumber enterprise. Notably, the facility underwent expansion in 2022 with the installation of a new resaw. Currently, Almaguin Forest Products boasts a production capacity of approximately 25,000 fbm per day of hardwood lumber.

Commercial and Retail

Restaurants

At present, the Village is home to four restaurants: Red Canoe, Sheri's Diner, Scops and More and Wong's Delight. Additionally, during the summer months, a chip truck operates within the Village of South River.

Automotive Services

There is a Shell fuel station situated at 314 Hwy 124 within the Village, as well as an independent fuel station located at 2370 Eagle Lake Road, adjacent to the Eagle Lake Narrows Country Store.

Within the Village of South River, two auto repair businesses and one small engine shop are in operation. Griffith Bros, located at 284 Hwy 124, specializes in general repair services for both passenger vehicles and commercial trucks, along with offering towing services, including heavy wrecker services. East End Auto, situated at 9 Ena Avenue, provides general automotive repairs for passenger vehicles and small engine repairs. Additionally, SJN Repairs, operating from 4 Lincoln Avenue, offers services for small engines and recreational vehicles.

In Machar Township, Bedards Towing operates a towing and salvage business located at 37 Industrial Road. Additionally, near Eagle Lake, there is a marina providing boat storage and maintenance services.

Retail

Freshmart, situated at 298 Highway 124, is the primary grocery store in the municipalities, boasting a size of approximately 660m². South River Kwik Way, located at 1 Montreal Avenue, serves as the sole convenience store in the Village.

Additionally, the Village accommodates one LCBO outlet, one Beer Store, and one wine making business, ensuring residents have access to various beverage options. For clothing needs, there is a single store located on Ottawa Avenue. Moreover, Eagle Lake Narrows features a convenience store with a gas bar, offering essential goods and fuel services to both residents and visitors.

Furthermore, a newly constructed pharmacy along Highway 124 enhances the accessibility of healthcare services for the community. These amenities collectively contribute to the convenience and well-being of the area's residents.

Services

In the Village, a credit union is located at 83 Ottawa Avenue, while Canada Post operates an outlet at 89 Ottawa Avenue. Adjacent to Canada Post, an insurance office operates within a residential/commercial building. Additionally, there is one surveying office within the Village.

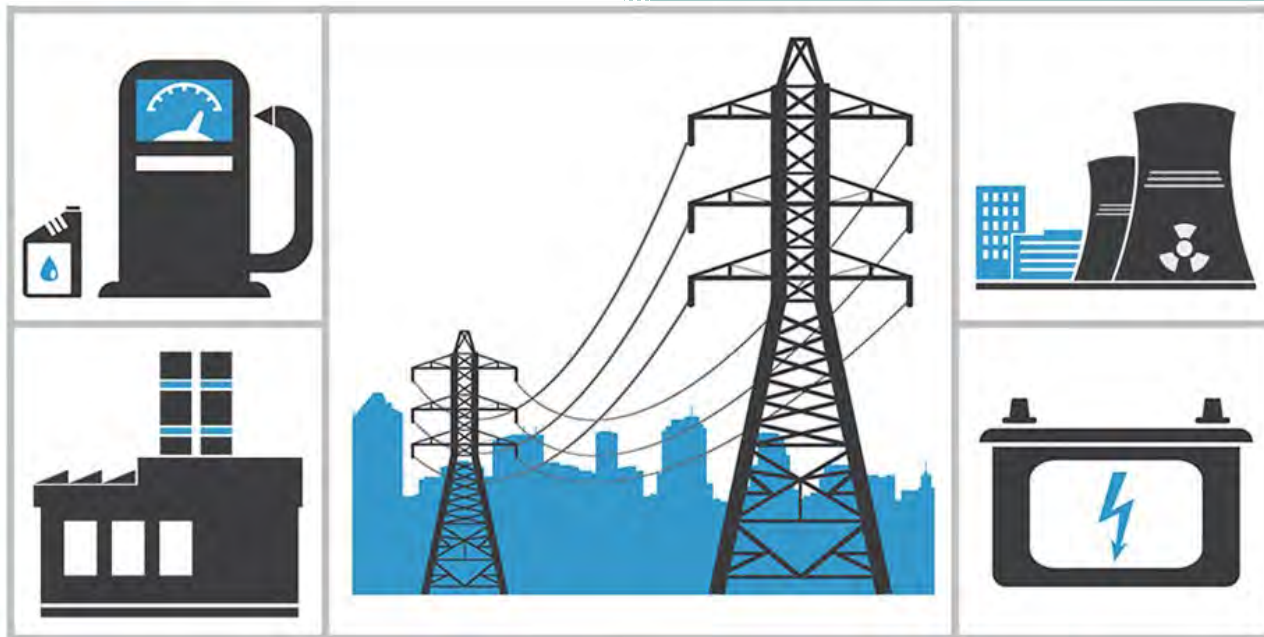
Moreover, a commercial business complex provides various services including a dental office, hairdresser, and office space for a tourist operator serving visitors to Algonquin Park.

Key Findings

- There are around 70 jobs within the manufacturing sector in the municipalities. Any loss of these jobs would have a substantial impact on the community.
- There is a scarcity of retail businesses in the municipalities, leading many residents to travel to North Bay for their retail shopping needs.
- Due to the limited number of businesses operating in the area, the loss of any business to fire would have a significant impact on the local economy.
- The fire suppression requirements for certain industrial properties could potentially overwhelm the fire suppression resources of the fire department.

Section 6

Critical Infrastructure Profile



South River Machar Fire Department

Critical Infrastructure Profile

Critical Infrastructure is characterized as interdependent, interactive networks encompassing institutions, services, systems, and processes crucial for meeting human needs, sustaining the economy, ensuring public health and safety, and upholding confidence in government functions. This profile delves into the capacities and constraints of critical infrastructure within the Village of South River and the Township of Machar, including electricity distribution, water distribution, telecommunications, fire station, municipal offices, and South River Public School. These facilities contribute to interconnected networks meeting essential human needs, sustaining the economy, and safeguarding public safety and security. The presence, availability, and capacity of this infrastructure can significantly impact dispatch, communications, suppression operations, healthcare, and transportation in the community, and may pose unique risk concerns. Considering critical infrastructure is crucial for setting priorities and devising strategies to address risk concerns, 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 situated at 148 Ottawa Avenue, positioned at the crossroads of Eagle Lake Road and Ottawa Avenue. Operating as a single station department, all fire suppression equipment, communication systems, and administrative resources are housed within the fire hall. The department boasts two radio communication repeaters – one situated on the Bell cellular tower, accessible through an easement off Roselawn Boulevard in the Village, and the second located on a Canadian Microwave tower at the north end of Park Road.



Although the fire hall itself lacks sprinkler systems, it is equipped with a monitored security alarm featuring fire detection monitoring. In the unfortunate event of the fire hall being compromised by fire or sustaining substantial damage, the Sundridge Strong Fire Department would step in to provide fire protection to the building. Since the fire hall is not staffed 24 hours a day, installing an automatic sprinkler system could significantly diminish the building's vulnerability to fire incidents.

Village of South River Municipal Office

The municipal office of the Village of South River is situated at 63 Marie Street, positioned at the intersection of Eagle Lake Road, approximately 100 meters from the South River Machar Fire Department. Beyond serving as the administrative hub for the Village, this building accommodates the Emergency Operations Center (EOC) for the Village. Additionally, the main level houses the South River Machar Public Library.



Within the building, office space is available for rent, with the basement hosting various offices, including a satellite office for Almaguin Highlands OPP. A monitored security system, inclusive of fire detection features, safeguards the premises.

Township of Machar Township Municipal Office

The municipal office of the Township of Machar is situated at 73 Municipal Road, roughly 4 km from the South River Machar Fire Department. Serving as the Primary Emergency Operations Center for the Township, the building is equipped with backup power. A monitored security alarm, inclusive of fire detection, adds an extra layer of protection. It's important to note that there is no on-site water source specifically designated for firefighting purposes.



South River Public School

Established on September 1, 1969, South River Public School, located at 139 Ottawa Avenue, is Type 2 construction and spans 1846 m² (2,406 ft²) in size. The current student enrollment stands at 180, supported by a staff of 22. The building is equipped with a single-stage fire alarm system and a monitored security alarm featuring fire detection capabilities.



To enhance fire safety, there are two fire hydrants serving the school. Both hydrants are connected to a 200mm water main, with one situated at the intersection of Lily Street and Ottawa Avenue, and the second located at the junction of Eagle Lake Road and Ottawa Avenue.

South River Water Treatment Plant

The commissioning of the South River Water Treatment Plant took place in May 2000 at 28 Howard Street. The facility, constructed as Type 2, spans approximately 550m². Specifically designed for full conventional treatment, the plant processes raw water sourced from the South River. Housing two Conventional Napier Reid package plants, the water treatment facility incorporates an in-ground clear well reservoir beneath it, boasting a usable storage capacity of around 1,536 m³. Continuous operation of high lift pumps at the treatment facility is essential to uphold water pressure throughout the water distribution system piping.



Raw water is extracted from a pumping station situated at the southern end of Tom Thomson Lane. This station, equipped with an alarm monitoring system, facilitates the initial water elevation.



An emergency backup power source at the treatment facility is provided by a diesel-powered generator. This generator is situated in a distinct structure east of the water treatment plant. All three structures are equipped with a security system that includes fire detection monitoring.



Utilities

Telecommunications

The Bell Network hub is situated at 8 Montreal Avenue, the hub is approximately 130 square meters. This building is located within a hydrant-protected zone, boasting two hydrants connected to a 150 mm water main. Additionally, Bell Mobility has two cellular towers within the

municipalities—one positioned between Johnson Drive and Roselawn Boulevard, and the second situated on a Canadian Microwave tower at the north end of Park Road in Machar Township.



Rogers network, on the other hand, has a tower off Tower Road in Strong Township, while the Bell Mobility Tower operates from the same location. Unfortunately, the telecommunications infrastructure has experienced challenges, including vandalism and prolonged power interruptions, on multiple occasions over the past five years.

Electricity

Situated on Mill Road in the Village of South River, there is an electric power generation station operated by the South River Power Generation Corporation. This station contributes power to the Hydro One grid; however, it does not supply power to the grid during instances when the main hydro feed to the Village is disrupted. Hydro One owns and maintains the transmission lines for the electrical grid in both the Village and the Township. The grid's feed originates from the north, passing through Chrest Drive to Leighton Road providing 3-phase power to both the Township and the Village.

Near 506 Eagle Lake Road, there are switches designed to isolate all 3 phases to the Township, while an additional set of switches near 63 Marie Street serves to isolate all 3 phases to the Village.

Natural Gas

The TransCanada pipeline traverses the southeast corner of Machar Township, situated west of the Village of South River. Along its route, the pipeline intersects with 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 linked to the station positioned at 418 Ottawa Avenue. Within the Village, there are two post regulator station, one situated at Gables Road and Ottawa Avenue, and the other located at Lincoln Avenue and Ottawa Avenue.



Key Findings

- Automatic fire sprinkler systems are not installed in any of the critical infrastructure buildings outlined in this profile. Nevertheless, the majority of these buildings are equipped with security alarms that incorporate fire detection monitoring.
- The majority of the critical infrastructure buildings outlined in this profile possess sufficient water supply for firefighting purposes, either through the Village's municipal water distribution system or via water shuttle utilizing the fire department's resources, including automatic aid resources.
- Telecommunications in the area are susceptible to vandalism and prolonged power outages. This vulnerability can compromise the public's ability to contact emergency services for extended periods. Consequently, the fire department becomes the primary point of contact for all emergency services in such situations.
- When the clear well reservoir at the water treatment plant reaches full capacity and no additional water is flowing, it would only be able to sustain a supply for 4.5 hours at a flow rate of 1500 gallons per minute (with the usage of 1 master stream device and 1 ground monitor).

