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SEAWAY TO THE WEST

Canada Day, July 1, 1958, will witness a dramatic moment in the development of a project daring in conception, vast in scope, and ingenious in design, one which has attracted the attention of nearly the entire world -- The St. Lawrence Seaway and Power Project.

On that day one thousand and seventy miles up the St. Lawrence River from the Atlantic Ocean, near the Ontario city of Cornwall, the gates of a control dam will be partly closed, a coffer-dam will be blasted and waters of one of the world's great rivers will start to back up. Inundation will spread over the sites of towns and villages, railroads and highways. The flood will cover forever some 28,000 acres of Canadian Territory, whose story is among the longest and richest in the history of our young country. Thousands of acres less settled will be flooded on the United States side of the river too, for the international boundary follows the river channel here.

So will be formed a lake, 35 miles long, from one to four miles wide and averaging in depth some 40 feet. The formation of this Seaway Lake or Power Pool will take but four or five days and then, when the waters stand at 238 feet above sea level behind the dams, the St. Lawrence, flowing at the rate of 240,000 cubic feet per second, will be freed again. But this time entirely under man's control, to run the turbines in a giant international powerhouse, yielding over 2,000,000 horsepower of electrical energy. Flowing slowly and gently, where once its waters raged in rapids, eddies and cross currents, the flood will form a tranquil basin for the passage of ships.

Ships did pass here, have done so for over a hundred years, but before by means of a system of canals on the Canadian side of the river.

Three new locks -- one Canadian and two United States -- to by-pass the power works have been built in this part of the St. Lawrence Seaway, called the International Rapids Section. These will be used for the remainder of this navigation season and subsequently four other new locks of size to handle a ship over 700 feet long and over 70 feet wide are being built by Canada along the St. Lawrence in the neighbouring Province of Quebec.

Together these seven locks with joining canals and other major works will cost about 450 million dollars. They will replace a system of Canadian canals and 21 locks between Montreal, 1,000 miles from the sea, and usually recognized as head of ocean navigation, west to Lake Ontario, most easterly of North America's six great inland seas.

With the melting of the ice and the opening of navigation in April, next year, the St. Lawrence Seaway will be open from Montreal to Lake Erie, providing a minimum depth of 27 feet for navigation from the Atlantic to the heart of our continent.

Part of this work is being shared by our neighbors, the people of the United States of America. The participation in this billion-

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dollar Seaway and Power scheme is as follows:

Power:	Canada.....	$300,000,000
	United States.....	$300,000,000
Navigation:	Canada.....	$320,000,000
	United States.....	$130,000,000

Next year, between the present head of ocean navigation and the Great Lakes to the West, there will sail bulk carriers with 25,000 tons in their holds, where before plodded small canallers, a scant 3,000 tons aboard. Through the new St. Lawrence Seaway will fly the flags of Canadian and foreign ocean ships, loaded to as much as 8,500 tons burden, where before their smaller sisters slid carefully through the old canals with cargoes of no more than 1,700 tons.

Of the millions of tons of traffic which are expected to move through the St. Lawrence Seaway in 1959, well over 85 per cent will be in the form of bulk commodities, most notable being wheat downbound to the ocean ports from the Western wheatlands; and iron ore upbound to the steel-making centres of the Great Lakes from the great ore-fields of Northern Quebec and Labrador. Other bulk commodities will account for much of the remainder and there will be the movement of North American general cargo.

The Great Lakes overseas trade is expected to be highly significant in the use of this new traffic artery.

This trade was pioneered by Norwegian interests in 1933, it is generally agreed. It expanded sporadically in the years before World War II, but was discontinued during hostilities.

Re-established in 1945, this trade has since expanded at a phenomenal rate. By 1957 the total volume exceeded 800,000 tons.

In 1954 overseas traffic involved 14 shipping lines and 120 vessels. This year, the last to see use of the small canals, there are double that number of lines operating into the Lakes, and scheduled sailings between Great Lakes and overseas ports have been estimated at between 800 and 1,000.

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"FISHY-BACKING"

Pointing out that motor transport and railways are integrating their services and that "piggy-backing", which began to grow in 1955, is today an increasing source of revenue for our railways, Transport Minister George Hees said in Ottawa May 27 that with the opening of the St. Lawrence Seaway, it is expected that "fishy-backing," the carrying of loaded truck trailers on steamships, will grow to great importance as a unit of transportation.

In an address to the Ontario Traffic Conference, Mr. Hees stated that the United States, trailer ships are presently under construction that will carry truck trainers half way across the continent when the St. Lawrence Seaway goes into operation next year.

