

## STATEMENTS AND SPEECHES

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### THE GREAT LAKES - ST LAWRENCE SEAWAY

An address by the President of the St. Lawrence Seaway Authority, Mr. Lionel Chevrier, to the Edmonton Canadian Club, September 6, 1955.

Projects to improve the natural waterway of the St. Lawrence River have been before the public for over 100 years. During the last 50 years they have been the subject of negotiations between Canada and the United States. No subject has been more thoroughly discussed, none more carefully studied. All of these studies culminated in first, The Treaty of Washington signed between our two countries in 1932, but unratified by the United States Senate; next the Agreement of 1941 covering a deep waterway from Montreal to the head of the lakes, which while it was never rejected by the Congress of the United States, was never approved and resulted in Canada withdrawing from it. Another 10 years passed without action. In 1952 a new approach was adopted. By agreement with the United States a joint application was made to the International Joint Commission, a body established by treaty composed of three Americans and three Canadians, for the development of power in the International Rapids Section and Canada agreed to build all the navigation facilities on the Canadian side from Montreal to Lake Erie. The application for power was approved. Meanwhile, Congress decided to participate in the Seaway. Early in 1954 it passed an Act authorizing an American agency to build all the navigation facilities in the International Rapids Section in American territory.

In July and August of 1954 representatives of our two countries met in Ottawa. The result: the United States is building a canal opposite Barnhart Island in the International Section and Canada is building a canal near Iroquois in the same section.

So much for the general historical background. Now for the project itself -

The St. Lawrence Seaway is a twelve-hundred mile channel, 27 feet in depth, extending from the head of the Great Lakes to the Atlantic Ocean. It will provide navigation facilities to permit Great Lakes freighters to come down to Montreal and, conversely, to allow 25 foot craft to carry their cargoes through the St. Lawrence River up to the Great Lakes.

Coupled with this is a development of 2,200,000 horsepower of electrical energy on a joint basis in the International Section of the St. Lawrence River, with the power equally divided between the two countries.

The Great Lakes - St. Lawrence Seaway should be distinguished from the St. Lawrence Ship Channel, which is a channel extending from Montreal easterly to a point 30 miles below Quebec. This channel was deepened by the Federal Government for the purpose of providing safe navigation for ocean-going vessels from deep water to Montreal. It has a depth of 35 feet at extreme low water and it will provide a link with the Great Lakes - St. Lawrence Seaway when the latter is completed.

The Great Lakes - St. Lawrence Seaway is but a small part of what is known as the Great Lakes - St. Lawrence Basin. This is a vast drainage system covering an area of 678,000 square miles, 493,000 of which are in Canada and 185,000 in the United States. It includes Lake Superior, Lake Michigan, Lake Huron, Lake St. Clair, Lake Erie and Lake Ontario, together with all the tributary rivers and streams, the most important of which are the St. Lawrence River, the Ottawa River, the St. Maurice River and the Saguenay River. The height of land in Canada at the northern limit of this drainage area averages about 1,800 feet above sea level.

You will therefore immediately appreciate the economic significance of this vast drainage basin comprising a potential waterway, together with a potential reservoir of white power in an area of Canada where no coal or black power is available.

The Seaway may be described as consisting of five steps. These five steps are liabilities as far as navigation is concerned, in that facilities must be provided to enable vessels to pass them. But they are also great assets, in that they offer more than 11,000,000 horsepower of electrical energy for the harnessing. The five steps are:

1. The St. Mary's River between Lakes Superior and Huron, a drop of 21 feet;
2. The St. Clair-Detroit passage joining Lakes Huron and Erie, a drop of 8 feet;
3. The Niagara River from Lake Erie to Lake Ontario, a tremendous drop of 326 feet;
4. The Upper St. Lawrence River from Lake Ontario to Montreal another great drop of 225 feet;
5. Montreal to the sea, a drop of 20 feet.

Now then, what is the present position of the Seaway?

As the navigation system is presently constituted, here is how the Seaway stands today:-

1. From the Gulf of the St. Lawrence to Montreal a distance of 1,000 miles, controlling navigation channels are 35 feet in depth.
2. From Montreal to Lake Ontario, a distance of 180 miles, controlling navigation channels are 14 feet;

3. From Lake Ontario to Lake Erie, a distance of 200 miles, controlling navigation channels are 25 feet;

4. From Lake Erie to the head of the Lakes, a distance of 970 miles, controlling navigation channels are 25 feet downbound and 21 feet upbound.