Section 7

Emergency Response Profile



South River Machar Fire Department

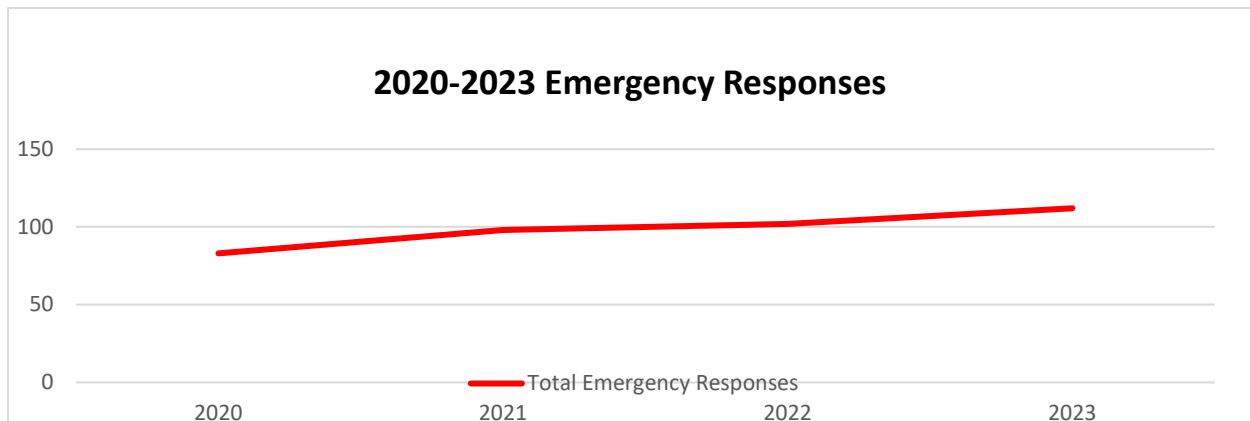
Emergency Response Profile

This profile delves into the South River Machar Fire Department's past emergency response experiences, encompassing various aspects:

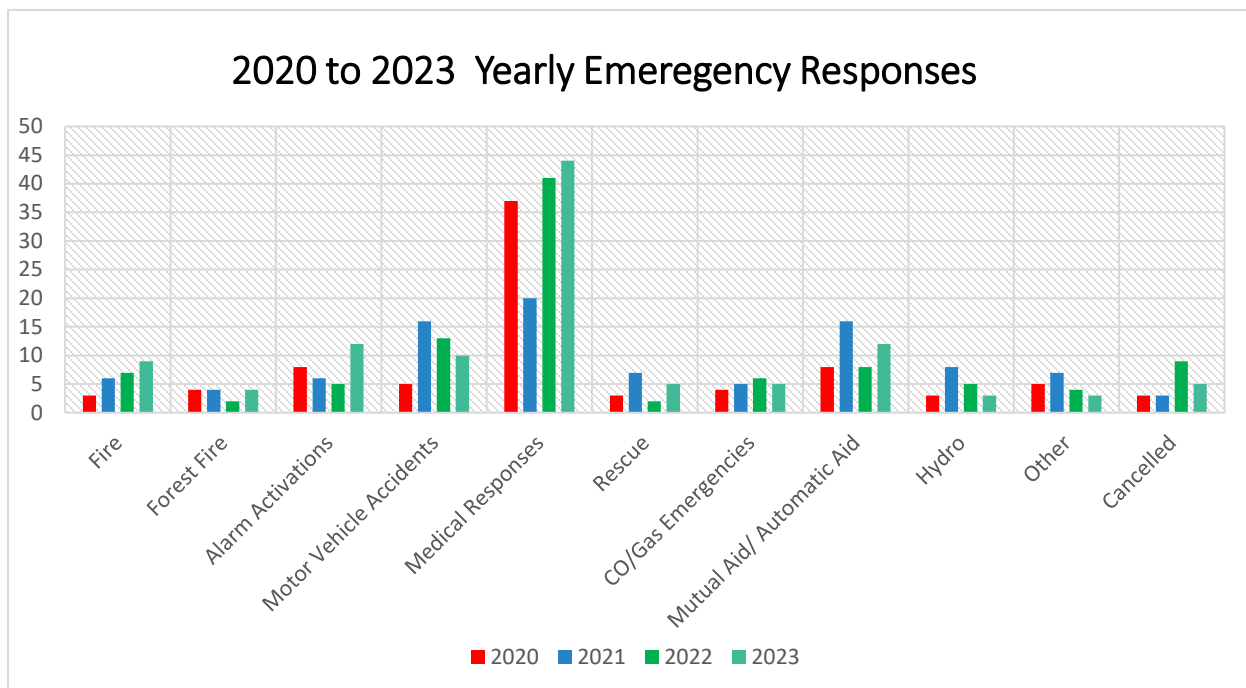
1. Examination of the number and types of emergency responses, injuries, deaths, and dollar losses.
2. Analysis of response times for the fire department to emergencies.
3. Evaluation of the fire department's responses to specific emergency situations.
4. Identification of potential trends in emergency responses.

By scrutinizing past emergency responses, informed decisions can be made regarding the delivery and prioritization of fire protection services, ensuring the safety and well-being of the community.

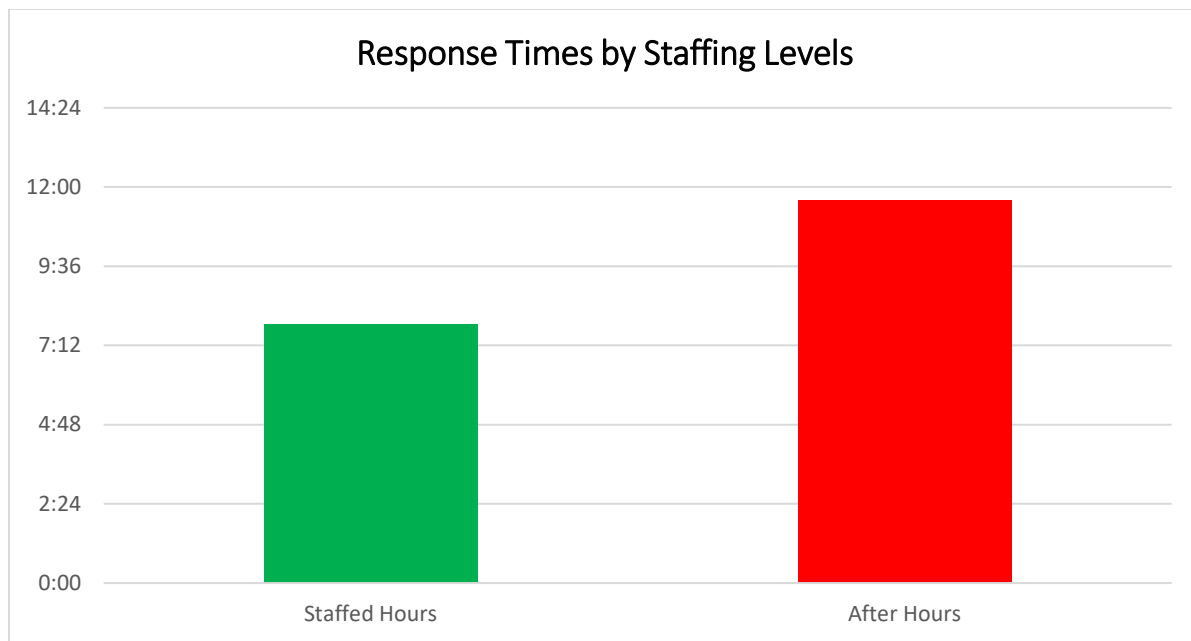
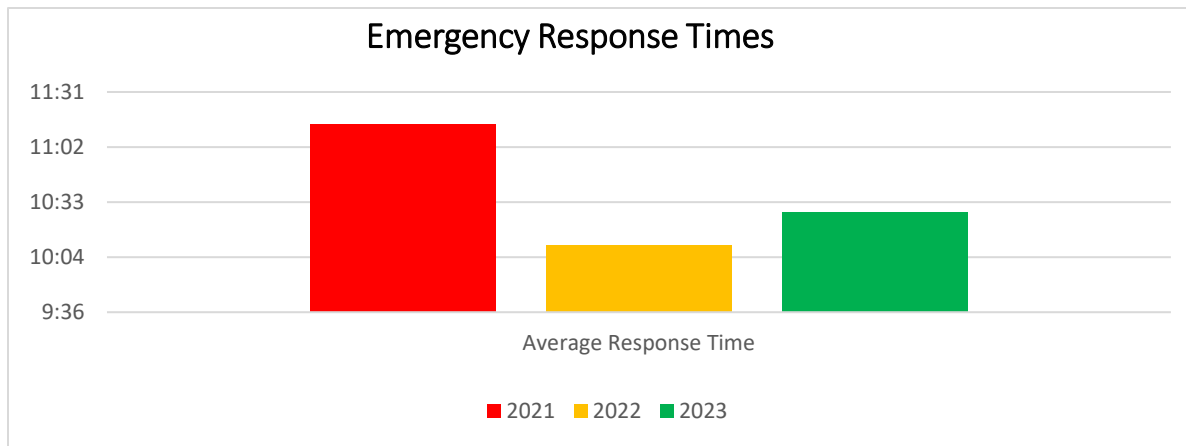
From 2020 to 2023, the South River Machar Fire Department exhibited a discernible trend in emergency responses. Over this four-year span, the fire department addressed a total of 395 emergency calls for service, with an average of approximately 98.75 calls per year. Notably, there was a minor decline in the number of emergency responses in 2019. However, subsequent years have shown a consistent and significant increase in the number of emergency responses. This pattern is anticipated to persist in the foreseeable future, characterized by a consistent increase in emergency responses since 2020.



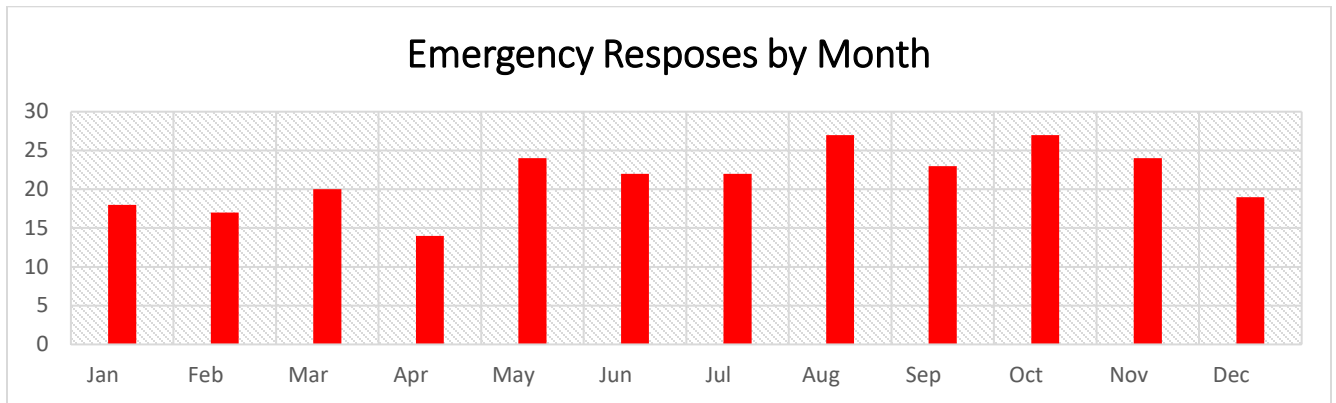
The following charts illustrates the breakdown of emergency responses on a yearly basis from 2020-2023.



