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CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
TRANSPORTATION & PUBLIC UTILITIES BRANCH

WATERWAYS OF CANADA

(**FEDERAL EXPENDITURES ON CANALS, HARBOURS,
LAKES, RIVERS, AIDS TO NAVIGATION, ETC.,
PORT FACILITIES, TRAFFIC.**)

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P R E F A C E

The St. Lawrence river, Great Lakes and connecting rivers, reaching into the centre of the continent, have played a major part in the development of Canada and will always constitute one of the chief routes of commerce. The Dominion Government has expended large sums of money on improvements and aids to navigation on these waters, on other inland lakes and rivers, along the Atlantic, Pacific and northern coasts and in the Hudson Bay. These expenditures have been made by various departments of the Government and at various times.

The present report has brought these expenditures together for the first time in an attempt to present a composite picture of the total cost since Confederation. The expenditures for the fiscal year ended March 31, 1934, have also been included to give an idea of the annual cost to the Federal Government for the maintenance and operation of these aids to navigation.

Statistics of capital expenditures, revenues, operating expenses, traffic handled and other statistics of large ports under harbour commission control have been included and compiled on a comparable basis as far as the data available would permit.

The Bureau wishes to express its thanks to the officials of the Departments of Public Works, Marine and Railways and Canals and the several harbour commissions for their co-operation in compiling these data.

The report has been compiled by Mr. R.G. Bangs, B.Sc., A.M.E.I.C., under the supervision of Mr. G.S. Wrong, Chief of the Transportation and Public Utilities Branch of the Bureau.



R.H. COATS,

DOMINION STATISTICIAN

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DOMINION BUREAU OF STATISTICS
TRANSPORTATION AND PUBLIC UTILITIES BRANCH
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WATERWAYS OF CANADA

It is well to keep in mind that the several agencies of transportation, carriers by water, rail, road and air are, or should be, inter-related parts of an integral whole and while the waterways of Canada are in no way articulated with other transportation agencies except in the private development of harbours by the railroad at certain points, nevertheless there exists a certain natural co-operation, even if not of a regulatory nature, which has played a large part in the development of the international and domestic commerce of Canada.

In the statistical analysis which follows the discussion of water-borne transportation has been developed under three principal headings. Part I outlines by means of statements the investments in waterways by the Dominion Government since Confederation and for the fiscal year 1933-34 and the expenditures on maintenance, operation and subsidies for similar respective periods. It also includes a statement showing the investment, maintenance and subsidies by the Department of Public Works on some of the more important harbours of Canada. Part II, Shipping, indicates the number of vessels and registered tonnage in and out of the harbours of Canada during the fiscal year ending March 31, 1934, under the classification of sea-going, coastwise, and international inland shipping. Part III shows in detail a statistical analysis of the more important harbours under the administration of Commissions. The discussion under each heading is only of a summary character.

PART I.- INVESTMENTS, MAINTENANCE, REVENUE, ETC.

Investments by the Government in rivers, harbours, canals, etc. must be considered as a part of a whole scheme, or for the general advantage of Canada, and not each piece of work as a complete entity and very seldom does any particular work earn sufficient to pay interest and depreciation charges, or to provide a sinking fund as is expected in the case of investments in private undertakings. The value of a Government investment in such works consequently cannot be measured by direct earnings and is generally measured by trade and affected by the improvements.

In the Dominion consolidated balance sheet no expenditures have been written off because of the destruction or abandonment of property. Consequently during this period (1867-1934) a considerable portion of these investments, such as the first, second and third Welland Canal of \$33,400,000 and Port Nelson Harbour improvements of \$6,240,000 are non-active investments and have little or no present day value.

The division of expenditures between those chargeable to capital account, or investments, and those chargeable to operation and maintenance has not always been well defined, especially in the early years, and consequently the division of expenditures under these two headings in the following should be considered as only approximate. It will be appreciated that an accurate total amount is almost impossible to compute because of expenditures made on such works as roads to docks, etc., which are more or less on the border line, the inclusion or exclusion of which in statements of waterway expenditures being entirely a matter of judgment.

The following departments are concerned in one way or another with waterways and shipping; (a) the Department of Railways and Canals, (b) the Department of Public Works, (c) the Department of Marine and the various Harbour Commissions under the jurisdiction of the Minister of Marine.

(a) There are in Canada six canal systems under the control and administration of the Department of Railways and Canals in connection with navigable lakes and rivers. They consist of the canals (1) between Port Arthur or Fort William and Montreal, (2) from Montreal to the International Boundary near Lake Champlain, (3) from Montreal to Ottawa, (4) from Ottawa to Kingston and Perth, (5) from Trenton, Lake Ontario, to Lake Huron (not completed) and (6) from the Atlantic Ocean to Bras d'Or Lakes, Cape Breton and the canal from Winnipeg to Lake Winnipeg under the control of the Department of Public Works. By means of these canals a total waterway of 1,846 miles has been opened to through navigation, the actual mileage of canals being 507.8 miles. The Great Lakes-St. Lawrence waterway system and its appertinent canals are by far the most important. The development of these canals included almost every branch of engineering works, such as docks, wharves and other harbour works, grain elevators, bridges, locks, dams, weirs and water control works, power plants and transmission lines, hydraulic works and a great variety of plant and equipment for the operation and maintenance of the works.

The total amount invested by the Department of Railways and Canals on such works up to March 31, 1934, was \$286,811,954.67, including \$17,738,192.34 chargeable to income representing expenditures on permanent improvements (see statement number 1) and the total maintenance and operation expenditures of \$68,927,919.60 (see statement number 3) for the same period. The amounts expended on investment and maintenance and operation for the fiscal year ending March 31, 1934, were \$2,408,986.60 and \$2,300,998.88 respectively (see statements 2 and 4). The revenue derived therefrom for the fiscal year 1933-34 was \$877,629.65 (see statement number 5) made up of hydraulic rents \$256,771.64, land rents \$252,921.07, transmission rents \$10,823.32, house rents \$9,251.23, elevator fees \$227,814.17 and miscellaneous \$120,048.32.

Although there have been heavy capital and maintenance expenses connected with these canals, since 1904 no tolls have been charged for their use and they are open to ships of any country on the same terms as to Canadian ships.

(b) Since Confederation, and before, the Department of Public Works has been the chief constructing department of the government. In 1879 the construction and administration of canals was conveyed to the then newly constituted Department of Railways and Canals and the construction and maintenance of lighthouses was transferred to the Department of Marine. The Engineering Branch of the Department of Public Works conducts the construction and repair of wharves, piers, breakwaters, dams, weirs, bank and beach protection, the improvement of harbours and rivers by dredging, the construction, maintenance and operation of graving docks, the construction and maintenance of interprovincial bridges and approaches thereto, also hydrographic and ordinary surveys, river gaugings and metering and the control of works constructed in or over navigable waters by authority of the Navigable Waters Protection Act of 1927.

There are five graving or dry docks built and owned by the Canadian Government - the old and new dry docks at Lauzon, Quebec, designated as the "Lorne" and the "Champlain" dry docks, the Kingston dry dock at Kingston, Ontario, and the old and new dry docks at Esquimalt, British Columbia. The dock at Kingston, Ontario, is under lease to the Kingston Shipbuilding Company. The "Champlain" dock at Lauzon, Quebec, east of the old dock, is 1,150 feet long, 120 feet wide with a depth of 40 feet at high water. It cost about \$3,850,000. Under the Dry Dock Subsidies Act of 1910 several docks have been subsidized by payments of 3 to 4½ per cent per annum on the original cost for a given number of years. The total amount of subsidy authorized under this Act is \$19,002,522 and the amount of this subsidy voted for the fiscal year 1933-34 was \$582,133. The dimensions and cost of graving docks subsidized under the Dry Dock Subsidies Act of 1910 are as follows:

Location	Length	Width	Depth over Sill	Total Cost	Subsidy
	Ft.	Ft.	Ft.	\$	
Collingwood No. 1, Ont.	515.8	59.8	14.8	500,000	3 p.c. for 20 years
Collingwood No. 2, Ont.	413.2	95	19.2	306,965	3 p.c. for 20 years
Port Arthur, Ont.	708.3	77.6	16.2	1,258,050	3 p.c. for 20 years
Montreal, Que. floating dock "Duke of Connaught"	601	100	31.5	3,000,000	3½ p.c. for 35 years
Prince Rupert, B.C. floating dock	600	100	32	2,199,168	3½ p.c. for 35 years
Saint John, N.B.	1150	133	40	5,500,000	4½ p.c. for 35 years
North Vancouver, B.C. floating dock	556.5	98	28	2,500,000	4½ p.c. for 35 years

The investments in harbours and rivers by the Department of Public Works from Confederation to March 31, 1934, is computed to be \$155,325,517.93 (see statement number 1 for the distribution of construction and improvements by provinces and other various items of expenditure). The investment for the fiscal year 1933-34 amounted to \$712,325.62 (see statement number 2 for the distribution). The expenditure for maintenance, operation and payments of subsidies since Confederation is \$67,375,370.92 (see statement number 3) and the expenditure for the fiscal year 1933-34, \$1,920,775.66 (see statement number 4). The revenue derived from such works for the fiscal year 1933-34 amounted to \$103,495.49, particulars of which are shown in statement 5.

The Department of Public Works has charged certain expenditures for dredging to a dredging account and made no segregation between capital account and maintenance. The difficulty in making such division is quite obvious. Straightening a channel and removing silt in a new piece of work would be construction, but subsequent removal of silt would be maintenance, although if the harbour or river were deepened at the same time part of the expense would ordinarily be charged to construction. The total amount charged by the Department of Public Works to dredging since Confederation was \$82,173,806 and for the fiscal year 1933-34, \$1,070,343. These amounts are additional to the capital, maintenance and operation expenditures shown in tables 1, 2, 3 and 4 and should be added to the totals but not to either capital or maintenance account separately. There are, however, dredging costs included in expenditures which have been allocated to capital and maintenance accounts and consequently this amount of \$82,173,806 must not be considered as the total expenditures on dredging.

In conclusion, statement 7 indicates the expenditures to March 31, 1934, (dredging, construction and improvements, maintenance and subsidies) on some of the more important harbours in the Dominion. Additional expenditures of course have been carried out on some of these harbours by private interest, municipalities and the various Harbour Commissions under the Department of Marine.

(c) Administration of the general shipping interests of Canada is in the hands of the Department of Marine. It deals with: (1) administration of the Canada Shipping Act and other Acts of the Dominion Government relating to marine transportation; (2) pilotage; (3) the construction and maintenance of lighthouses, lightships, fog alarms, buoys and beacons; (4) ports, harbours, piers, wharves and breakwaters; (5) the Meteorological Service of Canada; (6) relief of distressed seamen; (7) hydrographic tidal and current surveys; (8) inquiries into the causes of shipwrecks and casualties and the collection of wreck statistics; (9) life-saving service; (10) the inspection of steamboats; (11) the construction and maintenance of the St. Lawrence River ship channel; (12) marine signal service; (13) ice breaking, and (14) the administration of Government radio telegraph stations.

It may be seen from the above that a considerable proportion of the administration of this Department has to do with services affecting marine transportation only in a general way. These services do not represent in a great many cases any tangible value with the result, in the preparation of this part of the report, care has been exercised so as to include only those items of tangible investment. Dominion steamers and icebreakers employed in Ocean and River Service, the St. Lawrence Ship channel lighthouses and their apparatus and loans or advances to the various Harbour Commissions constitute the main avenues of investments. It is true that in the functioning of such services as radio telegraphy certain tangible investments, such as the construction of the radio telegraph stations, exist and these have been included.

The investment by the Department of Marine in harbours and rivers and all contributory works essential to marine transportation has been computed as \$228,093,590.94 to the end of March, 1934 (see statement 1). The chief investment is \$145,118,104.74 expended through advances to the Harbour Commissions, most of which are loans, and \$47,700,398.20 expended on the St. Lawrence Ship channel from July 1st, 1904. Prior to this date \$6,602,167.68 had been expended by the Department of Public Works. It may be of special interest to note here that unlike most river works the St. Lawrence River Ship channel costs very little for maintenance. From the Great Lakes the clear water passes through the rocky channels of the Thousand Islands and the several rapids that lead to Montreal. Thence the river flows with a gentle current bearing no detritus and the artificial deepening when once completed remains for the most part permanent without either silting up or scouring out of shape. The investments in harbours and rivers for the fiscal year 1933-34 amounted to \$7,012,776.34, the chief items being the St. Lawrence Ship Channel \$3,421,053.72 and loans to the Harbour Commissions, \$3,196,375.68 (see statement 2).

The expenditure on harbours and rivers by the Department of Marine for maintenance and operation excluding the Harbour Commissions' expenditures, amounted to \$100,085,881.00 to March 31, 1934, (see statement 3) and the annual expenditure for similar purposes during the fiscal year 1933-34 was \$3,492,124.79 (see statement 4). Revenue for the fiscal year 1933-34 was \$156,464.58 (see statement 5).

A summary of statements 1 and 3 giving in round figures the expenditures by these departments from Confederation to March 31, 1934, appears below.

	Investments as of March 31, 1934	Maintenance, Operation and Subsidies as of March 31, 1934	Total
Department of Railways & Canals...	\$286,812,000	\$ 68,927,900	\$355,739,900
Department of Public Works	155,325,500	67,375,400	222,700,900
Department of Marine	228,093,600	100,085,900	328,179,500
Totals	670,231,100	236,389,200	\$906,620,300
x - Includes dredging to March 31, 1934, by Public Works \$82,173,800; see text for remarks.			

The total investment on harbours and rivers excluding dredging by Public Works amounts to approximately \$63 per capita, as of March 31, 1934. Some measure of the value of these facilities to the international trade of Canada may be seen in the average yearly value of the exports and imports for the past ten years. For the ten years ending March 31, 1934, the average value of the exports and imports of Canada, excluding the United States, amounted to approximately \$950,000,000. This figure would be further increased by that portion of the international trade with the United States in and out of the various coastal and inland waterways of Canada and the coastal trade of Canada using these facilities.

In conclusion some remarks may be made as to the average life of various structures connected with harbour and river works. This is a very complex problem dependent on many circumstances. If we call the life which is terminated by ordinary wear and tear the normal life, then we may say that often the actual life is much less than the normal life as very often circumstances prevent structures continuing in service till worn out. Such examples as rebuilding works as a result of mechanical damage, and the rebuilding of canal locks, docks and wharves as a result of the increase in the tonnage and draught of vessels usually occur before the actual life has terminated.

A considerable portion of the docks and wharves of the smaller ports located on inland waterways and sea coasts are of timber construction. The estimated life of an ordinary timber structure while dependent on the species of timber used, the place where it is used and the elements to which it is exposed, might vary from 5 years to 25 years with an approximate average of 12 years. Creosote timber construction depends upon the same factors but omitting the chance of mechanical damage such structures might easily have an estimated life of 25 to 30 years. Marine borers have a decided effect on the life of harbour works in salt water. Where such works are constructed of uncreosoted timber the life may be anything from 4 months to 3 years if teredo navalis is present and more like 10 years if attacked by limnoria. Experience has shown that satisfactory impregnation of timber with a proper grade of creosote oil in sufficient quantity is the best deterrent of these borers. There is no definite evidence as yet as to what the life of timber under these circumstances would be. However, the Forest Products Laboratories at Ottawa with the co-operation of the Department of Public Works are constantly carrying on research to determine the economic life of timber structures of all sorts.

Concrete structures are mainly dependent on the sufficiency of the design being such as will meet the conditions to which they are exposed and in fresh water the expected life of such works may be 40 to 50 years. Concrete in salt water has not as dependable life as concrete in fresh water.

Dredging plant if kept in a good state of repair may have an estimated life of many years. The Department of Public Works is only now considering disposing of a dredge which has been in the possession of the Department and in operation some 70 years. Generally speaking an expenditure of 10 per cent per annum of the value of the plant is sufficient to keep a dredge in perfect working condition.

