



The Corporation of The Township of Bonfield

AGENDA FOR EMERGENCY SERVICES COMMITTEE TO BE HELD

March 18th, 2024 AT 6:00 P.M.

- 1. Call to Order**
- 2. Adoption of Agenda**
- 3. Disclosure of Pecuniary Interest and General Nature Thereof**
- 4. Adoption of Previous Minutes**
 - a. Emergency Services Committee Meeting: February 12, 2024
- 5. Presentations and Delegations**
- 6. Staff Reports**
 - a. Report from Deputy Fire Chief regarding completed training courses and current volunteers.
- 7. Items for Committee Discussion**
 - a. Receive and review progress of the CRA.
- 8. Resolutions to be Considered for Council Recommendation**
- 9. Correspondence**
- 10. Closed Session**
- 11. Adjournment**

**THE CORPORATION OF THE
TOWNSHIP OF BONFIELD**

Community Risk Assessment



June 2024

Table of Contents

| | |
|---|----|
| Bonfield Fire Department Condition Risk Assessment 2024 | 3 |
| Executive Summary | 4 |
| Introduction | 5 |
| Geographic Profile..... | 6 |
| Geographic Profile Key Findings | 9 |
| Building Stock Profile | 10 |
| Building Stock Profile Key Findings..... | 19 |
| Critical Infrastructure Profile | 22 |
| Critical Infrastructure Profile Key Findings | 25 |
| Demographic Profile..... | 26 |
| Demographic Profile Key Findings | 29 |
| Hazard Profile | 30 |
| Hazard Profile Key Findings..... | 32 |
| Public Safety Response Profile | 34 |
| Public Safety Response Profile Key Findings | 36 |
| Community Services Profile | 38 |
| Community Services Profile Key Findings..... | 39 |
| Economic Profile | 40 |
| Economic Profile Key Findings..... | 43 |
| Past Loss and Event History Profile | 44 |
| Past Loss and Event History Profile Key Findings | 55 |
| Bonfield Fire Department Capability and Readiness | 56 |
| Summary and Conclusions | 57 |

Bonfield Fire Department Condition Risk Assessment 2024

Executive Summary

Introduction

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

The regulation states:

1. Every municipality, and every fire department in a territory without municipal organization must,

(a) Complete and review a community risk assessment provided by this Regulation: and

(b) Use its community risk assessment to inform decisions about the provisions of fire protection services.

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

- Geographic Profile
- Building Stock Profile
- Critical Infrastructure Profile
- Demographic Profile
- Hazard Profile
- Public Safety Response Profile
- Community Services Profile
- Economic Profile
- Emergency Response Profile

Geographic Profile

Bonfield Township Fire Department Geographic Profile

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

This profile will identify geographic features that:

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

Bonfield Township Fire Department is responsible for fire protection services for the Municipality of Bonfield.

The Municipality of Bonfield is a township and is in the Nipissing District in northeastern Ontario.

The township comprises the communities of Blanchard's Landing, Bonfield, Grand Desert, and Rutherglen. The community of Bonfield is connected to Ontario Highway 17 by Ontario Highway 531, while Rutherglen is located directly on the route of Highway 17 and the other communities are located on local roads within the township.

Bonfield has land that covers an expanse of 206.22 square kilometers. As of 2021 Bonfield had a population of 2,146, residing in 889 of its 1,080 total private dwellings. Bonfield is a growing community with a 7.8% increase in population over that of 2016. Based on 2021 statistic Bonfield has a population density 10.4 people per square kilometer.

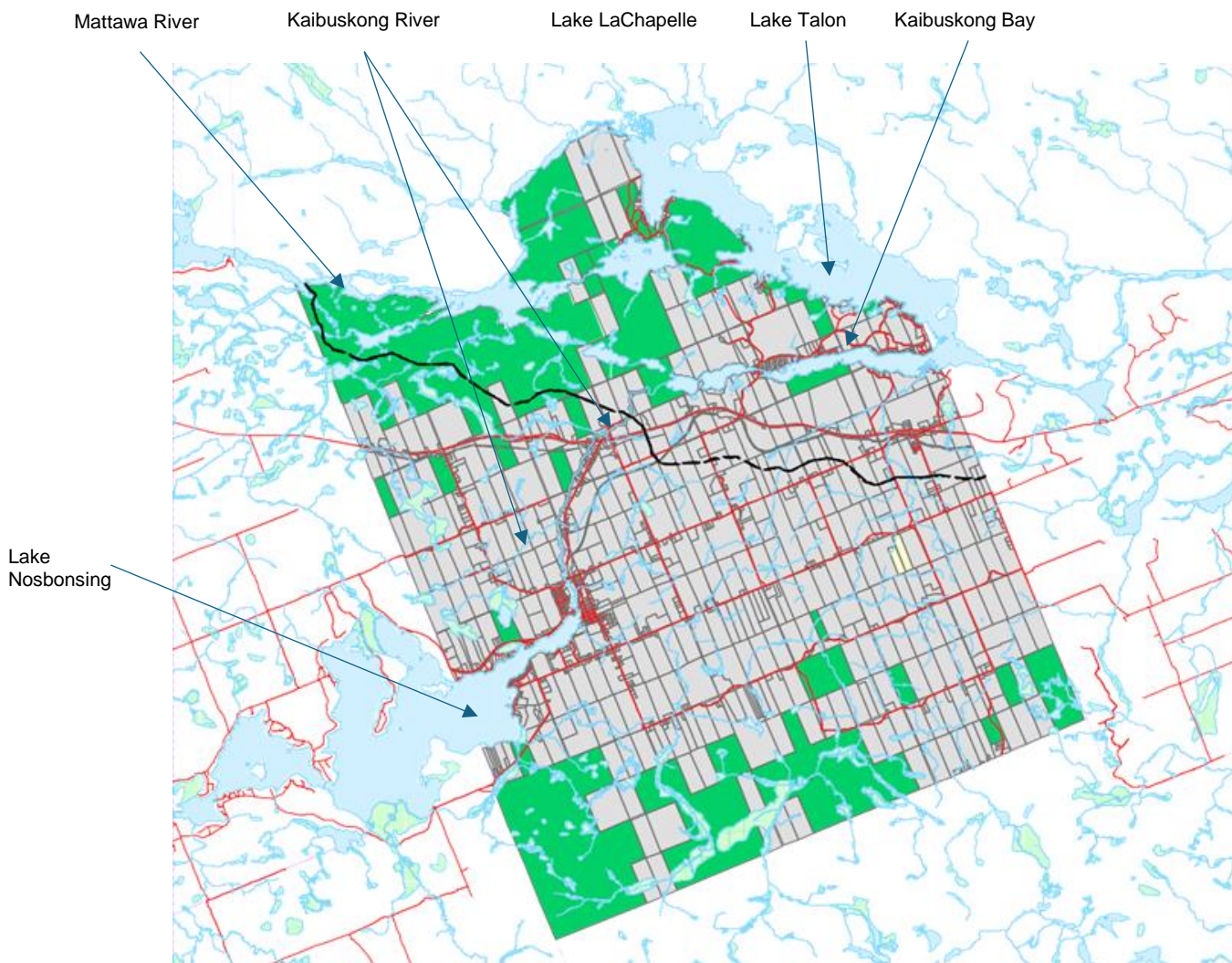
Geographic features

Bonfield has several geographic features that impact the risk of response. They include local roadways, a major highway (highway 17), waterways, railroad tracks, bridges, and culverts. The TransCanada gas pipeline transverse the township east to west.

Waterways

- Kaibuskong River to Lake Chapell
- Lake Nosbonsing
- Mattawa River encompassing Lake Talon
- Pine Lake

Waterways impact the risk of and response to fire and other emergencies. They may impact training and equipment response and service delivery. Waterways attract recreational activities that both increase the probability of response as well as potentially obstructing emergency services. Seasonal flooding compounds and increases risk for users and service providers, as well as obstructing and delaying response.



