

Organized forest fire detection is accomplished primarily by aerial patrols with a limited amount of backup detection provided by two or three lookout towers in areas of high value (e.g. Algonquin Park). Public reporting of forest fires (unorganized detection) is an important part of the program. The basic fire-fighting strike force comprises 135 trained five-man fire crews and 39 fire-bombing aircraft. The Ministry of Natural Resources owns 43 aircraft, most of which can drop either long- or short-term retardant on fires. Rented helicopters are also used. The communications system includes a network of ground stations, radiotelephones, fireline radios, aircraft radios, portable aircraft radiotelephones, Telex and facsimile.

**Manitoba.** The administration of provincial Crown forest lands in Manitoba is the responsibility of the Renewable Resources Division of the Department of Renewable Resources and Transportation Services. The Renewable Resources Division consists of three sub-divisions which have specific responsibilities pertinent to administration and management of forests and forest lands.

The Planning Division is responsible for developing short- and long-term forest resource utilization and land use plans and programs. The Forest Inventory Section provides basic information and data needed. The Forest Research Section undertakes practical research for development of programs, particularly in silvicultural research. The Timber Sales Office is responsible for licensing, allocation of permits, statistics data and collection of royalties on the timber harvest. The Operations Division implements forestry programs and projects. It also helps to develop plans for specific areas in the four regions of the province.

In the Lands and Forests Branch, the Forestry Programs Section is charged with administering the various forestry acts and regulations. Policy guidelines, programs and procedures are established by the Forest Protection, Timber Management and Silvicultural sections of the division.

These sections coordinate fire, insect and disease control activities, control measures for the propagation, improvement, management and harvest of forests. A provincial forest nursery is maintained to supply stock for reforestation of denuded Crown land and several natural tree seed orchards have been established to improve nursery stock. Seedlings are supplied to farmers for woodlots and to commercial Christmas tree producers; an average of more than 4 million are planted each year in reforestation projects on Crown lands. Conventional planting programs are being reduced in some areas and reforestation of cut-over lands is being achieved by scarification and seeding. Forest stand improvement consists of thinning, cleaning and chemical spraying to remove undesirable species and encourage growth of preferred trees. Forest inventories cover about 10,350 sq miles (26 806 km<sup>2</sup>) and, on the basis of these inventories, working plans with annual allowable cuts on a management unit basis are made.

Forest management licences may be granted for periods of up to 20 years and are renewable; timber sales may be from one year upward and timber permits for periods of up to one year. Two pulp and paper mills and one large sawmill provide the backbone for Manitoba's primary forest industry. A dozen intermediate-size sawmills and operations augment the production of these mills. Numerous small sawmills and timber harvesting operations provide the balance of production.

The province's new thrust in northern Manitoba has resulted in a number of remote timber harvesting and forest product operations. This thrust will continue as a means of resolving socio-economic problems in isolated communities and as a way of further utilizing the forest resource.

There are 128,370 sq miles (332 477 km<sup>2</sup>) under forest protection with zones of priority in less accessible areas. Fires are detected through a comprehensive network of lookout towers and a highly efficient aircraft detection system and supporting ground patrols. Approximately 90,000 sq miles (233 000 km<sup>2</sup>) are covered by aerial patrols.

Public education in fire prevention and forest conservation is carried out through radio, television, newspapers, pamphlets, signs, films, and tours.