



**Township of Seguin  
Community Risk Assessment**

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## Executive Summary

The Township of Seguin Fire Department (Fire Department) has conducted a community risk assessment (CRA) for the Township of Seguin (Township). The project had the following objectives:

- Identify and examine the Township's public safety risks from a **fire services** perspective.
- Develop informed recommendations for ways the Township can mitigate its identified public safety risks.

The CRA was developed as per the guidelines of the Ontario Fire Marshal (OFM) and Ontario Regulation 378/18. This project included reviewing the nine community profiles that Ontario Regulation 378/18 stipulates must be examined when assessing public safety risks. The Township's demographics and fire response data were reviewed and discussions with Township's staff and senior Fire Department personnel were held to help form the basis of the CRA.

After reviewing the community profiles, a risk assessment tool was used to rank the Township's issues, concerns, and risks. The risk assessment tool was then used to calculate the Township's total risk assessment score. The following list presents the risks identified by the Township's CRA based on severity (as determined by the risk assessment tool).

### Moderate Risk

1. Weather Event (Risk score: 90)
2. Road/Highway/Railway Incident (Risk score: 84)
3. Wildland Fires (Risk score: 72)

### Low Risk

4. Fire/Explosion in Residential Occupancy (Risk Score: 60)
5. Fire/Explosion in Commercial Occupancy (Risk score: 52)
6. Fire/Explosion in Industrial Occupancy (Risk score: 44)
7. Waterway-Related Emergency (Risk score: 40)

A risk treatment plan (RTP) was then created for each of the Township's identified risks. The OFM Fire Safety Effectiveness Model, known as the "three lines of defence was used," as a guiding principle during the creation of the RTPs, as this model highlights the importance of recognizing the different options available for developing community fire

safety. The final RTPs are included in this document. The Township and the Fire Department will review the RTPs and discuss implementing them into their operations.

**Disclaimer**

Every effort was made to ensure the information contained in this CRA is accurate and complete. For the Township to satisfy legislative requirements and ensure its risk treatment measures remain effective and up to date, it must complete the entire CRA process every five years.

## 1.0 Introduction

### 1.1 Community Risk Assessments:

Risk is defined as a measure of the probability and consequence of an adverse effect to health, property, organization, the environment, or community as a result of an event, activity, or operation. A CRA is conducted to identify the fire and life safety risks in each community. Once fire and life safety risks are identified, they are prioritized based on the following factors:

- the probability of the risks occurring
- the potential consequence to the community if the risks occur

Fire departments use the information gained by prioritizing risks to determine the best method for managing the risks in their communities. CRA's help fire departments with the following:

- structuring levels of service
- developing programs and activities for public fire safety education, fire code inspections, and enforcement initiatives
- structuring emergency response capabilities to mitigate community risk

### 1.2 Approach and Methodology

Information was gathered through documentation review, discussion with Township staff and engaging key members of the community and surrounding municipalities to conduct the Township's CRA.

The CRA's development included the following core components:

- reviewing background information about the Township, including documents and maps
- observing the Township's environment and community
- holding discussions with key staff members from the Township

These components gave a first-hand perspective on the information used to identify the Township's risks. This perspective helped ensure that all data reviewed was accurate and applicable to the Township's demographics. The findings of reviews, assessments, and discussions formed the basis of this CRA.

## **1.3 Summary of the Community Risk Assessment Development**

### **1.3.1 Community Profiles**

The CRA was developed according to the guidelines of the Ontario Fire Marshal and Ontario Regulation 378/18.

As per Ontario Regulation 378/18, the following nine community profiles must be reviewed when assessing community risk:

1. Geographic
2. Demographic
3. Economic
4. Building Stock
5. Critical Infrastructure
6. Community Services
7. Public Safety Response Entities
8. Past Events and Loss History
9. Hazards

### **1.3.2 Municipal Data and Stakeholder Engagement**

In addition to the nine community profiles, various statistics and documents were reviewed regarding the Township. Those items included the following considerations:

- the Township's current agreements and documents related to the delivery of fire services
- the Township's past incidents and dollar loss over the last five years
- the inspections completed and the violations issued within the Township over the last five years

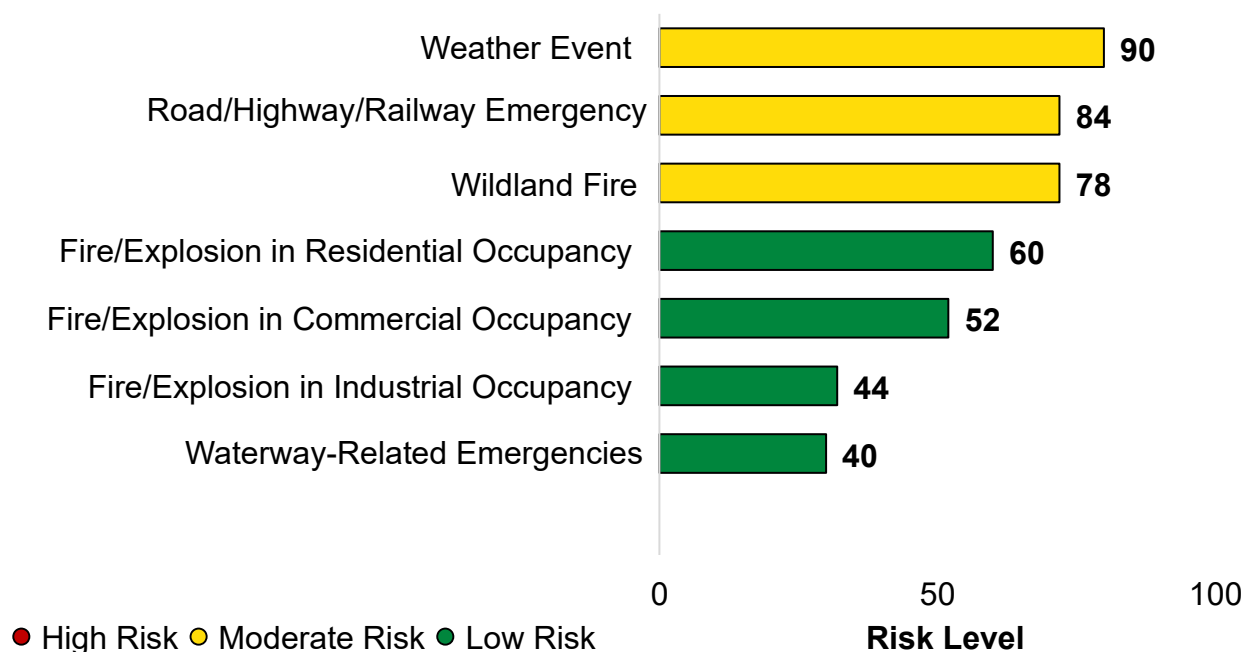
These considerations, along with the findings from the nine community profile reviews, helped identify the hazards and risks in the Township.

### **1.3.3 Risk Assessment**

After collecting and reviewing all required data, the Township's most likely risks were identified and a calculated risk score for each threat was determined. The risk scores were based on each risk's probability and potential consequences.

Figure 1 illustrates the Township’s identified public safety risks, ranked in order of their total risk scores.

Figure 1. Public safety risks identified in the Township of Seguin.



\* See notes in section 12.2 Risks Identified in the Township of Seguin

### 1.3.4 Risk Treatment Plans

The final stage of the CRA’s development involved creating a Risk Treatment Plan (**RTP**) for each of the Township’s identified risks. The Fire Protection and Prevention Act and the OFM Fire Safety Effectiveness Model, known as the “three lines of defence,” were used as a guiding principle for developing the RTPs.

The three lines of defence are:

1. Public education and prevention
2. Fire safety standards and enforcement
3. Emergency response

Using the OFM’s model is vital when creating RTPs because the three lines of defence emphasize the importance of a proactive approach to fire safety.

The following questions were used to assist in developing the RTPs:

1. Is the Fire Department meeting the community's current expectations?
2. Can the Fire Department provide an appropriate level of service to the Township in the future (based on expected trends)?

Each RTP that was developed for the Township focuses on a single risk and provides the appropriate action the Township should take to manage that risk. The RTPs assign at least one of the following actions for each risk:

- avoid
- mitigate
- share
- transfer
- determine the acceptance of the risk

Along with the recommended action, each RTP includes a strategy for managing the identified risk.

## **2.0 Ranking Public Safety Risks**

### **2.1 The Importance of Prioritizing Public Safety Risks**

One of the most important steps of the CRA process is ranking public safety risks based on their probability of occurrence. When emergency responders understand the probability of each risk, they can prioritize the risks and develop strategies to help mitigate the most likely threats. However, it is vitally important for every community to ensure it develops mitigation strategies for all potential risks its CRA identifies, not just those deemed most likely to occur. If a fire or other emergency occurs and a community has not planned for that circumstance, the consequences could include damaged property, tarnished reputations, and lost lives.

To gain a thorough understanding of the risks in the communities, the fire department must assess the probability and consequence levels of each risk identified in their community's CRA.

### **2.2 Defining Probability and Consequence Levels of Public Safety Risks**

Table 1 lists the risk probability levels which was used to rank the Township's risks. Table 2 lists the risk consequence levels.

Table 1. Risk probability levels.

| Probability    | Specifics                                                                                                                                                                          |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rare           | <ul style="list-style-type: none"> <li>• May occur in exceptional circumstances</li> <li>• No incidents in the past 15 years</li> </ul>                                            |
| Unlikely       | <ul style="list-style-type: none"> <li>• Could occur at some time if circumstances significantly change</li> <li>• Five to 15 years since the last incident</li> </ul>             |
| Possible       | <ul style="list-style-type: none"> <li>• Might occur under current circumstances</li> <li>• One incident in the past five years</li> </ul>                                         |
| Likely         | <ul style="list-style-type: none"> <li>• Will probably occur at some time under current circumstances</li> <li>• Multiple or recurring incidents in the past five years</li> </ul> |
| Almost Certain | <ul style="list-style-type: none"> <li>• Expected to occur in most situations, unless circumstances change</li> <li>• Multiple or recurring incidents in the past year</li> </ul>  |

Table 2. Risk consequence levels.

| Consequence   | Specifics                                                                                                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insignificant | <ul style="list-style-type: none"> <li>• No life safety issue</li> <li>• Limited value or no property loss</li> <li>• No impact on the local economy</li> <li>• No effect on general living conditions</li> </ul>                                   |
| Minor         | <ul style="list-style-type: none"> <li>• Potential risk to the life safety of residents</li> <li>• Minor property loss</li> <li>• Minimal disruption to business activity</li> <li>• Minimal impact on general living conditions</li> </ul>         |
| Moderate      | <ul style="list-style-type: none"> <li>• A threat to the life safety of residents</li> <li>• Moderate property loss</li> <li>• Poses a threat to small local businesses</li> <li>• Could pose a threat to the quality of the environment</li> </ul> |

|              |                                                                                                                                                                                                                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major        | <ul style="list-style-type: none"> <li>• Potential for a massive loss of life</li> <li>• Significant property damage</li> <li>• Significant threat to large businesses, local economy, and tourism</li> <li>• Environmental impact resulting in a short-term, partial evacuation of residents and businesses</li> </ul>      |
| Catastrophic | <ul style="list-style-type: none"> <li>• Significant loss of life</li> <li>• Property damage to a sizable portion of the community</li> <li>• Long-term disruption of businesses, local employment, and tourism</li> <li>• Environmental damage resulting in the long-term evacuation of residents and businesses</li> </ul> |

## 2.3 The Risk Level Matrix

Table 3 presents the risk level matrix. This matrix compares the factors of probability and consequence to calculate the risk level of a given hazard. Fire departments and other emergency service providers traditionally rank a risk's severity as low, moderate, or high.

Table 3. Risk level matrix.

|                | Insignificant Consequence | Minor Consequence | Moderate Consequence | Major Consequence | Catastrophic Consequence |
|----------------|---------------------------|-------------------|----------------------|-------------------|--------------------------|
| Almost Certain | Moderate risk             | Moderate risk     | High risk            | High risk         | High risk                |
| Likely         | Moderate risk             | Moderate risk     | Moderate risk        | High risk         | High risk                |
| Possible       | Low risk                  | Moderate risk     | Moderate risk        | Moderate risk     | High risk                |
| Unlikely       | Low risk                  | Low risk          | Moderate risk        | Moderate risk     | Moderate risk            |
| Rare           | Low risk                  | Low risk          | Low risk             | Moderate risk     | Moderate risk            |

The risk level matrix was used for all community profiles except the hazards profile. The hazards profile includes a more detailed analysis of the Township's risks and determines a risk level as well as a risk score.

### **3.0 Geographic Profile**

#### **3.1 Overview of a Geographic Profile**

A geographic profile examines a community's physical features, including the nature and placement of the following:

- highways
- waterways
- railways
- canyons
- bridges
- landforms
- wildland-urban interfaces

CRAs include reviews of geographic profiles because a community's physical features may impact fire services access or response times.

