Township of Douro-Dummer
Community Risk Assessment

June 24, 2024

ESSSi
Emergency Services Strategy and Solutions Inc.
321 Kentucky Court
Corunna, Ontario N0N1G0
esssi.ca

Page Intentionally Left Blank

ESSSi
Emergency Services Strategy and Solutions Inc.
321 Kentucky Court Corunna, Ontario N0N1G0
esssi.ca

Contents

ESSSi
Emergency Services Strategy and Solutions Inc.
321 Kentucky Court Corunna, Ontario N0N1G0
esssi.ca

Executive Summary

This document, prepared by ESSSi for the Township of Douro-Dummer, presents the Community Risk Assessment (CRA) meticulously crafted to comply with Ontario Regulations and align with the Ontario Fire Marshal (OFM) TG-02-2019 Community Risk Assessment guidelines. The CRA serves as a vital tool for fire departments, enabling informed decisions regarding fire protection services based on identified risks.

Risk assessment is crucial for shaping the Master Fire Plan, tailoring fire protection strategies to local needs. By identifying and prioritizing fire and life safety risks, fire departments can develop effective programs for public safety education, Fire Code enforcement, and emergency response.

The Three Lines of Defence framework—public education, fire safety standards enforcement, and emergency response—guides municipalities in fulfilling their obligations under the Fire Protection and Prevention Act 1997.

To meet CRA obligations, municipalities must understand community risks and prioritize them for effective risk treatment and provision of fire protection services.

The methodology adheres to OFM guidelines, ensuring a comprehensive assessment. Ontario Regulation 378/18 mandates municipalities to complete and review a CRA, using it to inform decisions about fire protection services.

This CRA equips Douro-Dummer with valuable insights to enhance public safety and mitigate fire-related risks effectively.

Community Risk Assessment

Scope

ESSSi has created this document for the Township of Douro-Dummer to aid in comprehending community risks associated with public fire protection. The Community Risk Assessment (CRA) for the Township of Douro-Dummer has been meticulously crafted to comply with Ontario Regulations, aligning with the methodology and analysis outlined in the Ontario Fire Marshal (OFM) TG-02-2019 Community Risk Assessment guidelines.

Community risk assessments serve as vital tools for fire departments, empowering them to make well-informed decisions regarding the nature and extent of fire protection services they offer based on identified risks. The CRA is instrumental in shaping the development of a Master Fire Plan, a strategic roadmap for fire protection tailored to local needs and circumstances.

Risk, in this context, is defined as the measure of the probability and consequence of adverse effects on health, property, organization, environment, or community resulting from an event, activity, or operation. By meticulously identifying and prioritizing all fire and life safety risks within their community based on probability and impact, fire departments can discern which risks warrant attention and devise optimal strategies to address them. Risk assessments are instrumental in shaping fire departments' level of service, programs, and activities related to public fire safety education, Fire Code inspections and enforcement, and emergency response, ultimately aiding in the prevention and mitigation of risks.

The Fire Protection and Prevention Act, 1997 (FPPA) mandates that every municipality in Ontario establish a program encompassing public education on fire safety, specific components of fire prevention, and other necessary fire protection services in line with local needs and circumstances. These elements are commonly referred to as the Three Lines of Defence, with lines one and two being proactive responses and line three serving as a reactive response.

- Line one: Public Fire Safety Education (Proactive Response)
  - This involves educating residents of the community.
- Line two: Fire Safety Standards and Enforcement (Proactive Response)
  - This involves ensuring that buildings are equipped with the necessary fire protection and life safety systems to minimize the severity of fires.
- Line three: Emergency Response (Reactive Response)
  - This involves providing firefighters who are well-trained and equipped to effectively mitigate emergencies.

To meet the CRA obligations, municipalities must make informed decisions regarding the types and levels of fire protection services they offer. This requires a thorough understanding of community risks, which can be achieved through a community risk

assessment. Once risks are identified, they can be prioritized to guide decisions on risk treatment options and the provision of fire protection services.

Methodology:

The methodology employed in preparing this Community Risk Assessment (CRA) adheres to the OFM Guidelines on Community Risk Assessments.

Legislation:

Ontario Regulation 378/18: Community Risk Assessments requires all municipalities in Ontario to develop a CRA. The CRA assists in making informed decisions about the provisions of fire protection services.

Ontario Regulation 378/18 states that,

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

a. complete and review a community risk assessment as provided by this Regulation and

b. use its Community Risk Assessment to make informed decisions about the provision of fire protection services.

Introduction

Douro-Dummer is a rural municipality in central Ontario with an approximate population of 7632 (2021) and a surface area of 460 square kilometres. The fire department operates out of four fire stations (812 Daleview Rd., 435 Douro Fourth Line Rd., 910 Water St., and 2153 Douro Sixth Line Rd., North Dummer). Douro-Dummer firefighters are well-trained and are certified, legacy or grandfathered in accordance with O/Reg 343/22. The department regularly responds to fires, rescues, medical emergencies, wildland fires, and other emergency incidents. In addition to these responses, Douro-Dummer firefighters also respond to barn fires, emergency incidents involving machinery rescues, and dangerous goods, such as transportation, fertilizer, pesticide, and insecticide-related incidents.

CRAs allow fire departments to make informed decisions about the types and levels of fire protection services they provide based on identified risks. This document has been prepared to meet the current requirements of Ontario Regulation 378/18. Fire departments must review and revise the community risk assessment annually to accurately reflect the mandatory profiles and fire and emergency risks. Once completed and received by Council, the CRA allows the municipality and the fire service to make reasonable and appropriate decisions regarding the level of fire protection services offered by the municipality through the fire department.

Risk is defined as a measure of the probability of an incident occurring. The consequence is an adverse effect on health, property, organization, environment, or community due to an event, activity, or operation.

By identifying all fire and life-safety risks in the community and prioritizing them based on the probability of occurrence and the impact, fire departments can determine which risks to address and how best to manage them. Risk assessments allow fire departments to ensure their level of service, programs and activities for public fire safety education, fire code inspections and enforcement, and emergency response directly address the identified risks and are most effective at preventing and mitigating them.

The Emergency Management and Civil Protection Act (EMCPA) requires every municipality to conduct an all-hazards risk assessment to maintain a continuous improvement of emergency management programs and improves public safety. A completed Hazard Identification Risk Assessment (HIRA) may provide some of the information/data required to fulfil the needs of a CRA under O. Reg. 378/18. However, specific fire-related information not contained in the HIRA was gathered as part of this process. The HIRA and the CRA are separate processes but should be viewed as complementary.

Identifying community fire and life safety risks and their value based on probability and consequence, including impact on the community, will help form the plan to prevent, mitigate or accept community fire risk.

This information also informs Council on matters to be considered when identifying the level of service, training, emergency response capability, capital and operating budgets, fire prevention/enforcement, and public fire and life safety education.

Conducting A Community Risk Assessment

Identifying Risks – Mandatory Profiles

The initial step in conducting a Community Risk Assessment (CRA) involves identifying fire and life safety risks within the community. This is achieved by gathering data about the community and its activities. O. Reg. 378/18 mandates fire departments to consider various profiles during a CRA to comprehensively analyze potential risks within the community:

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

Worksheets for each profile are provided in this risk assessment, serving as the foundation for assigning risk levels and identifying resources and solutions to address the risks effectively. Risks can be managed through several approaches:
- Avoidance: Implementing programs and initiatives to prevent fires or emergencies.

- Mitigation: Implementing programs and initiatives to reduce the likelihood and impact of fires or emergencies.
- Acceptance: Determining that specific risks will not be addressed through programs or initiatives, the fire department acknowledges the potential risk and commits to responding if it occurs.
- Transfer: Shifting the impact and management of risks to another organization or entity. Examples include contracting public fire safety education, fire code inspection and enforcement, or emergency response services to neighbouring municipalities or other organizations.