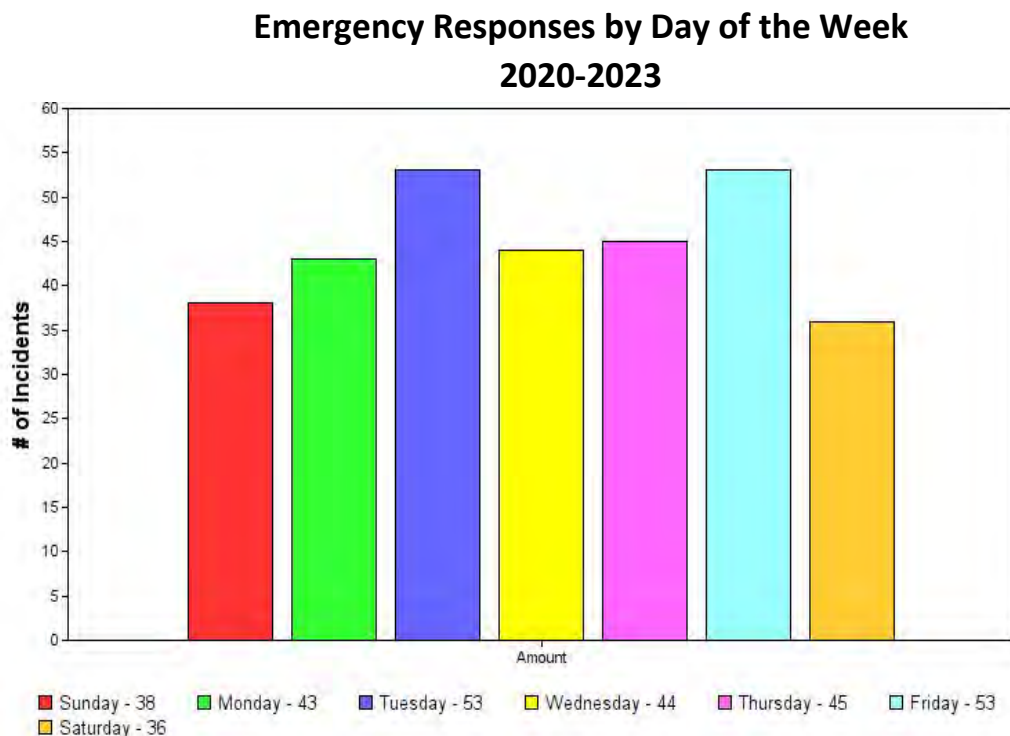
The average response time from 2021 to 2023 was 10 minutes and 10 seconds, with an average initial personnel count of 4.6 and an average total personnel count of 7.89. During regular weekday hours (Monday to Friday, 8 am to 4:30 pm), the average response time was 8 minutes and 38 seconds. Notably, 38.5 percent of all emergency calls occurred within the hours when the fire hall is currently staffed. Extending the coverage hours until 6:00 pm would have captured 45.3 percent of all emergency responses from 7:30 am to 6:00 pm.



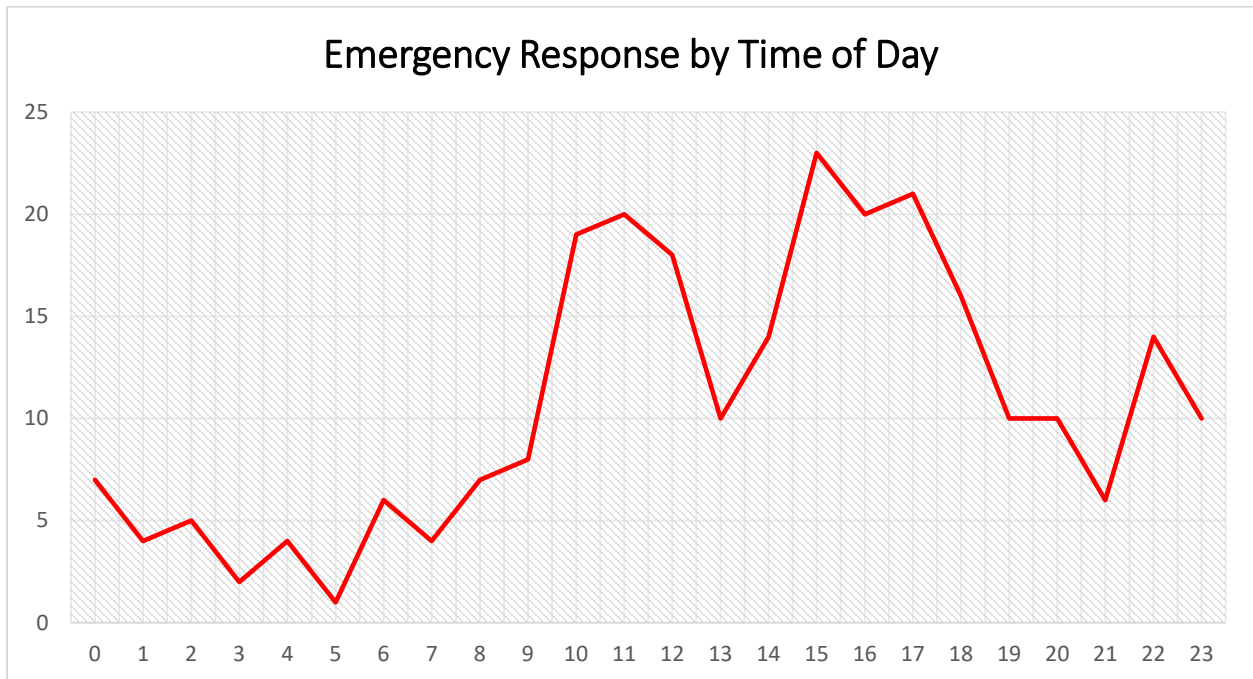
The following chart illustrates the South River Machar Fire Department's responses to emergencies over a three-year period. The month of April consistently shows the fewest emergency responses by the fire department, attributed to the changing seasons. In contrast, August emerges as the busiest month for emergency responses. The lower call volume observed from December to April is likely associated with reduced tourism during these months.



The chart below illustrates emergency response patterns throughout the week over the past four years. According to the data presented, the majority of emergency responses occur on weekdays, with Tuesday and Friday registering the highest number of incidents.



The following chart depicts emergency responses categorized by time of day. Drawing from the average emergency responses over the three years, it is noted that 40 percent of the emergency calls for service transpire between the hours of 8 am and 4:30 pm. Among these, 3 pm represents the peak time for calls for service, while 5 am stands as the period with the fewest calls for service.



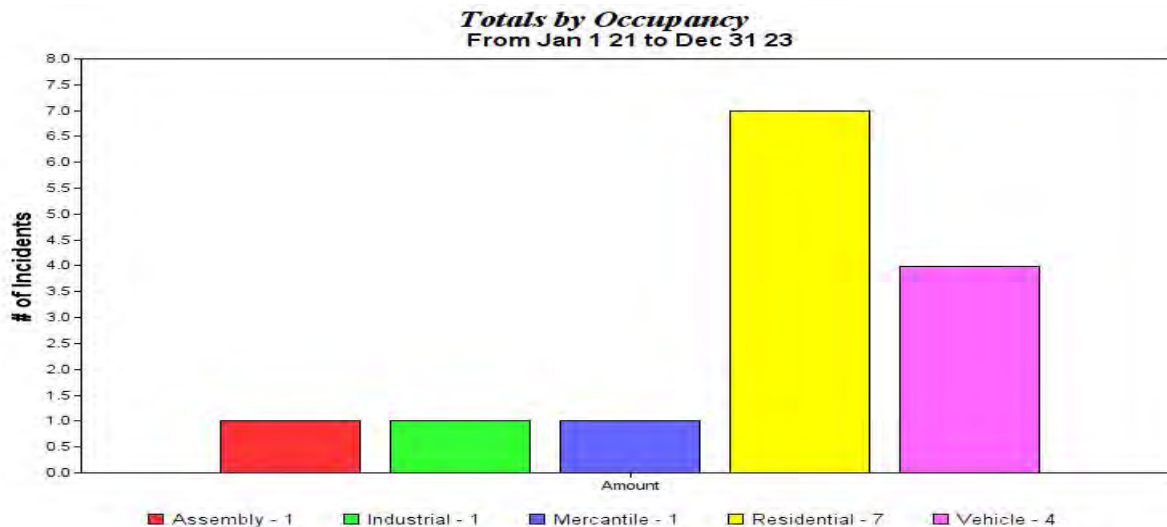
Fire Responses

Fire responses to structures and vehicles comprised 3.5 percent of the fire department's overall emergency interventions, while responses to alarm activations represented an additional 6 percent of the total emergency calls. Over the span of four years, the estimated property losses for fire incidents in the Village of South River and the Township of Machar totaled \$213,000. Conversely, a substantial amount of \$1,549,250 was saved during the period from 2020 to 2023, with an average reported dollar loss of \$16,384.62 for 13 incidents and an average reported dollar saved of \$221,321.43 for 7 incidents.

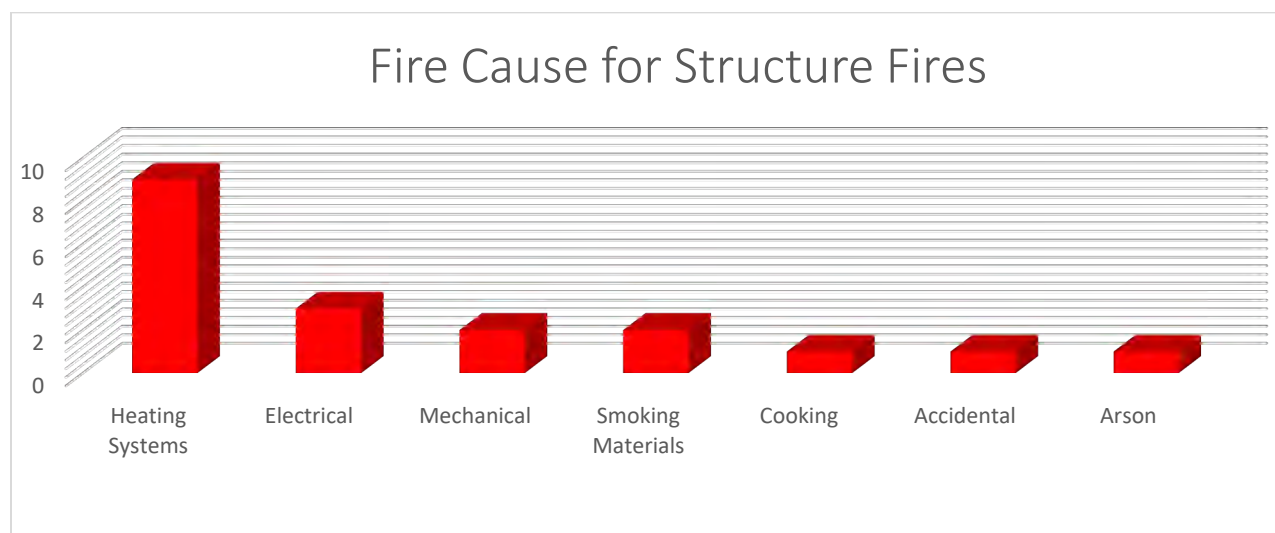


The South River Machar Fire Department achieved an average response time of 8 minutes and 22 seconds for fire-related calls during the same period. This calculation spans from the moment a call is received to the arrival of the first fire apparatus on the scene. Furthermore, the average chute time for structure fires from 2020 to 2023 was 3 minutes and 43 seconds, demonstrating the department's efficiency and commitment to rapid response.

From 2020 to 2023, single-family dwellings comprised a significant portion of the fire department's responses, accounting for 50 percent of their total fire-related incidents. Vehicle fires constituted 28.5 percent of the department's responses during this same period.



The South River Machar Fire Department conducts investigations into all fires occurring within the Village of South River and the Township of Machar. When necessary, OFM Fire Investigators assist in determining the origin and cause of fires. This collaborative process aids in identifying trends related to fire safety issues. Specifically, heating systems—encompassing chimney fires and primary heat sources for buildings—along with fires caused by mishandled smoking materials collectively account for the majority fire losses involving buildings.

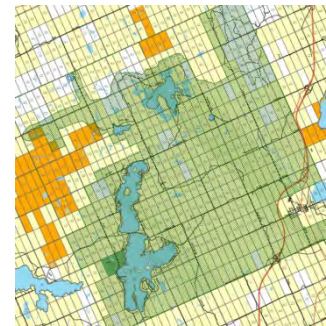


Alarm Activations

The South River Machar Fire Department responded to 4 Alarm Activations between 2020 and 2023, achieving an average response time of 8 minutes and 53 seconds. Currently, the Establishing Regulating By-Law for the fire department does not incorporate a service fee for false alarms. The total personnel hours spent addressing alarm activations summed up to 25 hours and 47 minutes.

Forest Fire

Over the past 4 years, forest fires constituted 2.5 percent of the emergency responses. Presently, the South River Machar Fire Department is tasked with forest fire responses in the shaded green areas of the Township of Machar, while the Ministry of Natural Resources and Forestry handles the rest of the Township. Most of the fires the fire department has attended to in the last 5 years have been contained within an area size of 0.1 hectares.



Motor Vehicle Accident Responses

From 2020 to 2023, motor vehicle accidents constituted 9.87 percent of the fire department's emergency responses. The average response time to such incidents was 9 minutes and 13 seconds. Typically, an initial team of 6.97 firefighters responded, with the total number of firefighters involved averaging 9.82. The cumulative personnel hours dedicated to handling these motor vehicle accidents amounted to 480 hours and 53 minutes. Out of the incidents, 23 were single-vehicle accidents, 8 involved multiple vehicles, 7 implicated large commercial vehicles (transports), and 1 involved a construction vehicle.