#### **3.2 Overview of the Township of Seguin**

The Township of Seguin is a largely rural community encompassing approximately 587 square kilometres of land area and has 186 lakes. The Township contains the settlements of Humphrey, Foley, Rosseau, and Orrville. The population density of Seguin is 9.0 people per square kilometer.

The Township's community is connected by approximately 381.7 kilometres of municipal year round roads, 32.3 kilometers of municipal seasonal roads, 312.3 kilometers of private roads and 224.6 kilometers of provincially maintained roads.

Due to the number of bodies of water within its borders, the Township contains 24 bridges and causeways falling under both municipal and provincial maintenance responsibilities.

There is no established standard on design and construction of private roads within the Township. Some private roadways or not constructed to ensure larger fire trucks are able to access all properties they lead to.

Figure 2 shows a satellite photo of the Township and its surrounding area.

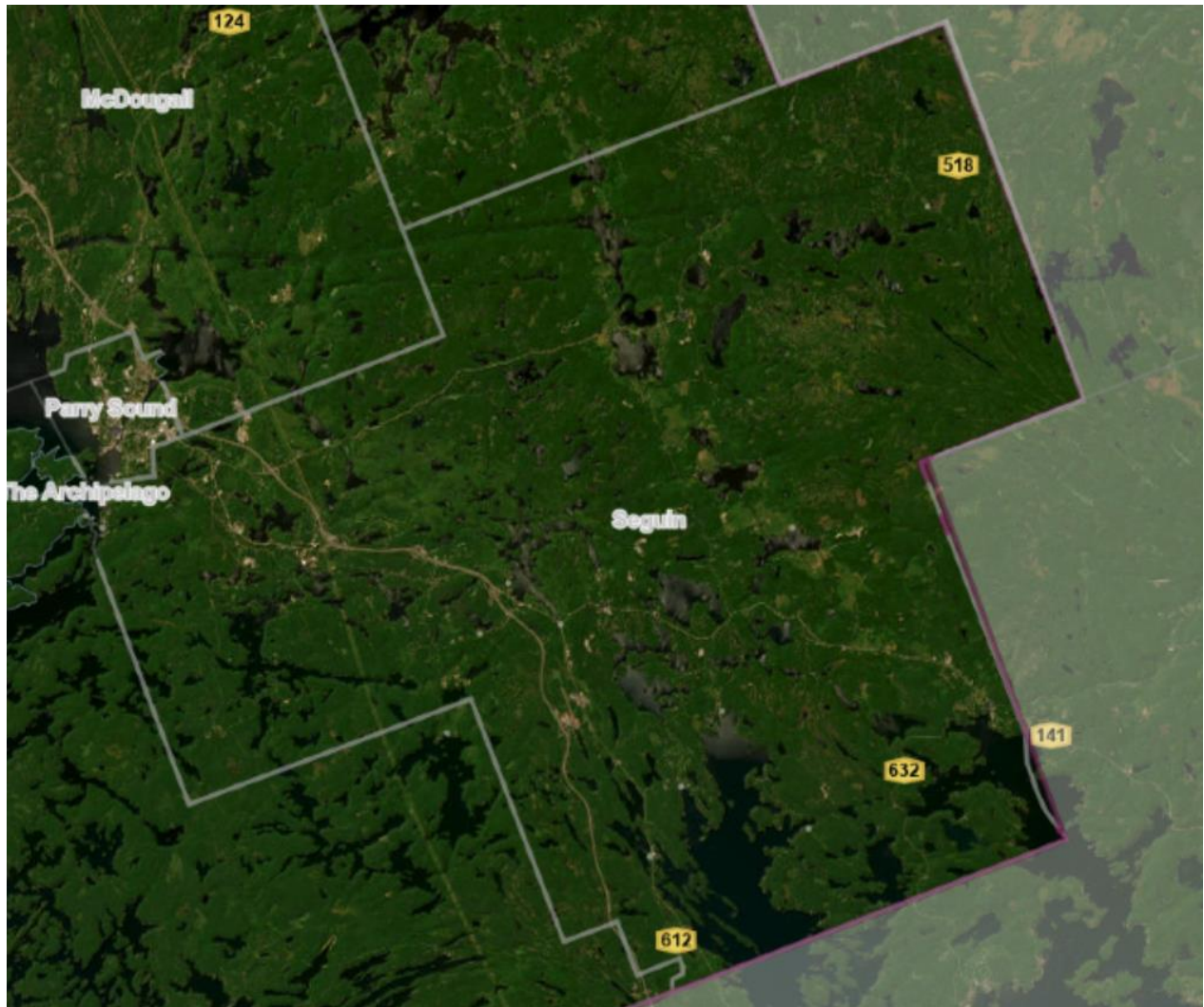


Figure 2. Satellite photo of the Township of Seguin and surrounding area.

### 3.3 Risks Identified by the Geographic Profile

Table 4 lists the Township's main geographic features and indicates if they impact the following Fire Department aspects:

- training and equipment
- response and travel times
- station locations
- response protocol

Table 4. Geographic profile: risk summary.

| Geographic Feature        | Training & Equipment Impact | Response & Travel Time Impact | Fire Station Location Impact | Response Protocol Impact |
|---------------------------|-----------------------------|-------------------------------|------------------------------|--------------------------|
| Public Roads and Highways | ✓                           | ✓                             | ✓                            | ✓                        |
| Rivers                    | ✓                           | ✓                             |                              | ✓                        |
| Bridges and Causeways     |                             | ✓                             | ✓                            | ✓                        |
| Lakes                     | ✓                           | ✓                             | ✓                            | ✓                        |
| Railway Tracks            | ✓                           |                               |                              | ✓                        |
| Urban Wildland Interface  | ✓                           | ✓                             |                              | ✓                        |
| Heavily Forested Areas    | ✓                           |                               | ✓                            | ✓                        |
| Recreation/Camping Parks  | ✓                           | ✓                             |                              | ✓                        |
| Multi-use Trails          | ✓                           | ✓                             |                              | ✓                        |
| Private Roads             | ✓                           | ✓                             |                              | ✓                        |

## 4.0 Demographic Profile

### 4.1 Overview of a Demographic Profile

A demographic profile examines a community's population based on the following factors:

- size
- distribution
- age
- gender
- cultural background
- education level
- socioeconomic makeup

When fire departments develop public safety education and prevention programs, implementation strategies, and other support resources, they must consider and respect the demographics and audiences this profile identifies.

## 4.2 Sources Used for the Demographic Profile

The information used to develop the demographic profile for the Township's CRA is primarily from the 2021 Statistics Canada Census. The Fire Department's database provided supplementary information.

## 4.3 Population

According to the 2021 Statistics Canada Census, the Township has a population of 5,280 residents. This number is expected to increase with an updated census in 2026.

## 4.4 Age Demographics and Age Distribution

Table 5 compares the age distribution of the Township's residents to the provincial average (based on the findings of the 2021 Statistics Canada Census).

Table 5. Age distribution in the Township compared to the Province of Ontario.

| Age Range         | Township of Seguin | Province of Ontario |
|-------------------|--------------------|---------------------|
| 0 to 14 years     | 10.5%              | 16.4%               |
| 15 to 64 years    | 61.0%              | 66.8%               |
| 65 years and over | 28.6%              | 16.7%               |

The above table shows that the Township's percentage of residents aged 65 and over (at 28.6%) is significantly higher than the provincial average (at 16.7%).

The average age of the Township's residents is 49.1, compared to the provincial average of 41.8.

One possible explanation for this statistic is the Township's suitability for those looking to retire and move from a large urban location to a smaller rural community.

## 4.5 Demographic and Cultural Considerations

There are two essential factors to consider when developing community services and programs: language and community culture.

In terms of language, the Township is a predominantly an English-speaking community, with 95.2% of residents identifying English as their first language. Only 4.8% identify a language other than English as their primary language.

In terms of demographic considerations, almost 1/3 of the Township’s population is over the age of 65. This demographic presents significant challenges for the Department regarding fire prevention and public education initiatives. For instance, it is much more difficult to encourage older adults to change their habits and accept safer fire prevention practices than it is for a younger audience. Additionally, if the Fire Department uses newer methods of communication (such as social media) to distribute fire prevention programs and public education, older community residents may not receive the messages. Some older residents might not use newer communication channels to receive information, instead relying on traditional sources (such as radio, newspaper, or television). Another factor to consider is the expectation of service from the Fire Department. With a high population of season and relocated residents originally from an urban centre, do they understand the level of service being provided by the Fire Department and are they properly prepared for the level of service being provided.

4.6 Level of Education

Figure 3 compares the level of education of the Township’s residents to the provincial average (based on the findings of the 2021 Statistics Canada Census).

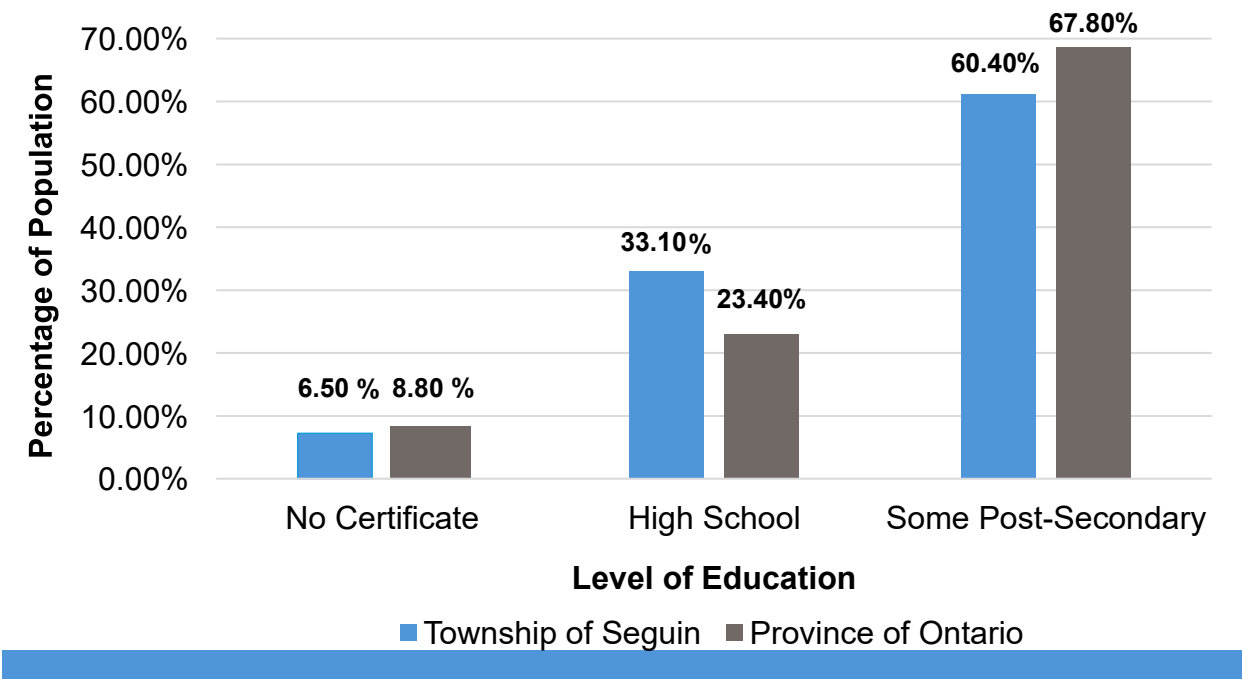


Figure 3. Education levels in the Township of Seguin and the Province of Ontario.

#### 4.7 Socioeconomic Makeup

According to the 2021 Statistics Canada Census, the median per household after-tax income in the Township is \$74,000, which is slightly lower than the provincial average of \$79,500. 11.5% of Seguin's household after-tax income is under \$30,000.

#### 4.8 Transient and Seasonal Population

Of the Township's 4,827 private dwellings, approximately 2,692 (55.7%) are listed as seasonal dwellings and 5 trailer parks/campgrounds. In total, there are approximately 533 trailer sites in the Township. Due to the number of seasonal properties within its borders, the Township's population increases by thousands during the summer months.

With the number of trailer parks in the Township, as well as the increased use of unregulated vacation rental services, it is impossible to determine an accurate number of transient residents in the Township at any given time. A major factor to consider is the expectation of service from the Fire Department. With the high number of seasonal and transient population typically originating from an urban centre, there must be consideration for ensuring transient population understanding the level of service being provided by the Fire Department and are they properly prepared for an emergency while visiting the Township.

#### 4.9 Other Demographic Considerations

The following tables present the number of students, and campers at the Township's care homes and youth facilities:

- Table 6 lists the number of students at the Township's three schools.
- Table 7 lists the weekly number of campers & staff at the Township's six youth camps.