Probability and Consequence Levels
Throughout this report, reference is made to probability levels (Table 1) and consequence levels (Table 2).

Probability
The likelihood of a fire or emergency within a community is often estimated based on past occurrences. Reviewing historical fire-loss data, learning from experiences in other communities, and consulting community members with extensive historical knowledge are crucial steps. Professional judgment, informed by experience, should be exercised when estimating probability levels. Events' probabilities are categorized into five levels of likelihood:

Table 1: Probability levels

Description	Specifics
Rare	• May occur in exceptional circumstances • No incidents in the past 15 years
Unlikely	• Could happen at some time, especially if circumstances change • 5 to 15 years since the last incident
Possible	• Might occur under current circumstances • One incident in the past five years
Likely	• Will happen at some time under the current circumstances • Multiple or recurring incidents in the past five years
Almost certain	• Expected to occur in most cases unless circumstances change • Numerous or frequent incidents in the past year

Consequence
The consequence of a fire or emergency refers to the potential losses or adverse outcomes associated with the event. Professional judgment and a review of past occurrences are crucial for determining consequence levels. Estimating the consequence level of an incident or event involves evaluating four key components:

1. Life Safety: This pertains to injuries or loss of life resulting from occupant and firefighter exposure to life-threatening fire or other hazardous situations.
2. Property Loss: This encompasses monetary losses related to private and public buildings, property contents, irreplaceable assets, significant historic or symbolic landmarks, and critical infrastructure.
3. Economic Impact: This includes monetary losses associated with property income, business closures, declines in tourism, reductions in tax assessment values, and employee layoffs.
4. Environmental Impact: This involves harm to both human and non-human life, such as wildlife, fish, and vegetation. It also encompasses a general decline in the community's quality of life due to air, water, or soil contamination resulting from the incident and response activities. The consequence of an event can be categorized into five levels based on severity:

Table 2: Consequence Levels

Description	Specifics
Insignificant	• No life-safety issue • Limited valued or no property loss • No impact on the local economy and • No effect on general living conditions
Minor	• Potential risk to the life safety of occupants • Minor property loss • Minimal disruption to business activity and • Minimal impact on general living conditions
Moderate	• Threat to the life safety of occupants • Moderate property loss • Poses a threat to small local businesses and • Could pose a threat to the quality of the environment
Major	• Potential for a large loss of life • Would result in significant property damage • Significant threat to large businesses, the local economy, tourism, and • Impact on the environment would result in a short-term, partial evacuation of residents and businesses
Catastrophic	• Significant loss of life • Multiple property damage to a substantial portion of the municipality • Long-term disruption of businesses, local employment, tourism, and • The environmental damage that would result in the long-term evacuation of residents and businesses

Risk Summary

The following worksheet outlines the primary risks to life safety and property, along with suggested methods for reducing or mitigating these risks. It is anticipated that both Council and the Fire Chief will utilize the preferred treatment options to identify areas requiring attention through public education, fire code enforcement, or adjustments in the level of fire service provision. These decisions will serve as the foundation for the Douro-Dummer community risk reduction plan.

The success of the plan will be gauged by a decrease in the occurrence of fires, diminished fire-related injuries, and a reduction in property loss. This will be achieved through ongoing fire-prevention initiatives, the implementation of early warning and detection systems, proactive inspections, and public education efforts aimed at promoting fire-safe behaviours.

Top risk or issues/concerns	Preferred treatment option(s)
Major waterfront multi-residential fire	• Multiple stations response • Access to on-site water • Ongoing staffing requirement/rotation in the event of a major fire • Tanker Shuttle through mutual aid, if available
Major multi-building fire	• Multiple stations response • Access to on-site water • Ongoing staffing requirement/rotation in the event of a major fire • Tanker Shuttle through mutual aid, if available
Major building fire – Lakefield College School	• Automatic Aid Agreement with Selwyn Township • Ongoing staffing requirement/rotation
Forest fire	• Fire Protection Agreement – MNRF • FD is trained and equipped • Multiple stations response • Access to on-site water • Ongoing staffing requirement/rotation in the event of a major fire • Tanker Shuttle through mutual aid, if available
Water or Ice Rescue	• Multiple stations response • Availability of required equipment in a timely manner • Availability of trained staff in a timely manner • Support from the County Rescue System

Top risk or issues/concerns	Preferred treatment option(s)
Specialized or machinery rescue	• Utilize the County SRU Team • Utilize mutual-aid assistance, if available, or activation of provincial teams through the OFM/Provincial Emergency Operations Centre when necessary and appropriate.
Hazardous materials/dangerous goods transportation incidents	• Maintain the current practices guided by SOGs and policies consistent with the Establishing and Regulating Bylaw. • Utilize mutual-aid assistance, if available, or activation of provincial teams when necessary and appropriate.
High Angle/Confined Space Rescue	• Utilize the County SRU team • Utilize mutual-aid assistance, if available, or activation of provincial teams through the OFM/Provincial Emergency Operations Centre when necessary and appropriate.
Structure Fires	• Douro-Dummer Council is legally responsible for ensuring the fire department's response capability meets local needs and circumstances. • Maintain the current practices guided by SOGs and policies consistent with the Establishing and Regulating Bylaw. • Utilize mutual aid assistance, if available, when necessary and appropriate.
Fire Services	• The Fire Chief reports to the Douro-Dummer Council quarterly to ensure that Council meets its legal obligation and that its response capability meets local needs and circumstances. • The Fire Chief ensures that the Douro-Dummer Council is informed of any emergency response capability issues, including inspections, pre-planning, training, staffing, equipment maintenance, and availability.

Structure Fire Loss Statistics

Year	**2023**
Number of structure fires	6
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$1.5 M
Fire-cause determination	Yes
Year	**2022**
Number of structure fires	8
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$432,000
Fire-cause determination	Yes
Year	**2021**
Number of structure fires	10
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$467,500
Fire-cause determination	Yes
Year	**2020**
Number of structure fires	3
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$ 3,500
Fire-cause determination	Yes
Year	**2019**
Number of structure fires	5
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$25,000
Fire-cause determination	Yes
Year	**2018**
Number of structure fires	15
Number of firefighter injuries	0
Number of civilian injuries and deaths	0
Total dollar loss	$1.342 M
Fire-cause determination	Yes

Profile Worksheets

Geographic Profile:
The Township of Douro-Dummer is situated in Peterborough County, located in Central Ontario. With a surface area spanning approximately 460 square kilometres, the municipality is home to an estimated population of 7,632 as of 2021. The population density stands at approximately 16.6 individuals per square kilometre. Moreover, the township often sees an influx of more than 3,000 seasonal residents, contributing to its dynamic demographic landscape.