Between the highly developed inland route through the Great Lakes having a minimum channel depth of 21 feet, and the ocean port facilities of Montreal to which 35 foot navigation is provided, lies the 114-mile international section of the St. Lawrence River. This international section is only navigable through a chain of outmoded 14-foot canals capable of handling ships with a maximum capacity of but 3,000 tons. The present programme is basically designed to break this bottleneck and by concurrently deepening the existing canals, locks and channels throughout the eastern portion of the Seaway system, to extend deep sea facilities into the heart of industrial North America bordering Lakes Ontario and Erie.

#### Works necessary to Complete Seaway

Now you may ask, what works are necessary to complete the Seaway.

For practical purposes, the Seaway has been divided, from Lake Ontario to the Port of Montreal, into five sections:

1. The Thousand Islands section.
2. The International Rapids section.
3. The Lake St. Francis section.
4. The Soulanges section.
5. The Lachine section.

Here is a brief description of what must be done in each section:

Thousand Islands Section: A small amount of dredging is necessary at an approximate cost of \$2,500,000. This work, it is anticipated, will be undertaken by the United States.

International Rapids Section: This is the most important, - the key section - first, because it is in international territory, and secondly, because the works to be built there will be the most expensive. In this section there will be spent \$700,000,000. of which the greatest part will be for hydro power installations. The Hydro-Electric Power Commission of the Province of Ontario and the New York State Power Authority are jointly responsible for these works. At the completion of the work some 20 thousand acres of land will have been flooded, 6 villages will have disappeared and 6,500 people will have been displaced. Their homes, their schools, their churches and their business establishments will be re-established in new villages along the new shore line.

The project approved for this section is what engineers call the 238-242 controlled single stage project.

Lake St. Francis Section: Here dredging will be undertaken in three locations at a total cost of about \$6,000,000. The purpose of this is to deepen the channels in these locations to a depth of 27 feet.

Soulanges Section: As well as considerable dredging in Lake St. Louis, works must be undertaken at Beauharnois. The existing canal here has been excavated to a depth of 27 feet. At Beauharnois, at the eastern end of the canal there must be built twin locks in flight.

Lachine Section: Here it is necessary to build a canal, 10 miles in length, in the Laprairie Basin extending above the Indian reservation at Caughnawaga to the Port of Montreal. Two locks are necessary to bring the level of the Montreal Harbour up to that of the Lachine Rapids. In the canal, three turning basins will be built in order to allow ships to manoeuvre more freely. It will also be necessary to elevate three bridges in order to provide 120 foot clearance as required by the regulations for navigation.

#### Effect of Seaway on Prairie Provinces

What effect will the Seaway have upon the Prairie Provinces and upon the Province of Alberta in particular.

He is an audacious man who will attempt to prophecy with any degree of accuracy the effect of the Seaway upon various communities. Because of this, at least one provincial government and one University are studying the effect of the St. Lawrence Seaway upon provincial and regional economies. We in the Seaway Authority have undertaken a similar study several months ago.

The importance of grain to Canada and especially to the Provinces of Manitoba, Saskatchewan and Alberta need hardly be emphasized. Wheat itself has always been a serious contender for the leading position in the export trade of Canada. The Prairie Provinces account for more than 95 per cent of the country's wheat production.

The ramifications through which Canadian wheat leaves the Prairies en route to internal and world markets are many.

As long as our markets were largely on the periphery of the Atlantic Ocean, the grain flowed through the St. Lawrence Channel to board ocean going ships at Montreal, Sorel, Trois Rivieres and Quebec City, or reached the Atlantic ports by rail at Halifax and Saint John.

The development of markets in Asia and the west coast of South America coupled with low water rates from the Pacific Coast has resulted in a steady increase in the amount of grain shipped via the Pacific Coast.

The proximity of Port Churchill to Canada's main purchaser of grains, Britain, has induced a continuous increase in traffic from this port, even though the total exports often temporarily regressed. Additional grain loading capacity will certainly enhance the advantages of that port and attract more traffic. The shortness of the navigation season on Hudson Bay will always be a serious limiting factor in the development of shipping through that route.

The Seaway is bound to have a pronounced effect upon the movement of grain from the prairie provinces. Wheat, oats, barley and other grains are commodities of relatively low value per unit weight. They are extremely well suited to mechanized bulk handling and are practically self-trimming in the holds of ships. These properties have made the transportation pattern of wheat very sensitive to freight rates with the result that water carriage has always been preferred even for relatively short distances.

A commodity as well adapted to water transport in bulk as grain will not fail to take advantage of the St. Lawrence Seaway facilities.

The large lake carriers now carry grain on two circuits - one from Port Arthur and Fort William to ports on the Georgian Bay for furtherance by rail to Lower St. Lawrence or Maritime points and the other to Sarnia, Lake Erie and Lake Ontario ports for transshipment into small canallers sailing to lower St. Lawrence ports via the 14 foot canals.