Table 6. Number of students per school in the Township of Seguin.

| School                 | Students |
|------------------------|----------|
| Humphrey Public School | 228      |
| Rosseau Lake College   | 140      |
| Mennonite School       | 178      |

Table 7. Weekly number of campers &amp; staff per youth camp in the Township of Seguin.

| Camp                             | Staff & Campers Per Week |
|----------------------------------|--------------------------|
| Camp Ekon                        | 145                      |
| CNIB Lake Joseph Centre          | 140                      |
| The Bob Rumball Camp of the Deaf | 200                      |
| YWCA Tapawingo                   | 175                      |
| Camp George                      | 550                      |
| Camp Koinonia                    | 55                       |

#### 4.10 Risks Identified by the Demographic Profile

Table 8 summarizes the Township's main demographic considerations and the fire and emergency risks most likely to affect them.

Table 8. Demographic profile: **risk summary.**

| Demographic Consideration                                                                | Issues/Concerns/Challenges                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seniors<br>(28.7 per cent of the Township's population is over 65 years of age.)         | <ul style="list-style-type: none"> <li>Seniors may not be verifying that their dwellings have working smoke alarms</li> <li>Seniors may have mobility issues and need help exiting a building during an emergency</li> <li>Seniors may not receive or apply new fire safety education</li> </ul>                                                      |
| Schools/Children<br>(14 per cent of the Township's population is under 14 years of age.) | <ul style="list-style-type: none"> <li>Time and resources are needed to ensure these facilities implement the duties listed in their fire safety plans and fire drills</li> <li>Time and resources are needed to deliver education about fire and life safety</li> <li>On-site visits are needed to identify hazards and their risk levels</li> </ul> |

| Demographic Consideration                                                                     | Issues/Concerns/Challenges                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Education<br>(6.50 per cent of the Township's residents do not have a certificate or degree.) | <ul style="list-style-type: none"> <li>• The Department should strive to ensure all residents receive fire prevention materials and messages</li> <li>• The Department should strive to ensure all residents receive public fire safety education</li> </ul>                                                                                                    |
| Socioeconomic                                                                                 | <ul style="list-style-type: none"> <li>• On average, residents of the Township have a higher income than Canadians overall but slightly lower than the provincial median</li> <li>• The Department should strive to ensure all residents receive public fire safety education</li> </ul>                                                                        |
| Tourism/Seasonal                                                                              | <ul style="list-style-type: none"> <li>• There is a significant population increase in the Township during the summer months</li> <li>• Increase in traffic (both vehicular and watercraft)</li> </ul>                                                                                                                                                          |
| Camps (for children and youths)                                                               | <ul style="list-style-type: none"> <li>• Time and resources are needed to ensure these facilities comply with implementing the duties in their fire safety plans and fire drills</li> <li>• Time and resources are needed to deliver education about fire and life safety</li> </ul> <p>On-site visits are needed to identify hazards and their risk levels</p> |

## 5.0 Economic Profile

### 5.1 Overview of an Economic Profile

An economic profile considers a community's economic information from an overall public safety perspective. This profile examines the following topics:

- the factors that influence the community's local economy
- the potential impacts the community would suffer by losing the factors that influence its economy
- the risks facing the industrial and commercial occupancies that provide significant economic production or jobs in the community

## **5.2 Tourism**

The Township contains attractions and events that enhance the quality of life for residents and tourists alike. Thousands of tourists visit the Township each year to enjoy its beautiful lakes, parks, and recreation facilities. The Township also offers shopping, restaurants, entertainment, and heritage and cultural sites. Popular activities and attractions in the Township include the following:

- fishing
- camping
- all-terrain vehicle trails
- snowmobile trails
- cross-country skiing
- boating
- golfing
- nature trails

## **5.3 Agriculture**

The Township contains over 260 farms with and without residences; however, many of these locations have ceased farming activities. Some sites have hobby farming on a small scale while other are deemed managed forest property.

## **5.4 Businesses**

There are over 70 businesses operating within the Township, including:

- retail businesses
- storage facilities
- resorts/hotels
- general stores
- restaurants
- repair shops and garages
- marinas
- golf courses

Many of the identified businesses operate within a residential dwelling zoned as a commercial property. Ensuring all properties have been brought to proper building and fire code standards is critical to ensure the safety of public and responders.

## 5.5 Industrial Businesses

The Township contains 97 industrial properties with 53 of these properties identified as sand/gravel pits or quarries. Public mini-storage facilities fall under the industrial category. These facilities provide a unique risk in the fact that minimal control is placed on the items being stored. There are 40 hangers located on the local airport properties that house various businesses that are not all identified with the Fire Department.

## 5.6 Risks Identified by the Economic Profile

Table 9 summarizes the risks associated with the Township's economic profile. (**Note:** Probability, consequence and risk level are defined in tables 1-3.)

Table 9. Economic profile: **risk summary.**

| Occupancy                                                        | Main Risk                | Probability    | Consequence | Risk Level |
|------------------------------------------------------------------|--------------------------|----------------|-------------|------------|
| Highways/Roads                                                   | Accident, fire, rescue   | Almost certain | Moderate    | High       |
| Industrial                                                       | Accident, Fire/explosion | Possible       | Major       | Moderate   |
| Residential                                                      | Fire/explosion           | Almost Certain | Minor       | Moderate   |
| Commercial/Residential (in business section of settlement areas) | Fire/explosion           | Possible       | Major       | Moderate   |
| Commercial                                                       | Fire/explosion           | Possible       | Major       | Moderate   |
| Marine                                                           | Fire/explosion           | Possible       | Major       | Moderate   |
| Agricultural                                                     | Fire/explosion           | Unlikely       | Minor       | Low        |

## 6.0 Building Stock Profile

### 6.1 Overview of a Building Stock Profile

A building stock profile examines the types and numbers of building stock within a community. This profile looks at the number and age of buildings and their uses, as per major occupancy classifications in the Ontario Building Code (OBC).

Reviewing a community's building stock and its importance to the community helps identify potential risk concerns. A review of this profile also helps provide information for developing programs and activities to address public safety risks such as fires, explosions, and structural failures.

### **6.1.1 Fire Marshal Directive 2022-001**

Fire Marshal Directive 2022-001 (Appendix B) specifies that certain assistants to the Fire Marshal must include information on the presence of truss and lightweight construction systems (commonly referred to as lightweight construction, or LWC) when classifying a community's building stock. That information must be made known and documented in a community risk assessment. This information provides firefighters with information about a building's structural composition so they can plan fire suppression activities, which will help ensure firefighter safety.

### **6.2 Overview of the Building Stock in the Township of Seguin**

Listed below is the Township's building stock:

- Group A (Assembly): 16 occupancies
- Group B (Care & Treatment): 0 occupancies
- Group C (Residential): 4827 occupancies
- Groups D & E (Mercantile/Commercial): 109 occupancies
- Group F (Industrial): 79 occupancies

### **6.3 Residential Housing in the Township of Seguin**

The Township's residential housing stock primarily consists of single-family dwellings. According to the 2016 Statistics Canada Census, the Township contained 4,647 residential dwellings at that time. As of 2021, that number had increased to 4,732 private dwellings (an increase of approximately 1.8 per cent).

### **6.4 Legislations Governing Inspection**

Ontario Regulation 365/13: Mandatory Assessment of Complaints and Requests for Approval requires that fire safety assessments and inspections be undertaken (if necessary), as directed by the Fire Marshal, for the following:

- every building for which a fire safety complaint is received
- every building for which a request for assistance to comply with the Fire Code is received and the involvement of the Chief Fire Official is required

Other regulations that govern the type and frequency of building inspections include the following:

- Ontario Regulation 364/13, Mandatory Inspections – Fire Drill in Vulnerable Occupancy: This legislation requires that fire safety assessments, inspections, and fire drills be conducted on an annual basis.

- Ontario Fire Code Section 2.8.2 – Occupancies that Require a Fire Safety Plan: This legislation requires applicable occupancies to prepare, receive approval of, and implement a fire safety plan.
- Ontario Fire Code Section 2.13 (installations of smoke alarms) and Section 2.16 (installations of carbon monoxide alarms): This legislation requires applicable occupancies to have a smoke/CO program (including inspections and enforcement) in place.

## **6.5 Inspection Statistics for the Township of Seguin Fire Department**

Statistics regarding inspections conducted in the Township over the last five years are summarized as follows:

- Table 10 presents the number of inspections conducted from 2019 to 2023.
- Table 11 presents the reasons for the inspections conducted from 2019 to 2023.
- Table 12 presents the number of violations that were noted and the number of notices the Department issued from 2019 to 2023.

**Note:** Fire departments in Ontario did not conduct property inspections during the COVID-19 pandemic. Therefore, the following tables do not record inspection numbers for 2020 or 2021, as these years saw the highest COVID-19 transmission numbers and the highest level of restrictions. The position of Fire Prevention Office was vacant in Seguin from September 2021 through to July 2022, when a Deputy Chief was hired and took on the responsibilities of conducting inspections. Inspection numbers for 2023 indicate a return to normal

Table 10. Inspections by occupancy type, 2019 to 2023.

| Type of Occupancy                  | 2019     | 2020     | 2021     | 2022     | 2023      |
|------------------------------------|----------|----------|----------|----------|-----------|
| Assembly (A)                       | 1        | 0        | 0        | 0        | 4         |
| Care, Treatment, and Detention (B) | 0        | 0        | 0        | 0        | 0         |
| Residential (C)                    | 3        | 1        | 2        | 5        | 16        |
| Mercantile/Commercial (D & E)      | 1        | 0        | 0        | 0        | 1         |
| Industrial (F)                     | 0        | 0        | 0        | 0        | 1         |
| Other                              | 0        | 0        | 0        | 0        | 0         |
| <b>Total Number of Inspections</b> | <b>5</b> | <b>1</b> | <b>2</b> | <b>5</b> | <b>22</b> |

Table 11. Reasons for inspections, 2019 to 2023.

| Reason for Inspection              | 2019     | 2020     | 2021     | 2022     | 2023      |
|------------------------------------|----------|----------|----------|----------|-----------|
| Complaint                          | 0        | 0        | 0        | 0        | 1         |
| Owner request                      | 1        | 0        | 0        | 1        | 1         |
| Follow Up                          | 1        | 0        | 0        | 0        | 0         |
| Routine                            | 3        | 1        | 2        | 2        | 20        |
| Licensing                          | 0        | 0        | 0        | 2        | 0         |
| <b>Total Number of Inspections</b> | <b>5</b> | <b>1</b> | <b>2</b> | <b>5</b> | <b>22</b> |

Table 12. Violations noted/notices issued, 2019 to 2023.

| Year | Verbal | Letter | FSIR | Order | Total | Resolved |
|------|--------|--------|------|-------|-------|----------|
| 2019 | 0      | 2      | 0    | 1     | 3     | 3        |
| 2020 | 0      | 0      | 0    | 0     | 0     | 0        |
| 2021 | 0      | 1      | 0    | 0     | 1     | 1        |
| 2022 | 0      | 3      | 0    | 0     | 3     | 3        |
| 2023 | 0      | 20     | 0    | 0     | 20    | 16       |

## 6.6 Risks Identified by the Building Stock Profile

Tables 13 to 17 summarize the Township's building stock and identify the fire and emergency issues/concerns for each occupancy type. The following factors were considered when identifying the issues and concerns for this profile:

- building use
- building density
- building height and square footage
- building location
- the building's historical or cultural significance
- the building's economic impact

**Note:** No data is available regarding the number of LWC buildings in the Township. As per Fire Marshal Directive 2022-001, the Township must begin recording data related to the LWC used in the construction of its building stock.