Roads, Railways, Bridges and Culverts

The municipality of Bonfield has a number of creeks and streams within the road network. The resulting infrastructure of culverts and bridges is essential for access to all areas of the municipality and can impact the risk to fire and emergency services in the event of failure, fire or flooding. (consult with public works, need to consider how to assess ongoing condition and status of critical bridges and culverts as part of the risk assessment)

| Geographic Feature | Potential Impact on the Delivery of Fire Protection Services |
|------------------------------------|--|
| West end of Lake Nosbonsing | <ul style="list-style-type: none"> • Impacts training and equipment for response service delivery • Impacts response /travel timelines to calls. • Recreational/tourist activities impact public fire safety education and Fire Code inspections and enforcement activities. • Seasonal flood plain considerations impacting property, infrastructure, and response times. |
| Kaibuskong River to Lake LaChapell | <ul style="list-style-type: none"> • Flows from Lake Nosbonsing through Bonfield Twp, seasonal flood plain considerations impacting property, infrastructure and response times. • Impacts training and equipment for response service delivery • Impacts response /travel timelines to calls. |
| Railroad Tracks | <ul style="list-style-type: none"> • Ottawa Valley Railroad (OVR) runs through Bonfield Twp with multiple road crossings within the Twp. • Impacts Fire Station #1 response times and responders travelling to the Fire Station due to the location of the OVR tracks nearby. • Impacts response / travel timelines to calls (travel routes to calls) • Impacts training, equipment for response service |
| Bridges and Culverts | <p>List of roads with bridges and major culverts</p> <p>NEED INPUT FROM TWP GARAGE</p> |
| Highway / Township Roads Network | <p>NEED INPUT FROM TWP GARAGE</p> |

Geographic Profile Key Findings

Geographic features are dynamic and can change over time due to weather events, seasonal variations, and human activities. Fire departments must continually adapt their strategies to address these factors effectively.

1. **Local Roadways:** These roads serve as vital arteries for transportation within the community. They facilitate access to various areas and can impact response times during emergencies.
2. **Highway 17:** As a major highway, it connects Bonfield to neighboring regions. While it enhances accessibility, it also presents risks due to higher traffic volumes and potential incidents.
3. **Waterways:**
 - **Kaibuskong River to Lake Chapell:** Water bodies like rivers and lakes can both aid and hinder firefighting efforts. They provide a water source for firefighting operations but can also pose risks if incidents occur near or on the water.
 - **Lake Nosbonsing:** Like other lakes, Lake Nosbonsing has its advantages and challenges. It may serve as a water source for firefighting, but incidents involving water can be complex.
 - **Mattawa River encompassing Lake Talon:** Rivers like the Mattawa River can impact response routes and influence the spread of fires.
 - **Pine Lake:** Pine Lake's proximity to the community may affect evacuation plans and emergency access.
4. **Railroad Tracks:** Railroads can affect emergency response routes and safety considerations.
5. **Bridges and Culverts:** These structures play a critical role in connecting different parts of the township. Their condition and accessibility can impact emergency services.
6. **TransCanada Gas Pipeline:** The TransCanada pipeline has high energy and high volatility. And while all precautions and safety systems are in place potential for failure is always a concern. The east-to-west pipeline traversing the township is essential for energy supply but also requires careful monitoring to prevent incidents.

Building Stock Profile

The building stock profile considers the characteristics of the buildings in the community. This includes the use of the buildings, building density, building age and construction type, building height and area and must include, where known, the identification of truss and lightweight construction systems (commonly referred to as lightweight construction) in all building occupancy classifications. This information will assist fire departments to identify the issues/concerns that will impact the delivery of fire protection services.

The **building stock profile** of a community significantly influences fire fighting and emergency response based on both building construction and occupancy vulnerability.

1. Building Construction:

- **Low-Risk Structures:** Buildings primarily constructed with fire-resistant or noncombustible materials pose lower risks. These structures are easier to contain in case of a fire.
- **Moderate-Risk Structures:** Ordinary mix of construction materials. These buildings require more effort to control fires but are manageable.
- **High-Risk Structures:**
 - Consist of significant wood-frame or heavy timber materials.
 - Share walls, attics, etc., with combustible materials.
 - These structures demand intense firefighting efforts and pose higher risks.¹

2. Occupancy Vulnerability Assessment Profile (OVAP):

- A detailed scoring system that categorizes occupancy risks based on criteria such as:
 - Number of occupants/life safety.
 - Building construction.
 - Economic impact on the community.
 - Number of stories.
 - Presence of automatic fire suppression/detection systems.
 - Overall size (square footage).
 - Proximity to fire hydrants.
 - Level of hazard.
- Building usage. Assigning scores helps prioritize critical target hazards for emergency response planning²

¹ [Rating \(Scoring\) Target Hazards | Community Risk Assessment Guide \(strategicfire.org\)](https://riskassessment.strategicfire.org/step-2-prioritize-risks/rating-scoring-target-hazards/)
<https://riskassessment.strategicfire.org/step-2-prioritize-risks/rating-scoring-target-hazards/>

² [Rating \(Scoring\) Target Hazards | Community Risk Assessment Guide \(strategicfire.org\)](https://riskassessment.strategicfire.org/step-2-prioritize-risks/rating-scoring-target-hazards/)
<https://riskassessment.strategicfire.org/step-2-prioritize-risks/rating-scoring-target-hazards/>

Bonfield has the following building types within its borders.

- Vacant Land
- Farms
 - Animal Shelters
 - Barns
 - Residences
 - Storage
- Residential within village proper and surrounding rural areas:
 - Seniors Residence (C)
 - Single Family (C)
 - Multiple Unit Residential (C)
- Commercial including:
 - Dinner Bell restaurant and motel
 - 2 chip stands
 - LCBO
 - Gagne's Red & White grocery store, Esso gas station, Home Hardware
 - Sunny Side RV Campground (A) (C)
 - Pharmacy and Medical Center (B)
 - Camp Caritou (A)
 - Talon Lake Campground (A)
 - Caisse Alliance
 - Reptile Adventure Camp
- Institutional including:
 - Lorrain Elementary School (A)
 - Municipal Building and Library (A)
 - Municipal Shops (F)
 - Lion's Club (A)
 - 2 Churches (A)
 - Community Center (A)
 - Fires Halls (2 Fire Halls: 1 in Bonfield and 1 in Rutherglen)
 - Outdoor Arena (A)
- Industrial
 - Municipal dump (F)
 - Aggregate pits

Building Stock Profile Risk Assessment

These are the building stock/occupancy types in the community and the fire and other emergency issues/concerns for each.
Probability, consequence, and risk levels

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. • historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|--------------------------|------------------|---|---|-------------|-------------|---------------------|
| Group A Assembly | Community Center | The Fire Department / Municipality considers the presence of lightweight construction to | <ul style="list-style-type: none"> • High occupancy • Staff training • Status of fire safety plan • Regular inspections | Possible | Moderate | Moderate |
| Group A Assembly | Lion Club Den | The Fire Department / Municipality considers the presence of lightweight construction to be possible” | <ul style="list-style-type: none"> • High occupant load • Staff training • Status of fire safety plan | Possible | Minor | Moderate |

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|--------------------------|--------------------------|--|--|-------------|-------------|---------------------|
| Group A Assembly | Camp Caritou | The Fire Department / Municipality considers the presence of lightweight construction to | <ul style="list-style-type: none"> • Seasonal high occupancy, primarily youth • Staff training • Status of fire safety plan | Possible | Minor | Moderate |
| Group A Assembly | Talon Lake Campground | The Fire Department / Municipality considers the presence of lightweight construction to | <ul style="list-style-type: none"> • Seasonal high occupancy • Staff training • Status of fire safety plan | Possible | Minor | Moderate |
| Group A Assembly | Sunny Side RV Campground | The Fire Department / Municipality considers the presence of lightweight construction to | <ul style="list-style-type: none"> • Seasonal high occupancy • Staff training • Status of fire safety plan | Possible | Minor | Moderate |

