



CITY OF YELLOWKNIFE



Yellowknife Fire Division *Level of Service*

April 21, 2021

INTRODUCTION

The Yellowknife Fire Division (YKFD) started a continuous improvement and risk analysis process in 2018 with the results of a regularly scheduled review of standard operating procedures and guidelines, followed by a risk identification and evaluation project. This year-long risk assessment project was guided by International Standards Organization (ISO) risk management standards and designed to comply with ISO 31000 and 31010. The ISO 31000 Standard provides principles and generic guidelines on risk management as an internationally recognized risk management template. The ISO 31010 Standard provides guidance on selection and application of risk assessment techniques, with several used during this project.

The risk assessment project used National Fire Protection Association (NFPA) Standards to articulate how YKFD will determine compliance with these ISO Standards. The following NFPA Standards were used for this purpose:

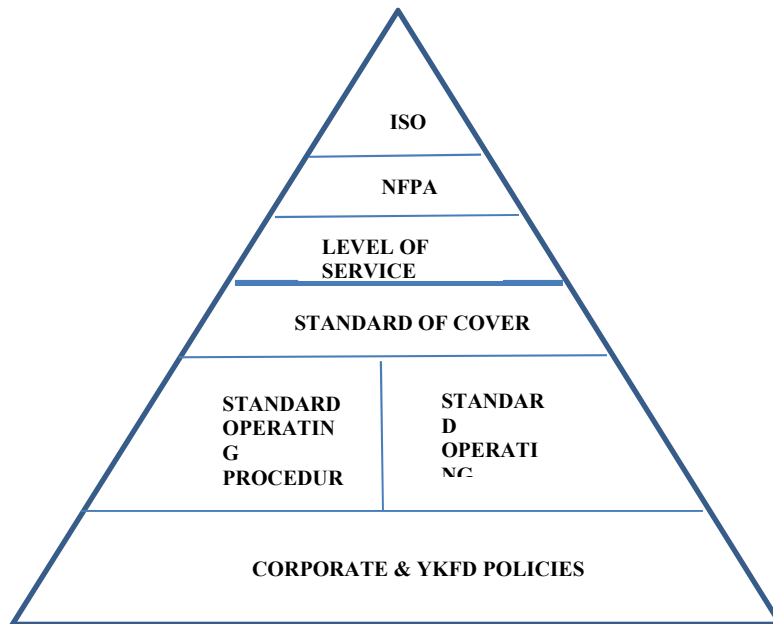
- 1) NFPA 472 - Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
- 2) NFPA 1006 - Technical Rescue Personnel Professional Qualifications
- 3) NFPA 1221 - Installation, Maintenance, and Use of Emergency Services Communications Systems
- 4) NFPA 1561 - Emergency Services Incident Management & Command Safety System
- 5) NFPA 1500 - Occupational Health, Safety and Wellness Program
- 6) NFPA 1143 - Wildland Fire Management
- 7) NFPA 1710 - Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments

YKFD's risk analysis process was designed on the two basic risks considered in the fire service:

Operational risk is the responsibility of all YKFD members to determine risk associated with the varying aspects and responsibilities of the organization. Operational risk is addressed from the Fire Chief, to Chief Officers, Platoon leadership and down to individual firefighter/paramedics.

Organizational risk is the responsibility of the City to determine the level of service, staffing and resources based on an assessment of risk. Making this determination is guided by ISO and NFPA Standards and implemented through Level of Service, Standard of Cover, Standard Operating Procedures & Guidelines, Corporate/Fire Division policies.

- ISO – risk management principles, guidelines & risk assessment techniques
- NFPA – consensus codes to minimize potential/effects of fire
- Level of Service – specify specific emergency services available
- Standard of Cover – articulate how service requirements will be achieved
- SOP's – document how to perform work in compliance with Codes
- SOG's - provide guidance where no standards exist



PURPOSE

A Council-approved Level of Service identifies the services YKFD is authorized to provide and to identify the level or standard to which each service will be performed. An approved Level of Service for a municipal fire service is an industry Best Practice which gives clarity to the community and certainty to First Responders on service level expectations.

This YKFD’s Level of Service provides that clarity and certainty. It also meets employer requirements of the Workers’ Safety and Compensation Commission (WSSC) Firefighter Codes of Practice to determine exactly what emergency services the fire service is authorized to provide, and identify the level or standard to which each service will be performed.

