

Historical role of rivers

The country's first industry, the fur trade, depended on the ready access provided by the St. Lawrence River, the Great Lakes and their tributary streams and the many other great waterways that provided transportation to the interior.

The early settlement of the country depended on this ready means of access. The plentiful water-supplies of the flat, fertile plains of southern Ontario and Quebec, the river-borne transportation of lumber and, later, the power of water-driven turbines, all were vital factors in the building of a Canadian nation.

Today, more than ever, water is the key to Canada's development, providing the moisture needed for food production, supplying the renewable energy required in industrial growth, providing access to raw materials and playing a vital part in the processing of these materials. It also adds immensely to the beauty of the countryside and thus to the enjoyment of life.

Numerous uses for water

The classification of water-uses as "withdrawal" and "non-withdrawal", and their further sub-division into "consumptive" and "non-consumptive" indicate the basic differences among the uses. As the adjectives imply, the withdrawal uses remove water from its natural course whereas the non-withdrawal uses do not. Withdrawal uses are chiefly municipal, rural, agricultural and industrial. Non-withdrawal uses include hydroelectric power, transportation, recreation and fisheries.

All or part of the water withdrawn for use will generally be returned to its source. Estimates of the amounts withdrawn for various uses are given in the table that appears as Appendix II. Since estimates of non-withdrawals are not so easily arrived at, none is attempted here. Because the hydrologic cycle is a closed system when viewed on a global scale, it can be seen that water is never actually lost. For example, water evaporated from industrial cooling-towers becomes part of the atmosphere, falls as rain and eventually returns to increase the amount of water in and on the earth. Nevertheless water-consumption does occur, representing a measure of water-loss from a river basin or similar hydrologic unit. Water-consumption varies with its uses, being very large in agriculture and certain mineral-extraction processes but relatively small in manufac-