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|----------------------------|-----------------------------|--|---|-------------|-------------|---------------------|
| Group A Assembly | Lorrain Elementary School | The Fire Department / Municipality considers the presence of lightweight construction to be possible | <ul style="list-style-type: none"> • High occupancy, primarily youth • Staff training • Status of fire safety plan • Regular inspection | Possible | Moderate | Moderate |
| Group B Care and Treatment | Medical Center and Pharmacy | The Fire Department / Municipality considers the presence of lightweight construction to be possible | <ul style="list-style-type: none"> • Staff training • Status of fire safety plan • Regular inspection | Unlikely | Moderate | Moderate |

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|--------------------------------|---|--|---|----------------|-------------|---------------------|
| Group C Single family. | 885 single family residences in Bonfield township | The Fire Department / Municipality considers the presence of lightweight construction to be possible | Older subdivision: 1200 houses built before 1970; old wiring; is there smoke alarm compliance; high potential for combustible insulation | Almost certain | Major | High risk |
| Group C Multi-unit residential | Qty 1 Senior's Residence Complex new 10 units in 2023 increasing to 20 in 2024. | The Fire Department / Municipality considers the presence of lightweight construction to be possible | <ul style="list-style-type: none"> • High occupancy, vulnerable occupants • Status of fire safety plan • Regular inspections | Possible | Major | Moderate |
| Group C Multi-unit residential | 2 Apartment buildings (1 in Bonfield & 1 in Rutherglen) | The Fire Department / Municipality considers the presence of lightweight construction to be possible | <ul style="list-style-type: none"> • High occupancy • Status of fire safety plan • Regular inspections | Possible | Major | Moderate |

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|------------------------------------|--|--|---|-------------|-------------|---------------------|
| Group C Hotel / Motel | Qty 1 Dinner Bell Restaurant and Motel | | <ul style="list-style-type: none"> • High occupancy, vulnerable occupants • Status of fire safety plan • Regular inspections | Possible | Moderate | Moderate |
| Group C Mobile Homes & Trailers | Sunny Side RV Campground | Seasonal trailers are present | <ul style="list-style-type: none"> • Seasonal high occupancy • Staff training • Status of fire safety plan | Possible | Minor | Moderate |
| Group D and E | Township Office | | <ul style="list-style-type: none"> • Staff training • Status of fire safety plan | Possible | Moderate | Moderate |

| Occupancy Classification | | # of buildings of each type. # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|--------------------------|------------------------|--|---|-------------|-------------|---------------------|
| Group D and E | Bank: Caisse Alliance | The Fire Department / Municipality considers the presence of lightweight construction to be possible | <ul style="list-style-type: none"> • Staff training • Status of fire safety plan | Possible | Moderate | Moderate |
| Group D and E | Reptile Adventure Camp | | <ul style="list-style-type: none"> • Exotic reptiles housed on site. • Staff training • Status of fire safety plan | Possible | Minor | Moderate |
| Group F | Industrial | Municipal Dump | <ul style="list-style-type: none"> • Large fire loads • Fire access routes. • Flammable and combustible materials • Unknown chemicals on site | Possible | Major | Moderate |

| Occupancy Classification | | Identify # of buildings of each type. And Identify # of LWC buildings where presence is known | Issues/Concerns <ul style="list-style-type: none"> • age of buildings. • Use of buildings. • building density, height, and area. historic and culturally significant buildings. | Probability | Consequence | Assigned Risk Level |
|--------------------------|---|---|---|-------------|-------------|---------------------|
| Group F | Industrial | Gas Station | <ul style="list-style-type: none"> • High fire loads • Fire access routes. • Flammable and combustible materials • Unknown chemicals on site | Possible | Moderate | Moderate |
| Other | Occupancies not classified in OBC such as farm buildings. | See CGIS Map considerable presence of farm buildings and facilities | <ul style="list-style-type: none"> • Old construction of heavy timbers • High fire loads (e.g., hay, straw, farm equipment) • Risk to livestock | Possible | Major | Moderate |

Building Stock Profile Key Findings

The following types, use and composition of the building stock in Bonfield have an impact on fire severity, impact, and response. Bonfield has a number of building types, uses and locations that impact fire and emergency response.

Vacant Land: While vacant land itself doesn't pose a direct fire risk, it's essential to monitor these areas for potential illegal burning or accidental fires. Firefighters should be aware of access routes to reach remote vacant land in case of emergencies.

Farms Animal Shelters, Residences, Storage and Barns: These structures may contain flammable materials (e.g., hay, straw) and pose a fire risk. Regular inspections and fire safety measures are crucial. Farmhouses and residential buildings on farms require fire safety education for occupants and awareness by first responders to construction materials, age and other flammable contents.

Residential Buildings including Senior residences, single family and multi unit residents all require unique consideration.

Commercial Buildings:

Dinner Bell Restaurant and Motel: Restaurants and motels need fire suppression systems and evacuation plans.

Chip Stands: These small food establishments should have fire extinguishers and safe cooking practices.

LCBO: Fire safety in liquor stores includes proper storage and handling of flammable materials.

Grocery Store, Gas Station, and Hardware Store: High-traffic commercial areas require fire safety training for staff and customers.

RV Campground: Campgrounds need fire pits, safety guidelines, and emergency contacts.

Pharmacy and Medical Center: Critical facilities like these must have robust fire safety protocols.

Camp Caritou and Talon Lake Campground: Similar to RV campgrounds, these sites need fire safety awareness.

Caisse Alliance: Financial institutions should prioritize fire prevention and evacuation planning.

Reptile Adventure Camp: Unique facilities like this require tailored fire safety measures.

Institutional Buildings:

Lorrain Elementary School: Schools need fire drills, clear exit routes, and fire-resistant construction.

Municipal Building, Library, and Shops: Essential services must have fire safety plans.

Lion's Club and Churches: Community centers and places of worship should prioritize fire prevention.

Community Center and Fire Halls: These central locations need efficient emergency response plans.

Outdoor Arena: Consider fire safety and medical response requirements during events.

Municipal Dump: Waste management facilities have a wide range of fire hazards, combustibles, toxic materials in various combinations. While every precaution is taken, the circumstances of a community delivery of waste to the landfill site possess a variability and unpredictability to fire, environmental, safety and response.

Other contributing factors to be considered are:

Building Types and Materials:

Wooden structures pose a higher fire risk due to their combustibility, while concrete and steel buildings are more fire-resistant.

Building Age and Condition:

Older buildings may lack modern fire safety features such as sprinkler systems, fire-resistant materials, and updated electrical wiring. The overall condition of buildings and structures may will mitigate or increase fire hazards.

Occupancy and Use:

Different occupancies have varying fire risks. Special-use buildings (e.g., schools, hospitals, nursing homes) require tailored emergency response plans.

Density and Layout:

The density of buildings in different areas will impact risk and response. High-density neighborhoods may require efficient evacuation plans. Building layouts and locations such as narrow or rugged streets and roads, dead-end roads, or cul-de-sacs could hinder fire truck access.

Access and Egress Routes:

Consideration needs to be given to primary access routes for fire trucks. Obstacles, both man-made (e.g., parked cars, road closures) and environmental e.g., trees, creeks as gullies) could delay or impede response times.

Hydrant Locations and Water Supply:

Hydrants are crucial for firefighting operations. Bonfield does not have a pressurized water system and the availability and reliability of water supply is dependent on natural water bodies.

Wildland-Urban Interface (WUI):

Given the location and circumstances of Bonfield in a rural and forested setting, strategies for wildland firefighting and evacuation needs to be considered with respect to MNRF and other agency responses.