The periods at which dredging operations must be carried out in harbours and rivers as a result of silting and scour vary, depending on the locality and natural features affecting the location. The extremes would be a river such as the Fraser River where there is continuous dredging maintenance owing to the fact that detritus is constantly being carried down the river from a practically inexhaustible supply in the upper regions. The other extreme would be a rock channel or a channel such as the St. Lawrence Ship Channel where very little dredging is required as a result of silting or scouring.

While it is very difficult to state the average life of harbour works it has been estimated that approximately 20 per cent may be considered as more or less permanent, 3 per cent as having to be renewed annually, 10 per cent every 5 years and possibly 40 per cent every 10 years.

STATEMENT NO. 1.- INVESTMENTS IN HARBOURS, RIVERS AND CANALS FROM CONFEDERATION TO MARCH 31ST, 1934.

	INVESTMENTS		
	\$	\$	\$
DEPARTMENT OF RAILWAYS AND CANALS			
<u>Quebec Canal Systems-</u>			
Carillon and Grenville	4,690,492.38		
St. Anne's Lock	1,473,133.58		
Chambly	1,851,095.77		
St. Ours Lock	914,330.62		
Lachine	16,098,550.04		
Lake St. Louis	298,176.11		
Beauharnois, Old	1,901,840.13		
Soulanges	<u>8,435,595.34</u>		
		35,663,213.97	
<u>Ontario St. Lawrence Canal Systems-</u>			
Lake St. Francis	102,934.79		
Cornwall Canal	7,892,219.01		
Williamsburg	1,730,727.23		
Farrans Point	877,090.57		
Galops	6,143,468.11		
Rapid Flat	<u>2,159,880.80</u>		
		18,906,320.51	
<u>Ontario St. Lawrence River Canals</u>			
North Channel	2,311,819.89		
River reaches	483,830.20		
Galops Channel	<u>1,039,895.65</u>		
		3,835,545.74	
St. Lawrence Ship Canal		691,360.60	
Prescott Elevator		4,715,325.43	
St. Peter's Canal		1,516,519.07	
Rideau Canal		4,938,012.47	
Tay Canal		490,347.88	
Murray Canal		1,355,239.25	
Trent Canal		23,720,202.65	
Welland Canal		33,441,314.03	
Welland Canal (Port Colborne Elevator)		95,984.48	
Welland Ship Canal		131,381,554.81	
Sault Ste. Marie Canal		5,256,784.19	
Oulbute Lock and Dam		443,314.83	
Baie Verte		44,387.53	
Canals, general		1,175,690.88	
<u>Hudson Bay Terminals-</u>			
Port Nelson	6,240,200.86		
Port Churchill	<u>12,900,635.49</u>		
		19,140,836.35	
			x 286,811,954.67

x - Includes expenditures of \$17,738,192.34 chargeable to income for heavy and permanent improvements.

STATEMENT NO. 1 (Cont'd.) - INVESTMENTS IN HARBOURS, RIVERS AND CANALS FROM CONFEDERATION TO MARCH 31, 1934.

	INVESTMENTS		
	\$	\$	\$
DEPARTMENT OF PUBLIC WORKS			
<u>Construction and Improvements-</u>			
Nova Scotia	12,309,256.66		
Prince Edward Island	2,092,244.56		
New Brunswick	16,742,094.97		
Quebec	34,974,871.70		
Ontario	43,141,887.91		
Manitoba	2,844,832.22		
Saskatchewan, Alberta and North West Territories	836,470.67		
British Columbia	23,331,268.20		
Yukon	364,547.00		
Generally	<u>217,431.38</u>		
		136,854,905.27	
Dredging Plant		8,161,639.96	
Slides and booms		1,733,192.19	
Roads and bridges		5,638,248.38	
Miscellaneous		<u>2,937,532.13</u>	
			155,325,517.93
<u>DEPARTMENT OF MARINE</u>			
<u>Ocean and River Service</u>			
Dominion Steamers	6,800,000.00		
Radio Telegraph Stations - Construction ...	<u>2,175,088.00</u>		
		8,975,088.00	
<u>Public Works-</u>			
# St. Lawrence Ship Channel from July 1, 1904	47,700,398.20		
Miscellaneous estimated	<u>3,000,000.00</u>		
			50,700,398.20
<u>Lighthouse and Coast Service-</u>			
Lighthouses, construction, improvements and apparatus		23,300,000.00	
<u>Harbour Commissions-</u>			
Montreal	60,546,048.08		
Quebec	27,821,787.30		
Vancouver	24,006,165.97		
St. John	14,481,188.82		
Halifax	10,816,452.71		
Chicoutimi	3,777,220.91		
New Westminster	974,537.23		
Thres Rivers	<u>2,694,703.72</u>		
		145,118,104.74	
			228,093,590.94
			<u>670,231,063.54</u>
GRAND TOTAL			

Prior to July 1, 1904, \$6,602,167.68 expenditures is included in Public Works investments.
 † See Table 6. for dredging.

STATEMENT NO. 2.- INVESTMENTS IN HARBOURS, RIVERS AND CANALS, FISCAL YEAR 1933-34

	EXPENDITURES		
	\$	\$	\$
DEPARTMENT OF RAILWAYS AND CANALS			
<u>Quebec Canal System-</u>			
Carillon and Grenville	5,311.60		
Lachine	32,019.80		
St. Anne's Lock	<u>3,857.30</u>		
		41,188.70	
Trent Canal		86,240.11	
Welland Ship Canal		2,116,539.32	
Hudson Bay - Churchill		<u>165,018.47</u>	
			2,408,986.60
 DEPARTMENT OF PUBLIC WORKS			
<u>Harbours and Rivers - Construction</u>			
Nova Scotia	148,529.91		
Prince Edward Island	15,120.68		
New Brunswick	38,370.46		
Quebec	184,748.75		
Ontario	235,838.03		
Manitoba	8,428.57		
Saskatchewan, Alberta and N.W.T.	314.30		
British Columbia	<u>48,952.15</u>		
		680,302.85	
<u>Harbours and Rivers - General</u>		7,770.73	
<u>Dredging Plant - Construction</u>			
Maritime Provinces	9,240.01		
Manitoba, Saskatchewan and Alberta	9,205.76		
British Columbia	<u>4,202.85</u>		
		22,648.62	
<u>Roads and Bridges - Construction</u>		<u>1,603.42</u>	
			712,325.62
 DEPARTMENT OF MARINE			
<u>Ocean and River Service-</u>			
Radio Telegraph - Construction		14,996.62	
<u>Public Works-</u>			
St. Lawrence Ship Channel	3,421,053.72		
St. Lawrence River Dams	<u>89,560.25</u>		
		3,510,613.97	
<u>Non-Active Investment-</u>			
St. John Harbour restoration		42,000.00	
<u>Lighthouse and Coast Service - Construction</u> ...		248,790.07	
<u>Harbour Commissions-</u>			
Montreal	449,000.00		
Quebec	106,914.06		
Vancouver	1,208,298.68		
Halifax	151,258.38		
St. John	829,190.56		
New Westminster	12,614.00		
Three Rivers	107,000.00		
Chicoutimi	<u>334,100.00</u>		
		<u>3,196,375.68</u>	
			7,012,776.34
GRAND TOTAL			<u>10,134,088.56</u>

**STATEMENT NO. 3.- EXPENDITURES (OPERATION, MAINTENANCE AND SUBSIDIES) ON HARBOURS, RIVERS
AND CANALS FROM CONFEDERATION TO MARCH 31, 1934.**

	OPERATION, MAINTENANCE AND SUBSIDIES		
	\$	\$	\$
DEPARTMENT OF RAILWAYS AND CANALS			
Quebec Canal Systems-			
Carillon and Grenville	2,597,957.55		
St. Anne's Lock	446,655.52		
Chambly	3,511,739.72		
St. Curs Lock	382,872.30		
Lachine	10,188,121.42		
Beauharnois, Old	1,175,266.12		
Beauharnois, New	9,815.21		
Soulanges	<u>3,158,545.62</u>		
		21,470,973.46	
Ontario St. Lawrence Canals System-			
Cornwall Canal	5,460,997.56		
Williamsburg	<u>2,671,893.34</u>		
		8,132,890.90	
Prescott Elevator		306,205.46	
St. Peter's Canal		302,585.18	
Rideau Canal		7,375,017.94	
Murray Canal		455,359.94	
Trent Canal		4,700,928.94	
Welland Canal		14,798,387.51	
Welland Canal (Port Colborne Elevator)		1,318,834.81	
Welland Ship Canal		2,600,339.08	
Sault Ste. Marie Canal		1,882,781.00	
Calbute Lock and Dam		18,543.63	
Canals, general		5,359,335.13	
Hudson Bay Terminals-			
Port Nelson	34,017.02		
Port Churchill	<u>171,719.60</u>		
		<u>205,736.62</u>	
			68,927,919.60
DEPARTMENT OF PUBLIC WORKS			
Construction and Improvements-			
Nova Scotia	4,259,880.48		
Prince Edward Island	816,602.58		
New Brunswick	5,240,404.55		
Quebec	10,315,224.02		
Ontario	6,152,708.23		
Manitoba	835,190.61		
Saskatchewan, Alberta and N.W.T.	81,014.46		
British Columbia	6,116,580.47		
General	<u>10,668,317.64</u>		
		44,485,923.04	
Dredging Plant		3,479,643.63	
Slides and Booms		4,105,287.55	
Roads and Bridges		1,265,914.79	
Miscellaneous		<u>14,038,601.91</u>	
			67,375,370.92
DEPARTMENT OF MARINE			
Ocean and River Service-			
Dominion Steamers	40,250,000.00		
Radio Telegraph Service	<u>4,095,881.00</u>		
		44,345,881.00	
Lighthouse and Coast Service-			
Agencies, rents and contingencies	5,750,000.00		
Maintenance	30,360,000.00		
Salaries of lightkeepers	19,350,000.00		
Repairs to wharves	<u>280,000.00</u>		
		<u>55,740,000.00</u>	
			100,085,881.00
GRAND TOTAL			x 236,389,171.52

x - See Table 6 for dredging.

STATEMENT NO. 4.- EXPENDITURES ON HARBOURS, RIVERS AND CANALS FOR MAINTENANCE, OPERATION AND SUBSIDIES,
FISCAL YEAR, 1933-34

	MAINTENANCE, OPERATION AND SUBSIDIES		
	\$	\$	\$
DEPARTMENT OF RAILWAYS AND CANALS			
<u>Quebec Canal Systems</u>			
Head Office	31,575.54		
Carillon and Grenville Canal	57,590.54		
Chambly Canal	68,901.01		
St. Anne's Lock	10,704.35		
St. Ours Lock	6,790.96		
Soulanges Canal	112,876.10		
Lachine Canal	363,353.12		
Dredge Vessels	29,510.41		
Hungry Bay Dyke - St. Barbe	<u>7,935.55</u>		
		689,237.58	
<u>Ontario-St. Lawrence System-</u>			
Head Office	39,010.65		
Cornwall Canal	137,605.24		
Williamsburg Canal	77,716.45		
St. Peter's Canal	<u>9,657.75</u>		
		263,990.09	
Rideau Canal		139,413.69	
Murray Canal		21,234.85	
Trent Canal		197,457.83	
Welland Canal		62,166.48	
Welland Ship Canal		610,064.73	
Sault Ste. Marie Canal		57,232.93	
Port Colborne Elevator		88,661.90	
Prescott Elevator		87,719.00	
Churchill Elevator		<u>83,819.80</u>	
			2,300,998.88
DEPARTMENT OF PUBLIC WORKS			
<u>Harbours and Rivers-</u>			
Nova Scotia	146,770.03		
Prince Edward Island	17,045.34		
New Brunswick	285,653.36		
Quebec	369,755.34		
Ontario	91,650.15		
Manitoba	19,267.28		
Saskatchewan, Alberta and N.W.T.	2,111.02		
British Columbia	<u>378,657.20</u>		
		1,310,909.72	
Harbours and Rivers - generally		409,319.75	
<u>Dredging Plant-</u>			
Maritime Provinces	35,983.75		
Ontario and Quebec	27,058.22		
Manitoba, Saskatchewan and Alberta	2,607.58		
British Columbia	<u>8,941.37</u>		
		74,590.92	
<u>Roads and Bridges-</u>			
Maritime Provinces	1,301.05		
Ontario and Quebec	50,005.64		
Manitoba	34.77		
Alberta	463.93		
North West Territories	<u>366.76</u>		
		52,172.15	
<u>Miscellaneous-</u>			
Surveys	49,237.69		
Quinze Dam	10,477.30		
Temiskaming Dam	5,743.13		
Inspection Boats	<u>8,325.00</u>		
		73,783.12	
			1,920,775.66
DEPARTMENT OF MARINE			
<u>Ocean and River Service-</u>			
Radio Telegraph Service	505,222.00		
Dominion Steamers	1,311,422.77		
Removal of obstructions	378.78		
Subsidy to wrecking plants	<u>40,000.00</u>		
		1,857,023.55	
<u>Lighthouse and Coast Service-</u>			
Agencies, rents and contingencies	192,192.02		
Maintenance	770,125.21		
Salaries of light keepers	645,859.10		
Repairs to wharves	7,424.91		
Ice breaking	<u>19,500.00</u>		
		1,635,101.24	
			<u>3,492,124.79</u>
GRAND TOTAL			7,713,899.33

STATEMENT NO. 5.- REVENUE FROM HARBOURS, RIVERS AND CANALS, FISCAL YEAR 1933-34

	REVENUE		
	\$	\$	\$
DEPARTMENT OF RAILWAYS AND CANALS			
<u>Welland Canal Systems-</u>			
Welland Canal	38,376.22		
Welland Ship Canal	<u>167,092.51</u>		
		205,468.73	
<u>St. Lawrence Canals-</u>			
La Chine Canal	269,025.16		
Beauharnois Canal	102,670.87		
Soulanges Canal	4,083.39		
Cornwall Canal	44,344.02		
Williamsburg Canal	<u>3,272.93</u>		
		423,396.37	
Chambly Canal		1,208.00	
<u>Ottawa River Canals-</u>			
Carillon and Grenville Canals	1,600.13		
Chats Falls Canals	1.00		
St. Anne's Lock	<u>479.00</u>		
		2,080.13	
Rideau Canal		10,511.77	
St. Peter's Canal		168.12	
Murray Canal		274.00	
Trent Canal		6,327.56	
Sault Ste. Marie Canal		217.00	
Port Colborne Elevator		153,795.25	
Prescott Elevator		58,262.51	
Charuchill Elevator		15,756.41	
Sundries		<u>164.00</u>	
			877,629.85
DEPARTMENT OF PUBLIC WORKS			
<u>Earnings of Dry Docks-</u>			
Chaplain Dock, Lauson, Que.	25,409.58		
Lorne Dock, Lauson, Que.	10,034.17		
Esquimalt New Dock, Esquimalt, B.C.	30,122.03		
Esquimalt Old Dock	129.00		
Selkirk Repair Slip, Selkirk, Man.	<u>1,114.60</u>		
		66,809.38	
<u>Rents, leases and privileges-</u>			
Kingston Graving Dock	18,150.00		
Ferry privileges	2,723.00		
Earnings of dredges and plant	<u>4,663.18</u>		
		25,536.18	
Miscellaneous		<u>11,149.93</u>	
			103,495.49
DEPARTMENT OF MARINE			
Radio Revenue - Traffic		49,081.39	
Piers and wharves		102,681.50	
Harbour Dues		2,172.50	
Dominion Steamers		<u>2,529.19</u>	
			156,464.58
GRAND TOTAL			<u>1,137,589.92</u>

STATEMENT NO. 6.- EXPENDITURES ON DREDGING BY THE DEPARTMENT OF PUBLIC WORKS

	From Confederation to March 31, 1934.	For the Fiscal Year 1933-34
	\$	\$
Nova Scotia	9,363,553.78	237,503.27
Prince Edward Island	2,103,478.11	2,287.30
New Brunswick	13,950,589.31	332,525.69
Quebec	14,760,806.40	124,653.83
Ontario	28,483,817.90	177,418.17
Manitoba	1,774,772.16	40,402.18
Saskatchewan, Alberta and Northwest Territories	191,483.24	.....
British Columbia	11,392,341.67	155,552.58
Generally	152,964.08	.....
TOTAL	82,173,806.65	1,070,343.02

STATEMENT NO. 7.- EXPENDITURES ON VARIOUS HARBOURS BY THE DEPARTMENT OF PUBLIC WORKS

FROM CONFEDERATION TO MARCH 31, 1934

Harbour	Dredging	Construction and Improvements	Repairs	Maintenance and Subsidies	Total
	\$	\$	\$	\$	\$
Halifax, N.S.	16,169	1,720,500	120,812	200,000	2,057,481
*St. John, N.B.	9,076,065	11,650,916	588,646	2,925,858	24,241,485
Chicoutimi, Que.	97,318	188,557	103,723	5,501	395,099
Quebec, Que.	683,478	8,849,311	39,962	1,751,075	11,323,826
Three Rivers, Que.	314,294	1,092,242	44,565	291	1,451,392
*Montreal, Que.	4,635	1,062,771	2,595	2,100,000	3,170,001
Belleville, Ont.	132,542	132,891	1,924	.....	267,357
Trenton, Ont.	298,741	14,842	4,008	.....	317,591
Toronto, Ont.	918,548	10,936,385	94,602	.....	11,949,535
Hamilton, Ont.	736,144	405,906	1,471	1,532	1,145,053
*Port Arthur, Ont.	2,087,801	5,045,243	42,845	751,802	7,927,691
Fort William, Ont.	7,360,550	2,279,443	8,370	4,505	9,652,868
*Vancouver, B.C.	2,683,332	2,449,364	3,574	1,112,019	6,248,289
*Prince Rupert, B.C. ....	.....	79,476	8,530	1,162,497	1,250,503

*Note:- Graving Docks subsidies.- Saint John \$247,500 for 35 years.
 Montreal \$105,000 for 35 years.
 Port Arthur \$ 37,741.50 for 20 years.
 North Vancouver.. \$112,500.00 for 35 years.
 Prince Rupert ... \$ 76,970.88 for 25 years.