Table 13. Group A: assembly occupancy buildings.

| Type of Building     | Number of Buildings | Issues/Concerns                                                                                                                                                                                       | Risk Probability | Risk Consequence | Risk Level |
|----------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------|
| Restaurants          | 7                   | <ul style="list-style-type: none"><li>• Cooking fires</li><li>• Maintenance of life safety systems</li><li>• Staff training</li><li>• Regular inspections</li><li>• Permits for alterations</li></ul> | Unlikely         | Moderate         | Moderate   |
| Schools and Colleges | 3                   | <ul style="list-style-type: none"><li>• Maintenance of life safety systems</li><li>• Staff training</li><li>• Regular inspections</li></ul>                                                           | Unlikely         | Moderate         | Moderate   |
| Community Halls      | 4                   | <ul style="list-style-type: none"><li>• Staff training</li><li>• Occupant load</li><li>• Regular inspections</li><li>• Renters need to have knowledge of fire safety procedures</li></ul>             | Unlikely         | Moderate         | Moderate   |
| Arena                | 1                   | <ul style="list-style-type: none"><li>• Staff training</li><li>• Occupant load</li><li>• Regular inspections</li><li>• Status of fire safety plan</li></ul>                                           | Unlikely         | Moderate         | Moderate   |
| Type of Building     | Number of Buildings | <ul style="list-style-type: none"><li>• Issues/Concerns</li></ul>                                                                                                                                     | Risk Probability | Risk Consequence | Risk Level |

|                       |   |                                                                                                                                                                        |          |          |     |
|-----------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-----|
| Libraries             | 4 | <ul style="list-style-type: none"><li>• Combustible fire load</li><li>• Staff training</li><li>• Regular inspections</li></ul>                                         | Rare     | Moderate | Low |
| Child Care Facilities | 1 | <ul style="list-style-type: none"><li>• Staff training</li><li>• Status of fire safety plan</li><li>• Regular inspections</li></ul>                                    | Rare     | Minor    | Low |
| Churches              | 7 | <ul style="list-style-type: none"><li>• Occupant load</li><li>• Open flame</li><li>• Retrofit of older buildings</li><li>• Regular inspections not regulated</li></ul> | Unlikely | Moderate | Low |

Table 14. Group B: detention, care, and treatment buildings.

| Type of Building              | Number of Buildings | Issues/Concerns | Risk Probability | Risk Consequence | Risk Level |
|-------------------------------|---------------------|-----------------|------------------|------------------|------------|
| Detention, Care and Treatment | 0                   |                 |                  |                  | N/A        |

Table 15. Group C: residential buildings.

| Type of Building                 | Number of Buildings | Issues/Concerns                                                                                                                                                                                                                               | Risk Probability | Risk Consequence | Risk Level      |
|----------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|-----------------|
| Single-family Dwelling           | 4,732               | <ul style="list-style-type: none"> <li>New builds use LWC</li> <li>Homes built prior to 1975 predate the OBC</li> <li>Smoke &amp; carbon monoxide alarms must be installed and working</li> </ul>                                             | Almost Certain   | Minor            | <b>Moderate</b> |
| Multi-unit Residential           | 4                   | <ul style="list-style-type: none"> <li>New builds use LWC</li> <li>Proper fire separations are needed</li> <li>Homes built prior to 1975 predate the OBC</li> <li>Smoke &amp; carbon monoxide alarms must be installed and working</li> </ul> | Almost Certain   | Minor            | <b>Moderate</b> |
| Mixed Occupancies with Residents | 10                  | <ul style="list-style-type: none"> <li>Code compliance regarding retrofit requirements (OFC sections 9.2 and 9.5)</li> <li>Lack of life safety systems</li> </ul>                                                                             | Possible         | Major            | <b>Moderate</b> |
| Hotel/Motels                     | 3                   | <ul style="list-style-type: none"> <li>Buildings constructed prior to 1975 predate the OBC</li> <li>May be used for long-term accommodations</li> <li>Status of fire safety plans</li> </ul>                                                  | Possible         | Moderate         | <b>Moderate</b> |
| Group Homes                      | 1                   | <ul style="list-style-type: none"> <li>Staff training</li> <li>Status of fire safety plans</li> <li>Retrofitting requirements regarding OFC section 9.5</li> </ul>                                                                            | Possible         | Moderate         | <b>Moderate</b> |

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Table 16 Groups D & E: business and personal service/mercantile buildings.

| Type of Building        | Number of Buildings | Issues/Concerns                                                                                                                                                                                    | Risk Probability | Risk Consequence | Risk Level |
|-------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------|
| Retail Lumber Yard      | 1                   | <ul style="list-style-type: none"><li>• Large fire loads</li><li>• Fire access routes</li><li>• Storage of flammable and combustible materials</li></ul>                                           | Possible         | Moderate         | Moderate   |
| Retail Service Stations | 6                   | <ul style="list-style-type: none"><li>• Combustible fuels</li><li>• Storage quantities</li><li>• Marina fueling on water</li></ul>                                                                 | Possible         | Moderate         | Moderate   |
| Retail Businesses       | 109                 | <ul style="list-style-type: none"><li>• Storage of flammable and combustible materials</li><li>• Building construction (legacy vs. LWC)</li></ul>                                                  | Unlikely         | Moderate         | Low        |
| Medical Facilities      | 1                   | <ul style="list-style-type: none"><li>• Mobility issues of occupants</li><li>• Compressed gasses</li><li>• Staff training</li><li>• Status of fire safety plan</li><li>• Staffing levels</li></ul> | Unlikely         | Minor            | Low        |
| Office Buildings        | 20                  | <ul style="list-style-type: none"><li>• Staff training</li></ul>                                                                                                                                   | Unlikely         | Minor            | Low        |

Table 17. Group F: hazardous industrial buildings.

| Type of Building                             | Number of Buildings | Issues/Concerns                                                                                                                                                           | Risk Probability | Risk Consequence | Risk Level |
|----------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------|
| Boat Storage Facilities (indoor and outdoor) | 7                   | <ul style="list-style-type: none"><li>• Large fuel loads</li><li>• Flammable and combustible materials</li><li>• Fire Department access/awareness</li></ul>               | Possible         | Major            | Moderate   |
| Industrial Properties                        | 17                  | <ul style="list-style-type: none"><li>• Large fuel loads</li><li>• Flammable and combustible materials</li></ul>                                                          | Possible         | Moderate         | Moderate   |
| Warehouses/ Rental Storage                   | 7                   | <ul style="list-style-type: none"><li>• Large fuel loads</li><li>• Improper storage practices</li><li>• Flammable and combustible materials</li></ul>                     | Possible         | Moderate         | Moderate   |
| Vehicle Repair Shops                         | 3                   | <ul style="list-style-type: none"><li>• Compressed gases</li><li>• Hot works</li><li>• Improper storage practices</li><li>• Flammable and combustible materials</li></ul> | Possible         | Minor            | Moderate   |

## 7.0 Critical Infrastructure Profile

### 7.1 Overview of a Critical Infrastructure Profile

A critical infrastructure (CI) profile examines the capabilities and limitations of a community's critical infrastructure. CI contributes to the interconnected networks, services, and systems that meet vital human needs, sustain the economy, and protect public safety and security. The most common factors assessed for this profile include the following:

- electricity distribution
- telecommunications
- critical buildings and services
- roadway infrastructure

The presence, availability, and capacity of CI can significantly impact factors such as:

- dispatch
- communications
- transportation
- fire suppression operations
- overall healthcare in a community

The presence, availability, and capacity of CI may present unique risk concerns because of its size or design.

Reviewing CI provides valuable information that municipalities can use when setting priorities and developing strategies for addressing risk concerns in their communities, such as public safety education, fire prevention, and emergency response pre-planning.

### 7.2 Risks Identified by the Critical Infrastructure Profile

Table 18 summarizes the CI in the Township (based on information provided by the Township's Community Emergency Management Program). The table lists the most likely fire and emergency issues/concerns affecting each type of CI, as well as general observations (where applicable).

Table 18. Critical infrastructure profile: **risk summary**.

| Critical Infrastructure               | Issues/Concerns                                                                                                                         | Observations                                                                                                                                                                                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water/Natural Resources               | <ul style="list-style-type: none"> <li>• Quality</li> <li>• Quantity</li> <li>• Access</li> </ul>                                       | <ul style="list-style-type: none"> <li>• The Township fire service relies on access to lakes, streams and ponds for fire suppression operations which is critical for structural fire responses</li> </ul>                                                                             |
| Electricity                           | <ul style="list-style-type: none"> <li>• Hydro distribution sites</li> <li>• Transmission</li> <li>• Access to grid</li> </ul>          | <ul style="list-style-type: none"> <li>• The transmission of electricity can be unreliable when poles and towers are damaged</li> <li>• A large portion of the electrical grid runs through forested areas with greater risk of failure due to trees falling on hydro lines</li> </ul> |
| Communications                        | <ul style="list-style-type: none"> <li>• 911 communications</li> <li>• Telecommunications</li> </ul>                                    | <ul style="list-style-type: none"> <li>• These systems rely heavily on radio towers and phone/internet lines</li> <li>• These systems can be severely affected by damage to poles and towers</li> </ul>                                                                                |
| Fuel (natural gas, oil, and gasoline) | <ul style="list-style-type: none"> <li>• Diesel and gasoline storage</li> <li>• Natural gas/propane storage and transmission</li> </ul> | <ul style="list-style-type: none"> <li>• It is critical to keep this infrastructure operating 24 hours a day, year-round</li> </ul>                                                                                                                                                    |
| Transportation                        | <ul style="list-style-type: none"> <li>• Public and private roads</li> <li>• Bridges</li> <li>• Trail system</li> </ul>                 | <ul style="list-style-type: none"> <li>• Damage to the Township's transportation networks could cause serious delays during emergency responses</li> </ul>                                                                                                                             |

## 8.0 Community Services Profile

### 8.1 Overview of a Community Services Profile

A community services profile examines the types of services provided in a community by entities other than the fire department. The presence/absence of other service providing entities may dictate the types of emergencies to which the fire department responds. Moreover, those other entities may be capable of assisting the fire departments with mitigating the impacts caused by emergencies. Community services can also potentially reduce risks to public safety by providing a means of delivering public education and prevention programs.

### 8.2 Risks Identified by the Community Services Profile

Table 19 summarizes the community service entities that may be able to assist the Department when it responds to an emergency and associated issues/concerns.

Table 19. Community services profile: **risk summary**.

| Agency                                | Assistance Provided                                                                                                                                                                                       | Issues/Concerns                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Health Unit                           | The Health Unit provides vulnerable persons with access to public education. The Health Unit also provides advice and services for firefighters who were exposed to contaminants during a response.       | Protocols for reporting exposed firefighters not documented.                                                                    |
| Municipal Halls and Community Centres | These facilities are large assembly occupancies that can serve as reception areas and warming/cooling centres.                                                                                            | The buildings require backup emergency power.                                                                                   |
| Schools                               | Schools are large assembly occupancies that can serve as reception areas and warming/cooling centres.<br><br>Schools are also essential locations for delivering fire and life safety education programs. | Individuals may have difficulty accessing the schools during an emergency.<br><br>The buildings require backup emergency power. |
| Service/Community Clubs               | Service groups run fundraisers to assist community interest groups. These groups can also provide fire prevention resources for distribution to the public.                                               | Depending on the type of emergency, these groups may suffer a shortage of available volunteers.                                 |

| Agency               | Assistance Provided                                                                                                                                                                                                   | Issues/Concerns                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Faith-based Groups   | There are churches in various parts of the community that may provide support for those who suffer a loss caused by an incident.                                                                                      | Depending on the type of emergency, these groups may suffer a shortage of available volunteers. |
| Red Cross            | Red Cross services can be activated to support the community during a large-scale emergency. For example, the Red Cross may help organize a temporary shelter for someone who has suffered a fire in their residence. | There may be delayed response times.                                                            |
| Community Care (211) | Connects with seniors and community members in need of services.                                                                                                                                                      | Awareness of program                                                                            |

## **9.0 Public Safety Response Profile**

### **9.1 Overview of a Public Safety Response Profile**

A public safety response profile examines which service providers (other than the fire department) respond to community emergencies. The profile looks at the types of incidents those entities respond to and includes a review of their response capabilities. Aside from the fire department, the most common examples of public safety response agencies are police and paramedic services.

A public safety response profile can contribute to an understanding of incident-related data. Data gathered from non-fire department public safety response entities can provide insight into a fire department's potential interdependencies. The profile can also give insights into the benefits of establishing a tiered/joint response to a public safety risk or emergency. Finally, the data from this profile can also help identify risk treatment options based on shared responsibilities.

### **9.2 Common Types of Shared Services**

The following subsections describe examples of common shared services and discuss their relation to the Township and the Fire Department.

#### **9.2.1 Fire Department Mutual Aid System**

Mutual aid is an agreement between emergency responders. A mutual aid agreement stipulates how and the degree to which assistance from across jurisdictional boundaries will be rendered during an emergency. For example, an emergency may occur in a community (such as a disaster or a multiple-alarm fire), and the nature of that emergency may exceed the resource capabilities of the local emergency services responder. If such an event occurs, the affected community can activate its mutual aid agreement and receive assistance by the neighbouring emergency services entities. The Ontario Fire Marshal's Office is the approval authority for fire services mutual aid agreements in Ontario.

As of this CRA, the Fire Department is part of the West Parry Sound Mutual Aid System.

#### **9.2.2 Automatic Aid and Fire Protection Service Agreements**

Automatic aid programs are designed to ensure that the closest available resource can provide support in the event of an emergency. Automatic aid agreements operate on a day-to-day basis, irrespective of municipal boundaries.

The Fire Department has automatic aid agreements with the following municipalities:

- a) Town of Parry Sound. This agreement covers fire protection service for the Rose Point area in the Township.
- b) Township of Muskoka Lakes as identified below.

Seguin Fire Services agrees to provide fire service to:

- A portion of Highway 141 extending east from the township boundary to and including Rosseau Lake Rd 2 and all properties accessed off these roads.
- All properties located on or accessed off Jean Marie Road.
- Seguin Fire will respond with any Muskoka Lakes Fire Station to assist as required.