Medical First Response

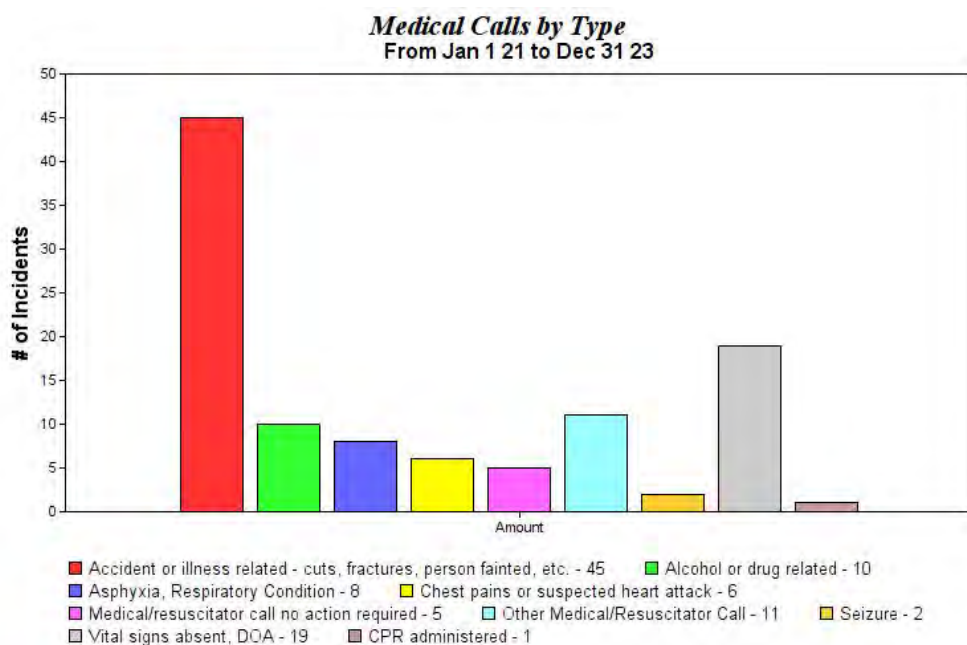
South River Machar Fire Department collaborates with Parry Sound EMS for a tiered response, addressing specific medical emergencies in the Village of South River and the Township of Machar.

- All cardiac arrest (VSA)
- All unconscious patients
- All medical emergencies at South River Public School
- All allergic reactions
- All industrial accidents

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)

The table below illustrates the medical emergencies attended to by the fire department between 2020 and 2023. The average response time for medical first response calls during this period was 7 minutes and 19 seconds. On average, 3.47 initial firefighters responded to medical calls. Medical first response calls accounted for a total of 441 hours and 54 minutes in personnel hours.



Rescue

While Rescue calls make up only 3.29 percent of the fire department's emergency responses, they play a crucial role in life protection. Remote rescue and water rescue calls constitute the majority of the rescues the fire department is summoned to.



Between 2020 and 2023, the fire department successfully carried out 13 rescues, totaling 232 hours and 12 minutes in personnel hours.

Carbon Monoxide and Gas Emergencies

Between 2020 and 2023, the South River Machar Fire Department attended 16 Carbon Monoxide or Gas Emergencies. The total personnel hours dedicated to these emergencies amounted to 83 hours and 5 minutes. The average response time for these incidents was 7 minutes and 57 seconds. In 27 percent of the calls, either gas or carbon monoxide was detected.

Hydro Line Emergencies

Hydro line emergencies accounted for approximately 4 percent of all emergency responses that the fire department attended to between 2020 and 2023. The total personnel hours dedicated to these emergencies amounted to 77 hours and 29 minutes.



Other Emergencies

Emergencies not specified encompass hazardous materials responses, storm-related incidents, missing persons, and other perceived emergencies. The total personnel hours devoted to these all-hazards responses amounted to 59 hours and 3 minutes. This category of all-hazards responses represented 3.9 percent of the emergency responses over the three years covered in this profile.

Key Findings

- The existing Establishing and Regulating By-Law for the fire department, Appendix B "Core Services," addresses the calls for service that the fire department responded to from 2020 to 2023.
- There has been a consistent increase in 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.
- Maintaining weekday normal business hour staffing levels should remain a priority to ensure sufficient staffing for emergency responses during the time frame with the highest number of calls for service. Extending staffed hours until 18:00 would address 50 percent of the emergency calls for service.
- While heating appliances and improperly disposed smoking materials contribute to the majority of fire responses for the South River Machar Fire Department, it is essential to monitor provincial trends to establish fire safety priorities, considering the relatively small database for the Village and the Township.

Section 8

Public Safety Response Profile



South River Machar Fire Department

Public Safety Response Profile

This profile provides an overview of the types of incidents responded to by all first response agencies, including public safety response agencies such as fire, police, ambulance, and rescue. These agencies may be tasked with or able to assist in emergency response efforts or addressing the impact of emergencies.

The profile aims to facilitate an understanding of incident-related data. By analyzing data from these public safety response entities, it becomes possible to develop an understanding of the potential interdependencies of the fire service and the mutual benefits of tiered or joint response in addressing risks to public safety. This description and analysis may help identify opportunities to further explore risk treatment based on shared responsibilities among different response agencies.

South River Machar Fire Department

The South River Machar Fire Department is responsible for providing fire protection services to both the Village of South River and the Township of Machar. The department operates under an Establishing Regulating By-Law that dictates the level of service it provides. The core services offered by the fire department include:



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

The fire department operates from a single fire station situated at 148 Ottawa Avenue in the Village of South River. Its fleet comprises 2 pumper apparatus, 1 tanker, 1 light rescue unit, 1 heavy rescue unit, and 1 UTV. The 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

Since 2012, the South River Machar Fire Department has maintained an automatic aid agreement with the Sundridge Strong Fire Department. Situated at 146 Ontario Street (Hwy 124), the Sundridge Strong Fire Department is located 8.5 km from the South River Machar Fire Department. Under this agreement, the Sundridge Strong Fire Department commits to providing assistance to the South River Machar Fire Department with three fire apparatus and up to ten firefighters.

The agreement encompasses all structure fires within each department's respective area of jurisdiction on a reciprocal basis. Over the years, this agreement has proven to be an invaluable tool for the delivery of Fire Protection Services to all of the Municipalities.

Mutual Aid

The fire department actively participates in the Mutual Aid Plan within the Nipissing East Parry Sound District. Mutual Aid, as defined in the current Mutual Aid Plan, is a program aimed at;

- 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 Rescue (HUSAR) and Hazmat teams are available for significant events through the Mutual Aid Plan.

Parry Sound EMS

The Town of Parry Sound serves as the designated delivery agent for ambulance services within the District of Parry Sound. These services are contracted to the West Parry Sound Health Centre, which administers the Parry Sound District Paramedic Service.

The Parry Sound EMS District Paramedic Service operates one base in South River, located at 11313 Highway 124. This base is staffed 24/7 with one ambulance crew and features an approved night landing helipad. Additionally, there are two other bases along the Highway 11 corridor: one in Powassan, situated at 14 King Street, approximately 30 km north of South River, and one in Burks Falls, located at 105 Main Street, about 28 km south of South River. Both of these bases are also staffed 24/7 with one crew.



The Parry Sound EMS District Paramedic Service is staffed with approximately 85 primary care paramedics. Moreover, the service operates two emergency support trailers for mass casualty incidents, strategically located on the west and east sides of the district.

Furthermore, the service runs a Community Paramedic (CP) Program, comprising 2 CP Clinicians and 1 CP Coordinator who work out of South River and Powassan. They can respond to 911 calls as a First Response Unit from 0700 to 1900 hrs, 7 days a week.

The Manager and one Superintendent of the Parry Sound District Paramedic Service also work out of the South River base and are available to respond, as required, to significant events throughout the District of Parry Sound.

Ontario Provincial Police

The Almaguin Highlands OPP Detachment operates with a 24-hour staffing model, employing 28 uniform members across 4 platoons. Additionally, they are supported by several staff members, including 2 Special Constables within the Court Services Team.



The uniform members comprise 3 Criminal Investigators, a Community Street Crime Officer, and a Community Services/Media Relations Officer, alongside a range of specialty-trained personnel. These include Drug Recognition Experts, Breath Technicians, Scenes of Crime Officers, and ATV/MSV operators.

The detachment is equipped to respond to marine, off-road, and remote access calls for service in any season. Moreover, they have access to a diverse range of specialized services within the OPP, such as the Emergency Response Team, the Tactics and Rescue Unit, the Canine Unit, Forensic Identification Officers, and Digital Forensic experts.

Ministry of Natural Resources and Forestry

The North Bay Fire Management Headquarters, situated at 40 Voodoo Crescent in North Bay, serves as the central hub for overseeing forest fire operations in the Parry Sound District. Under a fire protection agreement, the Ministry of Natural Resources and Forestry (MNRF) is responsible for primary forest fire response to 3,968 hectares of the Township of Machar.



Throughout the fire season, which typically spans from early April to mid-October, North Bay Fire Management typically staffs with 7 crews of 4 firefighters each. Additionally, air resources such as water bombers and helicopters are strategically relocated throughout the province as needed, and may occasionally be staged in North Bay to support firefighting efforts.

9-1-1 Public Emergency Reporting Service

OPP Communications serves as the Primary Public Safety Answering Point (PSAP) for the Village of South River and the Township of Machar within the 911 system. Presently, the fire department functions as a secondary PSAP, operating its own standalone dispatch for fire

department emergency dispatching. However, the fire department is undergoing substantial enhancements to its call-taking and dispatching capabilities to meet the requirements for the transition to Next Generation 911 (NG 911).



In addition, the North Bay Central Ambulance Communication Center, located on Ferris Drive in North Bay, is responsible for ambulance dispatching services for the South River area.

Canadian Forces Search and Rescue

Coordinated through the Joint Rescue Coordination Centre Trenton, Canadian Forces Search and Rescue Technicians (SAR Techs) stationed at 424 Squadron, based at 8 Wing Trenton, play a critical role in responding to emergencies. Operating a CH-146 Griffon helicopter and a CC-130H Hercules, the squadron covers the vast Trenton Search and Rescue Region (SRR), stretching from Quebec to the British Columbia/Alberta border, and from the Canada/United States border to the North Pole.



The CC-130H Hercules is instrumental in supporting SAR operations, while the CH-146 Griffon specializes in rescues and medical evacuations from challenging terrains, be it on land or over water. With Search and Rescue Technicians onboard, these aircraft provide vital care to individuals in need during missions.

Additionally, 424 Squadron SAR Techs promptly respond to incidents mandated under federal SAR regulations, including aircraft and marine incidents within federal waters. Furthermore, they offer their assistance to humanitarian missions and other SAR organizations whenever feasible, showcasing their commitment to saving lives and ensuring public safety.

Key Findings

- The South River Machar Fire Department stands as the sole emergency service directly governed by the Municipalities. It operates as the only emergency service entirely funded by the Municipalities, demonstrating its status as a 100% municipally funded entity.
- EMS staffs one crew at the South River Station. However, when this crew is deployed to an emergency or stands by to cover another area, there is an approximate 20-minute delay in responding to emergencies within the municipalities. Analysis of emergency calls from 2021 to 2023 reveals that the Fire Department arrived ahead of EMS in 48 percent of cases, encompassing instances when EMS is staffed at the South River base.

- The existing automatic aid agreement enables the fire department to sustain its present level of fire suppression capabilities. Should a significant event surpass the capacity of the fire department, Mutual Aid support stands as an available recourse, which can be requested to bolster emergency response efforts.
- According to the existing agreement with the MNRF, the South River Machar Fire Department bears the primary responsibility for forest fire suppression within the Township. Additionally, there have been instances where our department has been deployed to aid MNRF crews beyond our municipal boundaries.
- Presently, the fire department maintains a strong collaborative partnership with all allied agencies. This cohesive relationship facilitates an effective and efficient response to emergencies, ensuring cost-effective measures are implemented across all agencies involved.