Fire Safety Education and Awareness:

Community awareness about fire safety and educational programs can have a significant impact on fire safety and survival. Well informed residents armed with fire prevention practices and practiced safety plans will improve fire event outcomes.

Critical Infrastructure Profile

Critical infrastructure refers to the essential systems, facilities, and assets that are vital for the functioning of a society, economy, and public safety. These components play a fundamental role in maintaining daily life, security, and well-being. The following are the high-level critical infrastructure systems of Bonfield. They include:

- Electrical Distribution System
- Transportation and Road Networks
- Communication Networks and Systems
- Emergency Services and Emergency Management
- Financial Institutions
- Municipal Services and Public Works

| Critical Infrastructure Profile Risks | |
|---------------------------------------|---|
| Identified Critical Infrastructure | Issues/Concerns |
| Electricity distribution | <ul style="list-style-type: none">• Hydro line failures• Risk of fires within transformer stations (Community has 2 transformer stations)• Risk of pole transformer fires• Adverse effects to commerce, community and Twp if power is out (additional concerns if in winter related to potential sources of heat, cooking, etc.) |
| Radio Communications | <ul style="list-style-type: none">• Impacts Fire Dept., Twp Garage, and emergency management group• Impacts communication with first responders• Existing poor coverage areas of the Twp impacts /effects contact with fire services and first responders in dispatch center. |

| Critical Infrastructure Profile Risks | |
|---------------------------------------|--|
| Identified Critical Infrastructure | Issues/Concerns |
| Telecommunications | <ul style="list-style-type: none"> • Telephone lines / cell towers failures. • Loss of ability to notify and communicate with first responders. • Commerce, social and community services rely on operating telephone lines to complete transactions. • Loss of cell phone coverage throughout the township • Dead zones and not communication infrastructure at all. |
| Roads | <ul style="list-style-type: none"> • Impacted by weather and environmental factors, traffic accidents and wild land fires. • Public Works equipment readiness and unforeseen failures. • Access to incidents by first responders / fire dept., police, and ambulance response times. |
| Railroad (OVR) | <ul style="list-style-type: none"> • Derailment can have cumulative impacts on first responders / fire dept., police and/or ambulance response times in terms of demand on resources and access. • Impacts community services and residents – potential for blocked road access to residences and businesses. Could also impact on school bus routes. • Potential for chemical and or hazardous waste spill that could impact large areas of the Twp. |
| Natural Gas | <ul style="list-style-type: none"> • Leaks or breaches in gas pipelines. • Other Gas company infrastructure failures. • A lack of natural gas would mostly affect areas of Rutherglen. • Residential impacts of loss of natural gas service would affect heating and commerce. |

| Critical Infrastructure Profile Risks | |
|---------------------------------------|---|
| Identified Critical Infrastructure | Issues/Concerns |
| Township Office | <ul style="list-style-type: none"> • Disruption to continuity of township government and municipal services. • Negative impact on communications across various township departments. • Potential impacts to communications with residence and other levels of government and services in broader area |
| Financial Institution (1) | <ul style="list-style-type: none"> • Disruption to commerce due to power failure, weather events, computer hacking, health emergency • Disruption in computer system that prevents other businesses and community members from operating/completing transactions |

Critical Infrastructure Profile Key Findings

Fire risk poses significant threats to critical infrastructure. They can include:

- Direct damage to critical infrastructure components during fires. Flames can consume buildings, power lines, communication towers, and transportation facilities.
- Secondary effects may result from the initial damage. For instance, a fire-damaged electrical substation can disrupt power supply to hospitals, emergency services, and financial institutions.
- Smoke and soot from fires can accumulate in open water sources, highways and occupied areas, reducing visibility. This can cause issues in responding to events and the safety and security of infrastructure assets.
- Transportation disruptions from fire damage can cause reduced visibility from smoke and fire damage directly can impact transportation networks. Specific to Bonfield, highways, and railways may experience delays or closures.
- Health and Safety may be impacted by fire events and require shelter in place orders which can directly impact critical infrastructure operations. Emergency services and communication networks can be impacted by fire and unexpected events that could have serious implications to public health and safety.
- Interconnected consequences where disruptions in one sector cascade across others. For example, a fire near a major highway can impact emergency response times, affecting access and other critical services.

In summary, fire risk threatens critical infrastructure by causing damage, disrupting operations, and compromising safety.

Demographic Profile

According to the 2021 Census of Population, Bonfield is a township in northeastern Ontario, Canada, with a population of 2,146 and a land area of 206.22 km². The median age of the population is 44.2 years, and the majority of the residents are Canadian citizens (98.6%). Approximately 30% of Bonfield's population are between the ages of 55 and 69 and 11% of the population is over 69 years of age. With an older age profile emergency response to medical emergencies and fire are exposed to increased risk and complexity due to increased likelihood of decreased mobility and increased medical conditions.

The most common ethnic or cultural origins are Canadian (38.9%), French (28.8%), and English (25.7%). The most common mother tongue is English (89.9%), followed by French (7.4%). This supports the assumption that language would not be a barrier or cause increased risk in dealing with emergency situations and first response to medical or fire calls.

There is a small increase in seasonal population based on tourism and summer homes and cottages. This does not represent a significant increase in risk exposure to emergency events.

There is limited information available with respect to groups in the community that may have cognitive or physical disabilities. There is no treatment or services provided within the community of Bonfield. Any residents requiring services of this nature rely on North Bay Regional Hospital and other agencies in the City of North Bay. While direct supporting statistics are not readily available it is a reasonable assumption that cognitive and physical impairment increases with age in our populations requiring first responders to be prepared for these situations. Additionally, a new seniors complex has recently been built in Bonfield with 20 units housing more senior residents. The response to this complex should be tailored to a more senior resident circumstance.

Population in Bonfield (source: Statistics Canada)

| Year | Population |
|--------------------|------------|
| 2021 | 2146 |
| 2016 | 1975 |
| 2011 | 2016 |
| 2006 | 1981 |
| % change 2016-2021 | 7.8% |

Bonfield has an aging population. This is the trend in many northern communities as the youth tend to move to the south to seek more opportunities. It is worth mentioning that many residents move (or return) to Bonfield after retirement.

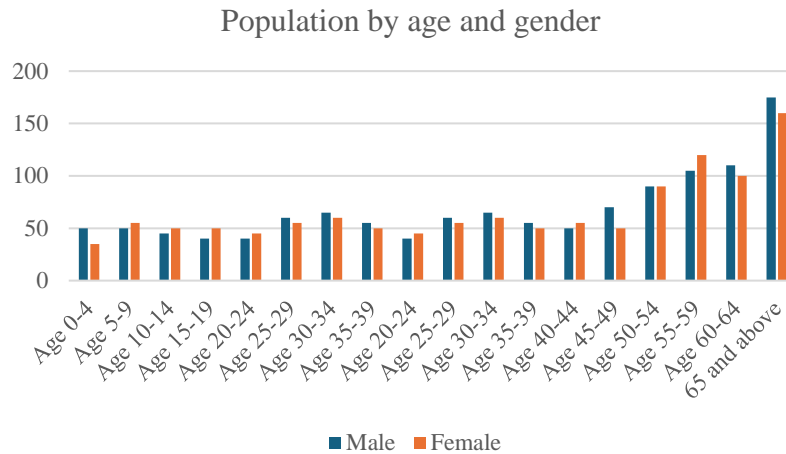


Figure 1: Distribution of the population in Bonfield versus age and gender.