In return the Township of Muskoka Lakes Fire Department will provide fire service to:

- A portion of District Road 7/632 to and including Old Portage Road and all properties accessed off these roads.
- All properties located or accessed off Juddhaven Road.
- All properties located or accessed off Highway 69 up to the junction of Highway 69 and 612, but not including Highway 612.
- Muskoka Lakes Fire Department will respond with any Seguin Fire Station to assist as required.

### **9.2.3 Police Services**

The following agency provides policing service for the Township:

- Ontario Provincial Police.

### **9.2.4 Emergency Medical Services**

The Township receives emergency medical services from Parry Sound Paramedic Services. The paramedics provide both primary care and advanced care (depending on the responding paramedic's level of training). Paramedic Services currently has one ambulance base located at the Humphrey fire station in the Township.

### **9.2.5 911 Public Emergency Reporting Service**

The Township receives its public emergency reporting services from the following two agencies:

- The Ontario Provincial Police in Parry Sound answer 911 for the Township.

- The Parry Sound Ambulance Communications Centre are transferred all 911 calls for ambulance and fire related emergencies.

### 9.2.6 Roadway Maintenance Services

The Township receives roadway maintenance for its municipal roads from its Public Works Department, which has 18 full-time employees.

The Province of Ontario has a contract with a private company for all provincial highway maintenance within the township.

Private roadway maintenance is the responsibility of the property owner or local association utilizing the road. These roads are not maintained to an identified standard.

### 9.3 Public Safety Response Entities in the Township of Seguin

Table 20 summarizes various incidents and the organizations responsible for responding to them. For some incidents, a proper community response only requires responders to activate the appropriate resources and maintain scene security until a representative of the correct organization arrives.

Table 20. Public safety response entities profile: risk summary.

| Response Entity            | Incident Response                                                                                                              | Role at Incident                                                                                                                                                                                                                             | Issues/Concerns                                                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| OPP                        | <ul style="list-style-type: none"> <li>• Fires</li> <li>• Sudden deaths</li> <li>• Motor vehicle collisions</li> </ul>         | <ul style="list-style-type: none"> <li>• Traffic control</li> <li>• Assist with investigations</li> <li>• Respond to criminal activity</li> </ul>                                                                                            | <ul style="list-style-type: none"> <li>• No issues or concerns</li> </ul>  |
| Office of the Fire Marshal | <ul style="list-style-type: none"> <li>• Large/suspicious fires and explosions</li> <li>• Fatal fire investigations</li> </ul> | <ul style="list-style-type: none"> <li>• Investigate fires as per the FPPA</li> <li>• Assist police with investigations</li> <li>• Provide advice during large-scale emergencies</li> <li>• Provide limited specialized equipment</li> </ul> | <ul style="list-style-type: none"> <li>• Delayed response times</li> </ul> |

| Response Entity                          | Incident Response                                                                                                                    | Role at Incident                                                                                                                                                     | Issues/Concerns                                                                                                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hydro One                                | <ul style="list-style-type: none"> <li>Fires</li> <li>Downed hydro wires</li> <li>Electrical fires involving transformers</li> </ul> | <ul style="list-style-type: none"> <li>Isolate electrical services</li> <li>Repair hydro infrastructure</li> </ul>                                                   | <ul style="list-style-type: none"> <li>Delayed response times</li> <li>Potential for lengthy power outages</li> <li>Requested by Fire Department to attend.</li> </ul> |
| Technical Standards and Safety Authority | <ul style="list-style-type: none"> <li>Fires</li> <li>Carbon monoxide emergencies</li> <li>Elevator emergencies</li> </ul>           | <ul style="list-style-type: none"> <li>Assist with investigations</li> <li>Provide training (limited)</li> </ul>                                                     | <ul style="list-style-type: none"> <li>Delayed response times</li> <li>Training levels may be limited</li> <li>Training can be costly</li> </ul>                       |
| Bell/Rogers                              | <ul style="list-style-type: none"> <li>Communication disruptions</li> </ul>                                                          | <ul style="list-style-type: none"> <li>Repair infrastructure</li> </ul>                                                                                              | <ul style="list-style-type: none"> <li>In some instances, the Department may have to request these agencies to attend</li> </ul>                                       |
| Enbridge Gas                             | <ul style="list-style-type: none"> <li>Fires</li> <li>Gas line infrastructure damage</li> </ul>                                      | <ul style="list-style-type: none"> <li>Isolate gas lines</li> <li>Repair broken or leaking gas lines/mains</li> </ul>                                                | <ul style="list-style-type: none"> <li>Delayed response times</li> </ul>                                                                                               |
| Parry Sound Paramedics                   | <ul style="list-style-type: none"> <li>Fires</li> <li>Motor vehicle collisions</li> <li>Medical emergencies</li> </ul>               | <ul style="list-style-type: none"> <li>Monitor firefighter health at emergencies</li> <li>Provide patient care</li> <li>Transfer patients to the hospital</li> </ul> | <ul style="list-style-type: none"> <li>Possibility of delayed response times</li> <li>Limited resources throughout West Parry Sound</li> </ul>                         |

| Response Entity                                                    | Incident Response                                                                                                                              | Role at Incident                                                                                                                                                                               | Issues/Concerns                                                                                                        |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| North Bay/Parry Sound Public Health                                | <ul style="list-style-type: none"> <li>Health emergencies</li> <li>Water-quality emergencies (regarding potable water and swimming)</li> </ul> | <ul style="list-style-type: none"> <li>Provide guidance during health emergencies</li> <li>Issue boil water advisories</li> <li>Issue swimming advisories (regarding water quality)</li> </ul> | <ul style="list-style-type: none"> <li>Possibility of delayed response times</li> </ul>                                |
| Ministry of Transportation (MTO) – Township of Seguin Public Works | <ul style="list-style-type: none"> <li>Fires</li> <li>Motor vehicle collisions</li> </ul>                                                      | <ul style="list-style-type: none"> <li>Issue road closures and detours</li> <li>Perform winter operations</li> <li>Road maintenance</li> </ul>                                                 | <ul style="list-style-type: none"> <li>Delayed responses are possible due to weather and ongoing operations</li> </ul> |

## 10.0 Past Events and Loss History Profile

### 10.1 Overview of Past Events and Loss History Profile

A past events and loss history profile examines the emergency responses that have occurred in a community over the past five years. The profile includes two main components:

- analyzing the number and types of emergency responses, injuries, deaths, and dollar losses over the last five years
- assessing previous response data

By evaluating previous response data, fire departments and municipalities can identify circumstances and behaviours that can assist with making informed decisions about the delivery of fire services in the community.

### 10.2 Past Events and Loss History Profile for the Township of Seguin

The following tables present the total loss history of the Township for the years 2019 to 2023:

Tables 21 to 25 summarize the fires that occurred in the Township from 2022. For each property group, the following is presented:

- number of fires

- total dollar loss
- known causes

Table 26 lists the number of fires in the Township from 2019 to 2023 in each property group, as well as the total dollar loss.

Table 21. Fire loss frequency, dollar loss, and causes, **2019**.

| Building Group                          | Fires    | \$ Loss          | Causes                            |
|-----------------------------------------|----------|------------------|-----------------------------------|
| Group A (Assembly)                      | 0        | 0                |                                   |
| Group B                                 |          |                  |                                   |
| Group C (Residential)                   | 6        | \$425,000        | Chimney, Cooking and Undetermined |
| Groups D & E<br>(Mercantile/Commercial) | 0        | 0                |                                   |
| Group F                                 | 1        | \$10,000         | Chimney                           |
| Other                                   | 3        | \$70,000         | Undetermined, Improper Disposal   |
| <b>Totals</b>                           | <b>8</b> | <b>\$505,000</b> |                                   |

Table 22. Fire loss frequency, dollar loss, and causes, **2020**.

| Building Group                          | Fires    | \$ Loss            | Causes                |
|-----------------------------------------|----------|--------------------|-----------------------|
| Group A (Assembly)                      | 0        | 0                  |                       |
| Group B                                 | 0        | 0                  |                       |
| Group C (Residential)                   | 4        | \$6,832,500        | Chimney, Undetermined |
| Groups D & E<br>(Mercantile/Commercial) | 1        | \$100,000          | Undetermined          |
| Group F                                 | 0        | 0                  |                       |
| Other                                   | 0        | 0                  |                       |
| <b>Totals</b>                           | <b>5</b> | <b>\$6,932,500</b> |                       |

Table 23. Fire loss frequency, dollar loss, and causes, **2021**.

| Building Group                          | Fires    | \$ Loss          | Causes                |
|-----------------------------------------|----------|------------------|-----------------------|
| Group A (Assembly)                      | 0        | 0                |                       |
| Group B                                 | 0        | 0                |                       |
| Group C (Residential)                   | 4        | \$212,000        | Undetermined, Chimney |
| Groups D & E<br>(Mercantile/Commercial) | 1        | \$10,000         | Maintenance           |
| Group F                                 | 0        | 0                |                       |
| Other                                   | 1        | \$1,000          | Undetermined          |
| <b>Totals</b>                           | <b>6</b> | <b>\$223,000</b> |                       |

Table 24. Fire loss frequency, dollar loss, and causes, **2022**.

| Building Group                          | Fires     | \$ Loss            | Causes                                     |
|-----------------------------------------|-----------|--------------------|--------------------------------------------|
| Group A (Assembly)                      | 0         | 0                  |                                            |
| Group B                                 | 0         | 0                  |                                            |
| Group C (Residential)                   | 11        | \$9,551,000        | Electrical, Smoking, Mechanical & Exposure |
| Groups D & E<br>(Mercantile/Commercial) | 0         | 0                  | Defective item                             |
| Group F                                 | 0         | 0                  |                                            |
| Other                                   | 2         | \$12,500           | Undetermined, Careless                     |
| <b>Totals</b>                           | <b>13</b> | <b>\$9,563,500</b> |                                            |

Table 25. Fire loss frequency, dollar loss, and causes, **2023**.

| Building Group                       | Fires    | \$ Loss            | Causes                                               |
|--------------------------------------|----------|--------------------|------------------------------------------------------|
| Group A (Assembly)                   | 0        | 0                  |                                                      |
| Group B                              | 0        | 0                  |                                                      |
| Group C (Residential)                | 9        | \$2,255,250        | Undetermined, Lightening, Smoking, Improper Disposal |
| Groups D & E (Mercantile/Commercial) | 0        | 0                  |                                                      |
| Group F                              | 0        | 0                  |                                                      |
| Other                                | 0        | 0                  |                                                      |
| <b>Totals</b>                        | <b>9</b> | <b>\$2,255,250</b> |                                                      |

### 10.3 Department Statistics

According to its statistics, the Department made 1,055 emergency responses from 2019 to 2023. Figure 4 illustrates the number of responses by year. Table 27 (below Figure 4) summarizes the Department's fire responses over the same period.

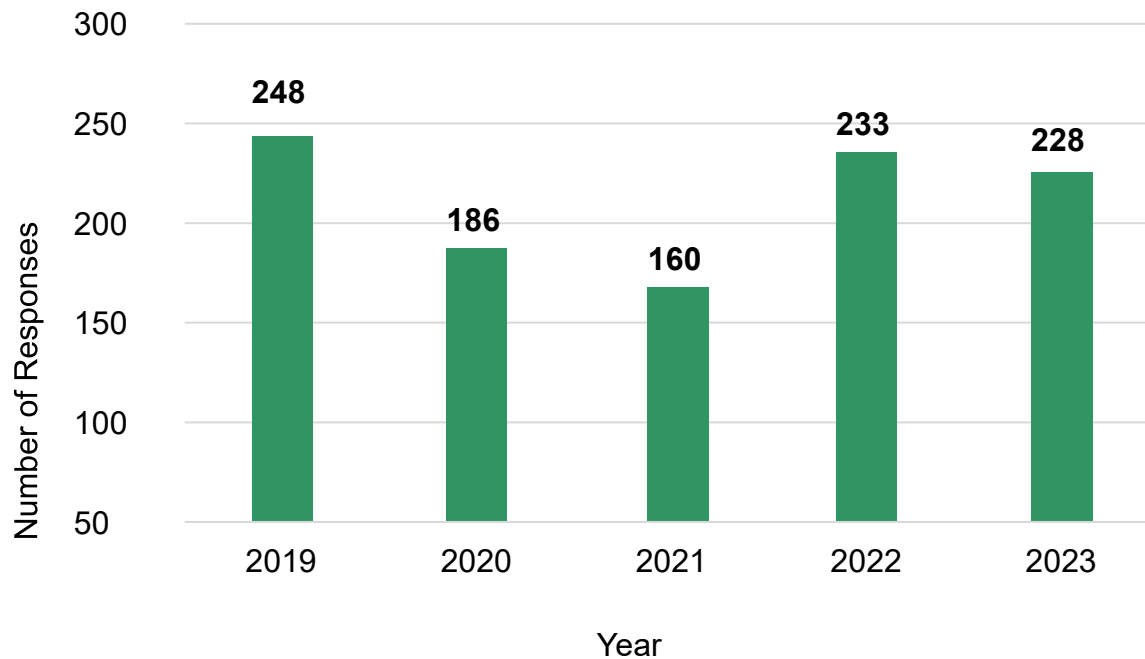


Figure 4. Number of emergency responses by year, 2019 to 2023.