AIR TRAVEL

The Trans-Canada Air Lines Annual Report, tabled in the House of Commons by Transport Minister George Hees, testified to the steadily increasing use by Canadians of air transportation. A total of 2,392,713 passengers were carried by the airline last year, an increase of 15.4 per cent over 1956 and more than twice as many as were carried in 1952.

Passenger traffic accounted for by far the greatest portion of TCA revenue - $86,523,981 or 82.4 per cent of the total revenue.

Statistically, the report showed the company, in 1957, shattered many of the records it had previously established. It provided the greatest number of seat miles and ton miles in its 21-year history, continuing to build mail, express and freight volume as well as passenger traffic.

During the year a total of 9,855,000 mail ton miles, 2 575,000 express ton miles and 12,903,000 freight ton miles were flown by the airline on regularly-scheduled passenger flights and by all-cargo air freighters.

At the year end, TCA was serving 59 communities over 27,782 miles of air routes in Canada, the United States, the British Isles, France, Germany, Bermuda and the Caribbean. Of these 59 communities, 39 were in Canada. And 27 of the 39 had populations of less than 100,000.

The Report said the company would have, by 1961, the world's first completely turbine-powered international air fleet, consisting of six giant DC-8 Jetliners for trans-continental and trans-Atlantic routes and 20 turbo-prop Vickers Vanguards and 51 Viscounts for short and medium haul routes.

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MOMENTO OF COMRADESHIP

A military museum in Turkey will soon have a permanent memento of the comradeship between Turkish and Canadian soldiers during the war in Korea.

The cap badges and shoulder flashes of all Canadian units and corps that served in the Far East have been mounted on a board for display in the memorial museum at Ayas near the Turkish capital of Ankara.

The commander of the Turkish troops requested the insignia of the Canadian Army to join those of other allies in the museum.

In addition to the badges and shoulder titles, Army Headquarters is sending along a Canadian Army battle dress uniform, complete from beret to boots that can be placed on exhibit as well.

The Canadian military and air attache to Turkey, Group Captain R.F. Gross, RCAF, will make the presentation to the Ayas memorial museum.

A CENTURY OF B.C. FISHING

Writing in "Trade News", a publication of the Department of Fisheries, L.G. Swann points out that in the celebration this year of a century of progress for British Columbia it is well to remember that commercial fishing is one of the oldest, if not the oldest, of the industries which now play an important part in the social and economic life of the province.

Early records reveal that the Hudson's Bay Company was engaged in the salmon fishing industry in the early part of the nineteenth century. The company bought the salmon from native Indians, and salted and shipped it to the Hawaiian Islands and to the Orient.

In those days spears, dip nets, brush traps, weirs and wooden hooks were primitive but effective means of fishing and for many years salt was the only preservative used for export products.

Time has brought many changes. Today the British Columbia fishing fleet is among the most modern in the world. The total investment in fishing vessels and service boats in 1956 was upwards of $43,000,000. Much of this is the direct concern of the 12,000 fishermen of British Columbia, many of whom can claim whole or part ownership of the vessels in which they operate.

In addition to the fishing boats another $7,600,000 is invested in purse-seines, gillnets, trolling gear and other types of fishing equipment.

Processing methods also have kept pace with modern manufacturing trends. From the first British Columbia salmon cannery, built by David Hennessy, Alexander Loggie, Alexander Ewen and James Wise, has sprung a widespread and progressive industry.

MANY CANNERIES

Early fishing methods tended to exploit salmon as they entered the mouths of rivers and inlets; canneries thus were built in clusters around these strategic points and fishing went on often within hailing distance of the cannery wharves. In 1917 British Columbia boasted 94 salmon canneries which in that year produced a total of 1,557,000 cases of canned salmon. The great sockeye runs to the Fraser River had developed a heavy concentration of fishing effort in this area and in 1901 there were 49 canneries on this river alone. This was the year when the Fraser River canned salmon pack totalled 900,000 cases -- the bulk of which were of the sockeye variety.

The earlier years of the B.C. fishing industry were productive of little else but salmon. However, the coastal waters were rich with other species and by the turn of the 20th century there was a rapidly growing halibut fishery. The completion of the Canadian Pacific and Northern Pacific railway lines to the Pacific coast opened up new markets for fresh iced fish in eastern areas and it was not long before an intensive halibut fishery developed.

Both Canadian and United States fishermen extended their halibut fishing operations far out into the Pacific and within a few years the stocks of this species were suffering from the continued onslaught.

It was a realization of this dangerously competitive fishing that brought about the first treaty entered into by Canada as a nation and the first international agreement to protect and rehabilitate a fishery. The North Pacific Halibut Convention and the Commission which operates under it have made their marks in economic history. Halibut stocks in the Pacific are now established on a sound basis of sustained yield and are expected to increase for many years.