Worksheet 1: Geographic Profile

Geographic profile risks List the geographic features in your community and how they may influence the delivery of fire protection services.	
Geographic feature	**Potential impact on the delivery of fire protection services**
Stony and White Lakes and parts of the Trent-Severn Waterway	• Subject to seasonal flooding, flooding during heavy rainfall or low water levels • Impacts training and equipment for response activities • Impacts response times/travel time to calls • Recreational/tourist activities impact public fire safety education, fire code inspections, and enforcement. • Impacts fire-protection delivery, structural, wildfire/ • grass fire, ice and water rescue and medical response to island properties. • Generates additional tourists to the area seasonally
Islands - Occupied	• Occupancies on islands are occupied longer than originally intended or throughout the year. • Appropriate 9-1-1 addressing • The level of service should be addressed in the Establishing and Regulating Bylaw. • Impacts training, equipment for response activities • Impacts response times/travel time to calls

Geographic feature	Potential impact on the delivery of fire protection services
Waterfront Properties and Resort Park	• Limited access and egress during an emergency • Some residences were built within the existing forest canopy without sufficient spacing to allow firefighting operations on the property.
Highway 28/ Highway 7	• Impacts transportation of all types, including commercial trailers and intermodal, that affect the supply chain • Impacts the transportation of hazardous materials and dangerous goods • Impacts life safety due to road conditions, collisions, and transportation of dangerous goods • Impacts weekly large traffic volumes, specifically Friday and Sunday during the late spring, summer and through fall • Continue working partnerships and response exercises with OPP, Peterborough EMS, and MTO to address major collisions, road closures and severe weather risks.
Private roads	• Impacts fire apparatus access • Impacts weight-bearing capacity for fire apparatus • Impacts response time/Golden Hour
Bridges on Secondary Highways and private roads	• Impact travel access and response times
County Forest System and forested area	• A considerable area of the municipality is forested • Impacts training, equipment for response activities • Impacts response times/travel time to calls Implement Fire Smart Program and Principles in the community

Building-Stock Profile

The building stock profile encompasses the types, numbers, uses, and ages of various buildings within the community. In assessing potential fire risks in the Douro-Dummer communities, consideration is given to the different types or classifications of buildings prevalent in the area, along with the presence of fire-safety systems and equipment during construction.

Past inspection practices and frequencies are also taken into account when evaluating the risk associated with building occupancy classification categories. Conversely, the need for historical inspection data concerning a specific occupancy classification category is considered when determining risk.

These building characteristics significantly influence public fire safety education, fire code inspection and enforcement, and emergency response activities that the fire department may deem necessary to address the identified risks.

Assigning Risk Levels

Assigning a risk level aids fire departments in prioritizing risks, thereby determining how to address or treat each risk. The risk level matrix provided in this section assists fire departments in determining risk levels based on the probability and consequence levels of each identified risk.

Risks are categorized as low, moderate, or high. The assigned risk level for each identified risk can be noted in the assigned risk level column in Appendix A on the relevant worksheets.

The matrix below can guide the determination of the assigned risk level.

To assign a risk level for each identified risk, plot the assigned probability and consequence levels on the relevant worksheets in Appendix A. This will help visualize and quantify the level of risk associated with each identified risk.

Table A: Assigns a risk level for each identified risk.

Risk Level Matrix

Probability	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
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

Consequence

ESSSi Emergency Services Strategy and Solutions Inc. 321 Kentucky Court Corunna, Ontario N0N1G0 esssi.ca

Worksheet 2: Building-Stock Profile Risks

Building Occupancy Group #-Number	Building Classification	Issues/Concerns (i.e., number of buildings; age of buildings; use of buildings; building density, height, and area; historic and culturally significant buildings; etc.)	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the Risk Level Matrix for recommend ed risk levels)
Group A					
#34	Assembly	Assembly buildings occupied by a large number of people, May contain high quantities of combustibles furnishings and decorations Occupants are generally unfamiliar with building exit locations	Possible	Major	Moderate
Group B					
	Detention	0	N/A	N/A	N/A
	Care/ Treatment	0	N/A	N/A	N/A

Building Occupancy Group #-Number	Building Classification	Issues/Concerns (i.e., number of buildings; age of buildings; use of buildings; building density, height, and area; historic and culturally significant buildings; etc.)	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the Risk Level Matrix for recommended risk levels)
Group C					
5189	Single-Family Dwellings	SIR/OBC 301,302,303, New Development, Light Weight Construction, close spatial separation between units, concerns regarding wildland interface and lack of protected space (Fire Smart Canada) Mixed construction types throughout (ordinary, balloon, platform) Building services concerns – age, wiring, lack of early warning devices, lack of fire separations Rural farm dwellings Remote access issues and private roads Access to water supply	Likely	Moderate	Moderate
53	Multi-Unit Residential Dwellings	SIR/OBC 321, 322,323, apartment buildings, lack of inter-connected early warning devices CO and smoke alarms	Possible	Moderate	Moderate
0	Hotel/Motel	SIR/OBC 355	N/A	N/A	N/A
28	Mobile Homes and Trailers	SIR/OBC 342	Possible	Moderate	Moderate

Building Occupancy Group #-Number	Building Classification	Issues/Concerns (i.e., number of buildings; age of buildings; use of buildings; building density, height, and area; historic and culturally significant buildings; etc.)	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the Risk Level Matrix for recommended risk levels)
Group D & E					
62	Business and personal service / mercantile	Occupied by a large number of people during business hours May contain a high level of combustible content.	Possible	Moderate	Moderate
Group F					
9	Industrial	SIR/OBC community and employment	Possible	Major	Moderate
Other Buildings					
6050	Occupancies not classified in OBC, such as farm buildings	SIR/OBC 811 Timber Barns 983 Modern Construction	Possible	Major	Moderate
207	Buildings, not an occupancy	Silos, Bulk Feed Tanks, Pool Enclosures, Solar Panels	Possible	Moderate	Moderate

Critical Infrastructure Profile

The critical infrastructure profile pertains to the facilities or services essential for maintaining interconnected networks, sustaining the economy, and ensuring public safety and security. Examples include:

1. Electricity Distribution
2. Water Distribution
3. Telecommunications
4. Hospitals
5. Airports

These critical infrastructure components play crucial roles in meeting vital human needs and safeguarding the community's well-being.

Worksheet 3: Critical Infrastructure Profile

Identified critical infrastructure	Issues/concerns
Continuity of government	The local government is closed or unable to operate, affecting confidence in ratepayers. As technology changes, so do the causes. Causes may include severe weather, infectious/communicable disease, IT infrastructure attack, or electrical grid instability/failure.
Electricity transmission and distribution	Hydro failure to the municipal building and EOC Fires at transformers and Ontario Hydro Transformer Station Sabotage
Radio/television communication	Inability to communicate with the public and outside area Inability to provide emergency information or instructions
Telecommunications	It affects most municipal fire departments It involves the paging and emergency notifications of responders It affects communications with EOC or alternate comms centre
Roads	Access to emergency scenes and evacuation routes The public need to access information from fire stations or municipal building
Natural gas delivery	Potential for leaks in main lines above/below ground Provider or infrastructure failures Lack of product could place the civil population at risk during three seasons. A lack of products could affect the mercantile, commercial, industrial, and hospitality sectors.

Identified critical infrastructure	Issues/concerns
Propane delivery	Potential for leaks in main lines above/below ground Provider or infrastructure failures Lack of product could place the civil population at risk during three seasons. A lack of products could affect the mercantile, commercial, industrial, and hospitality sectors.
Primary and secondary emergency operations centre	Potential to be unusable due to lack of power, failure of generator or IT, sabotage, extreme weather, or public health emergency
Transportation of fuels	Without reliable transportation, fuel supplies and logistical support, businesses cannot continue to operate, residents cannot evacuate if necessary, and conversely, it makes it more difficult for the community to recover. Lack of fuels may limit the use of personal gasoline/diesel generators.
Emergency shelters	Long-duration operations Shelter size may not accommodate the need Logistical support is required to support shelter operations, particularly long-term. Requirement for sanitation, disinfection, and potable water

Demographic Profile

The demographic profile encompasses the composition of the community's population, taking into account various factors such as population size and dispersion, age, gender, cultural background, level of education, socio-economic makeup, and transient population.

Understanding the characteristics of the population within the community enables the fire department to identify segments that may be at a higher risk of fire. This awareness allows for the identification of high-risk behaviours to target and specific communication techniques to engage with these high-risk groups effectively.

Fire protection services, including public fire safety education, fire code inspections, and enforcement programs, should be tailored to address the needs of high-risk groups. Delivering fire safety programs in ways that resonate with these groups can have a significant impact. For instance, utilizing communication techniques that are popular among specific high-risk segments increases the likelihood of message reception and, consequently, effectiveness in reducing fire risks.