Section 9

Community Services Profile



South River Machar Fire Department

Community Service Profile

This profile delineates the services provided by diverse community entities and their respective capacities. Special attention is given to how these community service groups can enhance emergency preparedness and offer support to the community during crises. Furthermore, these services have the potential to mitigate risks to public safety by facilitating the dissemination of public education and prevention programs.

North Bay Parry Sound District Health Unit

The North Bay Parry Sound District Health Unit extends its services to a population exceeding 120,000 residents, encompassing the majority of Nipissing District and the entirety of Parry Sound District. Within its catchment area, the health unit oversees 31 municipalities, four unorganized areas, and nine First Nation reserves. The unit's comprehensive programs aim to promote healthy lifestyles by addressing nutrition, active living, reproductive, sexual, and dental health, along with child development initiatives. Additionally, the health unit actively works to safeguard communities from infectious diseases and environmental hazards related to food, water, air, and soil. Furthermore, it plays a pivotal role in preparing for, responding to, and supporting recovery from major emergencies, contributing to the overall well-being and resilience of the diverse communities it serves.

Parry Sound Community Paramedicine

The Parry Sound EMS Community Paramedicine program stands as a distinctive branch of Paramedic Services, facilitating the application of paramedics' expertise and training in a community setting. Designed to address the needs of individuals identified as high risk for readmission, the program emphasizes collaboration with community stakeholders, including hospitals, Family Health Teams, Nurse Practitioner-led clinics, community agencies, and district programs. This collaboration aims to enhance access to primary healthcare, diminish non-urgent 911 calls, and deliver preventative healthcare and education to patients. Through a comprehensive range of services, such as home visits, wellness clinics, falls prevention, ECGs, independent living guidance, medication reviews, risk assessments for trip and fall hazards, and thorough physical assessments, the program is dedicated to promoting community well-being. The incorporation of the Community Referral by Emergency Medical Services (CREMS) system further streamlines the referral process, ensuring a holistic and efficient approach to patient care. Existing Primary Care Paramedics and specially-trained Community Paramedics actively contribute to the multifaceted aspects of this program, reinforcing its commitment to proactive healthcare within the community.



Religious Services

In the Village of South River and the Township of Machar, a variety of religious services cater to the spiritual needs of the community. One community has been established for several decades, focusing on fostering personal connections and sharing messages of love and faith. Another follows a brethren structure, offering inclusive services like communion and Family Bible Hour. A mainstream Protestant denomination, with a global presence, centers its beliefs on enhancing the quality of life and anticipating the return of a significant figure. Additionally, a local church actively engages the community, emphasizing worship, Bible-based teaching, and connecting through messages of hope. The region is home to several active congregations, providing a diverse spiritual landscape for individuals to explore and find solace on their faith journeys.

South River Lions Club

Established in 1943 amid the challenges of the Second World War, the South Lions Club, now boasting around 30 members, has been a steadfast pillar of support in the community. Over the years, the club has consistently contributed to various causes, including hospitals, schools, youth sports, the South River Machar Arena, and the South River Machar Fire Department. Their commitment extends to numerous youth programs and disaster relief efforts, encompassing incidents such as fires, tornadoes, and hurricanes. This ongoing dedication reflects the South Lions Club's enduring commitment to the well-being and resilience of the community.

South River Friendly Circle

The South River Friendly Circle, a social group catering to seniors, boasts around 60 members and provides a range of engaging activities, including line dancing, yoga, card games, and quilting. They are situated at 10 Isabella Street in South River, in a single-story wood frame building covering approximately 200m², complete with a full basement. This well-equipped facility features a backup generator and a fully functional kitchen, enhancing the group's capacity to host diverse events and gatherings for its members. Additionally, the South River Friendly Circle serves as an excellent avenue for the fire department to engage with local seniors regarding fire safety and prevention issues, fostering a proactive approach to community safety.

Red Cross

The North Bay Branch of the Canadian Red Cross is situated at 1275 Main Street West in North Bay. The organization collaborates with first responders, emergency managers, public officials, and other voluntary sector organizations to offer emergency and disaster services. These services encompass emergency lodging, reception and information, emergency food, emergency clothing, as well as personal services and family reunification. The Canadian Red Cross plays a crucial role in providing support during challenging situations, working in tandem with various entities to ensure comprehensive assistance to those in need.

District of Parry Sound Social Services Administration Board

Established in February 1999 under the District Social Services Administration Boards Act, the District of Parry Sound Social Services Administration Board is a corporate entity. Represented by municipalities and unincorporated areas within the geographic region of the District of Parry Sound, the board comprises 15 appointed members. Housed in a 1200 m² building at 16 Toronto Street in South River, the board operates an office that includes child care services. Their scope of social programs encompasses child services, housing initiatives, Ontario Works, and women's shelters, providing a comprehensive range of services to address various community needs.

East and West Parry Sound Victim Services

East and West Parry Sound Victim Services offer a 24/7 crisis line, available every day of the year. Victims seeking immediate emotional support can directly contact this helpline. It serves as the primary point of contact for referral services from Police, EMS, Fire, and various other social service agencies. In 2006, the West Parry Sound VCARS expanded its service area, evolving into the District of Parry Sound Victim Crisis Assistance and Referral Service, now collectively known as East & West Parry Sound Victim Services. With offices located in Parry Sound and Burk's Falls, the organization now extends its support services throughout the entire District of Parry Sound.

Canadian Mental Health Association (CMHA)

The Canadian Mental Health Association, Muskoka-Parry Sound Branch, is a non-profit charitable organization with a volunteer Board of Directors, serving Muskoka and Parry Sound Districts. Originating in 1972, we evolved into the Muskoka-Parry Sound Community Mental Health Service in 1994, gaining independent status. The integration of an addictions agency in 1992 marked the beginning of an operational relationship, culminating in full integration in 2015. Committed to values such as self-determination, collaboration, and accountability, our mission is rooted in providing integrated mental health and addiction services for hope, recovery, and wellness. Our tagline, "Recovering and Thriving," encapsulates our dedication to supporting individuals on their journey to well-being.

Key Findings

- During emergencies and, at times, as a consequence of fire safety inspections, the fire department encounters a notable challenge due to the limited availability of readily accessible resources for assistance.
- Firefighters are frequently required to aid families following the resolution of emergencies due to notable delays in receiving support from external agencies.
- Establishing robust partnerships with local community groups will aid the fire department in effectively disseminating public safety messages and accessing resources during emergency responses.
- Partnering with care agencies like Community Paramedicine or CMHA has the potential to aid the fire department in identifying residences with notable fire safety risks.

Part 10

Hazard Profile



South River Machar Fire Department

Hazard Profile

This profile outlines the hazards present in the community, encompassing natural, human-made, and technological sources. It specifically identifies hazards to which the South River Machar Fire Department may be called to respond. This analysis aids in establishing priorities for prevention, mitigation, preparedness, and emergency response.

The risks were assessed using the methodology outlined in the Emergency Measures Ontario Hazard Identification and Risk Assessment Program. This involved examining the frequency and consequences of each hazard to gauge its overall impact. The information used to identify these risks was gathered from previous profiles within this risk assessment process.

Structure Fires

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

Structure Fire Hazard Score			126	Very High
Frequency	6	Certain	From 2020 to 2023, structure fires constituted 3.2% of the fire department's emergency responses.	
Life Safety	3	High	Structure fires pose a serious threat to life, as the combination of modern materials and lightweight construction accelerates fire spread, significantly reducing the time available for safe escape.	
Evacuation	1	Low	Single-family dwelling account for the majority of fire responses as well as the majority of the building stock. Fires in multi-residential units would have a higher impact due to the displacement of multiple families.	
Psychological Social	2	Moderate	Structure fires typically only affect one family. The psychological impacts on the affected family would be significant, they are not typically widespread.	
Property Damage	2	Moderate	Fires pose a significant risk to individual properties and immediate exposures. However, widespread damage from a structure fire is unlikely.	
Critical Infrastructure	2	Moderate	A fire at the water treatment plant could disrupt potable water delivery to around 500 homes and limit water availability for firefighting. Similarly, fires at natural gas distribution facilities could significantly impact the area.	
Environmental	1	Low	Structure fires may have some environmental risk but, in most cases, will be localized and reversible.	
Economic	3	High	Residential buildings make up 92% of the building stock, while commercial or industrial properties account for 4%. A fire affecting 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 pose the highest risk in the municipalities. According to the Fire Protection and Prevention Act, municipalities are mandated to establish a program that includes public education on fire safety and certain aspects of fire prevention. Additionally, they must provide other fire protection services as deemed necessary based on local needs and circumstances.



The Act outlines two primary methods for municipalities to fulfill their fire protection responsibilities: appointing a community fire safety officer or team, or establishing a fire department. The minimum level of fire protection services that a fire department can provide is also specified, including fire suppression services and potentially other fire protection services within the municipality or designated areas.

These provisions from the Fire Protection and Prevention Act form the foundation for the three lines of defense: Public Education, Fire Safety Inspection, and Fire Suppression.

Fire Inspection

Fire safety inspections play a crucial role in identifying and rectifying fire safety deficiencies, thereby reducing the risk of fire incidents. Presently, the Fire Department fulfills the minimum requirements for fire inspections by responding to complaints and requested inspections. Additionally, progress has been made in collaborating with building owners to enhance pre-incident planning information.

Under the Ontario Fire Code, building owners bear the responsibility for complying with regulations. Enhancements to fire safety inspections not only decrease the likelihood of fires but also aid the fire department in preparing and planning for emergency responses. These inspections are particularly valuable in bridging gaps in fire suppression, especially concerning larger industrial, commercial, and multi-residential properties.

Fire Prevention

Fire Prevention serves as the initial line of defense against fire incidents. By fostering behavioral changes regarding fire safety and reducing the occurrence of structure fires, municipalities can effectively mitigate fire risks. This proactive approach not only safeguards the community and firefighters but also helps sustain the local economy. Fire Prevention is a mandated responsibility for municipalities.



Currently, fire prevention programs primarily focus on educating children, youth, and seniors, who are often the most vulnerable to fire hazards. These programs are accessible to the community and aim to:

- Distribute fire safety messages through handouts and social media platforms.
- Conduct educational sessions and presentations in schools.
- Implement smoke alarm programs, including inspecting alarms during emergency calls and targeted home inspections.
- Provide seasonal safety tips to raise awareness.
- Organize fire station visits and participate in special events to engage with the community and reinforce fire safety practices.

Fire Suppression

According to the current Establishing and Regulating By-Law, the South River Machar Fire Department is mandated to carry out a range of firefighting and rescue operations. This includes both offensive interior firefighting, where firefighters enter structures to directly combat fires, and rescue operations. Additionally, the department is tasked with defensive exterior firefighting efforts, which involve combating fires from outside structures when conditions necessitate.

However, the extent of these firefighting activities can vary based on factors such as fire conditions and the availability of resources at the time of the incident. In certain areas within the Township, especially those not easily accessible by all fire apparatus, there may be limitations on the department's ability to provide comprehensive fire suppression responses. This could include certain seasonal or private roads that may be inaccessible or challenging to navigate for firefighting vehicles. As a result, firefighting efforts in these areas may be more constrained, requiring strategic planning and coordination to effectively manage fire incidents.

Hazardous Materials Emergencies

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

Hazmat Hazard Score			120	High
Frequency	5	Likely	Most hazardous material emergency responses stem from motor vehicle collisions (MVCs) and the transportation of dangerous goods, with fuel leaks from commercial vehicles being the most common incident.	
Life Safety	9	High	Given the substantial volume of dangerous goods transported via rail and highways through the area, coupled with uncertainties regarding potential exposures, the hazmat life hazard is high.	
Evacuation	3	High	With both known hazardous materials in the municipality and the unknown dangerous goods traveling through, a significant impact on the municipality could result from a leak or fire incident.	
Psychological Social	3	High	Hazmat incidents can have significant impacts on large portions of the community, leading to substantial mental health concerns due to the high life safety hazard and potential long-term implications.	
Property Damage	2	Moderate	In most hazardous material incidents, severe property damage is generally localized, although the incident may have negative effects on larger areas.	
Critical Infrastructure	2	Moderate	Hazmat incidents in the source water protection area could impact the municipal water treatment and distribution system for the Village.	
Environmental	3	High	Given both known and unknown dangerous goods passing through the Municipalities, severe environmental impacts with significant long-term implications are quite possible.	
Economic	3	High	The ongoing long-term costs of mitigating hazardous materials incidents have the potential to negatively impact the municipalities' tourism economy and strain municipal budgets if cost recovery is not possible.	
Reputational	2	Moderate	Hazardous material incidents pose significant risks to the health and safety of residents and can also impact property values. These consequences may expose the fire department and the municipality to ongoing litigation challenges.	

