

“Water-Powers of British Columbia”

Title of Comprehensive Report Issued by Commission of Conservation, Ottawa—Available Horse Power 2,500,000—Possibility and Course of Development.

The Commission of Conservation, Ottawa, has just issued a comprehensive report on the water powers of British Columbia by Mr. Arthur V. White, a copy of which we are in receipt of. A volume of 650 pages, it is easily the most complete work of this character yet undertaken in Canada. It deals thoroughly with the legal, industrial and historical as well as the technical aspects of power development in British Columbia.

In round numbers, the horse power total derivable from the various estimates presented in the power-site tables for districts into which the Province has been conventionally divided are as follows:

	24-hour horse-power
1. Columbia River and tributaries—(North of the international boundary)—This comprises the portion of the Province lying between its eastern boundary and the watershed of the Fraser River	610,000
2. Fraser River and tributaries—This includes practically the entire area of the great interior plateau	740,000
3. Vancouver Island	270,000
4. Mainland Pacific Coast and adjacent islands (except Vancouver Island)—This includes all the rivers north of the Fraser, which drain into the Pacific	630,000
5. Mackenzie River tributaries—A rough estimate made for inclusion in this summary	250,000
Grand total	2,500,000

When one considers the diversified nature of the natural resources of the Province, it is recognized that the water powers of British Columbia have an exceptionally wide field of usefulness. The needs of municipalities, of electric railways, of manufacturing, of mining operations, of the forest resources, including pulp and paper mills, and of the electro-chemical industries, surely suggest great use for the water-powers of the Province, not to mention the probability that water-powers may be more extensively used in connection with pumping for irrigation.

Too frequently in reports on water-power resources it has been the tendency to deal with power development exclusively without adequately considering such related subjects as domestic and municipal supply, agriculture and irrigation, navigation, fisheries and riparian rights. In this report, however, the author, although dealing with water-power resources, has recognized the important fact that water-power is but one of the important uses to which inland waters may be applied. This aspect of the subject is discussed in Chapter I., in which reference is also made to the paucity of information available respecting British Columbia water-powers at the time the Commission, with the co-operation of the Provincial Government, undertook this work. The comprehensiveness of the outlook upon the water-power situation, as above indicated, may well be understood from a consideration of some of the sub-headings of this chapter, which deal with such subjects as: “Run-off and Forests,” “Water-power and Agriculture,” including a special reference to the necessity of conserving the underground waters; “Water-power and Irrigation,” where it is pointed out that irrigation tends to the permanent settlement of the country, and that consequently, in the majority of cases, the use of water for irrigation will result in more widespread benefit than if otherwise used; “Water-power and Navigation,” where it is pointed out that power possibilities under certain circumstances are

frequently regarded as of less, or as of only incidental, value when compared with the interests of navigation.

A list is here given of the navigable inland waters of British Columbia. Under “Water-power and Fisheries” the serious consequences to the fishing resources resulting from obstructions which prevent the free passage of salmon and other fish is referred to as being vital in its bearing upon power development. The author points out that no development for power or irrigation should be permitted on any of the salmon streams without fully safeguarding the fishing industry. Under “Inland Waters and Mining,” it is emphasized that the mining industry in British Columbia has exerted a marked influence upon the laws relating to the use of water-power and water, a fact to be expected on account of the most important part which water and water-power have played in mining development.

The important subject of the “Pollution of Inland Waters,” is dealt with at some length, and reference is made to the pollution by factory and industrial wastes, including the serious damage occasioned by accumulation in streams of logging waste and other wood debris, such debris constituting a serious menace to bridges, public highways, water-power development, etc. As is well known, “Inland Waters Attract Tourists,” and under this heading it is pointed out that where care is exercised to conserve scenic and sporting assets, such constitute an attraction for tourists, and are often a means of bringing much revenue into the country. Reference is also made to the important international character of some of British Columbia’s streams and lakes.

Chapter II. of the report is devoted to a clearcut discussion of water-power data. Consequent upon the great advance in the industrial arts which took place with the employment of steam, and which has been tremendously accentuated by the employment of electricity, there has been greatly increased demand for power, with the result that in recent years there has been a great stock-taking of water-power assets; especially by governmental agencies. It is emphasized that an accurate knowledge of the physical characteristics of various watersheds and of the basic physical factors, will alone enable a proper estimate to be made of the potentialities of proposed developments. The effort required to secure these results takes time, and without much information a prospective investor is not in a position to form a sound independent judgment respecting some of the basic factors involved in any project that may be under consideration.

Naturally, water-powers more easily developed, with good storage available, and situated near centres of population, have the greatest value. The author points out that it is as necessary to differentiate between water-powers as it is to differentiate in the case of agricultural lands, timber tracts, fisheries or any other natural resources varying in quantity, quality and situation. Examples are given to show how neglect, rightly to assemble or to interpret essential physical data has been responsible for many serious financial and other failures.

This chapter is replete with good counsel fortified by apt illustration, all presented with the view of protecting the investor against loss through embarking upon projects without making the proper preliminary investigations.

The report emphasizes the fact that the Province of British Columbia has encountered exceptional difficulties in connection with the uses and administrations of its inland waters. Indeed, no province of the Dominion has had such difficult problems to contend with. The chapter dealing with the provincial water laws gives an historical survey of water legislation in British Columbia which is most interesting, even for those who have not the legal mind. Commencing in 1858 with the revocation of the Royal Licence of exclusive trade issued to the Hudson’s Bay Co.,