

longer guarantee water to its users. The rehabilitation of this project was undertaken by agreement with the province and the irrigation district concerned, and completed by PFRA in 1958. A pressure irrigation system was also installed by PFRA for the irrigation of 290 acres of the Provincial Sanatorium farm lands at Tranquille.

A major reclamation project was undertaken in the Lillooet Valley upon agreement between the Federal Government, the Government of British Columbia, and the Pemberton Valley Dyking District. This project involved the reclamation of the lower 20 miles of the Lillooet River Valley through dyking, drainage and channel improvement to reclaim some 12,000 acres of agricultural land and to protect an additional 2,000 acres already under cultivation.

Engineering services have been provided by PFRA to the Experimental Farms and to other government agencies as requested. Some of these services have included surveys in the Fraser River Basin for the federal-provincial Fraser River Board, reports on proposed project development and reclamation in British Columbia, and services to the Experimental Farms for the establishment and improvement of farm water supplies and irrigation systems.

### Maritime Marshland Rehabilitation Act

The MMRA program was instituted by federal legislation in 1948 to provide assistance to the Provinces of Nova Scotia, New Brunswick and Prince Edward Island in preserving and developing tidal marshland areas, most of which are situated adjacent to tributaries of the Bay of Fundy. The areas are subject to flooding by tide water unless protected by systems of dams or dykes and aboiteaux (freshwater control structures). The soils are potentially productive and when properly used yield excellent crops.

Responsibility for the rehabilitation of approved marshland areas is shared by the provincial and federal governments. The latter undertakes the construction of works required to prevent flooding of lands by saltwater, maintains the structures until this responsibility is turned over to the provinces, and provides engineering services required in connection with the program. The provincial governments organize the owners of land and ensure that the marshland areas are adequately drained and that suitable land-use policies are developed and encouraged.

By Mar. 31, 1960, the provinces had requested the protection of some 95,450 acres from saltwater flooding. Structures had been completed to protect 76,813 acres and plans were under way to reclaim an additional 3,750 acres (Nova Scotia, 43,635 acres; New Brunswick, 36,653 acres; and Prince Edward Island, 275 acres). This acreage forms parts of approximately 3,500 farms having a total area of over 450,000 acres.

Conventional structures for the protection of marshlands are normally considered to be dykes and aboiteaux, supplemented by stream-bank control works. It has been found feasible to construct aboiteaux or dams across some tidal streams which eliminate the need for dykes and aboiteaux upstream of the proposed site and permit more efficient drainage of the land protected. Two of the more important structures of this type are the Annapolis River Dam in Nova Scotia and the Tantramar River Dam in New Brunswick, both in full operation. Each was undertaken on a share basis with a provincial authority as they serve as river crossings for traffic and eliminate the need to rebuild highway bridges at these locations in the future. The structures consist of rock-fill dams and freshwater discharge control gates; they were constructed on tidal rivers having tide ranges in excess of 30 feet and 40 feet, respectively. The addition of power-generating facilities to harness some of the energy produced by the tide at Annapolis Royal, N.S., was studied and found possible, but the cost was too high to warrant further consideration.