works to guard shorelines and prevent erosion, and also the control of roads and bridges that cross navigable channels. In order to prolong the season of navigation in important waters that freeze over in winter, ice-breaking operations are carried on at both the beginning and end of winter. This is particularly the case in connection with sea-going shipping from Montreal: these operations are primarily intended to prevent flood conditions during the spring break-up.

1.—Duration of the Season of Open Navigation on the St. Lawrence Ship Channel, 1930-43

NOTE.—For the years 1882 to 1911, see the Canada Year Book, 1934-35, p. 756, and for 1912-29, p. 615 of the 1942 edition.

Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour	Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour
1930	Apr. 12	Apr. 21	Dec. 12	1937	Apr. 9	Apr. 19	Dec. 8
1931	Mar. 19	" 15	" 11	1938	" 12	" 18	" 4
1932	" 27	" 14	" 8	1939	" 29	" 29	" 12
1933	" 23	" 14	" 6	1940	" 23	" 24	" 5
1934	" 28	" 26	" 8	1941	" 14	" 19	" 17
1935	" 30	" 15	" 9	1942	" 17	May 2	" 16
1936	" 28	" 13	" 11	1943	" 29	" 24	" 13

[1] "Channel Open" means it can be navigated although there may be floating ice still in the river.

Subsection 3.—Canals

Before the period of extensive railway construction, which commenced for Canada in the 1850's, the water routes, more especially the St. Lawrence, the Great Lakes, and the Ottawa, were the chief avenues of transportation. These routes were interrupted at certain points, necessitating portages and, to eliminate the toil of unloading, transporting and reloading at the portages, canals were constructed.

The earliest mention of canals in Canada is in connection with the Lachine Canal, begun by early French settlers in 1700. Only after the conquest of Canada by the British, however, were improvements of the main water routes made. In the early part of the 19th century increased internal and foreign trade and the introduction of steam navigation resulted in more attention being given to this work. Although some of the early canals were constructed primarily for military purposes, they soon became essential to the commercial life of the country. However, since the development of railways in Canada and, even more, since the growth of motor-vehicle traffic, the canals, with the exception of those on the Great Lakes-St. Lawrence River route, are playing a minor part in the transportation activities of the country.

The principal canals of Canada are under the jurisdiction of the Dominion Department of Transport and each is accessible from the Atlantic Ocean. They serve six routes: (1) Montreal to Port Arthur and Fort William, via the St. Lawrence River and Great Lakes; (2) Montreal to the International Boundary near Lake Champlain, via the Richelieu River; (3) Montreal to Ottawa, via the Ottawa River; (4) Ottawa to Perth and Kingston, via the Rideau and Cataraqui Rivers; (5) Trenton, at the mouth of the Trent River on Lake Ontario, to the mouth of the Severn River on Lake Huron, and (6) St. Peters, Nova Scotia, on the Atlantic Ocean, to the Bras d'Or Lakes. The aggregate length of these six routes is 1,890 miles, the total of actual canal being 509 miles.