Table 26. Types of fire responses, 2019 to 2023.

| Year | Loss Fires Structures | Loss Fires Other | Loss Fires Vehicles | No Loss Fires | Non-Fire Calls |
|------|-----------------------|------------------|---------------------|---------------|----------------|
| 2019 | 5                     | 3                | 1                   | 9             | 230            |
| 2020 | 5                     | 0                | 5                   | 18            | 158            |
| 2021 | 5                     | 1                | 2                   | 11            | 141            |
| 2022 | 11                    | 2                | 2                   | 29            | 189            |
| 2023 | 9                     | 0                | 5                   | 16            | 198            |

The Department's statistics also show that, on average, the Department responds to roughly 3 water-related emergencies each year.

#### 10.4 Response Times

A fire department's response time (or on-scene time) is separated into three components: initial call to dispatch time, assembly time, and travel time. These components include controllable and non-controllable factors.

The initial call to dispatch time is a controllable component. When a fire department has improved technology and a fully compliant communications service, it can decrease the time involved during this stage of a response. Conversely, assembly time is a noncontrollable component because there is no guarantee about how many firefighters will be on hand to respond to an emergency call or how close those firefighters will be to the fire station. Travel time is another non-controllable component because it depends on the location of the emergency and the roads that connect responders to the emergency scene.

Table 27 defines the response time components. The table also defines on-scene time.

Table 27. Response time components.

| Component                     | Definition                                                                                                                                  | Controllable or Non-Controllable |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Initial Call to Dispatch Time | The time interval during which an initial call is received by the dispatch center to the time the notification is sent to the fire station. | Controllable.                    |

|               |                                                                                                                                            |                                                     |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Assembly Time | The time interval during which a fire station is notified of an emergency call to the time the responding vehicle leaves the fire station. | Non-controllable.                                   |
| Travel Time   | The time interval during which a responding vehicle leaves the fire station to the time it arrives on scene at the emergency.              | Non-controllable.                                   |
| On-Scene Time | Total time after all controllable and noncontrollable components are added together.                                                       | Involves controllable and non-controllable factors. |

In rural areas, response times are often ten to 20 minutes, depending on factors such as the size of the municipality, the number and location of fire stations, and the type of available road networks.

It is important for fire departments to know their response times because a fire's growth is heat-generated and is dependent upon fuel and air supply. Once the temperature in a room ablaze reaches approximately 1000 °F (590 °C), a flashover may occur in the room, which is normally within ten minutes (or less) of fire ignition. Since the risk of loss of life and property significantly increases following a flashover, a quick response greatly increases the firefighters' ability to protect endangered lives and property.

Appropriate response time and firefighter intervention help increase the chance for any endangered lives to be rescued and fire control to improve.

### 10.4.1 Average Response Time in the Township of Seguin

Figure 6 illustrates the Department's average response times for 2019 to 2023 based on the data recorded in the Department's statistics. (**Note:** The timings include responses outside of the Township, which the Department made due to response agreements or requests for mutual aid assistance).

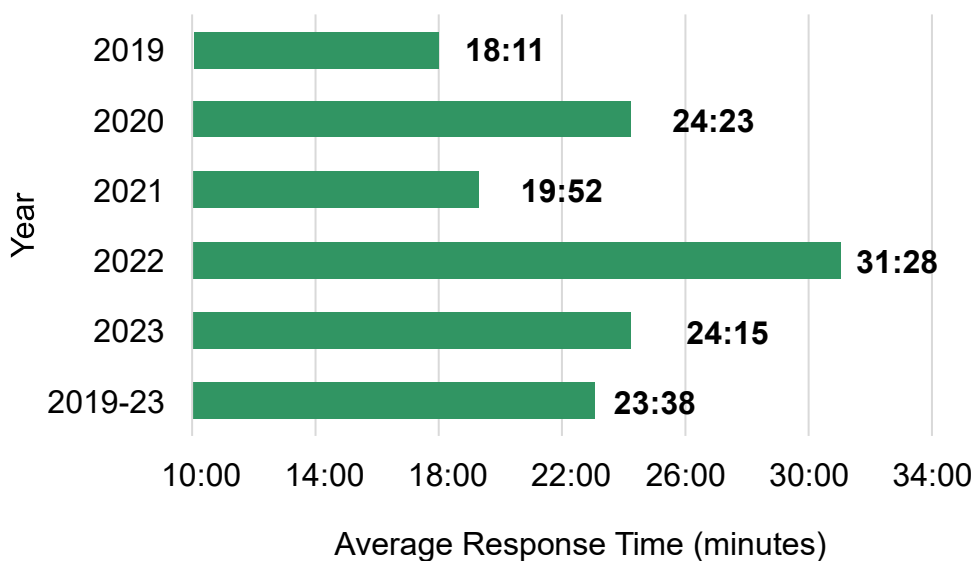


Figure 5. Average response times, 2019 to 2023.

### 10.5 Resource Deployment

Determining the number of firefighters needed for adequate resource deployment has been an ongoing concern for municipalities for many years.

In recent years, the provincial government has influenced the decision-making process for fire department staffing through the Occupational Health and Safety Act (OHSA) and the Fire Protection and Prevention Act. Under the former, the employer is responsible for protecting employees from workplace injuries and death, providing employee training, and providing competent supervisors. (Based on this legislation's criteria, the Township and Council are considered the employer.) Adhering to legislative requirements is the first step a fire department must take when it makes any staffing decisions.

Another resource that can help a fire department determine the appropriate number of staff is the effective fireground staffing model (EFSM). The Office of the Fire Marshal developed the EFSM in the 1990s as part of a comprehensive fire safety model that identified seven sub-models directly impacting fire protection:

- Public Attitude
- Intervention Time
- Detection
- Suppression Capabilities
- Fire Risk
- Fire Prevention Effectiveness
- Fire Ground Effectiveness

The EFSM has proven to be a valuable tool for helping fire departments determine staffing and resource levels/deployment, and it is now widely used across Ontario.

Table 28 applies the EFSM and lists the minimum number of firefighters required to perform the identified critical tasks at a fire in a single-family home.

Table 28. Firefighters needed for critical tasks at single-family home fires and lists the number of additional firefighters needed to provide the water supply for a fire in a non-hydrant area

| Critical Tasks               | Firefighters Required |
|------------------------------|-----------------------|
| Incident Commander           | 1                     |
| First Arriving Pump Operator | 1                     |
| Fire Attack Sector           | 2                     |
| Search & Rescue              | 2                     |
| Rapid Intervention Team      | 2                     |
| Ground Ladder/Ventilation    | 2                     |
| Incident Safety Officer      | 1                     |
| Water Supply (non-hydrant)   | 4                     |
| Water Fill (non-hydrant)     | 2                     |
| <b>Total</b>                 | <b>17</b>             |

## 10.6 Fire Department Volunteer Staffing Levels

Table 29 identifies the staffing levels at each of the four stations in the Seguin Fire Department.

Table 29 Fire Department staffing levels

| Year | Station 10 | Station 20 | Station 30 | Station 40 | Total |
|------|------------|------------|------------|------------|-------|
| 2019 | 25         | 11         | 10         | 23         | 69    |
| 2020 | 21         | 11         | 8          | 18         | 58    |
| 2021 | 22         | 12         | 6          | 19         | 59    |
| 2022 | 16         | 11         | 5          | 14         | 46    |
| 2023 | 16         | 10         | 8          | 10         | 44    |

Much of the population in the Township of Seguin is ages 60+years old (40%) and 0-19 years (13.9%). This leaves only 46.1% (2,434) of the 5,280 permanent residences eligible to apply for a position as a volunteer firefighter to staff 4 stations as per the Establish and Regulating a Fire Department by-law.

## 11.0 Community Comparison

### 11.1 Context

Ontario Regulation 378/18 came into effect in July 2019. This regulation stipulates that every municipality in the province must complete a community risk assessment, and the risk assessment component of the CRA must be completed by July 1, 2024. A CRA should compare the municipality in question with municipalities which have a similar size and demographic profile.

### 11.2 Community Comparison for the Township of Seguin

As of this CRA, there is not enough information available to conduct a thorough community comparison of the Township.

Ontario Regulation 378/18 requires a municipality to review its CRA annually. As more communities complete CRAs, the Township can use the data from those CRAs to complete this section of the document during one of its annual reviews.

## 12.0 Hazards Profile

### 12.1 Overview of a Hazards Profile

A hazards profile examines a community's hazards, including natural hazards and those caused by humans and technology. The three components of a hazards profile are probability scoring, consequence scoring, and total risk scoring.

This scoring methodology mirrors Emergency Management Ontario's Hazard Identification and Risk Assessment (HIRA) methodology but views the consequences and hazard types differently than Emergency Management Ontario; this is to ensure that the risk assessment best reflects the delivery of fire protection services.

The first component of a hazards profile is probability scoring. This component is determined after thoroughly examining the results of the previously-listed profiles that are reviewed as part of a CRA's development, particularly the past events and the loss history profile.

Table 30 explains each level of probability. The Department used this table when determining the probability of each identified hazard within the Township.

Table 30. Hazards profile: probability levels.

| Probability | Category      | Occurrence Rate                 | Description                                               |
|-------------|---------------|---------------------------------|-----------------------------------------------------------|
| 1           | Rare          | Occurs every 100 years or more. | Less than a 1 per cent chance of occurrence in any year.  |
| 2           | Very Unlikely | Occurs every 50 to 99 years.    | Between a 1-2 per cent chance of occurrence in any year.  |
| 3           | Unlikely      | Occurs every 20 to 49 years.    | Between a 2-5 per cent chance of occurrence in any year.  |
| 4           | Probable      | Occurs every 5 to 19 years.     | Between a 5-20 per cent chance of occurrence in any year. |
| 5           | Likely        | Occurs <5 years.                | Over 20 per cent chance of occurrence in any year.        |
| 6           | Certain       | The hazard will occur annually. | 100 per cent chance of occurrence in any year.            |

The second component of a hazards profile is consequence scoring. The consequences used in this profile include eight of the ten consequences in Emergency Management Ontario's HIRA. A heavier overall weighting is given to the "life safety" category due to the high life safety consequences involved during a front-line emergency response.

Consequence scores are calculated as follows:

- High: 3
- Moderate: 2
- Low: 1
- None: 0

The maximum score is 3 for all categories except life safety. The life safety category has a 3x weight attached to it, and the maximum score for this category is 9. Table 32 explains each consequence level for each of the eight categories.

Table 31. Hazards profile: consequence levels.

| Consequence Type           | None (0)                                                                                     | Low (1)                                                                                                     | Moderate (2)                                                                                                              | High (3)                                                                                                     |
|----------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1. Life Safety X3          | Not likely to result in injuries or fatalities.<br>No life safety issues.                    | Medical treatment is required, but no fatalities are likely.<br>Minor treatment or limited hospitalization. | Extensive injuries, significant hospitalization, or a fatality.                                                           | Large number of severe injuries requiring hospitalization. Possibility of multiple fatalities.               |
| 2. Evacuation              | Not likely to result in an evacuation, shelter-in-place orders, or people becoming stranded. | A small or localized portion of the population is evacuated, told to shelter-in-place, or becomes stranded. | A moderate and generally localized portion of the population is evacuated, told to shelter-in-place, or becomes stranded. | A large or widespread portion of the population is evacuated, told to shelter-in-place, or becomes stranded. |
| 3. Psychosocial            | Not likely to result in significant impacts on mental and emotional well-being.              | Moderate or generally short term impacts on one or more mental and emotional well-being.                    | Significant impacts on the mental and emotional wellbeing of one or more individuals, including longterm impacts.         | Widespread community impacts on mental and emotional well-being, including long-term impacts.                |
| 4. Property Damage         | Not likely to result in property damage.                                                     | Could cause minor to moderate damage.                                                                       | Localized severe damage.                                                                                                  | Widespread severe damage or severe damage to multiple properties.                                            |
| 5. Critical Infrastructure | Not likely to disrupt assets or services.                                                    | Could cause minor disruption of assets or services.                                                         | Could cause major but localized or short-term disruptions to critical infrastructure services.                            | Could cause widespread, severe, ongoing disruption of assets or services.                                    |

| Consequence Type | None (0)                                                                       | Low (1)                                                                              | Moderate (2)                                                                                                                | High (3)                                                                                     |
|------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 6. Environmental | Not likely to result in environmental damage.                                  | Could cause localized and reversible damage.<br>Quick clean-up is possible.          | Could cause major but reversible damage.<br>Clean-up is difficult.                                                          | Could cause severe, irreversible damage.<br>Clean-up is not possible.                        |
| 7. Economic      | Not likely to disrupt business/financial activities.                           | Minor disruption of business/financial activities or the economy of the local area.  | Could result in some losses for one or more businesses or other negative consequences for the regional or community economy | Could result in losses for an industry or severe economic impact on the community or region. |
| 8. Reputational  | Not likely to result in significant legal, political, or reputational impacts. | Likely to result in limited or short-term legal, political, or reputational impacts. | Likely to result in some significant or long-term legal, political, or reputational impacts                                 | Likely to result in significant or lasting legal, political, or reputational impacts.        |

The final component of a hazards profile is total risk scoring. Total risk scoring is determined by multiplying a hazard's probability score by its consequence score. Each hazard's overall risk level is calculated by multiplying its probability score (L) by its consequence score (C). Total scores (L x C) are organized into the following categories:

- **Score of 0: N/A**
- **Score of 1 to 30: Very Low**
- **Score of 31 to 60: Low**
- **Score of 61 to 90: Moderate**
- **Score of 91 to 120: High**
- **Score of 121 to 150: Very High**
- **Score of 151 to 180: Extreme**

## 12.2 Risks Identified in the Township of Seguin

Based on the results of the community profiles reviewed during this CRA's development, as well as consultations with staff, the Township's top risks (from a fire services perspective) are as follows:

1. Weather Event (Risk score: 90)
2. Road/Highway/Railway Incident (Risk score: 84)
3. Wildland Fires (Risk score: 78)
4. Fire/Explosion in Residential Occupancy (Risk Score: 60)
5. Fire/Explosion in Commercial Occupancy (Risk score: 52)
6. Fire/Explosion in Industrial Occupancy (Risk score: 32)
7. Waterway-Related Emergencies (Risk score: 40)

Table 32 provides a detailed breakdown of the probability and consequence scores for each risk.