PART 11. SHIPPING

Canadian shipping may be divided into three classes: (1) ocean or sea-going shipping, (2) international shipping between Canada and the United States on the inland rivers, canals and lakes, and (3) coasting trade or coastwise shipping. Ocean shipping constitutes the sea-going vessels arriving or departing from Atlantic and Pacific coast ports including Chicoutimi on the Saguenay River and the St. Lawrence River ports up to Montreal from and to foreign ports. In later years as a result of the completion of the Churchill terminal on Hudson Bay a new route of sea-going traffic has been opened. However, the number of vessels and tonnage using this route are as yet of very small importance. Coastwise shipping, or the coasting trade, is defined as shipping between two Canadian ports on the Atlantic or Pacific coast and on the inland international lakes, rivers and canals, or the lakes and rivers accessible to them. Inland international shipping is the term used to cover shipping between Canadian and United States ports on the Great Lakes and international rivers, and on lakes and rivers accessible to shipping from United States, such as the Ottawa, Richelieu, Rideau, Trent, etc.

Statement No. 1 has been compiled from the Shipping Report of the Department of National Revenue for the fiscal year ended March 31, 1934. The sea-going, coastwise and international inland shipping has been compiled to show the distribution by Atlantic and Pacific coasts, the Hudson Bay and the various inland lakes, rivers and canals. For the fiscal year ending March 31, 1934, the total number of all classes of shipping in and out of 196 ports and outports was 230,203 with a registered tonnage of 166,392,165. The corresponding figures for the previous fiscal year were 228,999 vessels with a registered tonnage of 159,348,666, indicating percentage increases of 0.5 and 4.4 per cent respectively in the number of vessels and registered tonnage.

Sea-going Shipping.- A total of 39,405 vessels arrived and departed from 128 ports and outports having a registered tonnage of 55,445,854 during the fiscal year 1933-34. The corresponding statistics for the previous year were 35,928 and 49,766,832, respectively; it will be seen that there was an increase of 9.7 per cent in the number of vessels and 11.4 per cent in the registered tonnage over the fiscal year of 1932-33.

The Atlantic Coast shipping constituted 20,071 vessels in and out of 77 ports and outports with a registered tonnage of 14,441,597. Combining the Atlantic Coast shipping with that of the Saguenay River, the Lower St. Lawrence (Montreal to the sea) and a small amount of shipping via the Hudson Bay and through traffic via the Great Lakes, the total shipping engaged in the Atlantic trade was 23,267 vessels with a registered tonnage of 26,126,340. The St. Lawrence route, Montreal to the sea, alone constituted 3,109 vessels in and out with a registered tonnage of 11,455,172, or 43.8 per cent of the shipping engaged in the Atlantic trade. This is all the more impressive when consideration is given to the fact that the St. Lawrence route is only open on the average seven and one-half months of the year.

The total sea-going shipping via the Pacific Coast in 1933-34 constituted 16,138 vessels in and out of 24 ports and outports with a registered tonnage of 29,319,514; Vancouver and its outports alone had 5,604 vessels in and out with a registered tonnage of 13,315,570, or 45.4 per cent of the total sea-going tonnage engaged in the Pacific trade.

Statement No. 2 shows the distribution by nationalities of the sea-going vessels entered into and cleared from the various ports and outports of Canada for 1933-34. The numbers and, particularly, the tonnage of the vessels entered and cleared indicate clearly the predominance of British shipping over that of all other nations. This is particularly the case on the Lower St. Lawrence and the Atlantic Coast where the bulk of our European and South American trade is handled.

Statement No. 3 further indicates that of a total of 55,445,854 tons register engaged in sea-going traffic, 40.5 per cent was British, 17.0 per cent Canadian and 42.5 per cent foreign.

Inland International Shipping.- Statistics of the Canadian and United States vessels trading on inland waters which arrived and departed from Canadian ports are also shown in Statement No. 1. The total number of vessels and registered tonnage in and out of Canadian ports for the fiscal year ending March 31, 1934, was 56,988 and 27,179,518, respectively. Of these amounts 14,759 (26 per cent) vessels and 16,455,343 (60 per cent) registered tonnage were Canadian shipping and the balance United States. The lakes of the St. Lawrence Basin including Lakes Superior, Michigan, Huron, Erie and Ontario together with the St. Lawrence River and all tributary and connecting rivers comprise the greatest fresh water system of the globe. The benefits of this great waterway are self evident and the Government, fully appreciating this asset, has spent money liberally in the deepening of its harbours and channels, in the construction of new channels, in the building of locks and canals and in providing of lighthouses and fog signals for the direction and safety of the traffic. The principal freight carried on the Great Lakes system is of bulk variety; grain from the Canadian and United States ports at the head of the lakes through to Buffalo, Montreal and other

ports, coal from United States-Lake Erie ports westward to Lake Superior ports and also eastward as far as Montreal, coal up the St. Lawrence to Lake Ontario ports, oil in tankers through to Lake Erie and lakes above, and, of late years, European coal up the St. Lawrence to Lake Ontario ports.

Coastwise Shipping.- In point of number of vessels and registered tonnage the coastal trade constitutes the most important type of water-borne transportation. Coastwise waterways are mainly utilized by shippers of relatively few items of bulk traffic, the outstanding water-borne commodities being coal, iron ore, petroleum, grain, sand, gravel, stone, lumber and logs. The total coastwise shipping as shown in Statement No. 1 was 133,810 vessels in and out of 188 ports with a registered tonnage of 83,766,793. The coastal trade of the Great Lakes and the St. Lawrence River route, including all tributary water routes accessible to the system, totalled 46,744 vessels in and out with a registered tonnage of 46,132,112, or 55 per cent of the total coastal tonnage in the Canadian trade. The coastal trade of the Pacific Coast constituted 54,756 vessels in and out of Canadian ports, with a registered tonnage of 27,007,042, or 32 per cent of the total coastwise shipping and the Atlantic coastal trade amounted to 32,306 vessels in and out with a registered tonnage of 10,624,620, or 13 per cent of the total coastwise shipping.

The greater part of the shipping engaged in the Canadian trade is of the steam or motor type of vessel with a small percentage of sail vessels engaged in the fishing industry off the Atlantic and Pacific coasts. No authentic statistics regarding the total water-borne freight tonnage in and out of all Canadian ports has ever been compiled; however, it is estimated that the water-borne commerce in and out of Canadian ports was between 35,000,000 and 40,000,000 tons for the year 1933, made up as follows:-

Sea-going (Dept. of National Revenue figures)	17,360,000 Tons
Great Lakes (Canadian coastal and international trade with United States) estimated	15,000,000 "
Pacific coastal trade (Canada only) estimated	2,500,000 "
Lower St. Lawrence, Saguenay River and Atlantic coastal trade (Canada only) estimated	1,000,000 "
TOTAL	<u>35,860,000 "</u>

STATEMENT NO. 1.- DISTRIBUTION OF THE TOTAL NUMBER AND TONNAGE OF ALL VESSELS

Distribution	No. of Ports and Outports	SEA-GOING				COASTWISE			
		Arrived		Departed		Arrived		Departed	
		Vessels	Tons Register	Vessels	Tons Register	Vessels	Tons Register	Vessels	Tons Register
ATLANTIC COAST									
Nova Scotia	50	4,469	4,987,610	4,975	5,405,892	11,694	4,061,037	11,549	3,441,342
Prince Edward Island..	6	105	84,661	132	123,535	1,046	356,051	1,013	309,719
New Brunswick	21	5,164	1,880,462	5,226	1,959,437	3,526	1,250,666	3,478	1,205,805
Total	77	9,738	6,952,733	10,333	7,488,864	16,266	5,667,754	16,040	4,956,866
HUDSON BAY	2	10	31,587	10	31,587	1	1,502	1	1,502
PACIFIC COAST									
British Columbia	24	8,101	15,008,619	8,037	14,310,895	27,117	13,335,730	27,639	13,671,312
LAKES									
Memphremagog, Que. ...	2	...	...	...	...	...	...	...	...
Champlain, Que.	1	...	...	...	...	2	15	2	15
Ontario, Ont.	12	...	...	1	649	3,343	3,343,714	3,124	2,899,883
Erie, Ont.	11	...	...	...	...	1,174	527,359	1,157	521,493
St. Clair, Ont.	1	...	...	...	...	...	...	...	...
Huron, Ont.	7	...	...	...	...	617	303,970	630	331,481
Georgian Bay, Ont. ...	9	...	...	...	...	723	844,816	773	925,555
Superior, Ont.	2	...	...	...	...	1,537	3,258,047	1,689	3,540,115
Lake of the Woods, Ont.	1	...	...	...	...	5	30	5	30
Winnipeg, Man.	1	...	...	...	...	7	2,203	7	2,203
Total	47	...	...	1	649	7,408	8,280,154	7,387	8,220,775
RIVERS									
Saguenay, Que.	2	32	76,615	29	85,196	157	327,344	159	303,088
Richelieu, Que.	1	...	...	...	...	5	147	3	45
St. Lawrence & Gulf...	22	1,619	6,139,521	1,490	5,315,651	11,490	9,797,130	11,381	10,361,890
Ottawa - Hull, Que....	1	...	...	...	...	236	37,933	237	38,141
Niagara, Ont.	1	...	...	...	...	777	599,934	778	785,222
Grand, Ont.	1	...	...	...	...	6	156	4	115
Detroit, Ont.	3	...	...	...	...	430	494,029	433	489,247
St. Clair, Ont.	3	...	...	...	...	786	624,530	775	554,727
Rainy, Ont.	2	...	...	...	...	4	48	4	48
Kootenay, B.C.	1	...	...	...	...	...	...	...	...
Yukon, Yukon	2	...	...	...	...	86	58,351	87	58,339
Total	39	1,651	6,216,136	1,519	5,400,847	13,977	11,939,662	13,861	12,590,862
CANALS									
Welland Ship, Ont. ...	4	1	872	4	3,065	1,113	1,470,857	899	1,073,250
Rideau, Ont.	2	...	...	...	...	278	46,693	282	47,180
Sault Ste. Marie	1	...	...	...	...	755	1,181,191	786	1,281,503
Total	7	1	872	4	3,065	2,146	2,698,741	1,967	2,401,933
GRAND TOTAL	196	19,501	28,209,947	19,904	27,235,907	66,915	41,923,543	66,895	41,843,250

ARRIVED AND DEPARTED, PORTS AND OUTPORTS FOR THE FISCAL YEAR ENDED MARCH 31, 1934

INLAND (RIVERS, LAKES AND CANALS)				TOTAL			
Arrived		Departed		Arrived		Departed	
Vessels	Tons Register	Vessels	Tons Register	Vessels	Tons Register	Vessels	Tons Register
...	...	...	...	16,163	9,048,647	16,524	8,847,234
...	...	...	...	1,151	440,712	1,145	433,254
...	...	...	...	3,690	3,131,128	8,704	3,165,242
...	...	...	...	26,004	12,620,487	26,373	12,445,730
...	...	...	...	11	33,089	11	33,089
...	...	...	...	35,218	28,344,349	35,676	27,982,207
104	214	104	214	104	214	104	214
...	...	...	...	2	15	2	15
2,659	3,572,887	2,890	4,343,671	6,002	6,916,601	6,015	7,244,203
1,102	584,688	1,074	565,826	2,276	1,112,047	2,231	1,087,319
3	30	2	20	3	30	2	20
205	111,145	172	93,417	822	415,115	802	424,898
343	779,379	360	869,876	1,066	1,624,195	1,133	1,795,431
613	1,510,925	468	1,343,983	2,150	4,868,972	2,157	4,884,098
140	5,081	137	5,211	145	5,111	142	5,241
...	...	...	...	7	2,203	7	2,203
5,169	6,664,349	5,207	7,222,218	12,577	14,944,503	12,595	15,443,642
...	...	4	4,384	189	403,959	192	392,668
42	5,880	52	6,843	47	6,027	55	6,888
6,111	1,047,442	6,252	1,314,249	19,220	16,984,153	19,123	16,991,790
...	...	...	...	236	37,933	237	38,141
519	508,343	518	518,855	1,296	1,108,277	1,296	1,304,077
11	155	10	180	17	311	14	295
1,256	1,288,275	1,233	1,278,314	1,686	1,782,304	1,666	1,767,561
13,860	2,115,145	13,887	2,724,926	14,646	2,739,675	14,662	3,279,653
43	531	41	503	47	579	45	551
4	50	4	50	4	50	4	50
16	7,040	16	6,425	102	65,391	103	64,764
21,862	4,972,861	22,017	5,854,729	37,490	23,128,659	37,397	23,846,438
429	654,310	630	1,043,827	1,543	2,126,039	1,533	2,120,142
...	...	...	...	278	46,693	282	47,180
868	427,046	806	340,178	1,623	1,608,237	1,592	1,621,681
1,297	1,081,356	1,436	1,384,005	3,444	3,780,969	3,407	3,789,003
28,328	12,718,566	28,660	14,460,952	114,744	82,852,056	115,459	83,540,109

STATEMENT NO. 2.- NATIONALITIES OF SEA-GOING VESSELS INWARDS AND OUTWARDS, FISCAL YEAR ENDED MARCH 31, 1934.

INWARDS			OUTWARDS		
	Number	Tons Register		Number	Tons Register
Great Britain	11,805	16,163,912	Great Britain	12,136	15,708,200
Belgium	2	9,796	Belgium	2	9,796
China	19	73,632	China	19	73,530
Cuba	1	9	Cuba .....	..	..
Denmark	210	587,936	Denmark	207	561,681
Finland	12	32,239	Finland	10	28,593
France	90	160,117	France	96	165,136
Germany	143	568,654	Germany	143	575,279
Greece	11	32,321	Greece	14	44,461
Italy	66	237,162	Italy	74	265,037
Japan	327	2,209,341	Japan	336	1,577,642
Jugo-Slavia	3	11,556	Jugo-Slavia	3	11,556
Netherlands	101	492,498	Netherlands	98	487,190
Norway	974	1,867,125	Norway	1,064	1,941,362
Panama	20	48,526	Panama	18	43,851
Poland	23	83,045	Poland	22	81,368
Portugal	1	321	Portugal	1	321
Spain	26	18,109	Spain	29	21,464
Sweden	142	468,767	Sweden	148	482,534
United States	5,525	5,144,881	United States	5,484	5,156,906
Total	19,501	28,209,947	Total	19,904	27,235,907

STATEMENT NO. 3.- VESSELS, BRITISH, CANADIAN AND FOREIGN, INWARDS AND OUTWARDS FROM AND TO THE SEA, FISCAL YEAR ENDED MARCH 31, 1934.