Hazardous materials emergencies rank as the second highest risk in the municipalities. A significant portion of these incidents that the fire department addresses stem from the transportation of dangerous goods, often involving motor vehicle collisions. The NFPA (National Fire Protection Association) delineates four levels of hazardous materials service, categorized as follows:



Awareness Level: Personnel at this level have the basic knowledge to recognize hazardous materials incidents and take appropriate actions to secure the area and notify the appropriate authorities.

Operations Level: Individuals at this level possess the skills to initiate defensive actions to protect nearby individuals, property, and the environment, while maintaining a safe distance from the hazardous materials incident.

Operations Mission Specific Level: This level involves personnel trained to perform specific tasks during hazardous materials incidents, such as containing a spill or supporting decontamination efforts.

Technician Level: Technicians are highly trained individuals capable of performing advanced tasks, including actively controlling hazardous materials releases, conducting chemical analysis, and implementing complex decontamination procedures.

These levels of hazardous materials service provide a structured framework for training and response, ensuring that personnel are equipped to handle various types and levels of hazardous materials incidents effectively.

Currently, the fire department offers operations level hazardous materials response, enabling them to address small leaks of petroleum products effectively. Additionally, they possess a limited rescue component for handling incidents involving other materials, where structural firefighting gear with Self-Contained Breathing Apparatus (SCBA) provides sufficient protection for limited exposure.

Motor Vehicle Collision's

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

Motor Vehicle Collision's Hazard Score			102	High
Frequency	6	Certain	Based on the emergency responses from 2020 to 2023 the Fire Department responded to 69 MVC's involving 84 vehicles.	
Life Safety	9	High	From 2020 - 2023, motor vehicle accidents comprised 9.87 % of the fire department's emergency responses.	
Evacuation	1	Low	Motor vehicle collisions generally do not present substantial evacuation concerns unless they entail hazardous materials.	
Psychological Social	2	Moderate	MVC's typically affect only one to two family units and may have significant psychological effects on them. However, these accidents generally do not have widespread repercussions throughout the community.	
Property Damage	1	Low	Motor Vehicle Collisions pose minimal risk of property damage beyond the vehicles directly involved in the collision.	
Critical Infrastructure	1	Low	The critical infrastructure most at risk from Motor Vehicle Collisions includes hydro transmission lines and telecommunication lines, but the impact is usually limited.	
Environmental	1	Low	Given that most motor vehicle accidents involve passenger vehicles, which generally lack significant hazardous materials, the environmental impact is typically minimal.	
Economic	1	Low	Motor Vehicle Collisions do not represent substantial economic risks to municipalities.	
Reputational	2	Moderate	Motor Vehicle Collisions are prone to having restricted, short-term, and localized reputational or legal impacts.	

The Fire Department predominantly responds to Motor Vehicle Collisions (MVCs) occurring on Highway 11 and Highway 124. Among MVCs, single-vehicle collisions and accidents involving animals are the most frequently encountered types. The Fire Department attends to all MVCs that are reported to involve injuries or where the extent of injuries is uncertain. Response to MVCs is a collaborative effort involving Emergency Medical Services (EMS) and the Ontario Provincial Police (OPP).



The fire department is presently trained and equipped to employ advanced auto extrication techniques, utilizing battery-powered hydraulic extrication tools. Additionally, they have the capability for lifting operations with airbags. When responding to motor vehicle collisions, the department mobilizes three apparatus: Rescue 2, Pump 4, and Tank 1. The primary responsibilities of Rescue 2 crews include vehicle stabilization, extrication, and patient care. Pump 4 crew focuses on fire suppression, initial traffic management, and provides assistance with extrication as needed. Tank 1 crew is tasked with traffic management duties and functions as a blocker vehicle during operations.

The fire department assumes responsibility for traffic management during firefighting operations and supports the Ontario Provincial Police (OPP) in managing traffic while collision investigations and vehicle recoveries are underway. According to Section 21 Guidance Note 6-10, traffic control mandates the use of blocker vehicles when the posted speed limit exceeds 80 km/h. Moreover, it stipulates the necessity of maintaining one clear lane around the accident site to ensure a safe working area. Consequently, single lane closures are frequent occurrences at motor vehicle accidents on Highway 11.



Remote Rescue

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

Remote Rescue			72	Moderate
Frequency	6	Certain	From 2021 to 2023, the fire department accomplished 9 successful rescues.	
Life Safety	9	High	The intricate nature and time-consuming process of remote rescue operations pose a significant risk to the life safety of injured or ill individuals.	
Evacuation	0	None	Emergencies requiring Remote Rescue do not present any evacuation risks.	
Psychological Social	1	Low	The psychological impacts of Remote Rescue calls are usually confined to those directly involved or exposed. Individuals may experience heightened stress due to the prolonged duration and isolated nature of these emergencies.	
Property Damage	1	Low	In certain situations, property damage, such as minor disturbances to land or trees, may occur as a consequence of rescue efforts.	
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.)

The fire department has responded to various incidents, encompassing snow machine accidents, ATV accidents, hiking injuries, aviation accidents and medical emergencies occurring in remote locations. Presently, the department operates at both the operations and limited technician levels for wilderness rescues, following the guidelines outlined in NFPA 1670.

For remote rescue operations across all seasons, the fire department utilizes a Utility Task Vehicle (UTV) equipped with a medical transport box. This unit is outfitted with tracks to ensure functionality during winter operations. To enhance the efficiency of rescues, deployed crews are equipped to operate independently in the field for up to 8 hours, facilitating effective and sustained rescue efforts.

CO Emergencies

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

CO Emergencies			66	Moderate
Frequency	6	Certain	Approximately 4% of annual emergency calls for service are attributed to Carbon Monoxide incidents. Notably, certain CO calls managed during regular business hours by fire prevention are not accounted for within this 4% figure.	
Life Safety	9	High	Carbon Monoxide (CO) is a lethal asphyxiant, devoid of odor or colour. Without sufficient detection systems, CO exposure can result in severe illness or even death.	
Evacuation	1	Low	CO emergencies generally impact only one building and are unlikely to pose broader evacuation risks for the community.	
Psychological Social	1	Low	CO incidents typically affect a single building, psychological effects limited to those directly involved.	
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	None	CO Emergencies do not pose any significant economic risks.	
Reputational	0	None	CO Emergencies do not pose any significant reputational risks.	

Two fatalities occurred as a result of carbon monoxide (CO) poisoning in the data analyzed for this risk assessment. On average, there are approximately 300 deaths each year in Canada due to CO poisoning.

The primary sources of carbon monoxide (CO) were heating systems and generators installed too close to buildings. During power outages, emergency calls for CO alarms surge due to auxiliary heating appliances, improper generator usage, and faulty backup batteries for the alarms themselves.

Firefighters are frequently exposed to hazardous levels of carbon monoxide (CO) and hydrogen cyanide during overhaul and fire investigations at structure fires. These deadly gases are often referred to as the "deadly twins." Hydrogen cyanide is carcinogenic and is a significant contributor to the elevated rates of cancer among firefighters, which are three times higher than that of the general public. Moreover, increased CO levels in the blood elevate firefighters' risk of heart attacks, which is compounded by the physical demands of structural firefighting.



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 34.3% of emergency responses between 2021 and 2023, reflecting an 18% increase since 2021.	
Life Safety	3	High	The Fire Department only attends to high-priority, life-threatening medical emergencies. 18% Of the first response calls were for patients with absent vital signs, while 9.35% were related to drug or alcohol issues.	
Evacuation	0	None	Medical Emergencies are not likely to result in any community evacuations.	
Psychological Social	1	Low	The psychological impacts of medical calls are generally confined to the patient and their immediate 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 unlikely to result in 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

Water Rescue

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

Water/ Ice Water Rescue			66	Moderate
Frequency	6	Likely	Between 2021 and 2023, the fire department answered four calls for Water Rescue/Ice Water Rescue services.	
Life Safety	9	High	Around 100 individuals drown in Ontario annually. Successful rescues are exceedingly difficult due to tight timelines for completion.	
Evacuation	0	None	Water rescue emergencies typically do not necessitate the evacuation of residents.	
Psychological Social	1	Low	The psychological effects of Water Rescue incidents usually affect only those directly involved or exposed. Individuals often experience heightened stress due to prolonged rescue times and the isolated nature of these emergencies.	
Property Damage	0	None	Water Rescue emergencies typically do not pose a risk of property damage.	
Critical Infrastructure	0	None	Water Rescue emergencies do not pose a threat to critical infrastructure.	
Environmental	0	None	Water Rescue emergencies typically do not pose environmental risks.	
Economic	0	None	Water Rescue emergencies do not pose economic risks.	
Reputational	1	Low	Water rescue operations are unlikely to result in significant legal implications.	

The existing Establishing and Regulating By-Law, the fire department provides water and ice water rescue services solely on static water surfaces. Equipped and trained for ice water rescue operations, the department is proficient in water entry procedures. Moreover, the ice water rescue training complements the department's remote rescue training, enhancing the safety measures for firefighters during intricate remote rescue missions.



Ice water rescue techniques have demonstrated their crucial role in various motor vehicle collision scenarios over the years, providing essential skills for emergency responders. In the specific incident illustrated in the accompanying image, firefighters faced the challenging task of conducting auto extrication on a vehicle partially submerged in water. Additionally, they undertook a comprehensive search of the surrounding area to ensure the safety of any potential occupants.



Moreover, the fire department's expertise in ice water rescue has extended beyond collision scenes. They have been called upon to collaborate with the Ontario Provincial Police (OPP) in conducting searches in local waterways. This collaboration underscores the versatility of their skills and their commitment to serving the community in diverse emergency situations.

Wildland Fires

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

Wildland Fires			66	Moderate
Frequency	6	Certain	Wildland fires constituted 2.5% of the fire department's responses between 2021 and 2023.	
Life Safety	3	Low	Due to the forest type and access to forested areas, most wildland fires are detected early and tend to remain relatively small in size. This limits the intensity of fire spread.	
Evacuation	1	Low	The majority of wildland fires to which the fire department has responded are 0.1 hectares in size. Current suppression resources are sufficient for containing most wildland fires in the municipalities.	
Psychological Social	1	Low	The primary psychological impacts of wildland fires often stem from significant project fires in Northern Ontario's Boreal Forests.	
Property Damage	2	Moderate	Despite the majority of wildland fires in municipalities being small, they still present a significant risk of localized severe property damage.	
Critical Infrastructure	1	Low	The critical infrastructure most vulnerable to wildland fires includes hydro transmission lines and telecommunication lines.	
Environmental	1	Low	Wildfires can both change landscapes visually and support the health and regeneration of specific forested areas.	
Economic	1	Low	Small wildland fires in our region typically have negligible short- and long-term economic effects on the community due to their limited size.	
Reputational	1	Low	Given existing mitigation strategies and local conditions, it is improbable that wildland fires will result in significant legal repercussions for municipalities.	

Currently, the fire department is responsible for safeguarding the majority of the Township of Machar against forest fires. By employing the remote rescue vehicle to aid in accessing remote regions within the township, the department has significantly slashed its payments to the Ministry of Natural Resources and Forestry (MNR) by more than 50 percent.



Presently, the fire department boasts two Mark 3 forestry pumps and one smaller Mercedes Wick 100 forestry pump, accompanied by 460 meters (1,500 feet) of 38 mm forestry hose.

The bulk of wildfires that the fire department tackles are typically within reach and are often suppressed using structural firefighting gear and vehicles. Thanks to prompt detection and swift intervention, most fires are swiftly extinguished and rarely surpass 0.1 hectares in size.

An open-air burning By-law is currently in effect, governing all open-air burning activities with a permit system in place for brush burning. Forest fire hazard ratings are determined by the fire department, leveraging weather and forest condition data obtained from the MNR, sourced from a weather monitoring station near Eagle Lake.

