

into Ranger Districts. There are approximately 25 Ranger Districts in each Forest District. Twelve directional, servicing or policy-forming divisions constitute the head office of the Forest Service at Victoria.

Vigorous efforts continue to bring British Columbia's forest resources under sustained-yield management and the forest industries are making definite progress toward more complete utilization of their raw materials. The problem is urgent despite the fact that, with a present annual cut of approximately 1,100,000,000 cu. feet, the total inventory would appear sufficient to support present needs in perpetuity. One of the more spectacular results of sustained-yield administration has been the swinging of a greater proportion of the annual forest harvest to the interior of the province. For many years, the over-cut coast (wet belt) forests have accounted for from 65 p.c. to 80 p.c. of the total forest cut each year. More recently, however, the interior cut has risen to account for almost 50 p.c. of the total provincial scale. For all practical purposes, the entire interior forest is publicly owned; the great majority of privately owned, leased or licensed forests are on the coast.

Several systems of timber disposal are in effect. The most publicized is the Tree Farm Licence, which constitutes a contract between the government and a company or individual whereby the latter agrees to manage, protect and harvest an area of forest land for the best possible return, in exchange for the right to the timber crop on the area. Tree-farm Licences are subject to re-examination for renewal every 21 years. Provincial Forests, Public Working Circles, and Sustained-Yield Units are the governmental equivalent of the Tree Farm Licence with the timber, when it is ready for cutting, being disposed of by public auction. Management, silviculture, roadbuilding and protection on such areas are the responsibility of the Forest Service. Other tenures of lesser importance are Tree Farms, Farm Woodlot Licences, and those Timber Sales issued outside 'regulated' areas.

The need for a more effective forest fire suppression capability becomes increasingly urgent as the program of planned, sustained-yield management of the resource expands. Improved fire fighting techniques, the use of aircraft for patrol, transportation and fire bombing, employment of helicopters for rapid movement of fire suppression crews, and a gradually expanding system of lookouts are employed. However, the problem of accessibility remains a most serious one. The fire seasons of 1958, 1960 and 1961 were in the disaster class with total fire fighting costs for these three years amounting to \$15,700,000 plus a loss of potential Crown revenue and the value of unmanufactured logs destroyed by fire over those three years totalling some \$190,500,000. Close liaison with the federal Department of Forestry, which maintains laboratories in Vernon and Victoria, provides information about insect and fungal enemies of the forest.

Subsection 3.—The Pulp and Paper Research Institute of Canada*

The Pulp and Paper Research Institute of Canada is a centre of research and learning concerned with virtually every aspect of the production and use of pulp and paper products. It was established in 1913 as a branch of the Dominion Forest Products Laboratories and in 1927 was reorganized under the joint sponsorship of the Canadian Pulp and Paper Association, the Federal Government and McGill University. The Institute staff carries out fundamental research and some applied research in the fields of woodland operations and pulp and paper mill operations. In addition, in co-operation with McGill University, it trains postgraduate students who are working toward master's and doctorate degrees in physical chemistry, wood chemistry, or chemical and mechanical engineering, and whose theses subjects lie in fields of interest to the pulp and paper industry.

The Institute has occupied, since 1927, a building on the McGill campus erected by the pulp and paper industry and in addition since 1958 a new building at Pointe Claire on the western outskirts of Montreal constructed by the Government of Canada in lieu of its former annual financial grant. The new building houses Institute staff and facilities

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