Bonfield's Age Distribution Profile

| Ages of population | # of People | % of Total Population |
|-------------------------|-------------|-----------------------|
| 0-4 | 105 | 4.9 |
| 5-9 | 100 | 4.7 |
| 10-14 | 115 | 5.4 |
| 15-19 | 95 | 4.4 |
| 20-24 | 90 | 4.2 |
| 25-29 | 110 | 5.1 |
| 30-34 | 140 | 6.5 |
| 35-39 | 120 | 5.6 |
| 40-44 | 125 | 5.8 |
| 45-49 | 120 | 5.6 |
| 50-54 | 140 | 6.5 |
| 55-59 | 200 | 9.3 |
| 60-64 | 255 | 11.9 |
| 65-69 | 200 | 9.3 |
| 70-74 | 115 | 5.4 |
| 75-79 | 50 | 2.3 |
| 80-84 | 40 | 1.9 |
| 85 and over | 25 | 1.2 |
| Total Population | 2145 | 100 |

| Demographic Profile Risks | |
|---------------------------------------|--|
| Identified Demographic Group | Issues/Concerns |
| Seniors' population | <ul style="list-style-type: none"> • New Seniors Residence Complex built in 2023 with 20 units to be completed by spring of 2024. This represents a high occupancy in one location of a vulnerable population. |
| Increased summer / tourist population | <ul style="list-style-type: none"> • Difficulty in information sharing and outreach to this group when they don't live full time in the community. • Local natural attractions such as lakes, rivers, campgrounds, and cottages bring increased numbers to the community, especially in the summer. Fire and life safety messaging may require different forms of communication including signage, social media, etc. • Some do not know the property identification number or street/road name when calling 911. |

Demographic Profile Key Findings

The demographic profile of a community significantly impacts fire safety and emergency response.

- Age distribution of a median age of 44.2 years suggests Bonfield is an older population. Older adults are more vulnerable during emergencies due to factors like decreased mobility and increased medical conditions. 30% of the population falls between ages 55 and 69, while 11% are over 69 years old. Emergency responders must consider these age-related challenges when dealing with medical emergencies and fires.
- Language and cultural diversity are unlikely to hinder emergency response in Bonfield. The most common ethnic or cultural origins are Canadian (38.9%), French (28.8%), and English (25.7%). The predominant use of English and some French as the mother tongue indicate that first responders can communicate effectively with residents during critical situations.
- A small increase in seasonal population due to tourism based on summer homes and cottages does not pose a significant impact risk exposure. It is essential to account for the fluctuations in emergency and first response planning.
- Limited information is available regarding groups with cognitive or physical disabilities. However, it's reasonable to assume that such impairments increase with age. First responders should be prepared to address the unique needs of residents with disabilities. The new seniors complex with 20 units in Bonfield requires tailored emergency response protocols for senior residents.

Hazard Profile

The public safety response profile lists the hazards in the community including but not limited to hazardous materials spills, floods, freezing rain/ice storms, forest fires, extreme weather events, transportation emergencies (i.e. air, rail or road), snowstorms, windstorms, extreme temperature, cyber-attacks, human health emergencies, and energy supply (i.e. pipelines, electricity, and natural gas facilities).

| Hazard Profile Risks | | | |
|--|-------------|-------------|---------------|
| Identified Hazard | Probability | Consequence | Assigned Risk |
| Ice Storm / Snowstorm (power interruptions / disruptions in communications / delayed access) | Possible | Minor | Moderate |
| Flood (obstructed access / increased calls for rescue / assistance) | Possible | Minor | Moderate |
| Train Derailment / Accident | Possible | Moderate | Moderate |
| Highway Closure – HWY 17 (Twp is primarily accessed off of major highway) | Possible | Minor | Moderate |
| Energy Supply (natural gas pipeline disruption - leaks in transmission lines and/or gas company infrastructure failures) | Possible | Moderate | Moderate |
| Extreme Temperatures for a prolonged period (deep freeze) | Possible | Minor | Moderate |
| Utility Disruption | Possible | Minor | Moderate |
| Hazardous Materials Event | Possible | Moderate | Moderate |

| Hazard Profile Risks | | | |
|--|-------------|-------------|---------------|
| Identified Hazard | Probability | Consequence | Assigned Risk |
| Snowstorm / Blizzard / Severe Wind Event / Severe Thunderstorm | Possible | Minor | Moderate |
| Road and/or HWY Incident – mass casualties | Possible | Moderate | Moderate |
| Large Fire – wild land fire and/or bush fire | Possible | Moderate | Moderate |
| Influenza or other infectious outbreak | Likely | Moderate | Moderate |

Hazard Profile Key Findings

1. Ice Storm / Snowstorm:

Probability: Possible **Consequence:** Minor (power interruptions, disruptions in communications, delayed access) **Assigned Risk:** Moderate

Key Measures:

- Ensure backup power sources for critical facilities.
- Maintain communication channels during storms.
- Plan for delayed access to affected areas.

2. Flood:

Probability: Possible **Consequence:** Minor (obstructed access, increased rescue calls) **Assigned Risk:** Moderate

Key Measures:

- Develop flood response plans.
- Identify safe evacuation routes.
- Train responders for water-related emergencies.

3. Train Derailment / Accident:

Probability: Possible **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Coordinate with railway authorities.
- Establish incident command protocols.
- Prepare for mass casualties.

4. Highway Closure – HWY 17:

Probability: Possible **Consequence:** Minor (limited access) **Assigned Risk:** Moderate

Key Measures:

- Develop alternative routes.
- Ensure emergency services can reach affected areas.

5. Energy Supply Disruption:

Probability: Possible **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Monitor gas pipelines.
- Have contingency plans for energy shortages.
- Educate residents on safety during disruptions.

6. Extreme Temperatures (Deep Freeze):

Probability: Possible **Consequence:** Minor **Assigned Risk:** Moderate

Key Measures:

- Prepare for cold-related emergencies.
- Ensure heating systems are functional.
- Address hypothermia risks.

7. Utility Disruption:

Probability: Possible **Consequence:** Minor **Assigned Risk:** Moderate

Key Measures:

- Maintain utility infrastructure.
- Have backup systems in place.
- Educate residents on coping during disruptions.

8. Hazardous Materials Event:

Probability: Possible **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Identify hazardous material storage sites.
- Train responders for chemical incidents.
- Implement evacuation plans.

9. Snowstorm / Blizzard / Severe Wind Event / Severe Thunderstorm:

Probability: Possible **Consequence:** Minor **Assigned Risk:** Moderate

Key Measures:

- Stock emergency supplies.
- Clear snow-covered roads promptly.
- Communicate storm warnings to residents.

10. Road and/or HWY Incident – Mass Casualties:

Probability: Possible **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Train first responders for mass casualty incidents.
- Establish triage protocols.
- Coordinate with hospitals.

11. Large Fire – Wildland Fire and/or Bush Fire:

Probability: Possible **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Create defensible zones around structures.
- Conduct fire drills.
- Collaborate with neighboring fire departments.

12. Influenza or Other Infectious Outbreak:

Probability: Likely **Consequence:** Moderate **Assigned Risk:** Moderate

Key Measures:

- Promote hygiene practices.
- Monitor health facilities.
- Educate residents on prevention.