Table 32. Risk matrix identifying the public safety risks in the Township of Seguin.

| Risk                                    | Probability Score (L) | Life Safety Consequence | Evacuation Consequence | Psychosocial Consequence | Property Damage Consequence | Critical Infrastructure Consequence | Environmental Consequence | Economic Consequence | Reputational Consequence | Consequence Score (C) | Risk Total (L x C) | Risk Level |
|-----------------------------------------|-----------------------|-------------------------|------------------------|--------------------------|-----------------------------|-------------------------------------|---------------------------|----------------------|--------------------------|-----------------------|--------------------|------------|
| Weather Event                           | 6                     | 6                       | 1                      | 1                        | 1                           | 2                                   | 2                         | 1                    | 1                        | 15                    | 90                 | Moderate   |
| Road/Highway/Railway Incident           | 6                     | 6                       | 0                      | 1                        | 2                           | 1                                   | 2                         | 1                    | 1                        | 14                    | 84                 | Moderate   |
| Wildland Fires                          | 6                     | 3                       | 1                      | 1                        | 2                           | 2                                   | 2                         | 1                    | 1                        | 13                    | 78                 | Moderate   |
| Fire/Explosion in Residential Occupancy | 6                     | 3                       | 1                      | 2                        | 3                           | 0                                   | 1                         | 0                    | 0                        | 10                    | 60                 | Low        |
| Fire/Explosion in Commercial Occupancy  | 4                     | 3                       | 1                      | 2                        | 3                           | 1                                   | 2                         | 1                    | 0                        | 13                    | 52                 | Low        |
| Fire/Explosion in Industrial Occupancy  | 4                     | 3                       | 2                      | 1                        | 2                           | 1                                   | 1                         | 1                    | 0                        | 11                    | 44                 | Low        |
| Waterway Emergencies                    | 5                     | 3                       | 0                      | 0                        | 1                           | 1                                   | 1                         | 1                    | 1                        | 8                     | 40                 | Low        |

## 13.0 Risk Summaries & Treatment Plans

### 13.1 Overview of Risk Summaries & Treatment Plans

The RTP process follows an evidence-based approach that helps to define the problems posed by the risks. This approach considers the outcomes of proposed actions, assesses options, and provides recommendations to address the identified issues.

There are many ways to address risk. Each RTP in this CRA recommends at least one of the following five actions:

1. Avoid: Eliminate the hazard.
2. Mitigate: Reduce the probability or impact of the risk.
3. Accept: Take no action.
4. Transfer: Transfer the risk to another party.
5. Share: Transfer part of the risk's ownership to another party.

Along with the recommended actions, the RTPs include strategies for risk mitigation. These strategies address topics such as:

- policies and procedures
- training
- service delivery agreements
- resource allocation
- service level changes

The Fire Department should use the following RTPs to guide the development and establishment of programs and services to mitigate the potential impacts of the community's identified risks.

**13.2****Weather Event**Risk Level: **Moderate Risk Score 90****Administrative and Operational Risks/Concerns/Observations**

- Response time by authority/agency to arrive on scene.
- Access to remote rural areas.
- Private roadway access due to inadequate maintenance.
- Weather related emergencies can last for many days, and with the Fire Departments volunteer firefighters may face challenges balancing employment and personal responsibilities with their emergency response duties.
- Loss of powerlines and communications equipment.

**Current Capabilities and Services Provided**

- The Fire Department responds to all types of weather-related emergencies, including tress down on powerlines due to windstorms, flooded properties and medical calls requiring access assistance due to heavy snow or rain.
- If infrastructure is damaged due to a weather event, the Fire department provides rescue and evacuation services and will establish a safety zone until the proper authority or agency arrives to repair damaged infrastructure.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****1. What evidence is there to support the need for Fire Protection Services?**

The Township has experienced severe weather events in the past few years, including unusually intense windstorms, drought and heavy snowstorms.

**2. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**3. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to respond to the weather events the township has faced.

**4. Is there a better way to make the community safer?**

Yes: The Fire Department can provide further public education regarding the actions Township residents should take during and after weather events. The education should also address emergency preparedness.

**5. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently.

**Recommended Risk Treatment Option(s) and Action(s)**

- Evaluate public education messaging regarding what to do during and after emergencies and the importance of emergency preparedness to ensure all demographics of the population are understanding the message.
- Consider partnering with allied agencies withing West Parry Sound to deliver public education initiatives.

**Resources Needed**

- Fire Department staff time
- Method(s) to reach all demographics of the Township
- Resources such as handouts and flyers
- Social Media

**Timeline**

- Ongoing

**13.3****Road/Highway/Railway Incidents**Risk Level: **Moderate Risk Score 84****Administrative and Operational Risks/Concerns/Observations**

- Response time by authority/agency to arrive on scene.
- Access to remote rural areas.
- Private roadway access due to inadequate maintenance/access for emergency vehicles.
- Transportation of dangerous goods through the Township via railway and Highway 400.
- Loss of powerlines and communications equipment.
- High volume of traffic on Provincial roadways running through the Township.
- Communications for road and highway closures within the Township.

**Current Capabilities and Services Provided**

- The Fire Department responds to all motor vehicle accidents within the Township.
- Auto extrication equipment provided at all 4 stations with heavy rescue extrication equipment on trucks closest to Highway 400.
- Staff cross trained to operate equipment located at all four stations.
- Hazardous material response at awareness level.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****6. What evidence is there to support the need for Fire Protection Services?**

The Fire Department responds to an average of 34 motor vehicle collisions on roads and highways annually. Railway incident have occurred in the past but there has not been any documented railway responses in the Township over the past 5 years.

**7. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**8. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to motor vehicle collisions and railway incidents. Ontario Fire Marshal mandatory

certification requirements allow Ontario fire departments to identify the level of hazardous material response they will provide, with the ability to utilize third party technical hazmat response teams.

**9. Is there a better way to make the community safer?**

Yes: The Township and the MTO could hire a traffic engineer to study high-collision areas of their roadways to find solutions that will reduce future incidents.

**10. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently

**Recommended Risk Treatment Option(s) and Action(s)**

- Consider certifying firefighters to Hazardous Material Operations level response. This would allow firefighters to begin mitigation and containment of any active material leaks until a Hazardous Material Technician level team arrives.
- The Fire Department should consider equipping all four Fire Departments with heavy extrication tools as to provide quicker response and not need to wait on heavy equipment to arrive from Foley Station #10.

**Resources Needed**

- Fire Department staff time
- Hazmat Operations level certification course
- Upgraded auto extrication equipment at three of the four stations
- Hazardous material clean-up supplies at all four stations

**Timeline**

- Ongoing

**13.4****Wildland Fires**Risk Level: **Moderate Risk Score 78****Administrative and Operational Risks/Concerns/Observations**

- Areas under responsibility of the Ministry of Natural Resources and Forestry (MNRF)
- Access to remote areas with emergency response equipment.
- Available water source near fire locations.
- Adherence to Township burn by-law.
- Large percentage of Township is forested lands with limited access.
- Locating wildland fires from the ground.

**Current Capabilities and Services Provided**

- The Fire Department responds to all wildland fires within township jurisdiction and when requested, assisting MNRF with wildland fires on crown land within the township boundaries.
- The fire department makes use of ATV/UTV's to respond to remote locations not accessible by larger equipment.
- All staff trained as per the SP103 standard established by the MNRF.
- Wildland firefighting equipment available at all four Township fire stations.
- Public Education initiatives focused on making properties "wildland fire safe".
- Monitoring Provincial Fire Danger Ratings and adjusting local rating as required.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****11. What evidence is there to support the need for Fire Protection Services?**

The Fire Department responds to an average of 17 wildland fires annually.

**12. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**13. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to ensure public safety from wildland fires.

**14. Is there a better way to make the community safer?**

Yes: Continuing to educate property owners and visitors of the Township and ensuring awareness of open-air burning regulations and fire danger ratings. Adopting the MNRF Fire Smart program as a standard for rural property development.

**15. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently

**Recommended Risk Treatment Option(s) and Action(s)**

- Communications for visitors of the Township to ensure understanding of the Townships Open-air burn by-law through social media, signage or permitting requirements.

**Resources Needed**

- Fire Department staff time
- Fire Danger Rating signage in high volume traffic areas
- A method to identify rental units within the Township to allow for fire safety messaging to visitors in the Township

**Timeline**

- Ongoing

**13.5****Fire/Explosion in Residential Occupancy**

Risk Level: **Low Risk Score 60**

**Administrative and Operational Risks/Concerns/Observations**

- A current approved fire prevention policy is not in place.
- Due to staffing availability, the fire department focusses fire safety inspections efforts on commercial occupancy units.
- Residential occupancies are only inspected upon request or concerns identified by crews at calls.
- Identification of light weight construction units not available.
- Delayed response times.
- Access to residential occupancies utilizing private roads.

**Current Capabilities and Services Provided**

- The Fire Department responds to all fires/explosions in residential occupancies within the township boundaries.
- The fire department completes tanker shuttle accreditation every five years.
- All staff firefighters are trained to the NFPA Firefighter 1001 1 & 2 standard as mandated by the Ontario Fire Marshal.
- All four Seguin stations are equipped with adequate equipment to deal with residential occupancy fires.
- Public Education initiatives focused on proper smoke and carbon monoxide detector installations.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****16. What evidence is there to support the need for Fire Protection Services?**

The Fire Department responded to 31 residential fires from 2019 to 2023.

**17. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**18. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to ensure public safety from residential occupancy fires.

**19. Is there a better way to make the community safer?**

Yes: Continuing to educate property owners and visitors on residential fire safety through multiple means of communication ensuring that messaging is received throughout the Township.

**20. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently

**Recommended Risk Treatment Option(s) and Action(s)**

- Communications methods to reach visitors of the Township utilizing rental units and local population who may not utilize digital media.

**Resources Needed**

- Fire Department staff time
- Fire Danger Rating signage in high volume traffic areas
- A method to identify rental units within the Township to allow for fire safety messaging to visitors in the Township

**Timeline**

- Ongoing

**13.6****Fire/Explosion in Commercial Occupancy**Risk Level: **Low Risk Score 52****Administrative and Operational Risks/Concerns/Observations**

- A current approved fire safety inspection policy is not in place.
- Identification of light weight construction units not available.
- Delayed response times.
- The Township does contain commercial occupancies where explosion or hazardous materials spills may occur.
- Firefighters currently trained to awareness level hazardous materials response.

**Current Capabilities and Services Provided**

- The Fire Department responds to fire related to commercial occupancies within township jurisdiction, utilizing response from all four Seguin fire stations and requesting Mutual Aid assistance as needed.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****21. What evidence is there to support the need for Fire Protection Services?**

The Fire Department responded to 3 commercial occupancy fires between 2019-2023.

**22. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**23. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to ensure public safety from fires in commercial occupancy.

**24. Is there a better way to make the community safer?**

Yes: Make commercial occupancy emergency plans readily available to responding firefighters to assist in size up and developing action plans. Familiarization training on commercial facilities should be conducted annually by firefighters through site visits.