Population distribution charts can indeed be valuable tools in identifying high-risk or vulnerable demographic groups within the community. By visually representing the

distribution of population across various demographic factors such as age, gender, cultural background, education level, and socio-economic status, these charts provide insights into where particular vulnerabilities or risk factors may exist.

For example, population pyramids can highlight age distributions, helping identify segments with higher proportions of elderly individuals who may be more susceptible to fire-related risks. Similarly, charts depicting educational attainment or income levels can pinpoint areas with lower socio-economic status, which may correlate with higher fire risk due to factors like inadequate housing conditions or limited access to fire safety resources.

By analyzing population distribution charts alongside data on fire incidents or safety concerns, fire departments can prioritize outreach efforts and tailor fire prevention programs to address the specific needs of vulnerable groups within the community. This targeted approach enhances the effectiveness of fire safety initiatives and contributes to overall community resilience.

Worksheet 4a: Demographic Profile (StatsCan 2021 Census Data)

Ages of population	# Of people	% Of the total population
0-4	340	4.4
5-9	430	5.6
10-14	440	5.7
15-19	400	5.2
20-24	355	4.6
25-29	345	4.5
30-34	390	5.1
35-39	460	6.0
40-44	400	5.2
45-49	390	5.1
50-54	515	6.7
55-59	680	8.9
60-64	720	9.4
65-69	605	7.9
70-74	500	6.5
75-79	315	4.1
80-84	205	2.6
85 and over	135	1.7
Total population	7630	100

In addition to the permanent population, the seasonal population of approximately 3,000 residents who engage in cottage, camping, and recreational activities within the Township of Douro-Dummer also significantly impacts the community's demographics and associated fire risk factors.

Seasonal residents often have distinct characteristics and behaviours compared to permanent residents, which can influence fire risk. For instance, they may spend extended periods in remote or rural areas where access to emergency services could be limited. Moreover, seasonal properties, such as cottages or campsites, may have different fire safety standards or equipment compared to permanent residences.

Therefore, it's essential for fire departments to consider the unique demographic profile of both permanent and seasonal residents when assessing fire risks and developing fire prevention strategies. Population distribution charts should encompass both permanent and seasonal populations to provide a comprehensive understanding of the community's demographics and associated vulnerabilities. This inclusive approach ensures that fire safety initiatives effectively address the needs of all residents, regardless of their residential status.

Population Distribution

(StatsCan 2021 Census Data)

Total distribution of the population by broad age groups	100.0 7630 Population	Male 3830 Population	Female 3800 Population
0-14 years	1210	615	595
15-64 years	4660	2305	2355
65 years and over	1760	910	850
85 years and over	135	70	65
The average age of the population	44.8	44.6	44.9
The median age of the population	48.4	48.0	48.8

Population By Ethnicity

(StatsCan 2021 Census Data – Extrapolation or Approximation)

Total – visible minority for the population in private households – 25% of sample data	Total	Male	Female
The total visible minority population	195	105	90
South Asian	50	25	25
Black	80	50	30
Chinese	35	20	15
Japanese	10		
Multiple Visible Minorities	10		

* Visible minority population so small that it is not broken down by ethnic origin

Education

(StatsCan 2021 Census Data – Extrapolation or Approximation 25% Sample Data)

Total – highest certificate, diploma or degree for the population aged 15 years and over in private households – 25% sample data	Total 6405	Male 3205	Female 3200
No certificate, diploma, or degree	850	540	315
Secondary (high) school diploma or equivalency	1,830	895	935
Post-secondary certificate, diploma, or degree	3,725	1,775	1,950
Apprenticeship or trades certificate or diploma	525	430	95
Trades certificate or diploma other than a certificate of apprenticeship or certificate of qualification	200	145	60
Certificate of apprenticeship or certificate of qualification	330	285	40
College, CEGEP or other non-university certificate or diploma	1,810	755	1,055
University certificate or diploma below bachelor level	115	70	45
University certificate or diploma at bachelor level or above	75	35	40
Bachelor's degree	945	360	585
University certificate or diploma above bachelor level	75	35	40
Degree in medicine, dentistry, veterinary medicine, or optometry	30	10	20
Master's degree	170	85	85
Earned doctorate	50	35	15

Socio-economic Summary

(StatsCan 2021 Census Data)

Total – income statistics in 2020 for the population aged 15 years and over in private households – 100% data		Total 6405	Male 3210	Female 3200
Without total income		1945	875	1075
With total income		4460	2335	2130
Under $10,000 (including loss)		445	195	255
$10,000 to $19,999		765	315	445
$20,000 to $29,999		910	380	535
$30,000 to $39,999		760	320	440
$40,000 to $49,999		730	375	360
$50,000 to $59,999		620	315	300
$60,000 to $69,999		475	260	210
$70,000 to $79,999		360	200	160
$80,000 to $89,999		270	155	115
$90,000 to $99,999		220	130	95
$100,000 and over		645	455	195
$100,000 to $149,999		445	295	150
$150,000 and over		200	155	45

Workforce

(StatsCan 2021 Census Data – Extrapolation or Approximation 25% Sample Data)

Total – population aged 15 years and over by labour force status - 25% sample data	Total 6405 a+b+c = Workforce	Male 3205 a+b+c = Workforce	Female 3200 a+b+c = Workforce
In the labour force	3,845	1,965	1,880
Employed	3,505(a)	1,845(a)	1,660(a)
Unemployed	345(b)	120(b)	220(b)
Not in the labour force	2,565(c)	1,245(c)	1,320(c)
Participation rate	60.0	61.3	58.8
Employment rate	54.7	57.6	51.9
Unemployment rate	9.0	6.1	11.7

Home Ownership

(StatsCan 2021 Census Data – Extrapolation or Approximation 25% Sample Data)

Total – private households by tenure – 25% sample	2925
Owner	2785
Renter	140
Condominium	0

Considering these questions can provide valuable insights into demographic groups within the community and their associated fire safety issues/concerns:

1. Are there specific age groups that make up a large portion of your community? If yes, who are they?

- For example, there may be a significant proportion of elderly residents or young children in the community, both of which could have specific fire safety needs. Elderly individuals may require assistance with mobility or hearing impairments, while young children may need guidance on fire safety education tailored to their age level.

2. Are there groups whose language and cultural practices impact fire safety in your community? If yes, who are they?

- Communities with diverse cultural backgrounds may have residents who speak languages other than the predominant language. Language barriers could affect understanding of fire safety instructions and access to relevant information. Additionally, cultural practices or beliefs may influence behaviours related to fire safety practices.

3. Are there transient populations in your community (e.g., post-secondary school students, migrant workers, seasonal tourists, etc.)? If yes, who are they?

- Transient populations may have different levels of familiarity with fire safety regulations and practices. For instance, post-secondary school students living in dormitories or rental properties may be less familiar with fire evacuation procedures compared to permanent residents.

4. Are specific socio-economic groups and circumstances impacting fire safety in your community? If yes, who/what are they?

- Socio-economic factors such as income level, housing conditions, and access to resources can influence fire safety risks. Low-income households may have limited access to fire safety equipment or may reside in older buildings with outdated infrastructure, increasing their vulnerability to fire incidents.

5. Are there demographic groups within your community that have cognitive or physical disabilities served by community service agencies? If yes, who are they?

- Individuals with cognitive or physical disabilities may require specialized assistance and accommodations to ensure their safety during fire emergencies. Community service agencies that support these populations play a crucial role in addressing their unique fire safety needs.

By addressing these questions, fire departments can better understand the diverse demographics within their community and develop targeted fire safety programs and initiatives to address the specific needs of each group. This inclusive approach ensures that fire safety measures are accessible and effective for all residents, promoting overall community safety and resilience.