Public Safety Response Profile

Public safety response includes agencies that are tasked with or able to assist in the response to emergencies or in mitigating the impact of emergencies in Bonfield Township. The following table identifies agencies and services that operate in and on behalf of the Township.

| Public Safety Response Profile Risks | | | |
|---|--|--|--|
| Public Safety Response Agency | Types of Incidents They Respond To | Role at the Incident | Issues/Concerns |
| Ontario Provincial Police (OPP) | <ul style="list-style-type: none"> • MVC's • Fire Scenes • Criminal activity • People in distress • Water accidents | <ul style="list-style-type: none"> • Scene control, traffic control • Evacuation • Investigations | <ul style="list-style-type: none"> • None |
| EMS – comes from City of North Bay and/or Town of Mattawa | <ul style="list-style-type: none"> • Medical Calls • Fire stand-by | <ul style="list-style-type: none"> • Take control of medical situations upon arrival | <ul style="list-style-type: none"> • Fire Dept usually first on scene due to response time from North Bay and surrounding area. • Fire Dept will assist in supporting once EMS arrives on scene. |

| Public Safety Response Profile Risks | | | |
|--------------------------------------|---|--|---|
| Public Safety Response Agency | Types of Incidents They Respond To | Role at the Incident | Issues/Concerns |
| Ontario Fire Marshal (OFM) | <ul style="list-style-type: none"> • Suspicious fires • Any fire in which there is either a civilian or fire fighter fatality. • High dollar loss fires. • Fires at retirement / senior's complex | <ul style="list-style-type: none"> • Investigation – lead agency working in conjunction with the police | <ul style="list-style-type: none"> • No issues or concerns |
| Ottawa Valley Railroad (OVR) | <ul style="list-style-type: none"> • All matters to do with the railroad tracks and/or their trains. | <ul style="list-style-type: none"> • Emergency derailment and/or spill response • Investigations • Clean-up | <ul style="list-style-type: none"> • Most likely the Fire Dept will be first on scene and provide initial situation assessment and immediate response. • Fire Dept will assist once other services arrive on scene including OVR response services and/or police, and/or EMS. |

Public Safety Response Profile Key Findings

The key findings from the Public Safety Response Profile for Bonfield Township are:

Ontario Provincial Police (OPP): Responds to various incidents including MVC's, fire scenes, criminal activity, and water accidents. Their role includes scene control, traffic control, evacuation, and investigations, with no issues or concerns noted.

EMS: Originating from City of North Bay and/or Town of Mattawa, they respond to medical calls and fire stand-by. They take control of medical situations upon arrival, with the Fire Dept usually first on scene due to response time.

Ontario Fire Marshal (OFM): Investigates suspicious fires, fires with fatalities or high dollar loss, and fires at retirement/senior's complexes. They work in conjunction with the police, and no issues or concerns are noted.

Ottawa Valley Railroad (OVR): Handles all matters related to railroad tracks/trains, including emergency derailment/spill response, investigations, and clean-up. The Fire Dept is likely to be first on scene, providing initial assessment and immediate response.

Overall, effective communication, coordination, and mutual support among these agencies ensure a comprehensive and efficient emergency response in Bonfield Township.

Coordination and Cooperation

Incident Management System (IMS).

It is common practice for emergency response agencies to utilize IMS or similar frameworks to enhance coordination, communication, and efficiency during incidents. IMS provides a standardized approach for managing emergencies, ensuring effective collaboration among various agencies. Currently the Bonfield Fire Department does not actively utilize the IMS system when dealing with emergencies beyond the identification of the Incident Commander. IMS streamlines emergency management, enhances collaboration, and ensures a well-organized response to protect lives and property. In Bonfield, the Fire Departments is routinely the primary first responder to fires and medical emergencies. It is critical that Bonfield's Fire Department be trained, read and willing to work within the IMS system.

IMS is beneficial to implement for several reasons:

Standardization and Consistency:

IMS provides a common framework and terminology for emergency response and facilitates effective coordination. All agencies involved follow the same procedures, ensuring consistency and efficient communication. IMS defines roles and responsibilities for each agency so that everyone knows their responsibilities and tasks ensuring seamless coordination during incidents, preventing confusion and overlapping efforts.

Resource Management:

IMS helps allocate resources effectively so agencies can prioritize critical needs and avoid resource shortages.

Scalability:

IMS adapts to incidents of varying sizes and complexities and whether it is a small incident or large-scale disaster, IMS provides a scalable approach.

Improved Communication:

IMS establishes communication protocols facilitating the sharing of information efficiently and enhancing situational awareness.

Documentation and Learning:

IMS encourages documentation of incident details. After an event, agencies analyze the response to identify areas for improvement.

In summary, IMS streamlines emergency management, enhances collaboration, and ensures a well-organized response to protect lives and property.

Community Services Profile

There are several community services organizations that have a presence and operate in Bonfield Township. They include Bonfield and District Lions Club, Knights of Columbus, Golden Age Club, and local churches. These organizations can and do provide services to community members in need. They are also a source of volunteer resources in the event of an emergency where residents are displaced or in need of food and shelter. The Bonfield and District Lions Club has approximately 25 active members and own a hall that has a 150-person capacity. The hall has washroom and cooking facilities. The Knights of Columbus operate under the auspices of the local Catholic Church. The Parish Hall now operating as a community center under an independent Board has a capacity of 400 plus and has washroom and cooking facilities. Neither of the halls has back up electricity generation. The Golden Age Club has a number of members and operates out of the Community Center and is a support reason for labour and supporting activities with respect to the care and feeding of residents in the event of an emergency.

| Community Services Profile Risks | | |
|---|---|------------------------------|
| Community Service Agencies | Types of Assistance they Can Provide | Issues/Concerns |
| Lions Club | Services in-kind (e.g. funding / physical labour / facilities) | no formal agreement in place |
| Knights of Columbus | Services in-kind (e.g. funding / physical labour / facilities) | no formal agreement in place |
| Local Churches | Services in-kind | no formal agreement in place |
| Golden Age Club | Services in-kind | no formal agreement in place |
| Canadian Red Cross – in City of North Bay | Temporary shelter, clothing, food following an incident | no formal agreement in place |
| Bonfield Snowmobile Club | Access to areas in winter | no formal agreement in place |

Community Services Profile Key Findings

Community clubs and services play critical roles in enhancing safety within a community and supporting first responders during emergencies. They can contribute by acting as vital partners, complementing first responders in preparedness, resilience and community cohesion during fire events and other emergencies.

1. Disaster Preparedness and Response:

- **Community Associations** and other local organizations actively engage in disaster preparedness.
- They educate community members, organize resources, and promote safety measures.
- During emergencies, they provide support to affected individuals and help maintain order.

2. Coordination and Structure:

- Community clubs bring structure and order during crises.
- They coordinate evacuation efforts, resource distribution, and communication.
- Their presence ensures a more organized response, reducing chaos.

3. Local Connections and Support:

- Community groups decrease isolation and abandonment felt by disaster victims.
- They offer emotional support, connect neighbors, and foster resilience.
- First responders can rely on these local networks to reach affected individuals.

4. Community Engagement and Volunteerism:

- In rural areas, community members often serve as trained volunteers.
- They assist local organizations during emergencies, ensuring efficient response.
- These volunteers bridge gaps and provide essential services.

5. Enhancing Decision Making:

- Community clubs contribute to local decision-making processes.
- Their insights help shape emergency plans and strategies.
- Collaborating with first responders, they ensure effective execution.

Economic Profile

Bonfield is a small township located in the northeastern part of Ontario, Canada. Here are some key aspects of its economic profile:

Job Market: The job market in Bonfield is relatively small, with limited employment opportunities available in the local community. The primary industries that drive the local economy are agriculture and forestry. Additionally, there are a small number of service-oriented businesses catering to the needs of the community.

