



# Continuing Education for Fire Inspectors 101

## MODULE FOUR Emergency Plans

 Module 4: Emergency Plans

RESOURCES



### Continuing Education for Fire Inspectors 101







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## Slide 4.0

### Welcome

Welcome to Module 4. Emergency Plans

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## Slide 4.1

### Agenda

In this module we will discuss:

- Significant changes in the 2020 National Fire Code for fire safety plan requirements are consolidated to facilitate compliance and enforcement.
- Classifications in the NFC are established for 5 widely used water-miscible liquid mixtures to ensure that appropriate fire safety measures are applied in their storage, handling, use and processing.
- Measures that are included to address fire safety during the construction of encapsulated mass timber buildings, and
- Emergency Planning

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## Slide 4.2

### Emergency Planning

The requirements for Emergency Planning in section 2.8 of the 2020 national fire code have changed significantly from the 2015 edition. Fire safety planning requirements have been consolidated from other sections of the code to facilitate ease of use, compliance, and enforcement.

The application of Section 2.8 has been changed to include:

- every building containing a care, home-type care, treatment or detention occupancy
- every building containing a school, college or university, or a daycare facility
- every building containing a licensed beverage establishment or a licensed restaurant, regardless of occupant load
- every building containing an assembly occupancy with an occupant load of more than 30. This is a very practical change as the previous code required fire safety plans in all assembly occupancies regardless of occupant load
- every building containing an area where treatment is provided in business and personal services occupancies
- every building required by the NBC to have a fire alarm system
- storage areas in buildings or parts of buildings described in Section 3.2
- outdoor areas where products described in Section 3.3 are stored
- every building, part of a building, and open area described in Section 4.1 and
- every building, part of a building, and open area where processes and operations described in Section 5.1 take place

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## Slide 4.3

### Supervisory Staff

Article 2.8.1.2 is entitled Supervisory Staff.

This article has been expanded to include sentences 2 and 3.

Sentence 2 says in part that “*A sufficient number of supervisory staff shall be on duty in care, home-type care, treatment, and detention occupancies to carry out the emergency procedures*”

The number of supervisory staff required in home-type care occupancies is determined by the applicable regulatory authorities, including the licensing authority. The general assumption is that at least one supervisory staff would be on duty for every two residents requiring assistance.

Sentence 3 has been added and says in part Group A Division 1 assembly occupancies intended for an occupant load of more than 60, at least one supervisory staff member must shall be on duty in the building whenever the building is open to the public.

#### **Slide 4.4**

##### **Fire Safety Plan**

Article 2.8.2.1 of the 2020 fire code is entitled Measures in a Fire Safety Plan. This article has changed substantially. Sentence "one" now includes a direct reference to "parts of buildings" that require a fire safety plan.

The notes to Sentence 3, include a discussion on the development of fire safety plans for large retail occupancies, especially bulk merchandising stores. The plan should take into consideration various unique risk factors prevalent in these stores. A bulk merchandising store is characterized as a retail store in which the sales area includes the storage of material usually located in piles, on pallets or on racks up to 3.7m in storage height. These mercantile occupancies tend to store and display large quantities of products ranging from compressed gas cylinders, oxidizers, flammable liquids, combustible liquids, foamed plastics, and other combustible materials.

Documented evidence of fires in these types of stores has shown that smoke obscuration occurs within 7 1/2 to 12 min from the inception of a fire. Prompt response by occupants in a fire emergency is therefore critical. Human behaviour studies have shown that occupants in a retail environment tend to delay evacuation for various reasons, such as unfamiliarity with exits or a lack of visibility of exits, reluctance to leave check-out lines, and uncertainty about the events unfolding. The training and education of staff are crucial elements in clearly notifying and instructing occupants during an emergency. A reliable public address system should be an integral part of the fire safety plan.

#### **Slide 4.5**

##### **Indoor and Outdoor Storage**

Article 2.8.2.3 is now entitled Indoor and Outdoor Storage of Dangerous Goods.

This is new from the 2015 edition of the fire code. It requires fire safety plans to include the names, addresses and telephone numbers of persons to be contacted in case of fire during non-operating hours.