Demographic Profile

Use the answers to the questions above to list the identified demographic groups in the first column of the worksheet below.

Worksheet 4b: Demographic Profile Risks

Identified Demographic Group	Issues/concerns
Senior population	• A significant number of seniors reside in the community, with approximately 1,760 individuals over the age of 65. • Ontario is experiencing a trend of increasing seniors population due to the retirement of baby boomers. • Some seniors may face mobility and cognitive challenges, requiring varying levels of care. – • No Vulnerable Occupancies (O/Reg. 364/13) identified.
Seasonal Population	• Approximately 3,000 seasonal residents/visitors frequent the municipality. • Fire safety messaging targeting tourists and seasonal property owners is crucial. • Local attractions and outdoor activities attract additional visitors, potentially necessitating emergency services. • Public fire safety messages may be disseminated through static signs, social media, pamphlets, and newspaper articles. • Some seasonal residents may be unfamiliar with their addresses and inaccessible by road. • A private seasonal resort is present in the area.

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all the information on all worksheets to decide how to provide fire protection services in their municipality/community.

Hazard Profile

The hazard profile encompasses the various hazards present within the community, including natural hazards, hazards caused by human activities, and technological hazards. These may include, but are not limited to:

- Natural Hazards: Floods, freezing rain/ice storms, forest fires, hurricanes, tornadoes, snowstorms, windstorms, extreme temperatures.

- Hazards Caused by Humans: Hazardous materials spills, transportation emergencies (air, rail, road), cyber-attacks, human health emergencies.

- Technological Hazards: Energy supply disruptions (pipelines, storage and terminal facilities, electricity, natural gas, oil facilities, etc.).

Fire departments must consider all potential hazards that pose a significant risk to or may have a significant impact on the community and to which fire departments may be expected to respond. This comprehensive approach ensures effective planning and response strategies to mitigate the risks associated with various hazards**.**

Worksheet 5: Hazard Profile

Identified Hazard	Probability (refer to Table 1 for suggested probability levels)	Consequence (refer to Table 2 for recommended consequence levels	Assigned risk level (refer to the risk level matrix for recommended risk levels)
Structure conflagration	Unlikely	Major	Moderate
Large fire	Possible	Major	Moderate
Wildland/residential interface fires*	Possible	Major	Moderate
Hazmat incident	Possible	Major	Moderate
Plane crash	Rare	Major	Moderate
Motor vehicle collisions	Likely	Moderate	Moderate
High-Pressure Pipeline Failure	Possible	Moderate	Moderate
Transportation incident MCI	Possible	Major	Moderate
Special event – large crowds	Unlikely	Major	Moderate
Utility disruption	Likely	Moderate	Moderate
Critical infrastructure failure	Likely	Moderate	Moderate
Cyber attack/IT failure	Likely	Major	Moderate
High-angle rescue	Unlikely	Moderate	Moderate
Trench rescue	Unlikely	Moderate	Moderate
Ice storm*	Likely	Major	Moderate
Severe thunderstorm*	Likely	Major	Moderate
Extreme temperatures*	Likely	Major	Moderate
Snow/blizzard*	Likely	Major	Moderate
Severe wind/tornado/straight-line winds*	Likely	Major	Moderate
Flood*	Possible	Moderate	Moderate
Drought*	Possible	Moderate	Moderate
Well water issues	Possible	Moderate	Moderate
Earthquake	Unlikely	Moderate	Moderate
Infectious/communicable disease – Human	Likely	Major	Moderate
Infectious/communicable disease – Animal	Likely	Major	Moderate

***Denotes potentially changing risks associated with climate change

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community.

Public Safety Response Profile

The public safety response profile encompasses the agencies and organizations within the community, such as police, EMS (Emergency Medical Services), and rescue teams, that may respond to various types of incidents.

Fire departments should consider the involvement of other public safety response agencies, such as police, EMS, and rescue teams, that might be tasked with or able to assist in responding to emergencies or mitigating their impact. This consideration aids fire departments in prioritizing community risks and determining the level of fire protection services they provide.

For instance, the presence of a private fire and rescue service at a local industrial facility may influence decisions regarding the type and level of fire protection services that a municipal fire department provides to that facility. Collaborating with other public safety agencies ensures a coordinated response to emergencies and enhances overall community safety.

Worksheet 6: Public Safety Response Profile

Identified public safety response agency	Incident response	Lead role	Issues/concerns
Fire	• Fires • MVCs • Rescues • Medicals • HazMat • Public Education • Access to MNRF for forest fires	• Suppress or extinguish fires • Perform rescues • Deliver initial patient care • Property Conservation • Cause and origin of fires	• Recruitment/retention • Daytime staffing • Fire Attack Team Capability
Ontario Provincial Police	• Collisions • Fires • Crime scenes	• Scene control • Primary/initial investigation	• Staffing for major incidents
Peterborough County-City Paramedic Services	• Medicals • MVCs • Fires	• Primary medical care provider	• Staffing for major incidents • Hospital offload delayed
Neighbouring fire departments	• Automatic/mutual aid • Technical rescue • Hazmat	• Emergency response • Fill-in • Standby • Technical Response	• Daytime response capability

Identified public safety response agency	Incident response	Lead role	Issues/concerns
HUSAR/CBRNE	• Fire investigation criteria • Fires involving vulnerable occupancies • HUSAR response • CBRNE response	• Fire investigation lead agency supported by police • Co-ordinate CBRN/HUSAR responses	• Lengthy response/travel time • Adequate staffing for duration events

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community.

Community Services Profile

The community services profile encompasses agencies, organizations, or associations within the community that can provide support to the fire department in delivering public fire safety education, conducting fire code inspections and enforcement, or responding to emergencies.

These community service agencies play a vital role in supporting the fire department's efforts by providing services such as:

- In-kind support
- Financial assistance
- Provision of venues for training
- Enhanced access to high-risk groups in the community
- Temporary shelter for displaced residents following an incident

Collaboration with community service agencies strengthens the fire department's ability to effectively deliver fire safety programs and respond to emergencies. By leveraging the resources and expertise of these organizations, the fire department can enhance its impact and improve overall community safety and resilience.

Worksheet 7: Community Services Profile Risks (Non-government organizations)

Community service agency	Types of assistance offered	Issues/concerns
Canadian Red Cross	Lodging, clothing, food, hygiene care and personal assistance; family reunification; child services; preparedness and training	2-hour warning notice
Amateur Radio Emergency Services	Support communications services EOC-shelter or site	Availability of amateur radio operators

Community service agency	Types of assistance offered	Issues/concerns
Salvation Army	Support for food, lodging, care, and personal assistance	Availability of members
St. John Ambulance	Emergency patient care Assist with shelter support	Availability of members

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community.

Economic Profile

The economic profile refers to the economic sectors that significantly impact the community's financial sustainability. When prioritizing risks within the community, the fire department should consider the impact of fires and other emergencies on the industrial or commercial sectors that contribute significantly to the local economy in terms of economic production and job opportunities.

This consideration aids in determining the type and level of fire protection services provided to these sectors within the community. By recognizing the importance of these economic sectors and their vulnerability to fire-related risks, the fire department can tailor its response strategies to mitigate potential impacts and ensure the continued economic vitality of the community.