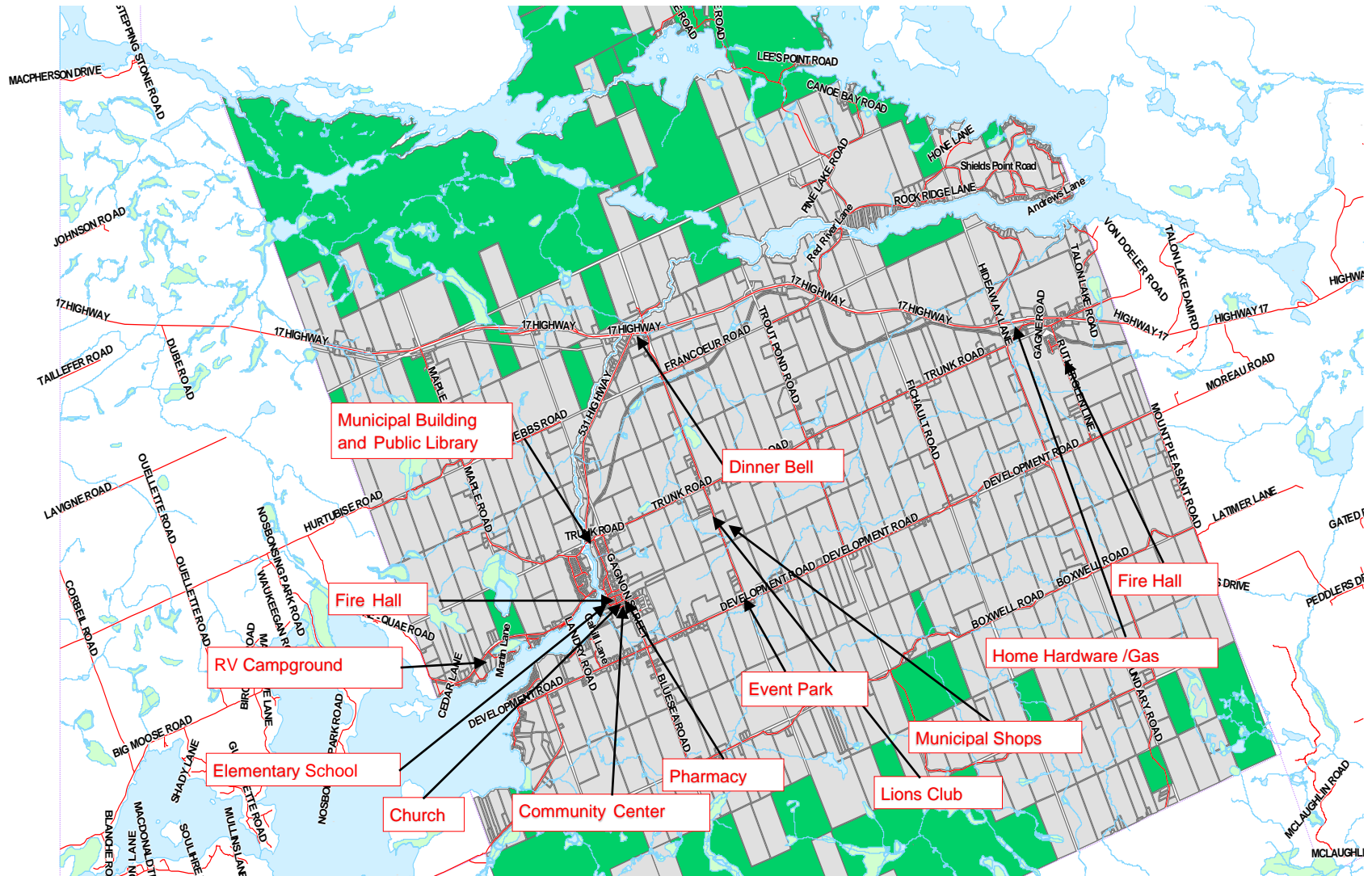
Income Statistics: According to the 2021 Census data, the average total income of economic families in Bonfield was approximately \$105,400 in 2020 and the average after tax income for families was approximately \$89,200 during the same period.

Quality of life: Bonfield offers a peaceful and rural lifestyle, surrounded by natural beauty. Residents enjoy access to parks, outdoor activities, and a close-knit community.

| Economic Profile Risks | | | | |
|--|---|-------------|-------------|---------------------|
| Identified Occupancy | Key Risk | Probability | Consequence | Assigned Risk Level |
| Vulnerable Occupancies – Seniors Residence Complex and Elementary School | Fire Power Outage and/or Weather Event | Possible | Major | Moderate |
| Gagne's Red & White, Home Hardware & Esso Gas Station | Fire Power Outage and/or Weather Event | Possible | Major | Moderate |

| Economic Profile Risks | | | | |
|--------------------------------|--|-------------|-------------|------------|
| Identified Occupancy | Key Risk | Probability | Consequence | Risk Level |
| Dinner Bell Restaurant & Motel | Fire Power Outage and/or Weather Event | Possible | Moderate | Moderate |
| Bonfield Event Park | Car accident and/or Medical event | Possible | Moderate | Moderate |
| Campgrounds / Seasonal Lodging | Fire | Possible | Moderate | Moderate |
| Township Office | Fire Power Outage and/or Weather Event | Possible | Moderate | Moderate |
| Bank: Caisse Alliance | Fire Power Outage and/or Weather Event | Possible | Moderate | Moderate |

Significant Economic Sites



Economic Profile Key Findings

In the unfortunate event of a fire or other emergency, the impacts on Bonfield's local economy and residents could be significant:

Economic Impact

Property Damage: Fires can cause damage to homes, businesses, and infrastructure. Rebuilding and repair costs would strain the local economy.

Business Interruption: Local businesses may face disruptions due to damage or evacuation orders. Loss of revenue and temporary closures could occur.

Insurance Claims: Insurance claims would increase, affecting both residents and insurers.

Social Impact

Displacement: Residents forced to evacuate would experience displacement, impacting their daily lives and routines.

Health and Safety: Emergency events can lead to injuries or health issues. First responders and healthcare services would be under pressure.

Community Resilience: The community's ability to recover and support one another would be tested.

Environmental Impact

Ecological Damage: Fires can harm natural habitats, forests, and wildlife.

Water Supply: Contaminated water sources or damage to water infrastructure could affect residents.

Past Loss and Event History Profile

Past Loss and Event History Fire and Emergency Calls

The following considers previous response data to identify trends regarding the deaths, injuries, dollar loss, and causes of fire in various occupancy types. This assists in determining the leading causes of fires and high-risk locations and occupancies. In the absence of fire loss data, local knowledge may be the most reliable predictor of fire risk in your community. Also, provincial statistics can assist in determining the types of occupancies and locations where fire losses, injuries and deaths most commonly occur.

| Municipal Fire Losses, Deaths, Injuries, and Causes | | | | | | | | | | | | | | | | |
|---|------------------------|------------|---------|---------------|-------------|--|------------|---------|---------------|-------------|---|------------|---------|---------------|-------------|------------|
| | | Year 2021 | | | | | Year 2022 | | | | | Year 2023 | | | | |
| Occupancy Classification | | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes |
| Group | Assembly | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | Detention Occupancies | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Group B | Care and Treatment | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | Single family | 2 | \$201K | 0 | 0 | * Porch fire – cigarette embers in garbage * House fire | 2 | \$112K | 0 | 2 | * House fire – undetermined * Garage fire - electrical | 1 | \$100K | 2 | 0 | Electrical |
| Group C | Multi-unit residential | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | Hotel / | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |

| Municipal Fire Losses, Deaths, Injuries, and Causes (Cont'd) | | | | | | | | | | | | | | | | |
|--|--|------------|---------|---------------|-------------|--------|------------|---------|---------------|-------------|--------|------------|---------|---------------|-------------|--------|
| | | Year 2021 | | | | | Year 2022 | | | | | Year 2023 | | | | |
| Occupancy Classification | | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes | # of Fires | \$ Loss | # of Injuries | # of Deaths | Causes |
| Group C | Mobile Homes and Trailers | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | Other | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| Groups D&E | Business & Personal | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | Other | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| Group F | Industrial | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |
| | | | | | | | | | | | | | | | | |
| Other | Occupancies not classified in OBC such as farm buildings | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A | 0 | 0 | 0 | 0 | N/A |

