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SESSIONAL PAPER NO. 12.

(First Session, 1968)

FIRE PROTECTION IN NORTHERN COMMUNITIES

DISPOSITION

Tabled	To Committee	Accepted as Read	Accepted as Amended	Deferred (to Session)	Rejected	Noted not Considered

## FIRE PROTECTION IN NORTHERN-COMMUNITIES

At its 35th session in November, 1967, Council requested a report on fire protection services in the Northwest Territories.

An Ordinance Respecting the Prevention of Fire (Chpt. 37, R.O.N.W.T.) came into force on the 1st day of September, 1956. D.J. Ford, of the Dominion Fire Commissioner's Office, Department of Public Works, was appointed Fire Marshal on September 1, 1958. Travelling expenses of the Fire Marshal are paid from Territorial funds but no charge is made for the services and staff of the Dominion Fire Commissioner's Office. R.G. Whatmough, also of the Dominion Fire Commissioner's Office, was appointed Fire Marshal on May 1, 1960 to fill the vacancy caused by Mr. Ford's death. Mr. F. Evans joined the staff on May 8, 1962, to assist the Fire Marshal. On December 16, 1966, L. Adrian was employed by the Government of the Northwest Territories as Territorial Fire Inspector. He moved from Inuvik to Yellowknife in October, 1967.

### Duties and Responsibilities of the Fire Marshal's Office

The Fire Marshal is charged with the administration of the Fire Prevention Ordinance of the Northwest Territories. This Ordinance, similar in scope and power to the Provincial Fire Prevention Acts, provides for the establishment of regulations dealing with Fire safety, outlines the duties of the Fire Marshal, the reporting and investigation of fires and the authority for correction of fire hazards in all structures. It provides for the appointment of local assistants to the Fire Marshal. Any fire chief, by virtue of his appointment, is automatically a local assistant.

Local assistants investigate or cause to be investigated in a general way the cause, origin and related circumstances of every fire occurring within their jurisdictions. They may inspect any structure or premise within that jurisdiction upon complaint, or without complaint when necessary. Local assistants are not paid for their services.

The principal duties of the Fire Marshall are:

- (a) To specify the necessary fire safety requirements for all public buildings;
- (b) To inspect public, Territorial and Federal Government buildings to ensure that adequate safeguards are being maintained;
- (c) To investigate fire;
- (d) To maintain records of fires;
- (e) To advise the Commissioner of the Territories concerning:
  - (i) the establishment of fire brigades,
  - (ii) the provision of adequate water supplies for firefighting purposes,
  - (iii) the installation of fire alarm and fire extinguishing equipment,
  - (iv) the storage and sale of flammable material,
  - (v) the enactment and enforcement of by-laws for fire prevention in municipal districts.

At the 35th session, the Member for Mackenzie Delta expressed concern about approved programs which had not been completed. The Fire Marshal's Office recommends these projects, but it is an inspection and regulatory agency rather than a construction agency and cannot assume responsibility for delivery to site or installation. The Office assures Council, however, that it does assist the Engineering Division in the preparation of purchase orders and with details concerning the design of the installations.

The Member for the Central Arctic proposed that a member of the technical establishment be appointed and trained to act as a part-time Regional Assistant to the Fire Marshal. A technician employed by the Department of Indian Affairs and Northern Development where as a heating plant operator has been sent on two firefighting courses, the Atlantic Firefighter's Workshop (September, 1966) and

the Volunteer Officers Firefighters Operation Course at the Ontario Fire College in August, 1967. The Dominion Fire Commissioner's Office conducted a Fire Chiefs Training Course at Deep River, Ontario, in November, 1967, but due to other commitments, suitable representatives from the Keewatin District were unable to attend. A technical officer employed as a fire inspector by the Department of Indian Affairs and Northern Development at Fort Smith attended the course. The N.W.T. Fire Marshal's Office will be conducting a fire chiefs training course in Fort Smith in February, 1968, with an expected attendance of thirty representatives.

Department of Transport personnel cooperate in an advisory capacity but are unable to assume any direct responsibility for an operational program not under the direct control of their Department. Deputy fire inspectors are required to meet fire inspection and fire equipment maintenance needs in the Districts of Franklin and Keewatin. These services in the District of Keewatin would only require a part-time employee and could be incorporated with other duties, provided fire prevention took priority. In the meantime, Mr. Adrian, with the assistance of Messrs. Whatmough and Evans, will make trips into the Arctic regions to carry out these duties.

### Fire Protection Engineering

#### Design:

Approximately fifty plans are received each year from private individuals or companies and from the Territorial Government and Federal Government departments in the Territories. These are studied, and requirements concerning fire protection are established. The requirements consist of types of construction as specified in the National Building Code and Fire Code, exit requirements, minimum standards for heating system, water supplies for hydrant systems, fire pumps, sprinkler installations, fire standpipes, fire doors, carbon dioxide systems, fire alarm systems, emergency lighting and protection of flammable liquids, etc. Specifications for fire protection installations are prepared. Meetings are held with both government and private architects and engineers to discuss implementation of requirements and alternative proposals.

#### Surveys and Inspections:

Fire prevention inspections are made of privately owned buildings of public assembly and Territorial and Federal Government buildings. Municipal fire fighting facilities are also inspected. The Office coordinates and reviews recommendations made to remedy unsatisfactory conditions noted by inspectors and fire chiefs.

Fire chiefs are encouraged to make inspections of dwellings and other buildings on a local level. During Fire Prevention Week, about six fire brigades engage in a dwelling inspection program. A check-off type of fire inspection report form which, is provided, is distributed to all area administrators in the Arctic Region, for completion on each dwelling in their areas. A self inspection form for schools is circulated to all schools; this form involves the cooperation of the school principal and the head of the school maintenance staff.

