explorers to open the country, followed later by settlers seeking new rich lands. As the main route of development this waterway linked the early eastern with the later western settlements and provided those settlements with cheap and easy access to European markets.

Throughout Canadian history this water route has continued to play the same vital role—that of providing low-cost water transportation. This will continue to be a fundamental factor in the economic development of the country. Cheap transport facilities are essential to span the long distances separating the various regions of Canada and the St. Lawrence waterway provides such facilities between the industrial areas of eastern Canada and the primary producing areas of western Canada. Furthermore cheap transportation along the St. Lawrence route from the producing areas to the North Atlantic is an equally important factor in Canada's ability to compete in overseas markets. Canada is the fourth trading nation of the world and is dependent on these overseas markets for the sale of many of its exports, grain, minerals, forest products and some manufactures, and for the supply of many imported consumer and producer goods. In addition for some years past a growing proportion of Canada's external trade has been with the United States and in this north-south trade also the St. Lawrence route is of vital significance.

Contiguous to this great waterway are situated six Canadian Provinces and eight States of the United States, a portion of the continent with a heavy concentration of population and one of the greatest industrial areas in the world. The entire area served by the St. Lawrence system accounts roughly for four-fifths of the iron and steel production of the United States and Canada, the same proportion of cereal grains, two-thirds of general manufacturing, one-quarter of the chemical products and of the oil refining. Low-cost water transportation has been a major factor in the development of this concentration of industry.

The volume of traffic on the Great Lakes amounted in 1955 to nearly 200,000,000 net tons (net ton = 2,000 lb.) per annum, all of which must be transported within a navigation season of about 230 days (from the middle of April to the middle of December). About 40,000,000 tons of this total is carried by Canadian ships and most of the remaining 160,000,000 tons by United States vessels. A small amount is carried by ocean-going ships which are able to make their way up the St. Lawrence canals. The annual traffic through the St. Lawrence canals in recent years has amounted to nearly 10,000,000 tons. A great part of the traffic on the Great Lakes and on the St. Lawrence canals consists of bulk commodities of low unit value, the most important being iron ore, grain, coal, forest products and petroleum products.

Waterway and Transport Facilities

From the water level of Lake Superior, the Great Lakes–St. Lawrence inland waterway falls to sea level in five steps: (1) St. Mary's River between Lakes Superior and Huron, with a drop of 21 feet; (2) St. Clair-Detroit passage joining Lake Huron and Lake Erie, with a drop of 8 feet; (3) Welland Canal from Lake Erie to Lake Ontario, with a drop of 326 feet; (4) upper St. Lawrence River from Lake Ontario to Montreal, with a drop of 225 feet; and (5) long passage from Montreal to the sea, with a drop of 20 feet.

Although the numerous rapids and falls between Lake Superior and Montreal are a valuable asset to Canada as a source of hydro-electric power, they have greatly increased the difficulties of navigation on the Great Lakes–St. Lawrence water route. The construction of canals to bypass these obstacles and to improve navigation has proceeded intermittently for more than a century but much still remains to be done. Of the ocean fleet, only small vessels carrying about 1,500 tons can now sail from the Atlantic Ocean to the head of the Lakes. The total volume of traffic on the Great Lakes–St. Lawrence water route is at present limited by the inadequacy of the navigation facilities between Montreal and Lake Ontario, which divides the route as a whole into three sections.

The eastern section of the route is the deep-water section from Montreal to the sea, including the St. Lawrence Ship Channel extending from Montreal to 30 miles below Quebec City. Canadian Government dredges maintain this channel at a depth of 35 feet,