Past Loss and Event History Non-Fire Emergency Calls

| Non-Fire Emergency Calls | | | | | | |
|----------------------------|-----------------------|----------------|-----------------------|----------------|-----------------------|----------------|
| | Year 2021 | | Year 2022 | | Year 2023 | |
| Non-Fire Emergency Calls | Total Number Of Calls | % Of All Calls | Total Number Of Calls | % Of All Calls | Total Number Of Calls | % Of All Calls |
| CO False Calls | 0 | 0 | 1 | 2.6% | 1 | 1.5% |
| False Fire Calls | 6 | 11.1% | 6 | 15.4% | 5 | 7.4% |
| Chimney Fire | 1 | 1.8% | 0 | 0 | 1 | 1.5% |
| Medical/Resuscitator Calls | 32 | 59.3% | 26 | 66.7% | 51 | 75% |
| Motor Vehicle Accident | 4 | 7.4% | 2 | 5.1% | 2 | 2.9% |
| Vehicle Fire | 3 | 5.6% | 1 | 2.6% | 2 | 2.9% |
| Bush / Grass Fire | 6 (4 bush; 2 grass) | 11.1% | 2 (1 bush; 1 grass) | 5.1% | 4 (3 bush; 1 grass) | 5.9% |
| Other Response | 2 (hydro line) | 3.7% | 1 (hydro line) | 2.6% | 2 (hydro line down) | 2.9% |
| Totals | 54 | | 39 | | 68 | |

Past Loss and Event History Profile Risks Summary

The following is the list of the risks/causes for each occupancy type and the non-fire emergency risks identified in the tables above. Probability, consequence, and risk levels have been assigned to each cause/risk identified.

| Occupancy Type/Location/Risk | Causes | Probability | Consequence | Assigned Risk Level |
|---|--|-------------|-------------|---------------------|
| Group C – residential low density (single family dwellings) | <ul style="list-style-type: none">• Electrical• Lightning• Improper maintenance – chimney fire | High | Moderate | Moderate |
| Motor Vehicle Collisions / Vehicle Fires | Various | High | Minor | Moderate |
| Medical Calls | Various | High | Minor | Moderate |
| | | | | |
| | | | | |
| | | | | |

Note: The information on the table above represents assessment based on events experienced rather than potential for harm.

Treatment Options for the Top Risks in the Community

The following are the preferred treatment options identified for each risk in the last column of this worksheet and is used to assist the fire department to set its type and level of fire protection services. This assessment uses the information in the profiles in the assessment to identify the preferred/ recommended treatment for each.

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|--------------------|--|--|
| Geographic Profile | Bodies of water impacts training, equipment for response | Avoid and Mitigate Risk - Implement water/ice rescue training protocols, SOGs, and activities. |
| | Bodies of water impacts response time | Accept Risk - Implement appropriate response protocols, SOGs, and activities. |
| | Bodies of water – recreational/tourist activities | Avoid and Mitigate Risk – public education programs required. Educate seasonal residents on the importance of knowing their exact address to avoid delays in fire services response. |
| | Railway impacts fire station location | Accept Risk - Implement appropriate response protocols, SOGs, and activities. Ensure volunteer fire fighters are familiar with alternate road routes. |
| | Railway impacts response protocols | Accept Risk - Implement appropriate response protocols, SOGs, and activities. Ensure volunteer fire fighters are familiar with alternate road routes. |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|-------------------------------|---|---|
| Building Stock Profile | Residential Dwellings – lack of smoke & CO alarms and fire extinguishers; not cleaning out wood burning chimneys; fire escape plans | Avoid and Mitigate Risk – Implement public education initiatives promoting smoke/CO alarms and need for well-maintained wood burning chimneys and cleaning before the season begins. Public education during Fire Prevention Week annually as well as through community news & information updates |
| | Farmland – Vacant Structures | Avoid and Mitigate Risk – Contact property owners to establish what plans are for unused structures. Promote need for the need to securing and making safe vacant structures or the demolition of them. |
| | Vulnerable Occupancies (Seniors Residence Complex and Public School) | Avoid and Mitigate Risk - Establish routine fire safety inspection program. Conduct pre planning activities related to emergency response. Know and practice escape routes out of their building |
| | Township Office and Businesses | Avoid and Mitigate Risk – Implement public education initiatives promoting smoke/CO alarms. Public education during Fire Prevention Week annually as well as through community news & information updates |
| | Historic and culturally significant buildings | Mitigate Risk - Establish routine fire safety inspection program. Conduct pre planning activities related to emergency response. Promote smoke and CO alarms and fire extinguishers. |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|--|--|---|
| Critical Infrastructure Profile | Electricity Distribution | Accept Risk – Loss of power will adversely affect everyone in the community as businesses, school, residences, emergency services, etc all rely heavily on power. |
| | Radio Communications | Avoid and Mitigate Risk – have put in place App that shows who is responding to fire and emergency calls in the community |
| | Telecommunications | Accept Risk – loss of cell coverage is possible for short periods of time. |
| | Roads | |
| | Railroad (OVR) | Accept Risk – railway goes through the community. Contact OVR immediately related to any emergencies related to the railway incidents. |
| | Natural Gas | Accept Risk – loss of supply of natural gas in the event of a transmission line breakage. Work with the local service authorities in relation to public education in such events |
| | Continuity of Government / Financial Institution | Avoid and Mitigate – refer to township government emergency management plan. Consider options of remote access / work from home. |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|----------------------------|-----------------------------|--|
| Demographic Profile | Senior Citizens | Avoid and Mitigate – through continued public education such as fire prevention week regarding importance of working smoke & CO alarms, escape plan, fire extinguishers, etc. |
| | School | Avoid and Mitigate – Promote fire safety, develop, and practice escape plan, conduct fire drills in the school. |
| | Seasonal Residents | Avoid and Mitigate – public education promoting smoke & CO alarms, escape plans and fire extinguishers, as well as knowing their address. Public awareness of keeping driveways clear in snow in case of a fire or emergency. |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|-----------------------|--|---|
| Hazard Profile | Weather Event - Ice Storm / Snowstorm / Flood / Extreme temperatures for prolonged period. | Accept Risk – while extreme weather events cannot be completely controlled or avoided, they can in many cases be predicted which will allow for pre-preparedness. |
| | Highway Closure (HWY 17) Road and/or Hwy accident | Accept Risk – ensure fire services are prepared for any type of such event |
| | Train Derailment / Accident | Accept and Transfer Risk - fire department responds and assesses situation. If required, call in outside expertise from OVR and HAZMAT. |
| | Hazardous Materials Event | Accept Risk and Transfer Risk – fire department responds and assesses situation. If required, call in outside expertise from North Bay HAZMAT. |
| | Large Fire – wild and/or bush fire | Mitigate Risk – communications and public awareness of fire rating, permitted burning times, implementation of fire bans |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|---------------------------------------|-----------------------------|--|
| Public Safety Response Profile | OPP | Accept Risk – fire department responds to vehicle accident calls and provides assistance until OPP arrives and then supports OPP as needed |
| | EMS | Accept Risk – fire department responds to medical calls and provides assistance until EMS arrives and then supports EMS as needed |
| | OVR | Accept Risk – fire department responds to medical calls and provides assistance until OVR arrives and then supports OVR as needed |
| Community Services Profile | No concerns | Accept Risk – there are some community groups willing to assist at an incident if requested. Other services may be available in North Bay. |
| Economic Profile | Fires | Accept Risk – public awareness of working fire & CO alarms and fire extinguishers. |
| | Electricity | Accept Risk – promote the advantages of having a standby generator in the event they lose power |

Treatment Options for the Top Risks in the Community (Cont'd)

| Mandatory Profiles | Top Risk or Issues/Concerns | Preferred Treatment Option |
|--|-----------------------------|---|
| Past Loss and Event History Profile | Fires | Avoid and Mitigate Risk – public awareness of importance of working fire & CO alarms and fire extinguishers and having a fire safety plan. |
| | Medical Calls | Accept Risk – fire department responds to medical calls and provides assistance until EMS arrives and then supports EMS as needed |

Past Loss and Event History Profile Key Findings

Bonfield Fire Department Capability and Readiness Assessment and Gap Analysis

Summary and Conclusions