INWARDS						OUTWARDS					
	Vessels	Tons Register	Freight Tons Weight	Freight Tons Measurement	Crew		Vessels	Tons Register	Freight Tons Weight	Freight Tons Measurement	Crew
With Cargoes-						With Cargoes-					
British	1,903	8,576,031	2,940,392	156,866	186,219	British	2,660	10,033,382	5,069,224	580,226	194,925
Canadian	3,528	3,601,030	1,481,969	21,448	121,727	Canadian	3,622	3,168,838	782,885	188,300	83,896
Foreign	3,549	6,329,535	3,043,727	23,513	150,649	Foreign	4,197	8,416,439	4,044,783	551,455	159,393
Total	8,980	18,506,596	7,466,088	201,827	458,595	Total	10,479	21,618,659	9,896,892	1,319,981	438,214
In Ballast-						In Ballast-					
British	1,499	2,858,068			44,060	British	769	1,013,006			21,796
Canadian	4,875	1,128,783			34,413	Canadian	5,085	1,492,974			55,638
Foreign	4,147	5,716,500			104,823	Foreign	3,571	3,111,268			83,734
Total	10,521	9,703,351			183,296	Total	9,425	5,617,248			161,168
GRAND TOTAL ...	19,501	28,209,947	7,466,088	201,827	641,891	GRAND TOTAL ...	19,904	27,235,907	9,896,892	1,319,981	599,382

PART 111.- HARBOUR COMMISSIONS

Harbour Commissions are appointed for the administration of the various harbours for which the commission form of management has been authorized by Parliament in Acts of Incorporation. The Act provides for the appointment of a personnel of usually three commissioners who will constitute the commission to administer the affairs of the harbour to which the Act applies. The harbours that are now administered by Harbour Commissioners are fourteen in number and are fairly similar in constitution but vary in personnel and powers.

Table 1.- Particulars of Harbour Commissions with the Year of the Incorporating Statute

(1) Federal Appointed Commissions-(Seven)

Montreal	-	1894	
Quebec	-	1899	
Vancouver	-	1913	
Three Rivers-		1923	Three commissioners appointed by the Government to hold office during pleasure.
Chicoutimi	-	1926	
Halifax	-	1927	
St. John	-	1927	

(2) Wholly or Partially Municipal Appointed Commissions (Seven)

Belleville	-	1899	3 Commissioners, the Mayor ex-officio and 2 appointed by the Government.
Toronto	-	1911	5 Commissioners, 3 appointed by the city, 1 by Government, and 1 by Board of Trade.
Winnipeg	-	1912	5 Commissioners appointed by the municipality.
Hamilton	-	1912	3 Commissioners, 2 appointed by the Government and 1 by municipality.
North Fraser-		1913	3 Commissioners, 2 appointed by the Government and 1 by municipality.
New Westminster		1913	3 Commissioners, 2 appointed by the Government and 1 by municipality.
Trenton	-	1922	3 Commissioners, 2 appointed by the Government and 1 by municipality.

There appears to be no clear dividing line between the class of port operated by a commission and the class operated by Federal harbour masters. The more important among the latter are Port William, Port Arthur, Victoria, Prince Rupert, Sorel, Sydney and Charlottetown. Some of these handle larger volumes of traffic than ports under commissions and in no sense are they of purely local importance. Harbours under commission control aim to be more or less self-sustaining, but harbours under harbour masters are maintained by the Federal Government and in some instances services are supplied to shipping by these latter at lower charges than charged by the former, even when the two ports are competitors for the same traffic.

The various Acts of Incorporation are fundamentally similar. The commissioners are empowered after submitting the necessary plans, specifications and estimates to the Minister of Marine for his recommendation and with the approval of the Governor in Council to borrow on debentures terminable in varying periods, and secured on the commissioners' property at rates and on terms approved by the Governor in Council for the purpose of constructing, acquiring and repairing or improving wharves and other works in the harbour. The operating expenses are a first charge on the commissioners' revenue, the payment of interest on debentures a second charge and the establishment of a sinking fund for the repayment of debentures a third charge. In most cases the various harbour commissions have been able to earn their operating expenses. Halifax, St. John, Chicoutimi, Three Rivers and Quebec as at December, 1933, had total interest accrued and unpaid of \$9,572,881 and Montreal was the only harbour commission which paid sinking fund charges during 1933.

All the harbour commissions have to submit annual reports to the Government and the accounts are subject to audit by the Department of Marine. St. John and Halifax only have to submit yearly estimates of requirements; all harbours, however, are required to obtain sanction for capital expenditures. Montreal has devoted at times surplus revenue to capital works - a practice which has only stopped with the surpluses. The later Acts of Incorporation, however, give the Government the control over expenditure from revenue as well as capital expenditure. Although the harbour commissions are authorized by their Acts of Incorporation to raise funds by debentures, with few exceptions the necessary funds have been advanced by the Dominion Government authorized by special acts, the harbour commission depositing its debentures with the Government as collateral.

In the case of wholly or partially municipal appointed commissions, such as the Toronto Harbour Commission, harbour works have been developed by the city through the issue of bonds or debentures guaranteed by the city. The Federal Government has also over a period of years voted through the Department of Public Works approximately \$12,000,000 to the end of the fiscal year 1933-34 for such works as dredging, breakwater construction, etc. Statement 7 of Part 1 shows the principal amounts expended by the Department of Public Works on the more important harbours of Canada to March 31, 1934.

Water transportation indeed cannot be studied with any degree of completeness without taking into account the co-ordination of rail and water transportation at many of the seaboard and inland ports. A complete description of ocean, lake or river ports requires consideration of the terminal facilities. Nowadays many facilities, especially designed to foster interchange movements, are provided by the various harbour commissions. Terminals may be said to perform two distinct functions, commercial and industrial, a fact which determines the facilities they need to provide. The commercial facilities have to do with the handling and shipment of through traffic brought to them for exportation from many outlying points by rail or by inland and coastwise water carriers and also with traffic imported from foreign countries for transshipment to outlying destinations. Facilities must also be provided to serve the local industries situated at the port, in the city or territory adjacent to the harbour. The terminal facilities first of all include the necessary docks and wharves. Some wharves are used for the handling of passenger traffic, but many more are freight cargo wharves, some of which serve only general cargoes while others are employed for special traffic such as coal, lumber, oil, grain and sugar. Many are covered with sheds or warehouses for the protection, assembling and handling of cargoes. The freight handling facilities at the wharves in the harbour constitute a second harbour essential. They may be general appliances for handling miscellaneous cargoes or special facilities for the handling of bulky commodities; special provision is made for uniform package freight. In addition cold storage facilities, switching connections, harbour railroad, grain elevators, coal bunkers and dry-dock accommodation are provided. The Canadian Pacific and Canadian National railroads and many other private companies own and operate many facilities and the two railroads are engaged in inland and sea-going transportation through the operation of a fleet of boats on the Great Lakes and the Pacific and Atlantic oceans.

The principal harbours of Canada which are administered by harbour commissions are: Montreal, Quebec, Three Rivers, Chicoutimi, Halifax, St. John, Vancouver and New Westminster. Part 1 of this report (Statement 1) has given the expenditures on these harbours by the government to March 31, 1934, either by way of loans to or appropriations for the various harbour commissions. Part 1 (Statement 7) has also given the amount expended by the Department of Public Works on these harbours. The purpose of this section of the report is to give a detailed statistical analysis of the more important harbours under the commission form of management and statistical tables have been compiled under the following headings:- (1) harbour commission facilities, (2) geographical location of the various ports to the important international trade centres, (3) the tonnage and classification of types of vessels entered the harbours, (4) the nationality and tonnage of sea-going vessels that arrived at some of the important harbours, (5) the traffic and operating results, (6) the traffic and operating results of the Montreal and Quebec harbour railways, (7) summary of grain handling at the more important grain ports, and (8) a summary of the tonnage of commodities in and out of the various harbours.

A summary of the traffic and operating results of Montreal, Quebec, Vancouver, Halifax, St. John, Chicoutimi, Three Rivers and New Westminster for the year ending December 31st, 1933, is given below.

Table 2.- Summary of Traffic and Operating Results Year 1933 of the Montreal, Quebec, Vancouver, Halifax, St. John, Three Rivers, Chicoutimi and New Westminster Harbour Commissions

Gross revenues	\$	6,792,000
Operating expenses	\$	4,097,000
Net operating revenue	\$	2,695,000
Interest accrued on debentures-		
To the Government	# \$	5,916,270
To the Public	\$	169,033
	\$	6,085,303
Sinking fund charges	\$	57,000 x
Deficit for the year	\$	3,968,000
Ratio of operating expenses to gross revenue	%	60.3
Loans secured by debentures as at Dec. 31-		
Held by the Government	\$	134,200,000
Held by the Public	\$	5,742,760
Total interest accrued and unpaid at Dec. 31	\$	9,572,881 †
Investment in harbour facilities at Dec. 31	\$	155,473,453
Sinking fund reserve at Dec. 31	\$	5,551,110
Total freight handled over wharves, including grain	Tons	22,573,500
Average gross revenue per ton	Cents	30.1
Average operating expenses per ton	Cents	18.1
Capital cost per ton of commodities handled over Commissioners' Wharves, including grain	\$	6.9

- \$3,591,996 paid during year by Montreal, Vancouver and New Westminster.

x - Montreal.

† - Halifax, St. John, Chicoutimi, Three Rivers and Quebec.

A study of the shipments by commodities over the various wharves of the commissioners for the year 1933 shows the relative importance of each harbour in the domestic and international commerce of the Dominion. Excluding the local and foreign coastwise tonnage in and out of Vancouver, which has not been classified, the total tonnage over the eight commissioners' wharves including grain was 20,510,000 tons for the year ending December 31, 1933. A subdivision of this tonnage shows that agricultural products accounted for approximately 6,757,000 tons (33.0%), animal products 322,600 tons (1.6%), mining products 7,305,000 tons (35.6%), forest products 1,225,000 tons (6.0%) and manufactures and miscellaneous 4,890,000 tons (23.8%).

Toronto and Hamilton being lake ports of considerable importance, a statistical analysis outlining the facilities, the traffic in and out and the shipment by commodities for the year ending December 31st, 1933, has been included. Since the completion of the Welland Ship Canal, which increased the allowable draught of vessels from fourteen to twenty-five feet, both Hamilton and Toronto have had a very considerable increase in tonnage handled.

HALIFAX HARBOUR COMMISSION

Harbour Facilities, 1933.-

Ocean berths with sheds	13
Ocean berths without sheds	3
Grain loading berths	5
Shed floor area (sq. ft.)	640,000
Wharfage (lineal feet)	9,933
Elevator capacity (bushels)	2,200,000

Note:- In addition there are dock facilities owned by private enterprises, such as Acadia Sugar Refining Company, Imperial Oil Company, Ltd., Irving Oil Co., and the Department of Marine.

HARBOUR OF HALIFAX

Table No. 1.- DISTANCES

Ocean

	Distances in Nautical Miles				
	Liverpool	Genoa	Hong Kong	Sydney Australia	Kingston Jamaica
Halifax	2,490	3,530	11,046	10,570	1,840
Montreal	2,760	4,050	11,570	10,877	2,700
New York	3,040	4,045	11,336	9,704	1,460
Coastwise					
Distance from Halifax (in nautical miles)					
Head of the Lakes	1,950	Head of the Lakes-			
Montreal	895	Via Cochrane			1,730
St. Johns (Newfoundland)	540	Via Bay Ports			1,720
Sydney (Cape Breton Island)	246	Montreal-			
Saint John, N.B.	260	Via St. John			760
New York	600	Via Lewis			842
Vancouver	6,455	Quebec-			
		(I.C.R.)			690
		(Transcontinental)			660
Inland					
Distances from Halifax (in statute miles)					

Table No. 2.- HARBOUR OF HALIFAX - NUMBER OF VESSELS AND TONNAGE ENTERED

Year	Trans-Atlantic		Coastwise		Total	
	No. of Vessels	Tons Register	No. of Vessels	Tons Register	No. of Vessels	Tons Register
1930	1,004	4,111,910	2,269	859,406	3,273	4,971,316
1931	890	3,769,971	2,253	732,726	3,143	4,502,697
1932	904	3,583,230	2,066	638,104	2,970	4,221,334
1933	978	3,744,709	2,007	588,261	2,985	4,332,970

Table No. 3.- HARBOUR OF HALIFAX - THE NATIONALITIES AND NET TONNAGE OF SEA-GOING VESSELS ENTERED, 1933-34
(Customs Return)

Nationality	Number of Vessels	Tonnage
Great Britain	940	2,738,227
Denmark	34	108,444
France	9	4,163
Germany	23	144,914
Netherlands	17	79,189
Norway	109	154,001
Sweden	40	205,384
United States	58	107,528
Other Nationalities	29	90,159
Total	1,259	3,632,009

Table No. 4 - HARBOUR OF HALIFAX - TRAFFIC AND OPERATING RESULTS

	Unit	1929	1930	1931	1932	1933
Gross revenues	\$	414,114	421,247	345,136	333,815	342,280
Operating expenses	\$	412,210	476,508	404,173	329,713	334,598
Net operating revenue or deficit	\$	1,904	Dr. 55,261	Dr. 59,037	4,102	7,683
Interest on loans secured by debentures-						
Paid to the Government	\$	1,446	59,500	4,288	4,769	....
Paid to the Public .....	\$	....	....	....	....	....
Sinking fund charges .....	\$	....	....	....	....	....
Profit or loss for the year	\$	458	Dr. 114,761	Dr. 63,325	Dr. 667	7,683
Ratio of operating expenses to gross revenue	%	99.6	113.1	117.1	98.8	97.8
Loans secured by debentures at Dec. 31-						
Debentures held by Government	\$	435,000	4,616,000	6,883,000	8,392,250	8,767,160
Debentures held by the Public .....	\$	....	....	....	....	1,700,000
Interest accrued on Govt. loans secured by debentures and unpaid at December 31	\$	7,379	80,998	217,667	419,357	860,725
Investment in harbour facilities at December 31	\$	1,812,000	5,381,000	7,539,000	8,615,000	11,132,280
Sinking fund reserves at Dec. 31 .....	\$	....	....	....	....	....
Total freight handled over Commissioners' wharves including grain	Tons	904,000	799,300	702,000	679,000	853,053
Average gross revenue per ton	Cents	45.8	52.7	49.2	49.2	40.1
Average operating expense per ton	Cents	45.6	59.6	57.6	48.6	39.2
Capital cost per ton of commodities handled over Commissioners' wharves including grain	\$	2.0	6.7	10.7	12.7	13.0

Table No. 5.- HARBOUR OF HALIFAX - GRAIN HANDLING AT ELEVATOR

Year	Receipts			Deliveries			Total
	Water-borne	Rail-borne	Total	Water-borne	Rail-borne	Local	
1929	-	-	6,226,892	-	-	-	6,260,314
1930	-	-	830,477	-	-	-	731,995
1931	-	-	1,244,192	-	-	-	1,126,787
† 1932	752,917	1,809,163	2,562,080	949,908	491,710	253,802	1,695,420
1933	1,990,148	827,219	2,817,367	1,961,356	502,933	277,508	2,741,797

† Marine tower of grain elevator completed 1932.

Table No. 6.- HARBOUR OF HALIFAX - SHIPMENTS BY COMMODITIES, 1933.

