

control of forest fires. An agreement was also in effect with the federal government for fire protection of 968,968 acres of Indian lands in the province.

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 and Quetico Park). Public reporting of forest fires (unorganized detection) continues to be an important and very necessary part of the over-all detection program. The basic fire-fighting strike force comprised 130 trained five-man fire crews and 39 fire-bombing aircraft. These forces, with the aid of timber operators, municipal fire brigades and the general public in some instances, provided initial attack on 997 of the 1,000 fires that occurred in 1973. Fire-bombing aircraft provided initial attack on 114 fires dropping 573,600 gal of water and long-term retardant which has proven an effective operational tool. Tracker aircraft spread most of the long-term retardant. Prescribed burning as a silvicultural and hazard reduction tool was continued in 1973 with 25 burns covering 5,013 acres. An integral float tank water-bombing system is installed on float-equipped aircraft. The fleet comprises 44 aircraft of various types including six Tracker air tankers. Four helicopters were leased for four months of the fire season and positioned one in each of the Northwestern, North Central, Northern and Northeastern regions. Smaller helicopters were hired when required. The communications system included a network of ground stations, radiotelephones, fireline radios, aircraft radio installations and portable aircraft radiotelephones.

Manitoba. The administration of provincial Crown forest lands in Manitoba is the responsibility of the Department of Mines, Resources and Environmental Management which consists of a Resources Management Division, a Mines and Departmental Services Division, an Environmental Management Division and a Water Resources Division. A special planning section is charged with developing short- and long-range forestry plans and programs relating to the forest inventory, timber utilization and industrial development, reforestation, silviculture and forest protection.

The Research Branch of the Environmental Management Division undertakes the necessary practical research for the qualitative development of these programs and the various projects and activities within them. The Branch co-operates with several federal services which maintain two research areas in the province and works closely with federal authorities in investigating and controlling forest damage resulting from insects and diseases.

The Resources Management Division is charged with the administration of the Forest Act and Regulations, and the implementation of forestry programs and projects developed. It also provides considerable input with respect to plans developed for specific areas within the four regions into which the province is divided, each headed by a regional director responsible for the field administration of the forests and other resources in the region. Policy guidelines are established by head office which co-ordinates control measures for the propagation, improvement and management of the forests, for the harvest of forest products, and for forest inventory surveys. A provincial forest nursery is maintained to supply stock for reforestation of denuded Crown land and some natural seed areas have been established for 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 and reforestation of cutover lands is being achieved by scarification and seeding. The program of forest stand improvement comprises thinning, clearing and chemical spraying to remove undesirable species and encourage growth of preferred trees. Forest inventories cover about 10,350 sq miles annually and, on the basis of these inventories, working plans with annual allowable cuts on a management unit basis are in operation.

Timber-cutting rights are awarded by forest management licences, timber sales and, in certain cases (particularly for salvage operations), by timber permits. Forest management licences may be granted for periods of up to 20 years and are renewable; timber sales may be for varying periods from one year upward and timber permits for periods of up to one year. In 1974 one long-term pulpwood berth with an area of 2,745 sq miles was in force. A second long-term pulpwood berth agreement was signed in 1966, covering the construction of a pulp mill and sawmill at The Pas in northern Manitoba.

There are 128,370 sq miles of the province under forest protection with zones of priority established in the less accessible areas. Fires are detected through a comprehensive network of