Where the dangerous goods are classified as radioactive materials, the fire safety plan must also include methods to control a fire emergency and safely recover radioactive materials and equipment. The names, addresses, and telephone numbers of primary and alternative sources of expert advice and assistance on radiation safety must be provided.

#### **Slide 4.6**

##### **Indoor Storage**

Article 2.8.2.4 is also new to the 2020 edition of the fire code. It is entitled Indoor Storage of Combustible Products and Dangerous Goods.

It requires fire safety plans for buildings or parts of buildings used for the storage of Class 1, 2, 3, and 4 commodities and Group A, B, and C plastics as defined in NFPA 13. It also applies to rubber tires, aerosols, and some dangerous goods.

The fire safety plan must identify the product classifications, the method of storage, including aisle widths for rack storage, the maximum permitted height of storage, the maximum permitted size of

individual storage areas, and the sprinkler system design. Where the products stored include Group A plastics, rubber products, Level 2 or 3 aerosols, or dangerous goods, the fire safety plan must identify their location and the maximum quantity of each product being stored.

The storage method and maximum height of storage as established in the fire safety plan must be posted in the storage area.

#### **Slide 4.7**

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##### **Outdoor Storage**

Article 2.8.2.5 of the fire code is entitled outdoor storage.

The fire safety plan for outdoor areas covers the storage of the products listed in Sentence 3.3.1.1.1 of the fire code. These include Class 3 and 4 commodities, and Group A, B, and C plastics, rubber tires, forest products, vehicle salvage yards and dangerous goods.

The plan must identify:

- the location and classification of the products being stored
- the method of storage, including the clear spaces required and the maximum permitted size of individual storage areas
- the location of fire alarm systems and firefighting equipment and
- the measures for controlling fire hazards in and around the outdoor storage area.

Sentence 2.2.2.14.2, requires at least one copy of the fire emergency procedures be prominently posted at the outdoor storage site.

#### **Slide 4.8**

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##### **Storage Tanks**

Article 2.8.2.6 of the fire code is entitled Rooms for Storage Tanks.

This article requires the fire safety plan to identify the liquids being stored in tanks as flammable or combustible liquids and the capacity of each storage tank.

The fire safety plan described in Article 2.8.2.7 of the fire code requires a spill management plan that deals with measures to be taken to control spilled liquids.

Fire safety plans for hot works is now covered in 2.8.2.9.

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##### **Fire Safety Plans**

As evidenced by the foregoing, significant amendments have been incorporated into Section 2.8 of the 2020 edition of the National Fire Code, underscoring the emphasis placed on Emergency Planning.

A fire safety plan is a detailed document that covers all aspects of fire safety for a specific building or property. Conducting an audit or review of the property or business will help identify factors that could affect fire safety. Items in this audit include site layout, points of entry/exit, roadways, use of the building, where and how items are stored, how items are used, water or fire department connections, alarm systems, sprinkler systems and many other factors.

While specific requirements may vary depending on factors such as size, use, and occupancy classification, a comprehensive fire safety plan should encompass emergency procedures to be followed in the event of a fire.

These procedures typically include:

- Activating the alarm system
- Notifying the fire department, building management, or other designated personnel as outlined in the plan
- Conducting orderly occupant evacuation
- Assisting individuals who may require aid in evacuation
- Attempting to confine, control, and extinguish the fire, if feasible.

The plan should also include trained, authorized personnel to silence fire alarms and alert signals under specified conditions. If special keys or devices are required to operate the alarm system, they should be readily available to supervisory staff on duty. The fire safety plan should also address actions to be taken if any fire protection systems are inoperable, damaged, or require repair.

#### **Slide 4.10**

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##### **Review**

That's the end of Module 4. In this module we discussed:

- Significant changes in the 2020 National Fire Code for fire safety plan requirements are consolidated to facilitate compliance and enforcement.
- Classifications in the NFC are established for 5 widely used water-miscible liquid mixtures to ensure that appropriate fire safety measures are applied in their storage, handling, use and processing.
- Measures that are included to address fire safety during the construction of encapsulated mass timber buildings, and
- Emergency Planning