

In Quebec and Newfoundland, forest protective associations have been formed to handle fire protection on licensed Crown lands. The other provincial fire-protection services provide protection for all forests except those lying within organized municipalities.

Field work in the provinces is controlled from District Offices, where these exist, or by district fire rangers. Subdivisions of districts are looked after by fire rangers, who may be assisted by lookout men and patrolmen. The observers in lookout towers report the appearance of smoke to a central office by telephone or radio. Patrolmen carry out regular patrols along roads or waterways and warn travellers against carelessness with fire, as well as suppress or report fires that break out. Special crews construct improvements needed for protection purposes, such as roads, trails, telephone lines, lookout towers and ranger cabins. Usually these crews are kept on duty throughout the fire season and are used as stand-by fire-fighting crews. All fire-protection services possess modern equipment such as portable fire pumps and hand tools, special vehicles and effective communication systems. Aircraft are used extensively for fire detection and to carry men and supplies to the scene of a fire.

Assistance to provincial forest fire-protection services along railway lines is given under the Railway Act, administered by the Board of Transport Commissioners for Canada. The Board has wide powers relating to fire protection along railway lines under its jurisdiction. Certain officers of the various forest authorities are appointed ex officio officers of the Board of Transport Commissioners and co-operate with the fire-ranger staffs that the railway companies are required to employ under the Railway Act.

Fires that start must be put out as quickly as possible, but the objective of all protection services is to prevent them from starting. Means taken to reduce the number of outbreaks include posting of warning notices along roads and portages and in camps, restriction or prohibition of travel in forest areas during periods of exceptional fire danger, radio addresses and plays, articles in the press advocating care with fire in the woods, and specially prepared talks to school children. Settlers are required by law to obtain permits to burn slash and to conduct their burning under supervision at times of low fire hazard.

For protection of the forests against injurious insects and tree diseases, the provincial forest services co-operate with the Division of Forest Biology of the Science Service of the Federal Department of Agriculture.

Disposal of Crown Timber.—The general policy in Canada is to maintain forest lands under public ownership. Industrial and private users of wood may be granted rights to cut standing timber under prescribed conditions, but title to the land itself remains with the Crown.

Many timber users need only relatively small quantities of timber from time to time. Others, including the larger lumber companies and the great pulp and paper concerns, must be assured of adequate supplies of wood for long periods in the future. Without this assurance they could not secure the huge capital investments essential to provide modern manufacturing plants.

Holders of timber-leases must pay annual ground rents for forest land, running from \$5 to \$20 per sq. mile east of the Rockies, but amounting to \$140 per sq. mile on the west coast of British Columbia. Lease holders must also pay fire-protection taxes or other protection charges, the basis for which differs according to province.