Commodities	Inward Tons	Outward Tons	Total Tons	Per cent of Total
Agricultural Products				
Wheat	39,331	59,577	98,908	
Corn	12,229	223	12,452	
Oats	2,634	2,505	5,139	
Barley .....	...	6	6	
Flaxseed	11	...	11	
Other Grain	5,631	28	5,659	
Flour	12,595	55,695	68,290	
Other mill products	5,119	10,987	16,106	
Hay and Straw .....	...	1,074	1,074	
Apples (fresh)	766	123,092	123,858	
Other Fruit (fresh)	19,948	801	20,749	
Potatoes	10	15,544	15,554	
Other Fresh Vegetables	1,292	4,719	6,011	
Other Agricultural Products	33,541	7,048	40,589	
Total	133,107	281,299	414,406	23.7
Animal Products				
Horses	1	6	7	
Cattle and Calves .....	...	607	607	
Sheep .....	...	19	19	
Hogs .....	...	10	10	
Dressed Meats (fresh)	30	1,262	1,292	
Dressed Meats (cured, canned)	541	6,607	7,148	
Other Packing House Products	239	6,697	6,936	
Poultry	2	334	336	
Eggs .....	...	209	209	
Butter	279	355	634	
Cheese	38	665	703	
Wool	2,829	441	3,270	
Hides and leather	182	1,141	1,323	
Other Animal Products	281	161	442	
Total	4,422	18,514	22,936	1.3
Mine Products				
Anthracite Coal	56,851	177	57,028	
Bituminous Coal	78,215	1,813	80,028	
Coke	5,728	107	5,835	
Iron Ores	1	...	1	
Other Ores and Concentrates	12	1,401	1,413	
Base Bullion, Matte, Pig and Ingot	2	13,678	13,680	

Table No. 6.- HARBOUR OF HALIFAX - SHIPMENTS BY COMMODITIES, 1933. (Continued)

Commodities	Inward Tons	Outward Tons	Total Tons	Per cent of Total
Mine Products (Continued)				
Sand and Gravel	8,409	3	8,412	
Slate, Dimension or Block Stone	140	1	141	
Crude Petroleum	466,053	...	466,053	
Asphalt (natural)	25	28	53	
Salt	8,818	355	9,173	
Other Mine Products	1,207	263	1,470	
Total	625,461	17,826	643,287	36.7
Forest Products				
Logs, Posts, Poles, Piling .....	...	76	76	
Ties .....	...	55	55	
Pulpwood .....	...	42	42	
Lumber, Timber, Box, Crate & Cooperage Material	672	50,277	50,949	
Other Forest Products	506	2,013	2,519	
Total	1,178	52,463	53,641	3.1
Manufactures and Miscellaneous				
Gasolene	28,868	200,214	229,082	
Petroleum Oils, etc.	24,451	45,132	69,583	
Sugar	41,698	13,395	55,093	
Iron, pig and bloom	46	27	73	
Nails and fastenings .....	...	1	1	
Iron & Steel (bar, sheet, structural, etc.)..	2,678	1,340	4,018	
Castings, Machinery and Boilers	913	287	1,200	
Cement	18,667	348	19,015	
Brick and Artificial Stone	675	124	799	
Lime and Plaster	6	240	246	
Agricultural Implements and Vehicles				
other than Automobiles	19	228	247	
Sewer Pipe and Drain Tile	21	11	32	
Automobiles, Auto Trucks and Parts	1,215	4,193	5,408	
Household Goods & Settlers' Effects	269	345	614	
Furniture	210	1,094	1,304	
Liquor Beverages	1,577	3,747	5,324	
Fertilizers, all kinds	2,556	538	3,094	
Newsprint Paper	17	20,859	20,876	
Other Paper	700	559	1,259	
Paper Board, Pulpboard and Wallboard	85	5,373	5,458	
Wood Pulp	2	579	581	
Fish (fresh, frozen, cured)	45,679	25,168	70,847	
Canned Goods (except meat)	4,458	7,250	11,708	
Other Manufactures and Miscellaneous	48,094	55,680	103,774	
Merchandise	5,556	1,566	7,122	
Total	228,460	388,298	616,758	35.2
GRAND TOTAL	992,628	758,400	1,751,028	100.0

SAINT JOHN HARBOUR COMMISSION

Harbour Facilities, 1933-

Ocean berths with sheds	13
Ocean berths without sheds	1
Grain loading berths, general	8
Elevator capacity in bushels	1,500,000
Shed floor area (sq. ft.)	446,400
Wharfage (lineal feet)	7,950

In addition there are private facilities of the Canadian Pacific Railway, Atlantic Sugar Refineries and Port Royal Pulp and Paper Company. Also the St. John Dry Dock and Shipbuilding Company, Ltd. operate a dry dock 1,178 feet long, 146 feet wide and 53 feet draught on sill, for which the Dominion Government votes an annual subsidy of \$247,500 for 35 years.

HARBOUR OF SAINT JOHN

Table No. 1.- DISTANCES

OCEAN

	Distances in Nautical Miles			
	Liverpool	Genoa	Kingston Jamaica	Hong Kong Via Suez
St. John	2,756	3,730	1,830	11,036
Halifax	2,490	3,530	1,840	11,046
New York	3,040	4,045	1,460	11,336
COASTWISE		INLAND		
Distances from Saint John (in nautical miles)		Distances from Saint John (in statute miles)		
Head of the Lakes by water	2,200	Head of the Lakes via Bay Ports		1,362
Halifax	260	Montreal -		
Montreal	1,145	C.P.R.		482
Boston	350	C.N.R.		630
New York	550	Halifax		278
St. Johns, Newfoundland	790			
Vancouver	6,445			

Table 2.- HARBOUR OF SAINT JOHN - NUMBER OF VESSELS AND TONNAGE ENTERED (Customs Return)

Fiscal Year ended March 31	TRANS-ATLANTIC		COASTWISE		TOTAL	
	No. of Vessels	Tons Register	No. of Vessels	Tons Register	No. of Vessels	Tons Register
1925-26	858	1,410,950	1,732	396,342	2,590	1,807,292
1926-27	1,132	1,515,196	1,813	440,056	2,945	1,955,252
1927-28	968	1,335,528	1,803	382,548	2,771	1,718,076
1928-29	1,282	1,459,320	1,949	400,422	3,231	1,859,742
1929-30	812	1,325,108	1,824	407,542	2,636	1,732,650
1930-31	719	1,327,680	1,640	670,736	2,359	1,998,416
1931-32	672	1,214,765	1,525	846,009	2,197	2,060,774
1932-33	636	1,411,293	1,340	804,761	1,976	2,216,054
1933-34	684	1,476,804	1,656	913,884	2,340	2,390,688

Table No. 3.- HARBOUR OF SAINT JOHN - THE NATIONALITIES AND NET TONNAGE OF SEA-GOING VESSELS ENTERED, 1933

Nationality	Number of Vessels	Tonnage
Great Britain	287	970,943
Denmark	10	8,994
Germany	9	25,409
Italy	8	23,533
Japan	3	12,715
Norway	75	93,274
Panama	13	26,689
Sweden	4	6,832
United States	83	240,945
Total	492	1,409,334

Table No. 4.- HARBOUR OF SAINT JOHN - TRAFFIC AND OPERATING RESULTS

	1928	1929	1930	1931	1932	1933
Gross revenue	\$ 344,615	341,817	310,135	245,856	222,100	238,688
Operating expenses	\$ 184,882	224,465	230,002	254,389	119,893	164,547
Net operating revenue or deficit	\$ 159,733	117,352	80,133	Dr. 8,533	102,207	74,141
Interest on loans secured by debentures-						
Paid to the Government .....	\$ ...	...	...	...	....	...
Paid to the Public- (City of Saint John)	\$ 99,335	99,335	99,335	99,335	96,974	91,714
Sinking fund charges .....	\$ ...	...	...	...	...	...
Profit or loss for the year	\$ 60,398	18,017	Dr. 19,202	Dr. 107,868	5,230	Dr. 17,573
Ratio of operating expenses to gross revenue	% 53.6	65.7	74.2	103.5	54.0	68.9
Loans secured by debentures at December 31-						
Debentures held by Govt. ...	\$...	1,881,000	3,243,000	6,862,000	11,112,281	12,206,365
Debentures held by Public ..	\$ 2,135,118	2,135,118	2,135,118	2,135,118	2,135,118	2,135,118
Interest accrued on Govt. Loans secured by debentures and unpaid at December 31	\$ 26,297	52,594	151,867	280,511	568,049	642,926
Investment harbour facilities at December 31	\$ 7,191,165	8,883,780	10,586,460	13,709,760	16,428,825	18,458,510
Sinking fund reserve at Dec. 31..	\$ ...	...	...	...	...	...
Total freight handled over Commissioners' wharves including grain	Tons 1,727,100	1,750,000	1,406,000	1,281,000	1,102,000	1,241,000
Average gross revenue per ton	Cents 19.9	19.5	22.0	19.2	20.2	19.2
Average operating expense per ton	Cents 10.7	12.8	16.4	19.9	10.9	13.3
Capital cost per ton of commodities handled over Commissioners' wharves including grain	\$ 4.2	5.1	7.5	10.7	14.9	14.9

‡ Includes \$4,420,000 capital expenditures by Public Works.
x \$2,151,663 written off in 1931 as a result of fire.

Table No. 5.- HARBOUR OF SAINT JOHN - GRAIN DELIVERIES

	1928	1929	1930	1931	1932	1933
Canadian Grain	Bushels 11,023,541	10,588,466	5,743,107	9,914,667	4,603,338	6,140,281
	Per cent... 47.5	45.7	61.1	95.5	73.0	92.3
American Grain	Bushels 12,188,228	12,541,940	3,650,462	440,367	1,707,523	520,517
	Per cent... 52.5	54.3	38.9	4.5	27.0	7.7
Totals	Bushels 23,211,769	23,130,406	9,393,569	10,355,034	6,310,861	6,660,798
	Per cent... 100.0	100.0	100.0	100.0	100.0	100.0

Table No. 6.- HARBOUR OF SAINT JOHN - SHIPMENTS BY COMMODITIES, 1933.

Commodities	Inward Tons	Outward Tons	Total Tons	Per cent of Total
Agricultural Products				
Wheat .....	...	190,487	190,487	
Corn	12,847	733	13,580	
Oats .....	...	1,418	1,418	
Barley .....	...	1,866	1,866	
Rye .....	...	1,640	1,640	
Other Grain	905	2,828	3,733	
Flour	3,501	57,108	60,609	
Other Mill Products	3,293	11,669	14,962	
Hay .....	...	2,876	2,876	
Apples (fresh) .....	...	10,740	10,740	
Potatoes .....	...	5,800	5,800	
Other fruit and vegetables (fresh)	19,565	8,296	27,861	
Other Agricultural Products	13,336	4,494	17,830	
Total	53,447	299,955	353,402	28.5
Animal Products				
Cattle .....	...	6,064	6,064	
Meats	174	16,594	16,768	
Other packing house products .....	...	22,551	22,551	
Cheese	76	365	441	
Wool	672	...	672	
Leather	136	81	217	
Other Animal Products	284	106	390	
Total	1,342	45,761	47,103	3.8
Mine Products				
Coal, anthracite	98,938	...	98,938	
Coal, bituminous	105,861	969	106,830	
Coke	942	...	942	
Copper ore	397	...	397	
Base Bullion, Matte and Ingot .....	...	4,993	4,993	
Salt	3,467	...	3,467	
Other Mine Products	1,616	2,744	4,360	
Total	211,221	8,706	219,927	17.7
Forest Products				
Poles .....	...	700	700	
Pulpwood	9,922	1,139	11,061	
Lumber, Timber & Misc. Material	409	92,997	93,406	
Total	10,331	94,836	105,167	8.5
Manufactures and Miscellaneous				
Gasolene	52,792	...	52,792	
Petroleum Oils	34,471	...	34,471	
Sugar, raw and refined	72,824	24,489	97,313	
Iron and steel, various	7,362	19,865	27,227	
Machinery	2,362	410	2,772	
Brick	1,007	...	1,007	
Agricultural Implements .....	...	909	909	
Automobiles and accessories	783	20,186	20,969	
Liquor	820	119	939	
Fertilisers	22,525	...	22,525	
Newsprint .....	...	6,172	6,172	
Other paper	428	261	689	
Paper Board, Pulpboard and Wallboard	119	399	518	
Wood pulp .....	...	26,767	26,767	
Fish	837	5,430	6,267	
Canned Goods	2,041	1,639	3,680	
Merchandise, general	51,952	74,771	126,723	
Other Manufactures and Miscellaneous	51,203	32,608	83,811	
Total	301,526	214,025	515,551	41.5
GRAND TOTAL	577,867	663,283	1,241,150	100.0

QUEBEC HARBOUR COMMISSION

Harbour Facilities-

	<u>Commissioners</u>	<u>Private</u>
Ocean berths-		
With single storey sheds	10	
With double storey sheds	3	
Open berths	6	4
Total	<u>19</u>	<u>4</u>
Grain loading berths-		
General	3	
Grain only	1	
Total	<u>4</u>	
Shed area	735,023	
(Sq. feet)		
Wharfage	13,500	2,800
(Lineal feet)		
One grain elevator.....	4,000,000	
(Capacity in bushels)		
One cold storage plant..	1,500,000	
(Capacity in cu.feet)		
Two graving docks (600 X 62 ft. and 1150 X 120 ft.)		
Quebec harbour railway mileage	32	

HARBOUR OF QUEBEC

Table No. 1.- DISTANCES

OCEAN

	Distances in Nautical Miles				
	Liverpool	Genoa	Hong Kong Via Suez	Sydney Australia	Kingston Jamaica
Quebec-					
Via Belle Isle Strait	2,620				
Via Cabot Strait		3,910	11,430	10,737	2,560
Halifax	2,490	3,530	11,046	10,070	1,840
New York	3,040	4,045	11,336	9,704	1,460
<u>COASTWISE</u>		<u>INLAND</u>			
Distances from Quebec (in Nautical Miles)		Distances from Quebec (in Statute Miles)			
Halifax	756	Head of the Lakes-			
		By water			1,375
		Via Cochrane, all rail			1,045
Saint John, N.B.	1,005	Via Bay Ports, rail and water			1,050
		Montreal-			
		By water			160
		By rail			172
New York	1,350	Chicoutimi-			
		By water			200
		By rail			227
St. Johns, Newfoundland	890	Halifax (I.C.R.)			690
		Halifax (Transcontinental)			660
		Saint John, N.B.			494

Table No. 2.- HARBOUR OF QUEBEC - NUMBER OF VESSELS AND TONNAGE ENTERED

Year	<u>TRANS-ATLANTIC</u>		<u>COASTING</u>		<u>INLAND AND RIVER</u>		Total No. of Vessels	Total Gross Tonnage
	No. of Vessels	Gross Tonnage	No. of Vessels	Gross Tonnage	No. of Vessels	Gross Tonnage		
1926	467	3,204,041	299	417,288	231	427,087	997	4,048,416
1927	449	3,445,338	320	431,131	327	404,091	1,096	4,280,560
1928	577	3,894,331	288	372,972	230	281,318	1,095	4,548,621
1929	483	3,530,034	326	431,544	270	311,142	1,079	4,272,720
1930	464	3,461,677	280	447,375	203	326,133	947	4,235,185
1931	423	4,313,114	267	464,331	105	225,447	795	5,002,892
1932	391	4,181,687	330	820,651	79	191,420	800	5,193,758
1933	454	4,230,734	331	813,370	278	508,506	1,063	5,552,610

Table No. 3.- HARBOUR OF QUEBEC - TRAFFIC AND OPERATING RESULTS

	Unit	1926	1927	1928	1929	1930	1931	1932	1933
Gross revenues	\$	678,882	702,310	788,490	735,593	889,475	803,753	630,810	687,816
Operating expenses	\$	549,272	585,539	600,131	657,688	730,000	838,101	615,865	638,767
Net operating revenue or deficit ..	\$	129,610	116,771	188,369	77,905	159,475	Dr. 34,348	14,945	49,049
Interest on debentures-									
Paid to Government	\$								
Paid to Public	\$	46,000	46,000	43,000	39,333	32,000	32,000	32,000	32,000
Sinking fund charges	\$								
Profit or loss for the year	\$	83,610	70,771	145,369	38,572	127,475	Dr. 66,348	Dr. 17,055	17,049
Ratio of operating expenses to gross revenues	%	80.9	83.4	76.1	89.4	82.1	104.3	97.6	92.9
Loans secured by debentures at Dec. 31-									
Debentures held by the Govt.	\$	13,531,995	14,669,995	16,855,995	20,034,995	22,972,995	24,429,995	26,150,095	26,257,009
Debentures held by the Public ...	\$	1,150,000	1,150,000	1,000,000	800,000	800,000	800,000	800,000	800,000
Interest on loans secured by debentures accrued and unpaid at December 31 \$.....	\$	2,870,900	3,198,775	3,526,560	3,891,426	4,646,353	5,543,269	6,495,200	7,535,963
Investment harbour facilities Dec. 31	\$	15,692,000	16,954,000	19,682,000	23,015,000	25,594,000	27,572,000	27,705,000	27,830,000
Sinking fund reserves	\$								
Total freight handled over wharves	Tons	1,220,000	1,325,000	1,500,000	1,230,000	1,255,000	950,000	953,000	1,596,000
Average gross revenue per ton	Cents	56	53	53	60	71	85	66	43
Average operating expenses per ton	Cents	45	44	40	53	58	88	65	40
Capital cost per ton of commodities handled over wharves including grain	\$	13.0	13.0	13.2	18.7	20.7	29.1	29.1	17.4

* The accrued interest on "Quebec Harbour Debentures" Series A, B, C, D and E, authorized by the Quebec Harbour Advances Acts, 1913, 1917, 1922, 1925 and 1928 respectively. The arrears of interest on the old Debentures of the Dominion Government (Quebec Harbour Debentures, 1888) have not been accrued or in any way incorporated in this table.