Worksheet 8: Economic Profile Risks

Identified occupancy	Key risk	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the risk level matrix for recommended risk levels)
Taverns	Fire	Unlikely	Moderate	Moderate
Taverns	Weather event	Likely	Minor	Moderate
Taverns	Power failure	Likely	Minor	Moderate
Taverns	Telecommunications /IT failure	Likely	Minor	Moderate
Gas stations	Fire	Unlikely	Moderate	Moderate

Identified occupancy	Key risk	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the risk level matrix for recommended risk levels)
Gas stations	Telecommunications /IT failure	Likely	Minor	Moderate
Gas stations	Out of fuel	Unlikely	Major	Moderate
Grocery stores	Power Failure/fuel disruption	Likely	Moderate	Moderate
Grocery stores	Telecommunications /IT failure	Likely	Minor	Moderate
Local business	Fire	Unlikely	Moderate	Moderate
Local business	Weather event	Likely	Moderate	Moderate
Local business	Power failure	Likely	Moderate	Moderate
Local business	Telecommunications /IT failure	Likely	Minor	Moderate
Municipal ops	Weather event	Likely	Moderate	Moderate
Municipal ops	Power failure	Likely	Moderate	Moderate
Municipal ops	Telecommunications /IT failure	Likely	Moderate	Moderate
Municipal ops	Flooding	Possible	Moderate	Moderate
Municipal ops	Fire	Unlikely	Major	Moderate
Municipal ops	IT failure/attack	Likely	Moderate	Moderate
Municipal ops	Seasonal reception centre – tourists	Possible	Moderate	Moderate

Identified occupancy	Key risk	Probability (Refer to Table 1 for suggested probability levels)	Consequence (Refer to Table 2 for recommended consequence levels)	Assigned risk level (Refer to the risk level matrix for recommended risk levels)
Municipal ops	Road closures – storms	Likely	Moderate	Moderate
Schools	Fire	Unlikely	Major	Moderate
Schools	Weather event	Likely	Moderate	Moderate
Schools	Power failure	Likely	Moderate	Moderate
Wide area municipal	Hazmat/TDG	Unlikely	Major	Moderate

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community**.**

Past Loss and Event History Profile

The past loss and event history profile involves analyzing previous response data to identify trends related to deaths, injuries, dollar loss, and fire causes across various occupancy types. This analysis helps in determining the leading causes of fires and high-risk locations and occupancies within the community.

In the absence of fire loss data, local knowledge becomes a crucial predictor of fire risk. This includes insights from firefighters, community members, and stakeholders familiar with historical fire incidents and their underlying causes.

Additionally, provincial statistics provide valuable information on the types of occupancies and locations where fire losses, injuries, and deaths have occurred. By leveraging both local knowledge and provincial data, the fire department can develop targeted strategies to address fire risks effectively and enhance community safety.

Worksheet 9a: Past Loss and Event History Profile

OBC classification Annual (structure fire) response history

Occupancy	2018	2019	2020	2021	2022	2023	Total
1. Class A							
2. Class B							
3. Class C Single family residence	15	5	3	10	8	6	47
4. Class C Multi-res.							
5. Class C Motel							
6. Class C Mobile home							
7. Class C Other – Cottages remote/island							
8. Class D&E				1			1
9. Class F	1					1	2
10. Unclassified Farm							

Note: The information on this worksheet should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community**.**

Past Loss and Event History Profile

List the causes for each occupancy type identified on the previous worksheet. Assign probability, consequence and risk levels to each cause identified. NOTE: Class C – single-family residential occupancies – has been selected due to the significant number of incidents versus all other building classifications.

Worksheet 9b: Past Loss and Event History Profile

Occupancy Type	Causes	Probability (refers to Table 1 for suggested probability levels)	Consequence (refers to Table 2 for recommended consequence levels)	Assigned risk level (refers to the risk level matrix for recommended risk levels)
Group C – Residential	Electrical Failure	Likely	Major	Moderate
Group C – Residential	Mechanical Failure	Likely	Major	Moderate
Group C –– Residential	Routine Maintenance	Likely	Moderate	Moderate
Group C – Residential	Other Intentional	Unlikely	Minor	Low
Group C – Residential	Misuse of Ignition sources	Unlikely	Minor	Low
Group C – Residential	Improper discard/handling of ignition source	Unlikely	Minor	Low

Note: The information on Worksheet 9b should be considered in conjunction with all other worksheets and not in isolation. Worksheet 10 allows fire departments to consider all of the information on all worksheets together to make decisions about providing fire protection services in their municipality/community.

When determining the type and level of fire protection services, it's essential to consider all three lines of defence which form the foundation of public fire protection in Ontario: public education, code enforcement, and emergency response. These lines of defence work together to reduce the probability or consequence of identified risks.

The primary goal is to prioritize public education and code enforcement measures, as they can mitigate risks and potentially reduce the frequency of emergency responses to major fires. By implementing these measures effectively, the community can be better prepared and proactive in fire prevention.

Once the fire department has identified the preferred treatment option for each risk, it can then plan and execute activities to address those risks. Factors to consider include the department's current resources, staffing levels, training, equipment, and authority, as well as collaboration with other agencies or stakeholders who may be involved in implementing the preferred treatment options.

By carefully considering these factors and leveraging all available resources, the fire department can develop comprehensive strategies to enhance public safety and minimize the impact of fire-related risks within the community.

Risk Treatment Options

Once risk levels have been determined, the fire department can assess how best to address each risk and allocate the necessary resources. There are four main options for treating risks:

1. Avoiding the Risk:

- Avoiding the risk involves implementing programs and initiatives aimed at preventing fires or emergencies from occurring.

- For instance, public fire safety education initiatives seek to change behaviours to prevent fires and ensure appropriate responses during emergencies. Fire code inspections and enforcement ensure buildings comply with safety regulations outlined in the Ontario Fire Code.

2. Mitigating the Risk:

- Mitigating the risk entails implementing programs and initiatives to reduce both the likelihood and severity of fires or emergencies.

- For example, routine fire code inspections and enforcement programs help minimize risks by ensuring compliance with safety standards. Pre-planning programs involving fire suppression crews provide valuable insights into community buildings, enabling effective planning for fire suppression operations.

3. Accepting the Risk:

- Accepting the risk means acknowledging that certain risks may occur and opting not to implement specific programs or initiatives to address them proactively.

- For instance, while fire departments may not actively work to prevent motor vehicle collisions or environmental hazards like ice storms, they accept that these events may happen and respond accordingly.

4. Transferring the Risk:

- Transferring the risk involves shifting the responsibility for managing and mitigating risks to another organization or entity.

- This could include contracting out public fire safety education, fire code inspection and enforcement, or emergency response services to neighbouring municipalities or external organizations.

After considering these options, the fire department can note the preferred treatment option (avoid, mitigate, accept, or transfer the risk) in the corresponding column of Worksheet 10 in Appendix A.

Furthermore, fire departments should ensure that their operational policies and standard operating guidelines address the required levels of service and activities to manage each risk effectively. This involves setting clear goals and objectives, determining necessary resources, training, equipment, and implementing activities and programs across all three lines of defence: public education, code enforcement, and emergency response.