#### Approvals and Standards:

The Fire Marshal serves on the following approval councils, committees and associations: Fire Council, Underwriters' Laboratories of Canada; The Association of Canadian Fire Marshals and Fire Commissioners; National Building Code, Committee on a Building Code for the North; Canadian Standards Association, Committee on Canadian Electrical Code, Part I; Canadian Standards Association, Committee B89.3, Automobile Firefighting Apparatus; Canadian Standards Association, Committee on Installation of Fire Alarm Systems; Federal Fire Prevention Committee; Federal Fire Advisory Council (Emergency Measures Organization).

### Equipment

There appears to be no effective intermediate step in providing fire protection in a settlement between the range and capability of portable extinguishers (for example, four 30-lb. multipurpose dry chemical extinguishers) and a tracked vehicle carrying a 500-lb. multipurpose dry chemical extinguisher unit, or a water-carrying fire fighting truck. The cost of four multipurpose dry chemical extinguishers is approximately \$700; the tracked vehicle, fully equipped, is estimated at \$10,000; the cost of the water-carrying fire truck is approximately \$20,000. Tests of the stationary 500-lb dry chemical extinguisher were most impressive, and this type of unit could be fixed onto a bombardier-type vehicle. The use of portable pumps and hose has been examined but, by the time such equipment could be put into operation, it would generally be too late to save the building or to use the equipment in rescue work. In some isolated cases where there is a readily available water supply, portable pumps have been used. The Nodwell Water Carrier, a water delivery vehicle used chiefly for domestic use, has been equipped with some firefighting apparatus. It is extremely difficult to maintain control and repair of such equipment when the vehicle is principally used for another service.

### Fire Loss Investigations

Local assistants submit fire loss reports describing the cause, origin and circumstances of every fire occurring within their jurisdiction. When deemed necessary by the Fire Marshal, special investigations are conducted. The Royal Canadian Mounted Police provide valuable assistance in this respect.

Fire loss reports are closely examined with a view to ascertaining facts which may be used to reduce the loss of life, injury or property damage. This information is passed on to municipal and government officials, fire chiefs and engineering departments. Where faulty design or operation of equipment is evident, various fire testing and approval laboratories are informed.

Where any local assistant has any reason to believe that a fire has been deliberately caused, he is required to advise the R.C.M. Police or the Fire Marshal immediately.

### Fire Loss Records

Records of fire losses are kept in the Fire Marshal's office. Fires are classified as to cause, type of occupancy and amount of damage sustained to the building and its contents. For the reporting of fire losses, fire loss forms are supplied to local assistants, fire chiefs, insurance companies and adjusters. A record of reported injuries and fatalities is also kept.

### Operation and Training of Fire Departments

Fire brigades are organized on a volunteer basis. There are no fully paid fire chiefs in the Territories, although the chiefs at Fort Smith, Hay River, Inuvik and Yellowknife receive payment for services rendered. All other chiefs receive no payment other than the stipend given to all volunteer fire fighters for attending fires and drills: \$5.00 per fire call and \$2.00 per drill. Each fire chief must complete monthly reports on the operation of the fire brigade.

Fire brigades are provided with drill outlines, technical notes and supervised training sessions and schools. It is the usual practice of the Fire Marshal's staff to conduct a training session or a meeting with the members of the fire brigade during inspections of settlements. Each brigade is also provided with the following training books and precis: Fire Training Manual, Ohio; National Fire Code of Canada (1963); Fire Training Precis (1 to 17), prepared by N.W.T. Fire Marshal's Office; Fire Inspection Practices (Oklahoma A & M); C. S.A. B139 - Installation Code for Oil Burning Equipment; and C.S.A.

B149 - Installation Code for Gas Burning Equipment. Fire prevention films and training films are provided through arrangement with the Office of the Dominion Fire Commissioner. Six fire prevention films are also available on request from the resident fire inspector in Yellowknife.

In some instances, the continuity of operation of a local volunteer fire department has been difficult due to the turnover of personnel in a community. Volunteers cannot be compelled to maintain equipment, attend practices, complete reports or make fire inspections. The Fire Marshal's Office cooperates with local groups such as residents associations and community clubs in organizing volunteer fire brigades. Usually the first step is a meeting with a group of interested citizens at which organization and goals are discussed and local representative groups are encouraged to elect a fire chief and a secretary-treasurer for the brigade. Training drills, manuals, fire news bulletins, pamphlets, etc. are then mailed to the fire chief. Generally speaking, the most suitable person to fill the position of fire chief in a community is a technical tradesman. However, experience suggests that such people are fully occupied with their daily work load, and the Fire Marshal recommends that the responsibility for calling fire drills and reporting on the condition of equipment should be written into the duties of the local area administrator or Northern Service officer.

#### Public Relations

The main avenue of contact with the public is through services provided to the local volunteer fire brigade. This includes the provision of fire prevention films, posters and pamphlets on fire safety. Each community has been supplied with copies of Fire Safety in the Home, Fire Prevention Education Guide for Teachers and Settlement Fire Prevention Orders. A special package of fire prevention material is sent to each community for use during Fire Prevention Week in October. Posters, newspaper "broadsides" and proclamations are included in the packet.

The facilities of the C.B.C. Northern Service are used to broadcast fire prevention news items. Material is mailed to fire chiefs for spot broadcasts on the radio.

Films from the library of the Dominion Fire Commissioner, which has over 450 prints of 16 mm. films, are supplied free of charge.

Recommendations for changes in the operation of fire prevention services and schedules for the provision of additional fire-fighting equipment for each settlement in the Northwest Territories are now under study.