

Noticeable among the works, the benefit of which will far exceed the expenditure incurred, have been those executed in order to provide safe landing places for the fishermen engaged in their calling on the Lower St. Lawrence. Loose and solid rock, obstructing the entrances at several points on the Gaspé coast, have been removed with very gratifying results. Provision has been made for the continuation of this useful work during the next fiscal year. A landing place has also been provided at Pointe-aux-Esquimaux, in the Gulf of St. Lawrence, and wharfs constructed at various points on Lake St. John and tributary rivers.

The problem of the direction of the current of the Fraser River in British Columbia and the protection of its banks, has, again engaged the attention of the department. This river, which is one of the largest and the most important of the province, and has its head waters at an elevation of about 3,000 feet above the sea, in the vicinity of the Yellow Head Pass, flows with a sinuous and, at points, very contracted course, for a distance of 900 miles to the Gulf of Georgia, wherein it empties about 8 miles north of the boundary. It has numerous tributaries, eight of the principal ones entering it from the right bank, viz. :—The North Fork, Salmou, Nechaco, Blackwater, Chilcotin, Harison, Pitt and Coquitlam Rivers, and three from the left bank, viz. :—the Willow, Quesnelle and Thompson Rivers. The water-shed of the Fraser and its tributaries embraces an area of not less than 70,000 square miles. Its main channel is spanned by four bridges, a road bridge at Lillooet, a cantilever railway bridge below Lytton, the Alexandria suspension bridge and the C.P.R. bridge at the Mission. It is affected by the inflowing tides to Chilliwack, 48 miles above New Westminster, or 65 miles from the mouth. The extreme high level reached by the waters of the river in May, and again in June or July, the friable nature of the banks in some portions of its course, affect in a serious manner the direction of the stream and creates new channels which demand immediate and urgent measures. The erosion of the shores is constant but least during low water. As the river rises, the erosive energy of the current increases rapidly until the maximum is reached at the highest stage of water.

Various dyking and reclamation schemes have been proposed, but the special features connected with the floods, the current and the constant erosion of the shores, require more intimate knowledge of the conditions of the river, and a very careful study of its peculiarities before a scheme fertile in good results can be adopted. A careful survey has been decided upon, to be carried on during the next fiscal year.

The other rivers of British Columbia have also received attention; work has been done on the Columbia, Okanagan, Kootenay and Skeena rivers, and it is the intention of the department to send a dredge to Nanaimo to give a further depth of water for vessels frequenting that harbour.

The works of construction and repair, under the heading of Harbours and Rivers, have extended over one hundred points in the Dominion, operations having been carried on at twenty-four places in Nova Scotia, seven in New Brunswick, sixteen in Prince Edward Island, thirty-one in Quebec, fifteen in Ontario, one in Manitoba and six in British Columbia. One hundred and twenty surveys have been made throughout the year.

In the Maritime Provinces, the damage caused to the wharfs and piers by those terribly destructive worms, the teredo and limnoria, continues to claim the attention of the department.