Table No. 4.- HARBOUR OF QUEBEC - HARBOUR RAILWAY OPERATION

Year	Gross Revenues	Operating Expenses	Net Operating Revenue	Operating Ratio
	\$	\$	\$	Per cent
1926	95,735	108,096	Dr. 12,361	112.9
1927	95,772	103,249	Dr. 7,477	107.8
1928	123,148	121,317	1,831	98.5
1929	88,284	121,596	Dr. 33,312	137.7
1930	71,785	120,277	Dr. 48,492	167.5
1931	51,908	128,887	Dr. 76,979	248.3
1932	36,730	96,814	Dr. 60,084	263.6
1933	46,511	87,914	Dr. 41,403	189.0

Table No. 5.- HARBOUR OF QUEBEC - HARBOUR RAILWAY, TONNAGE AND TRAFFIC

	1926	1927	1928	1929	1930	1931	1932	1933
Total cars handled by harbour railway	39,100	41,889	47,926	40,327	30,898	16,621	14,170	16,599
Operating expenses per car handled	\$ 2.76	\$ 2.47	\$ 2.53	\$ 3.01	\$ 3.89	\$ 7.75	\$ 6.83	\$ 5.30
Number of cars loaded	23,586	25,608	29,081	23,913	18,614	7,881	6,784	8,516
Percentage loaded	60	61	61	59	60	47	48	51
Number loaded grain cars		450	1,770	1,550	470	447	168	104
Number loaded coal cars	6,337	7,454	7,833	6,858	6,266	3,402	2,686	2,392

Table No. 6.- HARBOUR OF QUEBEC - SUMMARY OF GRAIN HANDLING AT ELEVATOR

Year	Receipts					Deliveries				
	Water-borne		Rail-borne		Total	Export		Local		Total
	Bushels	Per cent	Bushels	Per cent	Bushels	Bushels	Per cent	Bushels	Per cent	Bushels
1927	8,933,465	94.6	508,234	5.4	9,441,699	7,557,653	77.3	2,215,723	22.7	9,773,376
1928	8,730,520	79.0	2,333,233	21.0	11,063,753	8,068,997	78.6	2,198,085	21.4	10,267,082
1929	5,728,067	73.8	2,037,520	26.2	7,765,587	3,685,111	57.7	2,707,688	42.3	6,392,799
1930	7,787,823	98.4	126,741	1.6	7,914,564	5,439,646	68.0	2,547,252	32.0	7,986,898
1931	5,268,093	96.8	172,538	1.2	5,440,631	3,191,228	57.0	2,426,852	43.0	5,618,080
1932	4,319,595	99.9	3,995	0.1	4,323,590	2,293,341	46.0	2,730,294	54.0	5,023,635
1933	16,787,906	100.0	4,753		16,792,659	14,431,093	86.0	2,285,442	14.0	16,716,535

Table No. 7.- HARBOUR OF QUEBEC - SHIPMENTS BY COMMODITIES, 1933.

Commodities	Imports (Tons)	Exports (Tons)	Domestic Inward (Tons)	Domestic Outward (Tons)	Total (Tons)	Per cent of Total
Agricultural Products						
Grain.....	504,415	501,496	...	...	1,005,911	
Flour .....	...	5,574	25,362	...	30,936	
Mill Products .....	...	3,501	5,485	...	8,986	
Fruit (fresh)	532	1,184	...	...	1,716	
Vegetables (fresh)	333	...	...	...	333	
Other Agricultural Products .....	....	1,353	...	...	1,353	
Total	505,280	513,108	30,847	...	1,049,235	65.74
Animal Products						
Cattle .....	...	734	...	...	734	
Meats .....	...	10,164	...	...	10,164	
Lard .....	...	1,264	...	...	1,264	
Cheese .....	...	4,306	...	...	4,306	
Total .....	...	16,468	...	...	16,468	1.03
Mine Products						
Coal, anthracite	109,880	...	...	...	109,880	
Coal, bituminous	140,399	...	...	...	140,399	
Zinc	17	468	...	...	485	
Zinc concentrates .....	...	8,922	...	...	8,922	
Copper .....	...	1,803	...	...	1,803	
Aluminum and gold .....	...	116	...	...	116	
Nickel matte .....	...	2,843	...	...	2,843	
Salt	9,576	...	...	...	9,576	
Other Mine Products	835	23,790	...	...	24,625	
Total	260,707	37,942	...	...	298,649	18.71
Forest Products						
Lumber	2,324	11,775	2,785	214	17,098	1.07
Manufactures and Miscellaneous						
Fuel oil	2,200	...	82,982	...	85,182	
Sugar	1,032	...	3,615	...	4,647	
Iron, pig	69	...	...	...	69	
Iron & Steel (bar, sheet, billets, pipes, etc.)	6,322	8,319	...	...	14,641	
Machinery	384	159	...	...	543	
Cement	73	...	...	...	73	
Brick (fire)	1,076	...	...	...	1,076	
Drain Pipe and Tile	162	...	...	...	162	
Automobiles	129	81	...	...	210	
Dry goods	4,270	297	...	...	4,567	
Liquors	1,513	...	...	...	1,513	
Fertilizers	5,564	...	...	...	5,564	
Paper, newsprint .....	...	13,283	...	...	13,283	
Paper, other	413	...	...	...	413	
Paper Board (pulp and wall) .....	...	1,731	...	...	1,731	
Fish	435	95	...	...	530	
Canned Goods	456	2,254	...	...	2,710	
Chemicals	2,677	...	...	...	2,677	
Molasses	8,935	...	...	...	8,935	
Groceries	1,134	306	...	...	1,440	
Oyster shells	1,094	...	...	...	1,094	
Sulphur	16,682	...	...	...	16,682	
General cargo	3,635	2,317	15,577	20,473	42,002	
Miscellaneous	3,437	1,531	...	...	4,968	
Total	61,692	30,373	102,174	20,473	214,712	13.45
GRAND TOTAL	830,003	609,666	135,806	20,687	1,596,162	100.00

CHICOUTIMI HARBOUR COMMISSION

PORT MOVEMENT FOR 1933 (DEPARTMENT OF NATIONAL REVENUE)

Number of Vessels in and out 135
 Tonnage of Vessels 44,182

Table No. 1.- TRAFFIC, OPERATING RESULTS AND FACILITIES, 1933.

Gross revenues	\$	15,697
Operating expenses	\$	17,815
Net operating deficit	\$	2,118
Interest on loans and debentures-		
Paid to the Government .....	\$	.....
Paid to the Public .....	\$	.....
Sinking fund charges .....	\$	.....
Net loss for the year	\$	2,118
Ratio of operating expenses to gross revenue	Per cent	113.5
Loans secured by debentures at December 31-		
Held by the Government	\$	3,282,100
Held by the Public	\$	249,142
Interest accrued on Government loans secured by debentures and unpaid at Dec. 31	\$	343,368
Investment harbour facilities at December 31	\$	3,777,143
Sinking fund reserves at December 31 .....	\$	.....
Total freight handled over wharves	Tons	30,503
Average gross revenue per ton	Cents	51.1
Average operating expenses per ton	Cents	58.1
Capital cost per ton of commodities handled over wharves	\$	123.8
Shed area	sq. feet	28,000
Wharfage	lineal feet	3,000

Table No. 2.- SHIPMENTS BY COMMODITIES, 1933.

Commodity	Inland		Foreign Inward (Tons)	Total (Tons)	Per cent of Total
	Inward (Tons)	Outward (Tons)			
Agricultural Products					
Fruit and Vegetables	351	...	...	351	1.1
Animal Products					
Live Stock	5	4	...	9	
Butter and Cheese .....	...	910	...	910	
Raw Hides .....	...	75	...	75	
Total	5	989	...	994	3.2
Mine Products					
Anthracite Coal .....	...	...	4,299	4,299	
Bituminous Coal .....	...	...	5,081	5,081	
Granite Stone .....	...	226	...	226	
Coarse Salt .....	...	...	420	420	
Total .....	...	226	9,800	10,026	32.9
Forest Products					
Firewood	6,290	42	...	6,332	
Ties	270	...	...	270	
Pulpwood .....	...	140	...	140	
Lumber	600	150	...	750	
Total	7,160	332	...	7,492	24.6
Manufactures and Miscellaneous					
Oil and gasoline	271	15	...	286	
Automobiles and Supplies	37	4	...	41	
Furniture	71	95	...	166	
Beers and Ales	682	...	...	682	
Fertilizers	11	3	...	14	
Molasses .....	...	...	895	895	
Provisions	5,694	109	...	5,803	
Groceries	1,272	25	...	1,297	
Hardware	1,833	143	...	1,976	
Miscellaneous	90	390	...	480	
Total	9,961	784	895	11,640	38.2
GRAND TOTAL	17,477	2,331	10,695	30,503	100.00

THREE RIVERS HARBOUR COMMISSION

Table No. 1.- NUMBER OF VESSELS AND TONNAGE ENTERED INWARD AND OUTWARD

	1929		1930		1931		1932		1933	
	No. of Vessels	Reg'd. Tonnage	No. of Vessels	Reg'd. Tonnage	No. of Vessels	Reg'd. Tonnage	No. of Vessels	Reg'd. Tonnage	No. of Vessels	Reg'd. Tonnage
Ocean traffic..	110	349,766	143	414,312	76	214,297	67	168,568	98	273,275
U.S. traffic...	172	75,719	146	79,512	76	73,664	57	59,092	69	82,187
Inland traffic.	1,837	1,826,336	1,519	1,751,207	1,609	1,445,120	1,497	1,104,956	1,700	1,182,295
Total	2,119	2,251,821	1,806	2,245,031	1,761	1,733,081	1,621	1,332,616	1,867	1,537,757

Table No. 2.- NATIONALITY AND REGISTERED TONNAGE OF SEA GOING VESSELS ENTERED INWARD, 1933.

Nationality	Number of Vessels	Registered Tonnage
Great Britain	72	219,072
Canada	6	18,975
Denmark	1	1,924
France	1	1,882
Germany	4	7,720
Norway	11	18,124
Sweden	3	5,578
Total	98	273,275

Table No. 3.- TRAFFIC, OPERATING RESULTS AND FACILITIES, 1933

Gross revenues	\$	64,097
Operating expenses	\$	49,114
Net operating revenue	\$	14,983
Interest on loans secured by debentures-		
Paid to the Government .....	\$	.....
Paid to the Public	\$	9,524
Sinking fund charges .....	\$	.....
Net profit for the year	\$	5,459
Ratio of operating expenses to gross revenue	(Per cent)	76.6
Loans secured by debentures at December 31-		
Debentures held by the Government	\$	2,776,168
Debentures held by the Public	\$	158,500
Interest on Government Loans secured by debentures accrued and unpaid at December 31	\$	189,899
Investment harbour facilities at December 31	\$	6,732,665
Sinking fund reserve at December 31	\$	139,977
Total freight handled over Commissioners' wharves	(Tons)	602,267
Average gross revenue per ton	(Cents)	10.6
Average operating expenses per ton	(Cents)	8.2
Capital cost per ton of commodities handled over wharves	\$	11.2
Facilities-		
No. of berths with sheds		7
No. of berths without sheds		6
Shed floor area	(Square ft.)	126,825
Wharfage	(Lineal ft.)	9,000

Table No. 4.- HARBOUR OF THREE RIVERS - SHIPMENTS BY COMMODITIES, 1933.

Commodity	Inward			Outward			Total Tons	Per cent of Total
	Ocean Tons	U.S. Tons	Inland Tons	Ocean Tons	U.S. Tons	Inland Tons		
Agricultural Products								
Flour .....	...	...	5,431	...	...	35	5,466	
Hay .....	...	...	...	...	...	407	407	
Cotton .....	...	656	...	...	...	...	656	
Apples .....	...	...	60	...	...	...	60	
Total .....	...	656	5,491	...	...	442	6,589	1.1
Mine Products								
Anthracite coal	16,872	5,051	...	...	...	...	21,923	
Bituminous coal	244,605	7,081	...	...	...	9,419	261,105	
Coke .....	...	10,674	...	...	...	...	10,674	
Sand .....	...	...	...	...	...	3,500	3,500	
Salt	645	...	...	...	...	...	645	
China Clay .....	...	4,271	...	...	...	...	4,271	
Total	262,122	27,077	...	...	...	12,919	302,118	50.2
Forest Products								
Firewood .....	...	...	480	...	...	...	480	
Pulpwood .....	...	...	137,876	...	...	...	137,876	
Lumber .....	...	...	1,269	785	...	1,998	4,052	
Other Forest Products .....	...	...	1,067	...	...	...	1,067	
Total .....	...	...	140,692	785	...	1,998	143,475	23.8
Manufactures and Miscellaneous								
Gasolene .....	...	...	6,710	...	...	...	6,710	
Fuel oil .....	...	...	1,425	...	...	...	1,425	
Sugar	685	...	...	...	...	...	685	
Iron pipes .....	...	...	...	...	...	73	73	
Brick .....	...	...	460	...	...	...	460	
Newsprint paper .....	...	...	...	48,967	59,906	...	108,873	
Beaver board .....	...	...	...	101	...	...	101	
Other paper .....	...	...	...	93	...	70	163	
Sulphur .....	...	6,211	...	...	...	...	6,211	
Molasses	2,390	...	...	...	...	...	2,390	
General cargo .....	...	...	15,229	...	...	5,813	21,042	
Miscellaneous	486	169	...	1,297	...	...	1,952	
Total	3,561	6,380	23,824	50,458	59,906	5,956	150,085	24.9
GRAND TOTAL	265,683	34,113	170,007	51,243	59,906	21,315	602,267	100.0

MONTREAL HARBOUR COMMISSION

Harbour Facilities, 1933.-

Ocean berths-		
With single storey sheds		6
With double storey sheds		20
Open berths		<u>60</u>
	Total	<u>86</u>
Grain loading berths-		
General		29
Grain only		<u>2</u>
	Total	<u>31</u>
Number of grain berths that can be supplied simultaneously		23
Wharfage	(lineal ft.)	55,288
Four grain elevators	(Capacity in bushels)	15,162,000
Harbour railway mileage		69.82
Cold storage warehouse	(Capacity in cu.ft.)	4,628,000
Floating dock (601 ft. X 100 ft.) subsidized by the Government.		