In both cases there is involved the unloading of the lake carrier and the loading of either rail cars or canallers. This trans-shipment cost added to the higher rates incurred in rail or small canal ship movements raise substantially the cost of grains to the purchaser. The advent of the St. Lawrence Seaway will reduce shipment costs through the elimination of transfer of cargo and reduction in rates for the span now covered by rail or shallow-draft canals.

This reduction in rates will be substantial especially in view of the fact that the Labrador Iron Ore carriers will provide a large volume of bulk capacity on their return to the loading and transfer dock on the Lower St. Lawrence. Grain will indeed provide an idea return cargo for these vessels after unloading the ore at Great Lakes destinations. Whether these savings will be translated into increased profit per bushel for the farmer or lower prices on export markets is still an undecided factor. Whatever way the question is settled, the outcome will be beneficial to the grower as he will receive more profit per bushel or sell more bushels at a stated profit.

Customarily about 50 per cent of the Canadian grain exports are shipped from St. Lawrence ports. In the 1953-54 crop year however this proportion dropped to 40 per cent because of the continued increases in activity at the Pacific coast ports and at the Port of Churchill.

There has also been a sharp increase in the movement of grain direct from the Lakehead, although the volume is still comparatively small, amounting to less than one million bushels. The fact however that such a movement has started and gathered some momentum previous to the opening of the deep waterway is a strong indication of its future popularity, particularly in terms of low freights.

The Seaway will not completely obviate the need for trans-shipment. The absence of navigation in winter will continue to make rail shipments mandatory, especially because the Canadian harvest occurs late in the Fall and the Canadian Wheat Board cannot have it all moved to St. Lawrence ports before the freezing of the canals.

The increased capacity of the Seaway however is bound to divert all the Spring and Fall volume of grain that now makes use of rail facilities as present canals are unable to meet the demand.

The greater savings possible through the use of the deep waterway will provide an added incentive to the utilization of water transport. It will extend the zone from which grain can be gathered in the Prairies and delivered abroad at competitive prices via the St. Lawrence ports.

To sum up, it seems that Canada is in a very favourable position in world markets for grain, in spite of the current relaxed condition of the international wheat trade.

Even taking in account the recent trend toward more shipments of export grains through Pacific Coast outlets and the Port of Churchill, a considerable volume of grain will be moved on the new Seaway at a significant reduction in cost. This cannot help but benefit the Canadian grain growers and all their suppliers.

On the other hand, the St. Lawrence Seaway will have no effect upon the transportation of oil and gasoline products in the Province of Alberta since this province is now joined with the Province of British Columbia by the Trans-Mountain Pipe-Line and to the Province of Saskatchewan, Manitoba and Ontario by the Interprovincial Pipe-Line. Neither will the Seaway enhance the distribution of Alberta coal to points in the Province of Ontario.

Look at the map of North America, and you will find that the Great Lakes - St. Lawrence Seaway lies almost in the centre of the five physiographic regions of the North American continent. The upper end of the Seaway links the Canadian West to the Atlantic seaboard and the mid-west states to the port of New York. It joins the wheat fields of Western Canada to the United Kingdom market.

When one realizes that more yearly tonnage passes through the navigation facilities in the Upper Lakes region, namely, the locks at the Sault, than through the Panama and Suez Canals put together, this gives some idea of the tonnage that is likely to come through when the development is completed. The building of the Panama Canal through the Isthmus of Panama, the construction of the Suez Canal linking the Mediterranean with the Red Sea were logical projects. They were the inevitable and the

thing to do no matter at what cost. On the proposal to construct the Deep Waterway in the St. Lawrence River to link the Great Lakes to the Atlantic Ocean, the verdict will be the same.

We are indeed a fortunate country. Not only have we vast natural resources but nature has given us great rivers and streams surging with undeveloped water power. We have in Canada a potential of 55 million horsepower. About one-third of this is to be found in the Great Lakes - St. Lawrence basin. The production of electrical energy is not an end in itself. But it is a means to an end. It supplies services and facilitates production. The true significance of electric power lies in its relationship to the general economy of Canada.

The prosperity of Canada is to a very large extent dependent upon industrial production and the latter is impossible without power. Hence, the benefits of this great project to both Canada and the United States are incalculable.

The friendly relations existing between Canada and the United States for well over a century have been greatly enhanced by two world wars. They have shown that on many problems not only do we think alike but frequently we act together. The day has come at last when that thinking is being translated into action and I have further confidence that the future will amply justify the wisdom, the foresight and the courage that have made it possible.

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