**25. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently

**Recommended Risk Treatment Option(s) and Action(s)**

- Site familiarization training on commercial facilities should be provided to firefighters annually.
- Provide emergency plans developed by commercial occupancies specific to their facilities to firefighters.

**Resources Needed**

- Fire Department staff time due to increased training requirements.
- System to store fire safety plans for easy access to firefighters.
- Mapping of commercial occupancies in the township.

**Timeline**

- Ongoing

**13.7****Fire/Explosion in Industrial Occupancy**Risk Level: **Low Risk Score 44****Administrative and Operational Risks/Concerns/Observations**

- A current approved fire safety inspection policy is not in place.
- Identification of light weight construction units not available.
- Delayed response times.
- The Township does contain industrial occupancies where explosion or hazardous materials spills may occur.
- Firefighters currently trained to awareness level hazardous materials response.

**Current Capabilities and Services Provided**

- The Fire Department responds to fire related to industrial occupancies within township jurisdiction, utilizing response from all four Seguin fire stations and requesting Mutual Aid assistance as needed.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****26. What evidence is there to support the need for Fire Protection Services?**

The Fire Department responded to 3 industrial occupancy fires from 2019 to 2023.

**27. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**28. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to ensure public safety from fires in industrial occupancy. Assistance through Mutual Aid is available for large industrial fires.

**29. Is there a better way to make the community safer?**

Yes: The Department can continue to pre-plan with some of the Township's industrial sites. Make industrial occupancy emergency plans readily available to responding firefighters to assist in size up and developing action plans. Familiarization training on industrial facilities should be conducted annually by firefighters through site visits.

**30. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently

**Recommended Risk Treatment Option(s) and Action(s)**

- Site familiarization training on industrial facilities should be provided to firefighters annually.
- Provide emergency plans developed by industrial occupancies specific to their facilities to firefighters.

**Resources Needed**

- Fire Department staff time due to increased training requirements.
- System to store fire safety plans for easy access to firefighters.
- Mapping of industrial occupancies in the township.

**Timeline**

- Ongoing

**13.8****Waterway Emergencies**Risk Level: **Low Risk Score 40****Administrative and Operational Risks/Concerns/Observations**

- Response time by authority/agency to arrive on scene.
- Access to remote areas on lakes and rivers.
- Available number of staff trained for water rescue events.
- Loss of radio and cell phone communications some remote areas.

**Current Capabilities and Services Provided**

- The Fire Department responds to all types of waterway related emergencies, including boat rescue operations, ice/water rescue and surface water rescue.
- Two of the larger vessels are staged on Lake Joeseeph and Lake Rosseau capable of providing fire fighting operations to water access or remote access properties.
- Three of the four stations currently make use of mobile marine units to respond to waterway incidents.
- ATV/snowmobiles are available at all four stations to aid in response to emergency on ice covered lakes.
- All firefighters currently possess a pleasure craft operators' certificate.
- Currently a team of ten members throughout the four fire stations that are trained to ice/water rescue operations level. All other firefighters are trained to an awareness level.

**Recommended Risk Treatment Plan****Determining Appropriate Fire Protection Services****31. What evidence is there to support the need for Fire Protection Services?**

The Fire Departments has responded to 8 ice/water rescue incidents from 2019 to 2023 with the marine units utilized during 10 water/remote access residential fires.

**32. Does the current treatment meet community needs/expectations?**

Yes: There is no evidence that suggests expectations are not met.

**33. Does the community have the capability to deliver these services?**

Yes: As of this CRA, the department has provided the required services needed to respond to ice/water rescue incidents.

**34. Is there a better way to make the community safer?**

Yes: The Fire Department can provide further public safety education regarding ice and water safety. The education should also address information on the use of gathering precise location information to assist in timely response from the Fire Department.

**35. Are there any emerging risks in the community that are not currently treated or cannot be treated by the fire department?**

None currently.

**Recommended Risk Treatment Option(s) and Action(s)**

- Evaluate public education messaging regarding the dangers of unsafe ice conditions.
- Consider partnering with allied agencies withing West Parry Sound to deliver public education initiatives.
- Map out water access points and make information readily available to firefighters to allow for timely response with mobile marine units.
- Ice/water rescue certification training for more staff to ensure adequate responders for emergency events.

**Resources Needed**

- Fire Department staff time
- Ice/water rescue operations level training/certification
- Ice/water safety public education materials

**Timeline**

- Ongoing

## Appendix A: Resources

The Department used the following resources to help develop this community risk assessment:

Fire Protection and Prevention Act, 1997.

Ontario Regulation 213/07: Fire Code.

Ontario Regulation 378/18: Community Risk Assessments.

Statistics Canada. 2021 Census.

## Appendix B: Fire Marshal Directive 2022 – 001

### TOPIC: Use of Information on Lightweight Construction to Inform Fire Suppression Pre-Planning Activities

This directive is issued under the provisions of the *Fire Protection and Prevention Act, 1997*, (FPPA) S.O. 1997, chapter 4, clause 9.(1)(b). It is the responsibility of every assistant to the Fire Marshal to follow the Fire Marshal's directive as set out in subsection 11.(1) of the FPPA. Further, under clause 9.(2)(b) of the FPPA, the Fire Marshal has the duty to advise municipalities in the interpretation and enforcement of this Act and the regulations.

#### Background

It has been well established that buildings constructed with truss and lightweight construction systems<sup>i</sup> (commonly referred to as lightweight construction) may be susceptible to pre-mature failure and rapid collapse under certain fire conditions, and thereby pose a risk to responding fire crews. Given this risk, it is important for responding fire departments to be aware of the presence of lightweight construction buildings to inform delivery of fire suppression service and protect the safety of firefighters.

Following the tragic passing of two volunteer firefighters, Ken Rea and Ray Walter, who were killed while battling a fire in Listowel when the roof of the building they were inside collapsed, the focus is to provide firefighters with the necessary information about a building's structural composition to safely plan fire suppression activities and help ensure their safety.

Building stock profile, including any building-related risks known to the fire department, must be considered in the development of Community Risk Assessment required under Ontario Regulation 378/18 - Community Risk Assessments (CRA)<sup>ii</sup>.

Identifying the presence of lightweight construction where it is known to exist in a community's building stock is required<sup>iii</sup> by Worksheet #2 "Building Stock Profile" included in Appendix A of Office of the Fire Marshal technical guideline TG-02-2019 (as revised on February 25, 2022). Where this information is used to inform fire suppression pre-planning activities, the goal of providing firefighters with necessary information to help ensure their safety is met.

#### Directive

Those assistants to the Fire Marshal, as identified in clause 11.(1)(a) of the FPPA (the fire chief of every department), are directed to:

- Ensure that information on the presence of truss and lightweight construction systems (lightweight construction) in a community's building stock, that is known

and documented in the Community Risk Assessment, is used to inform fire suppression pre-planning activities conducted within the community:

- by the local fire department; and ○ by other municipalities providing fire suppression services through fire protection agreements.

Those assistants to the Fire Marshal, as identified in clause 11.(1)(b) of the FPPA (the clerk of every municipality that does not have a fire department) are directed to:

- Ensure that information on the presence of truss and lightweight construction systems (lightweight construction) in the community's building stock, that is known and documented in the Community Risk Assessment, is provided to those fire departments who provide fire protection services to the community, to inform their fire suppression pre-planning activities.

## **Rationale**

As truss and lightweight construction systems may be susceptible to pre-mature failure and rapid collapse under certain fire conditions, and pose a risk to responding fire crews, information pertaining to the presence of lightweight construction that is known and documented in a Community Risk Assessment must be used to inform pre-planning activities so that firefighters responding to a fire emergency may appropriately plan their fire response strategy.

Jon Pegg  
Ontario Fire Marshal February  
25, 2022

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<sup>i</sup> Buildings constructed using:

- i. lightweight pre-engineered floor or roof systems containing lightweight elements such as wood joists, cold formed steel joists, wood truss assemblies with metal or wood plates and metal web wood joists; or
- ii. lightweight floor or roof systems containing solid sawn lumber joist less than 38 mm by 235 mm.

<sup>ii</sup> The CRA is an in-depth and comprehensive assessment to inform fire protection service levels and requires the identification, analysis, evaluation and prioritizing of risk, based on nine mandatory profiles. The regulation outlines a standard set of information profiles that must be considered when conducting a community risk assessment. The information and data gathered to address each of the profiles will assist in determining and prioritizing the risks to public safety in the community, and determining the fire protection services to be provided by municipalities and fire departments in territories without municipal organization to address those risks. <sup>iii</sup> Section 2.(3) of the regulation requires that a CRA be in the form, if any, that the Fire Marshal provides or approves. The minimum expected level of information and detail that must be considered with respect to each of the mandatory profiles is outlined in Worksheets 1-9 included in Appendix A of TG-02-2019. While different styles and formats of the worksheets may be used, the information that is collected and considered for each profile must at minimum include the information outlined in the Appendix A worksheets.

## Appendix C: Glossary of Terms

There are varying definitions for the terms used in risk assessment and risk management, depending on the context to which a term is applied. For this CRA, The Department used the following definitions, as they generally align with both the [Emergency Management Ontario's Glossary of Terms](#) and the [Fire Protection and Prevention Act, 1997](#).

**Assessment:** The evaluation and interpretation of available information to provide a basis for decision-making.

**Catastrophe:** An emergency of particularly severe proportions.

**Commercial Occupancy:** A building where goods or services are sold, such as restaurants, offices, drug stores, and the downtown area.

**Community:** A generic term that includes both municipalities and First Nations communities.

**Consequence:** A result or effect of an action or condition that is expressed qualitatively or quantitatively. A consequence can manifest as a loss, injury, or disadvantage.

**Critical infrastructure:** The infrastructure that contributes to the interconnected networks, services, and systems that meet vital human needs, sustain the economy, and protect public safety and security.

**Environmental Impact:** Harm to human and non-human (animal or vegetable) species of life and a general decline in the quality of life within the community or ecosystem due to air/water/soil contamination. The negative consequences of a hazard on the environment, including the soil, water, air and/or plants and animals.

**Economic Impact:** Disruptions to businesses and financial activities, monetary losses due to impacts from an emergency, and other negative consequences for the affected community or regional economy. This impact refers to the negative economic consequences of a hazard on businesses, industries, and regional economies.

**Evacuation:** Potential for formal evacuation, shelter-in-place orders, or people stranded.

**Explosion:** A sudden conversion of potential energy into kinetic energy resulting in a sudden, violent release of gas(es) under pressure.

**Fire:** Uncontrolled or potentially destructive burning caused by the ignition of fuel or material, which, when combined with oxygen, gives off heat and light, with or without an open flame.

**Fire department (fire services):** A group of firefighters authorized by a municipality, group of municipalities, or an agreement to provide fire protection services.

**Flooding:** An overflow or inundation of water from a river or other body of water, or overland, which causes or threatens damage.

**Hazard:** A phenomenon, substance, human activity, or condition that may cause a loss of life, an injury, or other health impacts. A hazard can also result in property damage, loss of livelihoods and services, social and economic disruption, and environmental damage. The origin of a hazard can be natural, technological, or human-caused incidents, or some combination of these.

**Hazardous material:** A substance (gas, liquid, or solid) capable of causing harm to people, property, the environment, the economy, or services. Materials with combustible, corrosive, explosive, flammable, infectious, oxidizing, radioactive or toxic properties are considered hazardous.

**Life safety:** Injuries or loss of life due to a community or emergency responder becoming exposed to life-threatening situations.

**Mitigation:** Actions taken to reduce the adverse impacts of an emergency or disaster. Such actions may include diversion or containment measures to lessen the impacts of a flood or a spill.

**Ontario Building Code (OBC):** A set of ordinances or regulations and associated standards intended to control aspects of design, construction, materials, alteration, and occupancy in structures. The OBC's contents are necessary to ensure human safety and welfare, including resistance to collapse and damage.

**Probability/Probabality:** The probability of an event occurring that may result in an emergency, disaster, or service disruption.

**Property damage:** Monetary losses relating to private and public buildings, property content, irreplaceable assets, significant historic/symbolic landmarks, and critical infrastructure.

**Psychosocial:** Unusual or uncharacteristic behaviours, such as mental health issues. For example, hoarding can be deemed a psychosocial behaviour.

**Public education program:** A program that provides focused information to a target audience to educate about protective actions to reduce the risk of life and property damage in an emergency.

**Reputational:** The perception of one or more organizations or jurisdictions in the minds of its stakeholders, the public, and others who are vital to the organization's success.

**Risk:** The product of the probability of the occurrence of a hazard and its consequences.

**Risk assessment:** A methodology to determine the nature and extent of risk by analyzing potential hazards and the evaluation of vulnerabilities and consequences.

**Vulnerable occupancy:** A building such as a hospital, long-term care home, or group home.