Table No. 1.- HARBOUR OF MONTREAL - DISTANCES

OCEAN

	Distances in nautical miles					
	Liverpool	Genoa	Hong Kong	Sydney Australia	Kingston Jamaica	Buenos Ayres
Montreal-						
Via Belle Isle Strait	2,760					
Via Cabot Strait	3,007	4,050	11,569	10,877	2,700	6,420
New York	3,040	4,045	11,336	9,704	1,460	5,838
Vancouver	8,547	9,313	5,800	6,848	4,777	
<u>COASTWISE</u>			<u>INLAND</u>			
Distances from Montreal (in nautical miles)			Distances from Montreal (in statute miles)			
Halifax		895	Head of the Lakes-			
			By water			1,228
			Via Bay Ports			880
St. John, N.B.		1,145	Quebec-			
			By water			160
St. Johns, Newfoundland		1,025	By rail			172
New York		1,460	Halifax-			
			Via Lewis			842
			Via St. John			760
			St. John, N.B.			482
			Portland, Maine			297

Table No. 2.- HARBOUR OF MONTREAL - TONNAGE OF VESSELS ENTERED

Year	Trans-Atlantic		Maritime Provinces and Newfoundland		Inland and River	
	No. of Ships Entered	Net Registered Tonnage	No. of Ships Entered	Net Registered Tonnage	No. of Ships Entered	Net Registered Tonnage
1926	1,042	3,551,489	379	670,241	6,197	
1927	1,231	4,252,325	379	740,161	6,188	
1928	1,222	4,693,925	385	800,137	5,873	
1929	916	3,910,679	367	727,121	5,085	
1930	826	3,740,884	371	693,705	4,255	3,975,946
1931	811	3,425,107	339	644,314	4,000	3,770,753
1932	963	3,676,172	311	574,254	4,094	3,755,442
1933	1,061	3,822,586	415	724,092	4,413	3,868,274

Table No. 3.- NATIONALITIES AND TONNAGE OF SEA-GOING VESSELS THAT ARRIVED AT THE HARBOUR OF MONTREAL DURING 1933

Nationality	No. of Vessels	Net Tonnage	Nationality	No. of Vessels	Net Tonnage	Nationality	No. of Vessels	Net Tonnage
Great Britain	703	2,952,963	Germany	21	44,816	Norway	254	509,803
Canada	331	615,840	Greece	7	20,413	Panama	2	2,336
Danish	2	2,336	Italy	35	114,232	Sweden	23	51,559
Denmark	26	47,117	Japan	3	12,707	United States	48	106,049
France	3	4,102	Netherlands	18	62,405	Totals	1,476	4,546,678

Table No. 4.- HARBOUR OF MONTREAL - TRAFFIC AND OPERATING RESULTS

	Unit	1926	1927	1928	1929	1930	1931	1932	1933
Gross revenues	\$ (000's)	4,632	5,454	5,589	5,179	4,311	4,500	4,407	3,874
Operating expenses	\$ (000's)	2,602	2,950	2,810	2,684	2,394	2,431	2,415	2,196
Net operating revenue	\$ (000's)	2,030	2,504	2,779	2,495	1,917	2,069	1,992	1,678
Interest on loans secured by debentures-									
Paid to the Government	\$ (000's)	1,843	1,916	2,023	2,158	2,275	2,401	2,466	2,499
Paid to the Public	\$ (000's)	...	...	...	...	...	...	...	...
Sinking fund charges	\$ (000's)	445	469	477	504	528	537	569	578
Profit or loss for the year	\$ (000's)	Dr. 260	118	275	Dr. 167	Dr. 889	Dr. 869	Dr. 1,049	Dr. 1,407
Ratio of operating expenses to gross revenues	Per cent	56.2	54.1	50.3	51.8	55.5	54.0	54.8	56.7
Loans secured by debentures at Dec. 31-									
Debentures held by the Government	\$ (000's)	46,875	47,710	50,350	52,831	53,686	56,859	57,790	58,237
Debentures held by the Public	\$ (000's)	...	...	...	...	...	...	...	...
Investment in harbour facilities at Dec. 31..	\$ (000's)	50,556	52,324	55,363	58,064	60,121	61,667	62,277	62,577
Sinking fund reserve at Dec. 31.	\$ (000's)	1,514	983	1,460	1,964	1,492	2,029	2,597	3,175
Total freight handled over wharves	Tons(000's)	9,210	11,920	12,590	9,940	9,690	9,915	10,745	10,565
Average gross revenue per ton	Cents	50.3	45.8	44.4	52.1	44.5	45.4	41.0	36.7
Average operating expenses per ton	Cents	28.3	24.7	22.3	27.0	24.7	24.5	22.5	20.8
Capital cost per ton of commodities handled over wharves, including grain	\$	5.3	4.4	4.4	5.8	6.2	6.2	5.7	5.9

Table No. 5.- MONTREAL HARBOUR RAILWAY - TRAFFIC AND OPERATING RESULTS

Year	Traffic		Operation			
	Total number of cars handled	No. of loaded grain cars in and out	Gross Revenues	Operating Expenses	Net Operating Revenue	Operating Ratio
			\$	\$	\$	Per cent
1926	205,481	15,091	474,545	483,456	Dr. 8,911	102
1927	195,853	15,878	481,607	498,868	Dr. 17,261	104
1928	240,622	22,334	635,799	599,639	36,160	94
1929	242,967	10,730	603,103	601,343	1,760	99
1930	205,082	5,000	494,263	587,723	Dr. 93,460	119
1931	185,155	6,154	453,146	454,103	Dr. 957	100
1932	164,060	6,372	394,552	412,462	Dr. 17,910	105
1933	150,327	2,632	368,445	354,971	13,474	96

Table No. 6.-- HARBOUR OF MONTREAL - SUMMARY OF TONNAGE

DISTRIBUTION AFTER IMPORT

	1926		1927		1928		1929		1930		1931		1932		1933	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Forwarded by rail	162,933	8.0	169,805	6.8	207,541	8.2	213,000	6.8	157,027	4.7	126,649	3.5	145,491	3.6	192,253	4.2
Forwarded by inland vessel.	102,689	5.0	162,182	6.0	219,886	8.6	209,119	6.4	188,781	5.6	260,516	7.3	255,972	6.3	813,329	17.9
Consigned to Montreal ...	1,762,540	87.0	2,361,548	87.7	2,116,258	83.2	2,824,872	86.8	3,030,374	89.7	3,181,377	89.2	3,634,582	90.1	3,533,862	77.9
Total	2,028,162	100	2,493,535	100	2,543,685	100	3,256,991	100	3,376,182	100	3,568,542	100	4,036,045	100	4,539,444	100
Notes: Imports consigned to Montreal are in a number of cases redistributed as domestic tonnage.																
<u>CARRIED BEFORE EXPORT</u>																
	1926		1927		1928		1929		1930		1931		1932		1933	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Into port by rail	689,351	15.2	649,138	10.5	862,278	12.6	779,928	22.8	661,739	21.7	562,415	18.5	604,641	15.5	667,217	24.0
Into port by inland vessel.	3,498,451	76.9	5,239,553	84.8	5,655,425	82.7	2,346,936	68.6	2,071,900	68.1	2,218,511	73.1	3,042,617	77.9	1,826,854	65.7
Exported from Montreal	362,033	7.9	286,794	4.7	320,405	4.7	292,032	8.6	310,877	10.2	230,661	8.4	260,820	6.6	287,880	10.3
Total	4,549,835	100	6,175,485	100	6,838,108	100	3,418,896	100	⁷ / ₃ 3,101,561	100	¹ / ₃ 3,036,835	100	³ / ₃ 3,926,315	100	⁵ / ₂ 2,802,873	100
<u>DOMESTIC IN AND OUT</u>																
	1926		1927		1928		1929		1930		1931		1932		1933	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Rail	633,035	24.0	563,499	18.5	541,886	16.9	542,651	16.6	554,788	17.3	423,486	12.8	317,835	11.4	311,987	9.6
Vessel	1,920,960	73.0	2,367,166	77.6	2,388,497	74.5	2,621,129	80.4	2,608,494	81.3	2,795,264	84.5	2,423,665	86.9	2,923,672	90.1
Other	78,707	3.0	121,488	3.9	276,950	8.6	97,205	3.0	4,744	1.4	115,495	2.7	59,715	1.7	6,354	0.3
Total	2,632,702	100	3,052,153	100	3,207,333	100	3,260,985	100	3,215,026	100	² / ₃ 3,308,997	100	⁴ / ₃ 2,782,978	100	⁶ / ₃ 2,223,091	100
GRAND TOTAL	9,210,699		11,921,173		12,589,126		9,936,872		9,687,769		9,914,374		10,745,338		10,565,408	
¹ / _{Plus lumber exported 25,248. 3/ Plus lumber exported 18,237. 5/ Plus lumber exported 20,922. ²/_{Less lumber exported 25,248. 4/ Less lumber exported 18,237. 6/ Less lumber exported 20,922. 7/ Plus lumber exported 57,045.}}																

Table No. 7.-- HARBOUR OF MONTREAL - SUMMARY OF GRAIN HANDLING (Thousands of Bushels)

	Receipts				Deliveries			
	Water-borne grain	Rail-borne grain	Truck-borne grain	Total	Water-borne grain	Rail-borne grain	Other	Total
1926	104,700	31,200		135,900	126,100	5,400	3,100	134,600
1927	36,600	10,300		46,900	46,500	750	400	47,650
1928	38,600	13,300		56,900	53,200	1,100	200	54,500
1929	69,800	20,600		90,400	81,700	6,300	2,700	90,700
1930	19,500	850		20,350	71,300	8,600	1,800	81,700
1931	80,600	8,800		89,400	81,500	6,200	1,800	89,500
1932	97,600	11,600		109,200	106,400	4,700	1,750	112,850
1933	62,800	2,100	73	64,973	60,100	3,800	1,500	65,400

Table No. 5.- HARBOUR OF MONTREAL - SHIPMENTS BY COMMODITIES, 1933

	Imports Tons	Exports Tons	Domestic In and Out Tons	Total Tons	Per cent of Total
Agricultural Products					
Wheat	1	1,610,425	...	1,610,426	
Corn	55,719	986	...	56,705	
Oats .....	...	23,584	...	23,584	
Barley	6	16,022	...	16,028	
Rye	44,413	3,358	...	47,771	
Flaxseed	31,763	1,119	3,068	35,950	
Other Grain	5,439	6,330	240,671	252,440	
Flour	2,053	262,499	22,353	286,905	
Other Mill Products	1,315	51,916	11,722	64,953	
Hay and Straw .....	...	17,230	1,120	18,350	
Fruit (fresh)	30,757	71,486	2,132	104,375	
Potatoes	775	110	8,635	9,520	
Other Fresh Vegetables	4,923	506	482	5,911	
Other Agricultural Products	56,410	10,713	1,625	68,748	
Cotton	3,201	15	2	3,218	
Total	236,775	2,076,299	291,810	2,604,884	24.7
Animal Products					
Horses	38	69	...	107	
Cattle .....	...	19,311	1,513	20,824	
Dressed Meats (cured, salted, etc.)	163	55,703	353	56,219	
Dressed Meats (fresh)	190	5,699	1,422	7,311	
Other Packing House Products	424	60,801	148	61,373	
Poultry	24	78	23	125	
Eggs	13	3,665	92	3,770	
Butter	210	2,229	8	2,447	
Cheese	2,566	34,441	1,864	38,871	
Wool	7,888	906	...	8,794	
Hides and Leather	3,623	386	264	4,273	
Other Animal Products	5,414	8,042	1,510	14,966	
Total	20,553	191,330	7,197	219,080	2.0
Mine Products					
Anthracite Coal	1,321,649	117	50,476	1,372,242	
Bituminous Coal	229,143	23	1,405,118	1,634,284	
Coke	12,058	78	1,618	13,754	
Iron Ores	29,513	...	9	29,522	
Other Ores, Matte, Pig and Ingot	45,689	57,580	179	103,448	
Sand and Gravel	8,401	...	17,157	25,558	
Stone	77	...	2,725	2,802	
Slate, Dimension or Block Stone	2,025	4	2	2,031	
Crude Petroleum	1,672,297	13,432	303,112	1,988,841	
Asphalt .....	...	162	215	377	
Salt	24,965	474	2,338	27,777	
Other Mine Products	20,574	5,520	18,121	44,215	
Total	3,366,391	77,390	1,801,070	5,244,851	49.7

Table No. 8.- HARBOUR OF MONTREAL - SHIPMENTS BY COMMODITIES, 1933 (Continued)

	Imports Tons	Exports Tons	Domestic In and Out Tons	Total Tons	Per cent of Total
Forest Products					
Logs, Posts, Poles, Piling	22	...	...	22	
Cordwood and other Firewood .....	...	...	22,322	22,322	
Ties .....	...	29	385	414	
Lumber, Timber, Box, Crate, Etc.	39	29,850	10,957	40,846	
Other Forest Products	1,775	333	192	2,300	
Total	1,836	30,212	33,856	65,904	0.6
Manufactures and Miscellaneous					
Gasolene	60,823	390	416,963	478,176	
Petroleum Oils and Products	600	343	387,507	388,450	
Sugar, raw and refined	209,741	4,358	52,205	266,304	
Iron and Steel, pig and bloom	1,191	1	3,163	4,355	
Rails and fastenings	3,763	...	68	3,831	
Iron and Steel (Bar, Sheet, Structural, etc.)	111,861	24,262	18,174	154,297	
Castings, Machinery and Boilers	5,494	2,872	1,092	9,458	
Cement	115	9,325	41,880	51,320	
Brick and Artificial Stone	4,341	58	291	4,690	
Lime and Plaster	198	349	608	1,155	
Sewer Pipe and Drain Tile	83	...	47	130	
Agricultural Implements, etc.	933	3,298	196	4,427	
Automobiles, Trucks and Parts	2,726	60,043	166	62,935	
Settlers' effects	1,056	1,779	28	2,863	
Furniture	1,481	1,491	328	3,300	
Liquor Beverages	3,855	11,459	129	15,443	
Paper, various	5,182	34,310	3,569	43,061	
Paperboard, pulpboard and wallboard	89	12,293	341	12,723	
Wood Pulp	186,959	34,105	40	221,104	
Fish (fresh, frozen, cured, etc.)	1,109	4,024	245	5,378	
Canned Goods (except meats)	5,382	18,885	13,300	37,567	
Fertilizers	5,484	588	285	6,357	
Other Manufactures and Miscellaneous	301,423	203,409	148,533	653,365	
Total	913,889	427,642	1,089,158	2,430,689	23.0
GRAND TOTAL	4,539,444	2,802,873	3,223,091	10,565,408	100.0

VANCOUVER HARBOUR COMMISSION

Harbour Facilities, 1933.-

	<u>Commissioners'</u>	<u>Private</u>
<u>Ocean berths-</u>		
With single storey sheds	4	35
With double storey sheds	4	..
Open berths	3	22
<u>Grain loading berths-</u>		
General	8	..
Grain only	5	6
Grain elevator capacity	(bushels) 8,625,000	9,190,000
Shed area	(square ft.) 547,250	1,089,710
Wharfage	(lineal ft.) 7,960	24,709

Table No. 1.- HARBOUR OF VANCOUVER - DISTANCES

OCEAN

	<u>Distances in Nautical Miles</u>						
	<u>Liverpool</u>	<u>Genoa</u>	<u>Yokahama</u>	<u>Hong Kong</u>	<u>Singapore</u>	<u>Sydney Australia</u>	<u>Montreal</u>
Vancouver	8,547	9,313	4,280	5,800	7,090	6,848	7,240
San Francisco	7,737	8,503	4,530	6,420	7,440	6,470	6,430
<u>COASTWISE</u>				<u>INLAND</u>			
<u>Distances from Vancouver (in Nautical Miles)</u>				<u>Distances from Vancouver (in Statute Miles)</u>			
Prince Rupert	482			Moose Jaw	1,080		
Seattle	125			Head of the Lakes	1,890		
Victoria	80			Montreal, all rail	2,890		
San Francisco	820						

Table No. 2.- HARBOUR OF VANCOUVER - NUMBER OF VESSELS AND TONNAGE ENTERED INWARDS

	<u>Deep Sea</u>		<u># Local Coastwise</u>		<u>Foreign Coastwise</u>		<u>Total No. of Vessels</u>	<u>Total Net Tonnage</u>
	<u>No. of Vessels</u>	<u>Net Tonnage</u>	<u>No. of Vessels</u>	<u>Net Tonnage</u>	<u>No. of Vessels</u>	<u>Net Tonnage</u>		
1926	1,071	3,698,066	17,148	4,268,620	1,548	1,900,942	19,767	9,867,628
1927	1,123	3,779,015	17,770	4,627,880	1,470	1,897,362	20,363	10,304,257
1928	1,344	4,674,091	19,270	4,958,498	1,470	2,109,982	22,084	11,742,571
1929	1,295	4,532,794	20,464	5,281,026	1,537	2,097,206	23,296	11,911,026
1930	1,157	4,313,666	18,894	5,694,115	1,619	2,598,294	21,670	12,606,075
1931	1,036	4,031,192	15,376	4,993,164	1,728	3,112,032	18,140	12,136,388
1932	1,123	4,501,734	13,394	4,388,184	1,464	2,192,984	15,981	11,082,902
1933	1,113	4,492,622	13,196	4,501,296	1,468	1,903,384	15,777	10,897,302

Including Vancouver-Victoria vessels.

