

acquired value as recreational areas. Forest pest problems in 1976 were dominated by the spruce budworm which infested almost 14.8 million hectares, but spraying operations to control this insect were limited to 40 875 ha in high-value local areas. Smaller acreages on Crown lands and lands managed under agreement were also treated for white pine weevil, pine and spruce sawflies, white grubs, white pine blister rust, annosus root rot and mice.

The forest research section provides scientific and technical knowledge for the management of forest lands and is more specifically oriented toward attaining production targets. Various disciplines including tree ecology and physiology, site and fertilization, tree genetics and breeding, mensuration, silviculture, equipment design and development are used to solve problems in tree improvement, stock production, regeneration and forest tending. The results of province-wide research are published in journals and reports. Research headquarters is at Maple and there are four field stations at Thunder Bay, Sault Ste Marie, Dorset and Midhurst.

The timber sales branch co-ordinates and supervises preparation of management plans for Crown management units and approves the plans prepared for company management units. Forest inventory requirements and priorities for such plans are determined by the branch. As of March 31, 1977, 179 plans (88 Crown units, 26 company units and 60 agreement forests) were completed or under way for about 533 540 km². The planning of access roads crucial to proper management is also part of the branch's responsibilities. The branch arranges for the allocation, disposition and measurement of Crown timber through Crown land licensing, timber sales and wood scaling. During 1976, some 440 Crown timber licences covering an area of 255 133 km² were effected. The Crown land harvest amounted to 13.1 million m³. Ontario's primary wood-using industries are licensed and their performance is monitored. In 1976, there were 761 primary wood-using plants in Ontario. The branch is also responsible for promotion of new industrial development and growth of the forest industry. Information is collected and analyzed on production, transportation and utilization of timber.

The air service and fire management branch is responsible for the 518 000 km² area under organized forest protection which is divided into eight regions and 38 districts. In 11 additional administrative districts, south of this area in the highly developed agricultural counties, municipalities are responsible for fire control. The vast inaccessible areas to the north of the fire districts, totalling over 295 000 km², do not support significant stands of merchantable timber and, except for the protection of private property and human life, are not normally protected. Within the fire regions, agreements were in effect in 1976-77 with 209 municipalities for prevention and control of forest fires. An agreement was also in effect with the federal government for fire protection of 392 127 ha of Indian lands.

Organized forest fire detection is accomplished primarily by aerial patrols with limited backup detection provided by several lookout towers in areas of high value such as Algonquin Park. Public reporting of forest fires 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 natural resources ministry owns 49 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 renewable resources and transportation services department. The renewable resources division contains the lands and forests branch, the fish and wildlife branch, the planning and development branch and management services. All forestry activities occur in the forestry section of the lands and forests branch. The one exception occurs in the planning and development branch where long-term forest resource utilization and development plans are developed by a senior forest planner.

The forestry branch contains three major forestry programs: forest inventory, forest protection and forest management. These three functional areas administer the