Worksheet 10: Identifying Treatment Options for The Top Risks in The Community

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Geographic profile	Water – subject to seasonal flooding or flooding during heavy rainfall	**Accept:** Douro-Dummer Fire Services has the appropriate training, response procedures and SOGs to address this risk.
	Water -– impacts training and equipment for emergency response	**Avoid and mitigate:** Douro-Dummer Fire Services has the necessary equipment, continuous training and SOGs to address risk.
	Water – impacts emergency response and travel time to incidents	**Accept:** Douro-Dummer Fire has appropriate training, communications, response procedures and SOGs to address this risk.
	Road network, including Hwy. 28	**Accept:** Douro-Dummer Fire Services has the appropriate fire protection agreement, training, communications, response procedures and SOGs to address this risk.
	Private roads	**Accept:** Douro-Dummer Fire Services has response procedures and SOGs to address this risk. (Private road owners/users must be aware of Douro-Dummer Fire access limitations regarding integrity and weight limitations of private roads.) This level of service should be identified in the E&R Bylaw.
	Private Campgrounds	**Avoid and mitigate:** Douro-Dummer Fire Services promotes its' Burning Bylaw to establish times during which fires may be set in the open air and the precautions to be observed by persons setting the fires and implement burn bans when necessary. Douro-Dummer Fire Department works with MNRF when the Minister declares a Restricted Fire Zone.
	Bridges	**Accept:** Douro-Dummer Fire Services has appropriate training, communications, response procedures and SOGs to address this risk. Alternate routes are available within most of the municipality.
	Crown Land	**Accept:** Douro-Dummer Fire Department has the appropriate training, communications, response procedures, SOGs and agreements with MNRF to address this risk. Implement the Fire Smart program and principals in the community.
Building stock profile	Fire	**Avoid and mitigate:** Inspections of commercial, industrial, and mercantile occupancies should be conducted every two years to enhance fire safety measures and minimize the risk of fire incidents with economic repercussions for the community. Additionally, public fire safety education initiatives can contribute to lowering the overall risk of fires.
	Fire	**Avoid and mitigate:** Legacy buildings in the community may face an elevated risk of fire due to factors such as construction type, materials used, and construction techniques. To mitigate this risk, Douro-Dummer Fire should conduct annual inspections of these buildings in collaboration with their owners. These inspections aim to identify potential fire hazards and implement measures to reduce the risk of fire incidents. Additionally, offering public education opportunities to building owners can further enhance fire safety awareness and practices within the community.

Mandatory Profiles	Top risk or issues/concerns	Preferred treatment option
Building stock profile	Large Structure Fire – (Economic Loss to the Community)	**Avoid and Mitigate:** A significant fire in any of these structures, particularly those related to large employers, has the potential for substantial economic loss to the Douro-Dummer community. To mitigate this risk, it is essential to conduct annual inspections of these buildings in collaboration with their owners. These inspections aim to identify potential fire hazards and implement measures to reduce the risk of fire incidents. Additionally, offering public education opportunities to both owners and staff can enhance awareness of fire safety practices and the potential outcomes of a significant fire, ensuring preparedness and appropriate response measures.
Building stock profile	Lightweight Construction	**Avoid and Mitigate:** Douro-Dummer Fire should maintain ongoing firefighter training programs that incorporate building construction awareness, particularly focusing on the hazards associated with lightweight construction. It's crucial for company officers to understand the risk/benefit analysis and fire growth curves before deploying crews for search and rescue operations in newer homes. This knowledge equips them to make informed decisions about the safety of firefighting operations in different types of structures, ensuring the well-being of both firefighters and the public.
Building stock profile	OBC Group C – Single family occupancies	**Avoid and mitigate:** Continue delivering public education materials and programming aimed at promoting smoke alarms, carbon monoxide alarms, and home fire escape planning for families. Offer information materials and training sessions on the proper use of fire extinguishers. Maintain public messaging emphasizing the importance of professionally installed and maintained wood-burning appliances, along with regular chimney and flue cleaning before and during the heating season, as per usage requirements. Implement Fire Smart techniques as deemed appropriate for the community's needs and circumstances.
Building stock profile	Poor maintenance and general housekeeping	**Avoid and mitigate:** During inspections, identify instances of poor equipment maintenance, including electrical and appliance maintenance. Emphasize the importance of fire-safe housekeeping practices to prevent fires and limit their spread. Highlight the necessity of maintaining clear pathways for emergency egress in the event of a fire.
Building stock profile	Vacant farms and other rural occupancies	**Avoid:** Collaborate with the Chief Building Official to reach out to property owners or occupants of unoccupied or vacant buildings to ascertain their intended disposition. Take appropriate measures to secure, make safe, or demolish buildings as necessary. Conduct inspections of occupied properties as needed to encourage the installation of smoke alarms fire extinguishers, and adherence to fire-safe housekeeping practices.

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Critical infrastructure profile	Electricity	**Accept:** The loss of electrical utility has a profound impact on daily life, affecting the entire community reliant on reliable electrical service. Encourage the use of backup generators for critical business operations and disseminate public information on the safe use of generators for families and residences.
	Natural gas	**Accept:** The loss of reliable natural gas distribution can significantly impact various parts of the local community. Collaborate with the utility to expedite system repairs and disseminate relevant public information to affected residents and businesses.
	Propane	**Accept:** The loss of dependable propane distribution can have significant implications for various parts of the community. Maintain collaboration with propane distributors to facilitate the restoration of reliable propane delivery and disseminate pertinent public information accordingly.
	IT/Tele-communications	**Accept:** Prepare for potential disruptions in cell and internet services across the municipality. Recognize that the loss of these services can impede business operations, commerce, and certain government services. Collaborate with service providers to guarantee backup power availability at all sites and explore alternative reliable and redundant service options.
	Continuity of government	**Avoid and mitigate:** Ensure that staff members who are unable to work from primary or alternate locations have remote access to the municipal computer and telephone networks. Additionally, ensure that the Municipal Emergency Operations Center (EOC) has alternate power sources in place. Consider collaborating with an IT provider to assess the availability of redundant IT systems to enhance resilience and continuity of operations.

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Demographic profile	Seniors	**Avoid and mitigate:** As the number of seniors remaining in or relocating to Douro-Dummer may increase in the near term, it's crucial to ensure that public services they require or are interested in joining are readily available. This demographic expects accessibility to essential services, including those related to fire safety. Therefore, there will be an ongoing need to provide public fire safety education to new residents, whether through initiatives led by the fire department, building management, or the real estate industry. This proactive approach ensures that seniors are equipped with the knowledge and resources necessary to maintain their safety and well-being in the community.
	Seniors	**Avoid and mitigate:** Leverage shared opportunities such as fairs, community events, Fire Prevention Week, and public fire safety education clinics to target seniors, especially as they continue to be mobile for longer periods. Education efforts should encompass various topics tailored to their specific needs, including: - Ensuring smoke and carbon monoxide alarms are installed and functioning properly in their homes. - Developing and regularly practicing a home escape plan tailored to their particular residences. - Promoting safe cooking practices to prevent kitchen fires. - Providing guidance on how to effectively extinguish grease fires in the kitchen. - Offering instruction on the proper operation of fire extinguishers. - Educating on burn prevention strategies, such as avoiding moving pans or pots containing burning grease. • By incorporating these topics into public education initiatives and events, Douro-Dummer Fire can effectively empower seniors to take proactive measures to enhance their fire safety awareness and preparedness at home.
	Youth	**Avoid and mitigate:** To maximize fire safety education among youth, leverage platforms like youth group meetings to deliver crucial information and hands-on training. These sessions should cover: - Stressing the significance of installing and maintaining smoke and carbon monoxide alarms in their homes. - Teaching the process of creating and regularly practicing a home escape plan tailored to their living spaces. - Providing practical demonstrations on how to properly operate a fire extinguisher. - Educating on burn prevention techniques, including the importance of not moving pans or pots containing burning grease while cooking. • By incorporating these topics into youth group meetings, Douro-Dummer Fire can effectively equip young individuals with the knowledge and skills needed to prevent and respond to fire emergencies, fostering a safer community for all.