Table No. 3.- HARBOUR OF VANCOUVER - NATIONALITIES OF SEA-GOING STEAM VESSELS ENTERED, 1933

Great Britain	434	Jugo Slavia	1
Belgium	3	Netherlands	24
Denmark	37	Norway	102
France	22	Panama	4
Germany	43	Sweden	28
Italy	16	United States	234
Japan	165	<u>Total</u>	1,113

Table No. 4.- HARBOUR OF VANCOUVER - TRAFFIC AND OPERATING RESULTS

	Unit	1926	1927	1928	1929	1930	1931	1932	1933
Gross revenues	\$	2,193,670	2,003,889	2,095,650	1,950,192	1,827,493	1,710,513	1,696,730	1,519,812
Operating expenses	\$	1,122,412	609,420	511,293	414,200	616,400	632,690	662,611	682,315
Net operating revenue	\$	1,071,258	1,394,469	1,584,357	1,535,992	1,211,093	1,077,823	1,034,119	837,497
Interest on loans secured by debentures-									
Paid to the Government	\$	681,245	711,686	816,895	874,981	900,365	1,039,767	1,070,409	1,080,163
Paid to the Public	\$	97,500	97,500	97,500	97,500	71,143	...	...	...
Sinking fund charges	\$	200,000	300,000	300,000	300,000	100,000	...	...	...
Profit or loss for the year	\$	92,513	285,283	369,962	263,510	Dr. 139,585	38,056	Dr. 36,290	Dr. 242,670
Ratio of operating expenses to gross revenue	%	51.2	30.4	24.4	21.2	33.7	37.0	39.1	44.9
Loans secured by debentures at Dec. 31-									
Debentures held by Government..	\$	13,810,900	15,352,900	17,317,900	17,805,900	18,312,900	21,370,900	21,416,900	22,395,199
Debentures held by Public	\$	1,950,000	1,950,000	1,950,000	1,950,000	852,375	...	...	...
Investment in harbour facilities at December 31	\$	18,290,000	19,270,000	20,055,000	20,367,000	22,225,731	22,705,500	23,408,500	23,991,318
Sinking fund reserve at Dec. 31..	\$	842,391	1,157,799	1,498,985	1,857,773	2,019,754	2,086,750	2,157,139	2,236,133
Total freight handled over Commissioners' wharves	Tons	8,035,422	7,809,627	9,899,787	9,597,889	8,026,839	7,292,705	7,225,855	6,104,845
Average gross revenue per ton ...	Cents	27.3	25.7	21.2	20.3	22.8	23.5	23.5	24.9
Average operating expenses per ton	Cents	14.0	7.8	5.2	4.3	7.7	8.7	9.2	11.2
Capital cost per ton of commodities handled over Commissioners' wharves including grain	\$	2.3	2.5	2.0	2.1	2.8	3.1	3.2	3.9

Table No. 5.- HARBOUR OF VANCOUVER - SHIPMENTS BY COMMODITIES, EXPORTS AND IMPORTS, 1933

	Imports Tons	Exports Tons	Total Tons	Per cent of Total
Agricultural Products				
Wheat .....	...	1,913,873	1,913,873	
Corn	5,850	...	5,850	
Oats .....	...	64,392	64,392	
Barley .....	...	29,479	29,479	
Rye .....	...	17	17	
Rice	7,455	170	7,625	
Flour	3,628	124,567	128,195	
Other mill products .....	...	29,292	29,292	
Hay	9	41	50	
Cotton lintons	238	...	238	
Apples	642	4,013	4,655	
Potatoes .....	...	902	902	
Other fruit and vegetables	26,919	2,017	28,936	
Other agricultural products	42,643	2,246	44,889	
Total	87,384	2,171,009	2,258,393	55.90
Animal Products				
Live stock	3	18	21	
Dressed meats (fresh)	120	344	464	
Dressed meats (cured, salted, canned)	986	...	986	
Other packing house products	343	125	468	
Butter	311	93	404	
Cheese	107	52	159	
Wool	1,813	764	2,577	
Hides	3,853	1,835	5,688	
Other animal products	3,941	826	4,767	
Total	11,477	4,057	15,534	0.38
Mine Products				
Coal	21,116	288	21,404	
Coke	787	...	787	
Ore concentrates .....	...	12,073	12,073	
Base Bullion, matte, pig and ingot .....	...	17,786	17,786	
Crude petroleum	310,888	...	310,888	
Asphalt	155	...	155	
Salt	26,897	...	26,897	
Other mine products	1,018	12,022	13,040	
Total	360,861	42,169	403,030	9.99
Forest Products				
Logs, posts, poles and piling	12,604	238,658	251,262	
Pulpwood .....	...	4,750	4,750	
Lumber, timber, box, crate & cooperage	2,816	227,495	230,311	
Other forest products	491	22	513	
Total	15,911	470,925	486,836	12.05
Manufactures and Miscellaneous				
Gasolene	20,023	...	20,023	
Petroleum oils and other petroleum products except asphalt and gasolene	457,560	...	457,560	
Sugar	73,240	...	73,240	
Pig iron	732	...	732	
Iron and steel	13,284	2,082	15,366	
Machinery	1,966	1,833	3,799	
Cement	2,521	...	2,521	
Brick (fire)	1,060	...	1,060	
Lime .....	...	299	299	
Sewer pipe and drain tile	283	...	283	
Agricultural implements and bicycles	192	...	192	
Automobiles and parts	811	7,809	8,620	
Furniture	355	...	355	
Liquor	3,089	3,628	6,717	
Fertilizers	3,923	10,020	13,943	
Newsprint paper .....	...	39,616	39,616	
Other paper	3,853	6,706	10,559	
Wall board (paper)	134	12	146	
Fish (fresh, frozen, cured, etc.)	1,907	29,209	31,116	
Canned goods (except meats)	12,954	47,301	60,255	
Other manufactures and miscellaneous	85,243	44,340	129,583	
Total	683,130	192,855	875,985	21.68
GRAND TOTAL	1,158,763	2,881,015	4,039,778	100.00
Note: In addition the following tonnages:-				
Local coastwise In	1,528,729			
" " Out	463,813			
Foreign coastwise In	29,819		1,992,542	
" " Out	42,706		72,525	

HARBOUR OF NEW WESTMINSTER

Table No. 1.- NUMBER OF VESSELS, NET TONNAGE OF VESSELS AND TRAFFIC IN TONS, INWARDS AND OUTWARDS

Year	Shipping - Deep Sea		Traffic		
	Number of Vessels	Net Tons	Inwards Tons	Outwards Tons	Total Tons
1926	175	579,167	.....	.....	.....
1927	153	486,603	10,444	336,767	347,211
1928	198	625,271	5,942	367,313	373,255
1929	248	827,762	12,873	376,836	389,709
1930	297	994,673	36,270	395,340	431,610
1931	301	1,052,865	13,465	420,544	434,009
1932	311	1,087,878	14,634	446,754	461,388
1933	409	1,454,842	20,699	657,879	678,578

Table No. 2.- NATIONALITY OF SEA-GOING VESSELS, 1933

Great Britain	179	Jugo Slavia	1
Denmark	24	Netherlands	11
Finland	1	Norway	39
France	5	Panama	1
Germany	12	Sweden	14
Italy	1	United States	70
Japan	51		

Table No. 3.- TRAFFIC AND OPERATING RESULTS, 1933

Gross revenues, harbour	\$	33,642
Gross revenues, elevator lease	\$	15,629
Total gross revenue	\$	49,271
Operating expenses, harbour	\$	12,471
Expenses on elevator repairs	\$	1,221
Total operating expenses	\$	13,692
Net operating revenue	\$	35,579
Interest on loans secured by debentures-		
Paid to the Government	\$	12,833
Paid to the Public	\$	35,795
Sinking fund charges .....	\$	...
Profit or loss for the year	\$	Dr.13,049
Ratio of total expenses to gross revenue	Per cent	27.8
Loans secured by debentures at December 31-		
Debentures held by the Government	\$	274,537
Debentures held by the Public	\$	700,000
Investment harbour facilities at December 31	\$	974,537
Sinking fund reserve at December 31 .....	\$	...
Total freight handled over Commissioners' wharves	Tons	682,891
Average gross revenue per ton	Cents	# 49.2
Average operating expenses per ton	Cents	# 18.3
Capital cost per ton of commodities handled over Commissioners' wharves	\$	1.43

Elevator not included.

Table No. 4.- HARBOUR OF NEW WESTMINSTER - SHIPMENTS BY COMMODITIES, 1933

	Inward Tons	Outward Tons	Total Tons	Per cent of total
<u>Agricultural Products</u>				
Grain .....	...	49,842	49,842	
Corn	4,540	...	4,540	
Flour .....	...	7,043	7,043	
Apples .....	...	12,940	12,940	
Rice	5,330	...	5,330	
Total	9,870	69,825	79,695	11.7
<u>Animal Products</u>				
Hides .....	...	458	458	
<u>Mine Products</u>				
Bar metal lead and zinc .....	...	181,991	181,991	
Phosphate rock	1,000	...	1,000	
Salt	543	...	543	
Total	1,543	181,991	183,534	26.9
<u>Forest Products</u>				
Lumber and timber products .....	...	345,324	345,324	50.6
<u>Manufactures and Miscellaneous</u>				
Petroleum, crude	2,777	...	2,777	
Liquor .....	...	660	660	
Fertiliser .....	...	55,374	55,374	
Salmon, canned .....	...	475	475	
Milk, evaporated .....	...	373	373	
Oreosote	1,148	...	1,148	
Broom handles .....	...	636	636	
General	5,361	7,076	12,437	
Total	9,286	64,594	73,880	10.8
GRAND TOTAL	20,699	662,192	682,891	100.0

TORONTO HARBOUR COMMISSION

Harbour Facilities, 1933:-

Berthing space (lineal feet)	42,350
Transit shed floor area (square feet)	178,000
Dry storage floor area (square feet)	750,000
Cold storage space (cubic feet)	2,500,000
2 grain elevators -(capacity in bushels).....	2,750,000
2 oil fueling docks	
3 coaling docks	

Table No. 1.- NUMBER OF VESSELS AND REGISTERED TONNAGE INWARD AND OUTWARD

	1931				1932				1933			
	Entered		Cleared		Entered		Cleared		Entered		Cleared	
	No.	Reg'd. Tons	No.	Reg'd. Tons	No.	Reg'd. Tons	No.	Reg'd. Tons	No.	Reg'd. Tons	No.	Reg'd. Tons
Inland	..		..		..		..		..		..
International	687	877,895	747	937,905	400	899,223	415	907,399	819	1,375,750	874	1,406,332
Coastwise	1820	1,675,674	1784	1,622,194	1910	1,778,908	1891	1,776,074	1609	1,547,109	1564	1,517,784
Total	2507	2,553,569	2531	2,560,099	2310	2,678,131	2306	2,683,473	2428	2,922,859	2438	2,924,116

Table No. 2.- SHIPMENTS BY COMMODITIES, 1933

Commodities	Inward Tons	Outward Tons	Total Tons	Per cent of total
Agricultural Products				
Grain	170,509	15,107	185,616	
Flour	18,215	4	18,219	
Total	188,724	15,111	203,835	8.2
Mine Products				
Anthracite coal - Scotch	22,652			
Welsh	217,540			
U.S.A.	2,517			
.....	242,709	...	242,709	
Bituminous Coal - N.S.	50,552			
U.S.A.	788,592			
.....	839,144	...	839,144	
Coke - U.S.A.	243,914	...	243,914	
Sand	24,865	...	24,865	
Salt	7,043	557	7,600	
Crude Petroleum ..	277,232	2,516	279,748	
Total	1,634,907	3,073	1,637,980	65.5
Manufactures and Miscellaneous				
Gasolene	218,243	18,637	236,880	
Other petroleum oils	102,677	22,285	124,962	
Sugar	36,661	...	36,661	
Pig iron .....	...	224	224	
Cast iron pipe	116	140	256	
Cement	15,964	31	15,995	
Wines	4,095	875	4,970	
Fertilizers	1,302	...	1,302	
Vegetable oils	11,763	...	11,763	
Fish oil	20	...	20	
Merchandise	122,464	93,742	216,206	
Sundries	7,084	1,962	9,046	
Total	520,389	137,896	658,285	26.3
GRAND TOTAL	2,344,020	156,080	2,500,100	100.0

Note: Direction water-borne coal shipments 1933:-

From Upper Lakes via Welland Ship Canal	968,270 tons.
From Great Britain & Nova Scotia via Montreal & St. Lawrence	290,744 tons.
From Lake Ontario ports	66,753 tons.

HAMILTON HARBOUR COMMISSION

Harbour Facilities, 1933.-

Commission wharfrage 1,000 lineal feet with shed area of 70,000 square feet. In addition, Canada Steamships, Hamilton By-Product Coke Ovens, Ltd. Steel of Canada, Canadian Industries and International Harvester have a wharfrage of 3,470 lineal feet.

PORT MOVEMENT FOR 1933

Number of vessels entered in and out 1,207
 Tonnage of vessels 2,617,056
 Commodity tonnage handled 1,660,872

Table No. 1.- SHIPMENTS BY COMMODITIES, 1933

Commodity	Inward Tons	Outward Tons	Total Tons	Per cent of total
Agricultural Products				
Flour	5,748	...	5,748	
Rice	65	...	65	
Sisal	851	...	851	
Total	6,664	...	6,664	0.4
Mine Products				
Coal	1,222,341	...	1,222,341	
Coke	5,454	1,200	6,654	
Iron ore	124,909	...	124,909	
Sand	6,430	...	6,430	
Limestone	10,997	...	10,997	
Salt	1,444	...	1,444	
Fluorspar	600	...	600	
Total	1,372,175	1,200	1,373,375	82.7
Manufactures and Miscellaneous				
Gasolene and oil	127,371	...	127,371	
Sugar	19,416	...	19,416	
Iron and steel, various .....	...	3,523	3,523	
Agricultural implements .....	...	4,410	4,410	
Wire rods	2,329	450	2,779	
Phosphate	2,240	...	2,240	
Fertilizer .....	...	3,428	3,428	
Sulphur	8,402	...	8,402	
Tar .....	...	31,411	31,411	
Miscellaneous	820	...	820	
Package freight	15,129	61,902	77,031	
Total	175,707	105,124	280,831	16.9
GRAND TOTAL	1,554,546	106,324	1,660,870	100.0

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Annual Reports of Department of Public Works
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