Pandemic

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

Pandemic			64	Moderate
Frequency	4	Probable	Considering current trends such as Covid-19, SARS, and H1N1, it is likely that other pandemics will occur due to our interconnected society.	
Life Safety	2	Moderate	Life safety hinges on both the nature of the illness causing the pandemic and the healthcare system's capacity to address it effectively.	
Evacuation	2	Moderate	Drawing from the measures implemented to combat Covid-19, future pandemic mitigation strategies are anticipated to involve some degree of public lockdowns and the quarantine of individuals who are ill.	
Psychological Social	3	High	Medical calls related to mental health significantly increased during the Covid-19 Pandemic. If a pandemic involved an illness with a higher local mortality rate, the psychological effects would likely be even more pronounced.	
Property Damage	0	None	Pandemics are not likely to directly cause any significant property damage	
Critical Infrastructure	2	Moderate	While pandemics may not directly impact critical infrastructure, they are likely to affect the staff needed to operate and maintain such infrastructure.	
Environmental	0	None	Pandemics do not pose any significant environmental risks.	
Economic	2	Moderate	The economic impacts of a pandemic are directly influenced by the duration and severity of the pandemic.	
Reputational	1	Low	Pandemics are unlikely to result in significant local legal implications for municipalities.	

The fire department does not take on the primary responsibility for responding to pandemics. Instead, Public Health and Emergency Medical Services (EMS) are designated as the lead agencies for pandemic responses. However, the fire department plays a crucial support role to both agencies, stepping in to assist if either becomes overwhelmed.

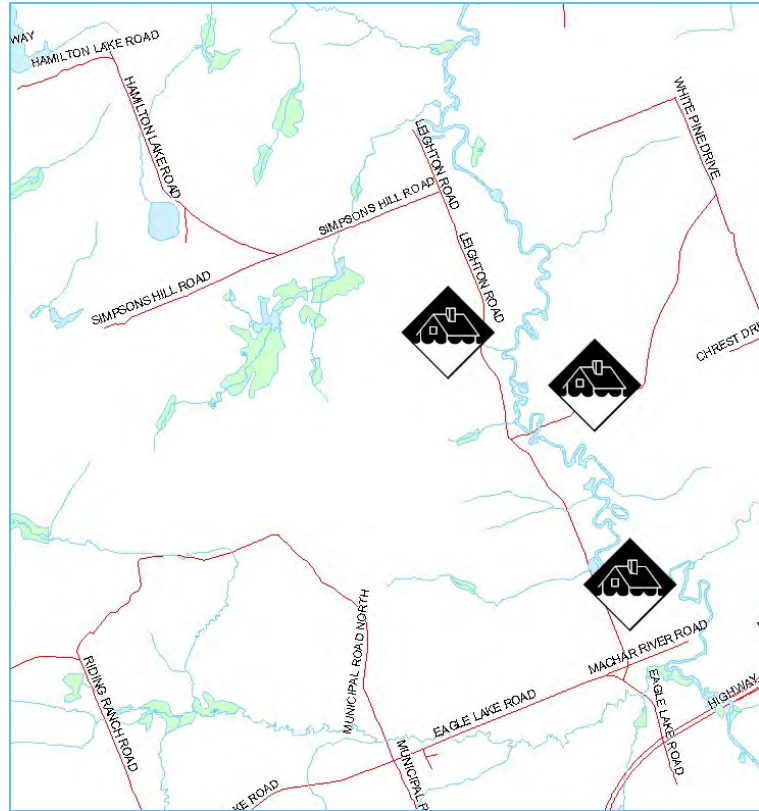
Throughout the Covid-19 Pandemic, the Fire Department maintained its provision of medical first response coverage. Should the Health Unit open a Covid-19 assessment center, firefighters would have been deployed to aid in its operation. Additionally, the fire department extended its support to local businesses, helping them adhere to public health requirements amidst the pandemic's challenges. This collaborative effort underscores the community's resilience and the fire department's commitment to serving beyond traditional emergency response roles.

Flooding

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

Flooding			48	Low
Frequency	4	Probable	Freshet flooding may impact the Leighton Road area, leading to the isolation of around 70 residents.	
Life Safety	1	Low	Flooding may impact medical access for residents and fire apparatus accessibility in the Leighton Road.	
Evacuation	2	Moderate	Flooding in the Leighton Road area mainly affects residents' road access to their properties. However, many can shelter in place as their homes typically remain uncompromised.	
Psychological Social	1	Low	Since flooding mainly impacts the Leighton Road area, the psychological impacts are not widespread throughout the community.	
Property Damage	2	Moderate	Property damage from flooding is typically confined to Leighton Road area. Given the frequency of flooding, many homes are resilient to typical freshet events.	
Critical Infrastructure	2	Low	Severe freshet flooding or a failure of the Craig Lake dam could potentially impact the low lift pumping station of the Villages Municipal Water system.	
Environmental	1	Low	Flooding along the South River poses minimal environmental concerns.	
Economic	1	Low	Flooding does not result in significant economic impacts for the municipalities.	
Reputational	1	Low	Flooding typically does not result in significant legal implications for the municipalities.	

The adjoining map delineates areas susceptible to freshet flooding in the Leighton Road vicinity. Thunderbridge Road stands out as the most vulnerable to flooding, albeit with minimal impact on residents or the provision of emergency services. However, Leighton Road, particularly north of Machar River Road, faces heightened susceptibility to flooding, which can result in the isolation of roughly 70 residents. During flooding events, the fire department faces limitations in accessing affected properties adequately for interior structural firefighting operations. Typically occurring during spring freshet, flooding in this area prompts the fire department to utilize its remote rescue vehicle, accessible via a trail system off Hamilton Lake Road. Areas closer to the South River present swift water conditions, while those further away are densely wooded, posing significant hazards for rescue operations along the river.



The most critical infrastructure at risk of flooding is the low lift pumping station, responsible for pumping water from the South River to the water treatment plant. Although previous freshet flooding hasn't impacted the pumping station, a potential dam failure at Craig Lake could lead to its vulnerability.



During flooding incidents affecting Leighton Road, the fire department's primary role is to support EMS and Police in accessing properties as needed. In the event of necessary evacuation, the fire department would assume the lead agency role in coordinating the evacuation efforts.

Windstorms

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

Windstorms/Microburst/Tornados			45	Low
Frequency	5	Probable	Only storms that prompt the fire department to respond to storm-related emergencies were considered for this hazard assessment.	
Life Safety	1	Low	The majority of risks from microbursts arise during cleanup, or due to CO or electrical issues following the storm. If more serious tornadoes were more frequent in our area, higher life hazards would be a concern.	
Evacuation	1	Low	No evacuations have happened due to wind or storm events so far. However, if multiple homes are affected, it could pose a significant evacuation challenge.	
Psychological Social	1	Low	Storms can have a significant psychological impact on affected individuals. If more severe wind storms, such as tornadoes, were common, residents could experience longer-lasting psychological effects.	
Property Damage	1	Low	Property damage from wind storms depends on the severity of the storm. In our area, more powerful tornadoes are not as common based on past history.	
Critical Infrastructure	2	Moderate	Power lines are vulnerable to wind storms, and severe storms could result in prolonged power outages.	
Environmental	0	None	Windstorms along in the area present minimal environmental concerns.	
Economic	1	Low	Windstorms can affect municipal expenses, particularly during the recovery phase. However, based on past event history, these impacts have been minimal.	
Reputational	0	None	Windstorms typically do not lead to significant legal implications for municipalities.	

The recent climate change report released by the government of Canada serves as a stark confirmation of the significant impacts environmental shifts are having on our region. The findings highlight a concerning trend: heavy rainstorms triggering catastrophic flooding, prolonged and intensified summer heatwaves, and an uptick in frequency of extreme weather events. Of particular note, severe wind events, such as Microbursts, are occurring more frequently in our area. These events often coincide with substantial rainfall and thunderstorms, exacerbating the resultant damage.

At present, the fire department's primary focus does not encompass Urban Search and Rescue operations. However, during windstorms, the department's response efforts are multifaceted. They promptly attend to hydro-related emergencies, CO alarm incidents, and medical first response calls. Additionally, in certain scenarios, they extend assistance in accessing



patients. Furthermore, the fire department plays a pivotal role in clearing fallen trees from roadways, aiding emergency services like EMS and the Ontario Provincial Police (OPP) in accessing properties as needed during such emergencies. This collaborative effort underscores the fire department's adaptability and commitment to ensuring the safety and well-being of the community amidst evolving environmental challenges.

High Angle Rescue

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

High Angle Rescue			44	Low
Frequency	4	Likely	The fire department has responded to low angle rescues for construction injuries, hunters in tree stands, and some motor vehicle accidents, but has not been called for any high angle rescues.	
Life Safety	9	High	High angle emergencies present substantial life safety risks due to difficult terrain and elevation, leading to challenges in accessing and stabilizing the situation, heightening the potential for accidents and injuries.	
Evacuation	0	None	There are no evacuation concerns for high angle emergencies.	
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 angle emergencies do not typically result in significant property damage concerns.	
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 generally do not lead to significant legal implications.	

According to NFPA 1670, high and low angle rescues are classified as follows:

High Angle rescue involves situations where the load is primarily supported by the rope rescue system.

Low Angle rescue refers to scenarios where the load is primarily self-supported and not reliant on the rope rescue system, such as on flat terrain or gently sloping surfaces.

Presently, our fire department exclusively provides low angle rescue services and lacks the training and equipment necessary for high angle rescues. The most frequent low angle rescue calls involve motor vehicle accidents and remote rescues, particularly when patients are located in areas with steep embankments. Additionally, ladder rescues are common for accessing patients on rooftops during emergencies.



Winter Storms

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

Winter Storms			36	Low
Frequency	4	Likely	The chance of significant snow events in the area, over the next 5 years is moderate, given historical patterns.	
Life Safety	1	Low	The primary life hazards associated with winter storms stem from delayed access to emergency services and improper use of portable heaters and generators during prolonged power outages.	
Evacuation	1	Low	No evacuations have occurred due to winter storms in our area so far. However, prolonged power outages caused by a winter storm could pose a significant evacuation challenge for municipalities.	
Psychological Social	1	Low	Winter storms are unlikely to result in significant long-term psychological impacts on the community.	
Property Damage	1	Low	Winter storms may lead to minor property damage from falling trees and, in some cases, structural failures in buildings.	
Critical Infrastructure	2	Moderate	Power transmission lines are vulnerable to winter storms, and significant storms could lead to prolonged power outages.	
Environmental	0	None	Winter storms typically do not present environmental concerns.	
Economic	1	Low	Winter storms can affect municipal expenses, particularly during the recovery phase. However, historically, these impacts have been minimal.	
Reputational	0	None	Winter storms typically do not result in significant legal implications for municipalities.	

Winter storms pose significant challenges to the fire department's emergency response efforts. They can substantially delay firefighters' arrival at the fire hall and hinder the deployment of fire apparatus to the scene due to adverse weather conditions. Both extreme cold snaps and heavy snowfall events hamper the firefighters' ability to promptly respond.



Moreover, winter storms place increased strain on fire suppression equipment and personnel. Freezing temperatures can cause equipment to malfunction, while the setup of rural static water supplies for fire suppression becomes notably more time-consuming. Severe winter weather also heightens the risk for firefighters attending motor vehicle collisions, as reduced visibility and traction elevate the likelihood of secondary collisions.

During severe winter storms, the fire department experiences a surge in medical emergency responses, assisting EMS in accessing patients and extricating them from their residences.

To enhance their response capabilities during winter emergencies, the fire department has implemented several measures. These include maintaining a 4-wheel drive pumper and a 4-wheel drive light rescue vehicle equipped with studded snow tires. Additionally, tire chains are available for other fire apparatus. In extreme situations, the remote rescue vehicle can be mobilized to extricate residents from isolated areas, further bolstering the department's ability to navigate and respond effectively during harsh winter conditions.

Confined Space/Trench Rescue

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

Confined Space / Trench Rescue			33	Low
Frequency	1	Unlikely	Because there are few confined spaces in the area, the South River Machar Fire Department has not been required to respond to any confined space or trench rescue incidents for over forty years.	
Life Safety	9	High	Confined space or trench rescue situations pose a high risk to life. Currently, none of the local fire departments have the capability for confined space rescue.	
Evacuation	0	None	Confined space emergencies do not present evacuation risks for the municipalities.	
Psychological Social	1	Low	The psychological impacts of confined space emergencies usually affect only the individuals directly involved or exposed to the event.	
Property Damage	0	None	Confined Space emergencies do not pose any property damage risks for the Municipalities	
Critical Infrastructure	0	None	Confined space emergencies do not pose a threat to any critical infrastructure.	
Environmental	0	None	Confined space emergencies do not pose any significant environmental risks.	
Economic	0	None	Confined Space emergencies do not pose any significant economic risks.	
Reputational	1	Low	Confined Space emergencies are not likely to cause significant legal implications.	