SERVICE LEVEL EXPECTATIONS

Service level expectations placed on the fire service have steadily increased with additional responsibilities in such areas as natural disasters, hazardous materials response and technical rescue. Today, YKFD’s risk assessment goes beyond fire protection and emergency medical services (EMS) to include hazardous materials response, wildland fire response, vehicle extrication and technical rescue. Mutual aid arrangements also add responsibilities for YKFD in responding to incidents, including outside municipal boundaries.

Council approval of a Level of Service will enable YKFD to detail how its Fire/EMS operations will fulfill established service level requirements. This detail is provided through adoption of a Standard of Cover (Yellowknife Fire Division Master Plan, 2016).

LEVEL OF SERVICE

A Level of Service outlines the fire and emergency services provided, and at what level, in the community and through mutual aid agreements. An approved Level of Service enables YKFD to plan how it can meet its obligations as a community fire service. In fulfilling its Level of Service requirements, YKFD will utilize these three options which are specified in most NFPA Standards:

1. **Awareness Level** – Responders will recognize risks and hazards, secure the area and call for qualified assistance
2. **Operations Level** – Responders will take defensive action to contain and control the incident and seek assistance from outside agencies equipped to mitigate the incidents
3. **Technician Level** – Responders will initiate offensive action to bring the incident under control and to an end

The level of any response to a specific incident in different areas of the City, or outside the municipal boundaries, will vary for many reasons including:

- Geographical size and layout of the City and surrounding area
- Accessibility challenges in remote areas within the City and surrounding area
- Distance an incident is outside the municipal boundaries
- Staffing and emergency responder training levels
- Water supply available for fire suppression
- Adverse weather conditions
- Multiple emergency events

STANDARD OF COVER

YKFD illustrates how its Level of Service is implemented through a Standard of Cover which is a well-articulated description of how fire and emergency services are provided in the community (Yellowknife Fire Division Master Plan, 2016).

A Standard of Cover is a deployment standard that is based upon an assessment of community risks, community baseline data, and service level objectives which will affect emergency response to incidents. A Standard of Cover's overview of risk assessment and deployment of resources establishes performance benchmarks for existing services and provides opportunities for continuous improvement.

LEVEL OF SERVICE REQUIREMENTS

1. STRUCTURAL FIRE RESPONSE

Structural firefighting at NFPA 1001 - Level 2, NFPA 1002

YKFD members are trained and equipped to conduct land-based offensive and defensive operations over a wide spectrum of hazards including commercial, large-scale residential, industrial or transportation related structures or facilities. Response to the risk posed in responding to emergencies in these structures and facilities is determined by the number of firefighters, specialized training and equipment available.

Depending on geographic location, availability of water, First Responder availability, work schedule, staffing and training levels, defensive attack may be the only option in responding to a structural fire. An offensive attack is always the primary goal of YKFD if conditions permit. If this is not possible, the next option is transitional attack which is a combination of defensive tactics to contain and hold the fire until additional resources arrive to change to offensive tactics.

2. EMERGENCY MEDICAL SERVICES

- a. Emergency Medical Response – Basic Life Support / Primary Care Paramedic
Pre-hospital treatment and stabilization for illness and injuries, and medical transport to facility
- b. Non-Emergent Ground Transport - Basic Life Support / Primary Care Paramedic
Inter-facility transfers and airport medical transport of all non-ambulatory patients to and from an aircraft, with care being provided by external sources

3. FIRE PREVENTION

- a. Public Education/Awareness
Various programs and messages adapted annually to increase fire and emergency safety and reduce incidents through education and public awareness
- b. Fire Code Inspections
Scheduled inspection program of high risk and high occupancy structures within Yellowknife to assess safety for occupants by requiring engineered fire safety standards maintained in accordance with the National Fire Code
- c. Fire Pit Inspections
Inspection of construction and use of fire pits for safe open air burning by residents
- d. Wildland Fire Mitigation
Public information on wildfire prevention, protection and site management regarding forest fuel removal/reduction action to reduce the threat of forest fires.