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Demographic profile	Schools (Public and Private)	**Avoid and mitigate:** Utilize school visits as a platform to deliver comprehensive fire safety education to students, covering the following topics: • Educate students on fire-safe behaviour, emphasizing the importance of not playing with ignition sources and practicing caution around fire-related items. • Encourage active participation in fire drills to familiarize students with emergency procedures and evacuation protocols. • Stress the significance of installing and regularly testing smoke and carbon monoxide alarms in their homes to detect potential hazards early. • Provide age-appropriate training on how to operate a fire extinguisher, empowering students with practical firefighting skills. • Educate on burn prevention strategies, including the importance of avoiding moving pans or pots containing burning grease while cooking. • Guide students in developing and regularly practicing a home escape plan tailored to their living spaces, ensuring they are prepared in the event of a fire. • Organize a contest for the best digital media fire prevention messaging, encouraging students to creatively convey fire safety messages through various digital platforms. • By incorporating these elements into school visits, Douro-Dummer Fire can effectively engage students in fire safety education and empower them to become proactive advocates for fire prevention in their homes and communities.
	Seasonal residents and tourists	**Avoid and mitigate:** Maintain an ongoing and robust public education campaign focused on the importance of smoke and carbon monoxide alarms, home/cottage escape plans, and fire extinguishers. This continuous effort serves as a constant reminder to residents to prioritize fire safety measures and utilize municipal numbers or other location-identifying applications in case of emergencies.
	Residents – public education and general information	**Avoid and mitigate:** Continue delivering public education programming in schools emphasizing the importance of smoke alarms and carbon monoxide alarms, teaching children to crawl low through smoke, and creating home fire escape plans. These efforts are crucial for educating children about fire safety and preparing them to respond effectively in case of emergencies.

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Hazard profile	Fire	**Avoid and mitigate**: Continue to publicly emphasize the importance of the three lines of defence, ensuring that the community understands the necessity of public education programming. The further the travel distance, the greater the Douro-Dummer fire response time.
	Fire	**Avoid and mitigate:** Continue to deliver public education programming in schools that promote smoke alarms, carbon monoxide alarms, crawling low through smoke, and home fire escape planning with children.
	Fire	**Avoid and mitigate:** In the event of additional significant residential growth, Douro-Dummer Fire should meet with area builders annually to remind them of the value of residential sprinklers.
	Severe weather events/storms	**Accept:** Severe weather events, flooding, and temperature extremes can not be avoided. Many are predictable and forecast ahead of time. The public relies on high-quality, accurate, timely messaging during these events.
	TDG/hazmat incidents	**Accept:** Mass casualties, wide area perimeter, isolation or destruction, and transportation route closures may occur. Wide area evacuations may be necessary. Douro-Dummer Fire Department has training, experience and SOGs to address these incidents, their public safety colleagues, and the transportation industries.
Public safety response profile	Mutual-aid fire departments	**Avoid and mitigate:** Douro-Dummer Fire Department relies on outside fire departments or the PEOC for some technical rescue skills. (Douro-Dummer Fire limitations should be identified in the Establishing and Regulating Bylaw)
	Douro-Dummer Fire Department	**Accept:** Like most fire departments in Ontario, the Douro-Dummer Fire Department needs more available firefighters during the business day. The ongoing recruitment process is aimed at filling this need. If recruitment is not successful, other methods of daytime staffing must be considered.
	Douro-Dummer Fire Department – training	**Avoid and mitigate**: Ensure all firefighters receive live fire training annually to maintain professional competency.
	Ontario Provincial Police	**No Concerns**
	Peterborough County-City Paramedic Services	**No Concerns**
Community services profile	Support for ongoing recruitment programs for various community services	**Avoid and mitigate:** Continued recruitment for community service agencies ensures they can continue supporting municipal operations during major events**.**

Mandatory profiles	Top risk or issues/concerns	Preferred treatment option
Economic profile	Electricity	**Accept:** The loss of the electrical utility severely impacts daily lives. The entire community relies on reliable electrical service. Encourage using backup generators for business-critical operations and provide public information on the safe use of generators for families and residences.
	Fires	**Accept** Potential economic decline due to industrial/commercial/mercantile fires - loss of income for families in the community.
Past loss and event history profile	Fires	**Avoid and mitigate:** Directed public education programs focussing on cooking practices, dangers of grease fires, and loose clothing catching fire near stoves. Identify the risks associated with unsafe housekeeping practices, the failure to maintain wood-burning appliances and the need to clean flues and vents regularly. Maintaining 30m of defensible space between forests and residential structures is necessary.

Review of the Community Risk Assessment:

According to O. Reg. 378/18, the fire department must complete a new community risk assessment at least once every five years. Additionally, the Regulation mandates that the fire department review its community risk assessment at least annually to ensure its alignment with the community's evolving fire and emergency risks. This periodic review aims to identify any changes in the mandatory profiles that may necessitate adjustments in risk levels or the type and level of fire protection services provided by the fire department.

The objective of this review is to ensure that the fire protection services offered are evidence-based and effectively address the identified risks within the community. Documentation of these reviews is crucial, and it should include the following:

- Any modifications made to the mandatory profiles.
- Changes in assigned risk levels or fire protection services resulting from the review.
- Any other pertinent information deemed relevant to the review or alterations to fire protection services.

If no significant changes occur in the community within the 12-month review period, no adjustments to the profiles or fire protection services are necessary. In such cases, a thorough review of existing documents would suffice to maintain compliance with regulatory requirements.

Annual Review of The Community Risk Assessment

2025

Profile type	Changes	Preferred treatment option	Clerk/CAO sign off or report to Council

2026

Profile type	Changes	Preferred treatment option	Clerk/CAO sign off or report to Council

2027

Profile type	Changes	Preferred treatment option	Clerk/CAO sign off or report to Council

2028

Profile type	Changes	Preferred treatment option	Clerk/CAO sign off or report to Council

2029

Profile type	Changes	Preferred treatment option	Clerk/CAO sign off or report to Council

Conclusion

The Douro-Dummer Fire Department has met the community's emergency needs without receiving any written complaints from ratepayers. Similarly, the Office of the Fire Marshal has not raised concerns about public fire protection in the Township of Douro-Dummer.

As public expectations of fire services evolve, it is wise for Council to prioritize allocating additional resources to public education and fire code enforcement. This strategic approach aims to maintain a lower fire loss and injury rate, improve overall community safety, and prevent catastrophic fire incidents.

The Douro-Dummer Fire Master Plan complements the Community Risk Assessment (CRA) by guiding the municipality in determining the appropriate "Level of Service" for fire protection. Recommendations in the Fire Master Plan include establishing clear goals and objectives, identifying necessary resources, providing training and equipment, and implementing activities and programs aligned with the Three Lines of Defence framework for effective fire protection services.

Continuous review and updating of operational policies and standard operating guidelines are essential aspects of the ongoing Fire Master Plan process. Additionally, new policies and guidelines should be developed to address emerging risks effectively. The Fire Master Plan identifies areas requiring Council approval for the levels of service and activities aimed at enhancing fire safety within the community.

In addition to the ongoing Fire Master Plan process, it is crucial to conduct a yearly review of the Community Risk Assessment (CRA) and a major review every five years. These reviews ensure that any new risks are identified promptly and existing risks are evaluated for any changes. This comprehensive approach allows the municipality to stay proactive in addressing emerging risks and adapting to evolving community needs. Furthermore, aligning the CRA reviews with the Fire Master Plan reviews enhances coordination and synergy between these critical processes, fostering a cohesive and integrated approach to fire protection and community safety planning.

End of Report.

References:

Government of Ontario, TG-02-2019 Community Risk Assessment Guideline | Ministry of the Solicitor General (gov.on.ca)

Government of Ontario, *Fire Protection and Prevention Act, 1997, SO 1997, c. 4*

Government of Ontario, *Ontario Regulation 378/18: Community Risk Assessments*, May 2018

Government of Ontario *O. Reg. 364/13: MANDATORY INSPECTION - FIRE DRILL IN VULNERABLE OCCUPANCY (ontario.ca)*

National Fire Protection Association, *NFPA 1300, Standard on Community Risk Assessment and Community Risk Reduction Plan Development*, Proposed Second Draft, January 14, 2019

Douro-Dummer Fire Department Establishing and Regulating Bylaw 2019-28