A confined space is characterized as an area that is sufficiently large for a person to enter and perform assigned work but is configured with limited or restricted means for entry or exit. Examples include tanks, vessels, silos, storage bins, hoppers, vaults, and pits, and these spaces are not intended for continuous human occupancy. Confined space incidents pose a significant life safety hazard due to the potential for entrapment, engulfment, or hazardous atmospheric conditions.



However, despite the high life safety risk associated with confined spaces, the frequency of confined space emergencies in our area is relatively low, resulting in an overall low risk level. As a result, the fire department has not undergone specific training or acquired specialized equipment for confined space or trench rescue operations.

While confined space emergencies may not be a common occurrence locally, it's essential to recognize the inherent risks they pose and to ensure adequate preparedness through ongoing training and collaboration with neighboring agencies or specialized teams when necessary. Maintaining awareness of confined space hazards and establishing protocols for responding to such incidents, even in low-frequency scenarios, remains crucial for ensuring the safety of both responders and the community.

Swiftwater Rescue

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

Swiftwater Rescue			33	Low
Frequency	1	Unlikely	Swiftwater is defined as water with a velocity greater than 1 knot. During freshet, there is a significantly higher chance of swift water emergencies.	
Life Safety	9	High	Rescues in swift water are seldom successful. In our area, the amount of swift water increases during freshet, coinciding with a reduced chance of survival for victims 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 of swift water emergencies typically affect only the individuals directly involved or exposed to the event.	
Property Damage	0	None	Swiftwater emergencies do not pose any risks of property damage 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.	

Swiftwater is characterized by water moving at a speed exceeding one knot (equivalent to approximately 1.85 kilometers per hour). Currently, the fire department does not offer swift water rescue services as it is not designated as a core service according to the establishing and regulating by-law.



Throughout the summer and winter months, swift water occurrences in our region are minimal. However, during the freshet period, which typically occurs in the spring, numerous waterways in the area become swift water hazards. For instance, under normal summer conditions, the water flow beneath the Chemical Bridge may not be classified as swift water. However, during the freshet season, as depicted in the accompanying image, the velocity of the water exceeds one knot.

The risks associated with swift water hazards are significantly heightened during periods when the surrounding area is covered in ice. Under such conditions, individuals can easily become trapped beneath the ice, amplifying the potential dangers associated with swift water rescues. It's imperative for the community to remain vigilant and exercise caution when navigating waterways during these hazardous conditions, and for emergency services to adhere to their guidelines in the event they are faced with a swift water emergency.

Key Findings

- The existing Establishing and Regulating By-Law for the fire department, specifically outlined in its Appendix B focusing on "Core Services," effectively manages all foreseeable risks deemed probable, offering comprehensive mitigation strategies for hazards rated at Moderate and higher overall risk.
- Structure fires pose the highest risk to municipalities. While the fire department efficiently manages fires in single-family homes, larger commercial, industrial, and multi-residential properties would benefit from an enhanced fire safety inspection program. In 2023, fire suppression operations resulted in \$26,000 in fire losses, while saving property values amounted to \$1,123,750.
- Expanding the hazardous materials response capability should encompass handling other common dangerous goods and increasing the availability of spill control materials. Emphasis should be placed on initial containment to buy time for additional support to arrive.
- The fire department's emphasis on auto extrication training has greatly enhanced its response to Motor Vehicle Collisions (MVCs), leading to improved outcomes for those involved. Additionally, the department's efforts have likely averted secondary collisions through effective traffic management at accident scenes, thus enhancing overall safety.
- The technical rescue specialties of Ice Water, Remote, and Low Angle Rescue complement each other in training and equipment. Moreover, the remote rescue vehicle is regularly deployed in wildfire suppression, demonstrating its versatility and importance across diverse emergency situations.
- With the addition of mandatory certification requirements for technical rescue in 2028, municipalities may face the need to scale back the level of services provided, despite the absence of other viable alternatives.

Part 11

Summary



South River Machar Fire Department

Summary

The Community Risk Assessment serves as a vital tool for municipalities, aiding in informed decision-making to guarantee the fulfillment of the municipality's fire protection requirements. This comprehensive report is instrumental in guiding decisions regarding service delivery options. By assessing the current state of fire protection services and forecasting the community's future needs, this summary offers valuable insights for strategic planning and resource allocation.

Staffing

Staffing remains a persistent challenge for all volunteer-based fire departments. Our firefighters devote considerable effort to enhancing their firefighting skills while juggling family and work commitments. It's crucial that recruitment and retention efforts for firefighters remain a top priority to ensure the fire department consistently meets the community's needs. As demands on both firefighters and the department escalate, this task will become increasingly daunting.

Increase Suppression Staff	
Background	
In 2023, firefighters collectively contributed 2,899 hours of service, including 1,025 hours dedicated to emergency responses, 1,506 hours allocated to training, and 368 hours devoted to public education and community events.	
Consideration	Resources
Increase the roster of firefighters to 30.	• Additional costs for personal protective equipment. • Additional costs for compensation and employee expenses. • Additional space for lockers, likely requiring addition to the fire hall. • Availability to recruit firefighters

Daytime Staffing	
Background	
The highest call volume consistently occurs Monday to Friday during normal business hours. Concurrently, there is a notable uptick in interactions between the fire department and the community during this time period.	
Consideration	Resources
Increase onsite daytime staffing during the week.	• Extend the staffing hours at the fire hall by adjusting the schedules of the fire prevention officer and the fire chief.

Additional Dispatch Staffing	
Background	
Dispatchers are integral to efficient emergency responses, with their role becoming progressively intricate and demanding specialized skills. Assigning firefighters to dispatcher duties diminishes the pool of firefighters accessible for immediate emergency responses.	
Consideration	Resources
Create new dispatch positions.	• Enhance dispatcher capabilities with an increased allocation of radios and upgraded equipment. • Additional expenses for compensation and employee-related costs. • Training for dispatchers.

Recruitment and Retention	
Background	
As per the 2022 Fire Census, 32% of Canada's firefighters are aged 50 and above. Presently, there are over 15,000 unfilled firefighter positions across the country. Moreover, 18% of fire departments require new or upgraded facilities, while 25% are in need of replacement apparatus.	
Consideration	Resources
Recruitment and Retention of Firefighters	• Adequate financial support of the fire department to demonstrate the municipal commitment to delivery of the service. • Provide recognition for firefighters and the department. • Consider internal implementing long-term service awards and other incentives for firefighters.

Service Level

Under the Fire Protection and Prevention Act, municipalities have the authority to determine the suitable level of fire protection for their area. This level of service provided by the fire department is detailed in the Establishing and Regulating By-Law.

Commercial and Industrial Fire Suppression	
Background	
At present, the fire department effectively manages single-family dwelling fires. To mitigate staffing demands for larger building fires, targeted fire safety inspection programs for larger structures can help minimize risks.	
Consideration	Resources
Reduce the risk of major fires in larger buildings.	• Targeted fire safety inspection program to industrial properties. • Targeted fire safety inspections of multi-residential buildings. • Plans review for new construction of commercial, industrial and multi-residential.

Hazardous Materials Emergencies	
Background	
Hazardous materials emergencies rank as the second-highest risk in municipalities. Presently, the fire department is equipped to handle small petroleum spills, often stemming from motor vehicle collisions. However, resources for assisting with hazardous materials incidents are located over an hour away.	
Consideration	Resources
Improve the capacity of the fire department's initial hazardous materials response.	• Increase training for firefighters on hazardous materials response to operations mission specific level. • Add hazardous materials response trailer with additional spills control measures for initial response to hazardous materials incidents. • Increased personal protective equipment for most common hazardous materials. • Collaborate or form partnerships with other fire departments to bolster and improve the Hazmat response capacity.

Motor Vehicle Accidents	
Background	
Motor Vehicle Accidents rank as the third-highest risk that the fire department responds to. The fire department has achieved more successful rescues in this category than any other type of response.	
Consideration	Resources
Maintain existing rescue and auto extrication capacity of the fire department.	• Include rescue and auto extrication equipment on long range capital replacement plan. • Monitor types of rescues being performed to ensure the level of service is continuing to meet the needs of the community.

Technical Rescue	
Background	
Making certification mandatory will considerably escalate both the financial strain on the fire department and the personal burdens on firefighters. Addressing these heightened requirements might entail reducing the level of service that the fire department can provide.	
Consideration	Resources
Maintain the delivery of existing technical rescue operations	• Compensation for firefighters to acquire certification and maintain training levels. • Potentially develop an on-call system for specialty trained firefighters. • Reduce the level of service which may have significant negative reactions from the public.

Medical First Response	
Background	
Medical first response calls saw a 50 percent increase from 2021 to 2023. In 48.5 percent of these calls, the fire department arrived on scene before EMS.	
Consideration	Resources
Enhance medical first response times for unresponsive patients.	• Staffing the fire hall significantly reduces response times. Adjusting the fire prevention officer and fire chief's schedules would further decrease response times for medical first response calls.

Capital Investments

To ensure the fire department can provide efficient fire protection services to municipalities, ongoing capital investments are necessary. Given the limited availability of tax dollars, it's crucial that all investments in fire protection are meticulously planned to optimize the use of funds.

Hall Renovations	
Background	
The increasing demands on the local fire department have underscored the need for an addition to the existing fire hall. The current facilities are struggling to accommodate the necessary equipment, personnel, and resources required for effective emergency response. Additionally, advancements in firefighting technology and equipment necessitate additional space for storage and maintenance. Recognizing these challenges has emphasized the importance of investing in expanding the fire hall to better serve the community's evolving needs and ensure the safety and well-being of its residents.	
Consideration	Resources
Remove firefighter personal protective equipment from apparatus bays to reduce exposures to carcinogens.	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.
The pandemic underscored that the current meeting room can only host eight firefighters.	Add training room to a second level to allow for maximum space for training and staffing when required.
Add apparatus bay for remote rescue unit and additional storage.	- Add single full-length bay to the west side of the fire hall to house remote rescue unit. - Alternatively add bays to east end of hall to allow for hazmat and remote rescue trailer storage.

Apparatus Replacement	
Background	
Areas with and without hydrant access necessitate different apparatus for effective fire protection delivery. Additionally, to maintain current fire insurance ratings and service levels, the fire department must have a frontline pumper that is no more than 10 years old.	
Consideration	Resources
Ensure that fire apparatus and equipment are designed and deployed to effectively address both hydrant and non-hydrant protected areas in a complementary manner.	• Establish a comprehensive long-term capital plan for replacing Pumper units, ensuring they are replaced on a 20-year cycle, with replacements scheduled 10 years apart. • Keep a mini-pumper for non-hydrant protected areas as an attack vehicle, and deploy a larger pumper tanker unit for hydrant-serviced areas, capable of being utilized in water shuttle operations. • Include a minimum of 3000 imperial gallon tanker on 20-year replacement cycle.

Capital Enhancements	
Background	
Providing capital funding is imperative to enhance fire protection services, ensuring communities are adequately equipped to respond to emergencies. Investments in modern equipment, such as advanced firefighting vehicles and communication systems, bolster firefighters' capabilities and effectiveness.	
Consideration	Resources
Enhance the fire departments capabilities responding to remote rescues, wildland fires, ice and water rescues and hazardous material incidents.	• Implementing a drone program equipped with thermal imaging capability would be invaluable for assessing emergencies, improving efficiencies within the fire department, and significantly enhancing firefighter safety through enhanced situational awareness.

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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1.	Mandatory use
2.	What it is
3.	When to complete (at least every five years)
4.	When to review (at least every year)
Schedule 1	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



Appendix C

Establishing and Regulating - 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 1st, 2nd and 3rd 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**.

South River Machar Fire Department Cost Recovery	
Equipment and Staffing	
Equipment	Cost
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
Consumables	
Item	Cost
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
Administration Costs	
Expense	Cost
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
Equipment Damaged	
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.	
Equipment and Services Contracted	
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.	