4. HAZARDOUS MATERIALS RESPONSE

Hazardous materials response at the Operations Level in support of the designated Lead Agency or Agency Responsible through defensive tactics to minimize the impacts of spilled material and water-based decontamination of affected persons

5. MOTOR VEHICLE ACCIDENTS (MVA)

Vehicle extrication at the Technician Level in response to motor vehicle accidents on public roadways including scene control, vehicle stabilization, and patient access and removal from light passenger vehicles, large vehicles and heavy equipment

6. WILDLAND/URBAN INTERFACE FIRES

Response to wildland/urban interface fires within municipal boundaries with support of Environment and Natural Resources (ENR), when required and as available. YKFD assists ENR by containing and extinguishing small urban interface fires, and supports ENR forest fire operations outside municipal boundaries by responding to structural fires which pose a real or potential wildfire threat, when requested and when operational requirements permit

7. TECHNICAL RESCUE

a. Rope Rescue

- Low Angle Rescue – YKFD provides Low Angle Rope Rescue at the Operations Level
 - High Angle Rescue – YKFD provides High Angle Rope Rescue at the Operations Level
- Access and rescue in either low or high angle environments including victim packaging and care, extrication and egress

b. Confined Space Rescue

- YKFD provides Confined Space Rescue at the Technician Level
- Atmospheric monitoring, entry to confined spaces in low and high angle environments, victim packaging and removal with response limited to built environments

c. Surface Water Rescue

- YKFD supports RCMP primary marine search and rescue responsibility with Surface Water Rescue at the Operations Level, when requested
- Removal of victims from still water with rescues conducted from a watercraft

d. Ice Rescue

- YKFD provides Ice Rescue at the Technician Level
- Locating and accessing victims in still water ice through First Responder entry into ice/water environment to conduct rescue including victim packaging and removal

8. RESPONDING OUTSIDE MUNICIPAL BOUNDARIES (as operational requirements permit)

Area of Response - Dettah (by highway or ice road), Highway 3 to Stagg Creek, Highway 4 to Tibbett Lake. Services that may be available outside municipal boundaries are:

- a. Vehicle Extrication and Rescue
- b. Emergency Medical Services (roadside only)
- c. Hazardous Materials Response (in support of Lead Agency or Agency Responsible)
- d. Structural Fire /EMS Response to Dettah
- e. Structural Fire Response (in support of ENR to mitigate a real or potential wildfire threat)

9. EMERGENCY PREPAREDNESS AND RESPONSE

In the event of a declaration of a state of local emergency or during emergency operations, YKFD will respond in accordance with its community Emergency Management Plan responsibilities.

10. MUTUAL AID/SUPPORT ARRANGEMENTS

YKFD Agreements with external agencies on mutual assistance, or YKFD specified fire service support (as operational requirements permit):

- a. Mutual Aid – Towns of Hay River/Fort Smith – YKFD provides, or requests assistance, during emergencies
- b. Ground Ambulance Highway Rescue Agreement – Highway rescue services
- c. GNWT Department of ENR (2) – Wildfire response, hazardous materials incidents
- d. Yellowknife Airport Fire Department – Structural fire suppression, mutual assistance during emergencies
- e. Diavik Diamond Mines - Structural fire suppression, EMS, technical rescue, and hazardous materials response
- f. Government of Canada (CIRNAC), Giant Mine Site - Structural fire suppression, EMS and technical rescue
- g. AVENS – Transport services for non-ambulatory patients during emergencies

11. MUTUAL AID/SUPPORT ARRANGEMENTS TO BE NEGOTIATED

- a. City of Yellowknife/Yellowknives Dene First Nation – Municipal Services Agreement for structural fire suppression/EMS

APPENDIX A

LEVEL OF SERVICE SUMMARY – APRIL 1, 2021

Within Municipal Boundaries

Response Type	Awareness	Operations	Technician
Structural Fire Suppression	Offensive/Transitional/Defensive		
EMS	Basic Life Support		
Hazardous Materials Response		X	
Vehicle Extrication			X
Technical Rescue			
• Low Angle Rope Rescue		X	
• High Angle Rope Rescue		X	
• Confined Space			X
• Surface Water Rescue		X	
• Ice Rescue			X
Emergency Preparedness and Response	In accordance with responsibilities under the City's Emergency Management Plan		

Outside Municipal Boundaries

Response Type	Awareness	Operations	Technician
Structural Fire Suppression/EMS (Dettah)	Defensive / Basic Life Support		
EMS (roadside only)	Basic Life Support		
Fire Suppression (summer only)	Defensive / Wildland Interface Fires		
Hazardous Materials Response		X	
Vehicle Extrication			X

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