BIG HERRING TRADE

The herring fishery of B.C. began in the latter part of the last century, when a market was found in the Orient for herring brined, drained and packed into boxes with salt, marketed as dry-salt herring. This business increased and flourished up to the time of the second World War, when it came to an abrupt halt.

However, a new outlet had developed in the intervening years. Fish meal was being used extensively, first as fertilizer, then as domestic stock feed, and the oil extracted in the same manufacturing process was absorbed in blending processes which emerged in a variety of products ranging from cosmetics to shortenings.

This led to the construction and operation of reduction plants and for the past decade all but a very minor proportion of the annual herring catch has been processed in these establishments. British Columbia's output of fish meal normally ranges between 35,000 and 45,000 tons and the oil production varies from 25,000,000 to 40,000,000 pounds annually. During the Second World War several million cases of canned herring were produced and put into the British Commonwealth food pool.

In its years of development the B.C. fishing industry underwent growing pains, some of them severe and at all times serving to point up and emphasize some valuable lessons for succeeding generations.

In the salmon canning section of the industry the wasteful and costly methods of pioneering days were gradually being streamlined as new techniques were perfected. When marine power replaced cars and sails in fishing a marked step forward was evident. First came a brief period in which flotillas of fish boats were towed to and from the fishing grounds. Then came power into the fishing boats themselves. No longer was it necessary to maintain canneries on every salmon stream;

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collectors and packers appeared in increasing numbers and fishing boats were able to stay on the fishing grounds for extended periods, where not long before they had been obliged to deliver their own catches daily to the cannery.

This was an era in which salmon canneries began to decline in numbers. Today there are only 19 of these plants, but many of them are million-dollar or more establishments, and all are mechanized to the highest degree utilize every scrap of raw material that science has found to be usable.

During the formative period of British Columbia's fisheries some costly lessons in conservation were brought home to the industry. Intensive fishing of the salmon runs, particularly into the Fraser River, had begun to affect salmon populations on the spawning grounds in the vast and normally productive areas of the upper Fraser system. Efforts of Canadian nationals to regulate the fishery proved ineffective in the face of the fact that the Fraser River salmon passed through United States waters on their way to the river, and that no restrictions were, in those days, placed on American fishermen.

Expansion of other industries also was affecting the salmon populations. Logging dams and small power dams had been erected in various localities and some of these had proved disastrous to the salmon runs in the area of their operations. Finally a heavy slide of rock occurred during railway construction at Hell's Gate on the Fraser River, dealing a death blow to one of the largest salmon cycle runs in existence.

All this is a matter of history and it is now well known how the two countries involved, Canada and the United States, got together to form an international agreement and subsequently to set in motion the machinery which today is functioning smoothly in the work of rehabilitating the great salmon runs to the Fraser.

Salmon, herring and halibut are, and always have been the "big three" in the British Columbia fisheries, but the coastal waters support stocks of several other species of food fishes, and many have been fished commercially for the better part of the last 100 years.

Several varieties of cod and bottom fish landings are mentioned in early fishery records. A small but active fleet of trawlers was operating from B.C. ports as far back as reports go. For many decades the only possible outlet for these species was in local markets, but in the past 20 years the great technical advances made in the preservation and packaging of fresh and frozen fillets, fish sticks and pre-cooked fish dishes has stabilized this branch of the industry and extended its market range far beyond former bounds.

Other fish and marine ventures have come and gone, and some may come again. Towards the end of the 19th century there was a thriving pelagic sealing operation off the Pacific coast. In 1891 a fleet of 50 vessels, based at Victoria, sailed regularly to hunt Alaska fur seals on the surface of the sea for their skins. By 1908 the herds were so decimated that sealing was no longer profitable and this situation prompted the international sealing treaty between Great Britain, the United States, Russia and Japan, whereby pelagic sealing was forbidden in these seas.

THE PILCHARD FISHERY

At the time of the upsurge in the building of reduction plants a great continental fishery was booming on the B.C. coast. Vast schools of the species we know as pilchards were coming into the zone of the continental shelf off the coast of California in late spring. From there they followed the coastline northwards. In the southern latitudes they were young, small fish and they were caught in huge quantities by big fleets of ocean seiners to be canned as sardines. By the time they had migrated to the colder waters off British Columbia they had reached maturity and B.C. seiners had their turn at what, for a few years, was a steady annual marine harvest. By the late '30's annual production reached from 14,000 to 15,000 tons of meal and from 3,000,000 to 4,000,000 gallons of oil. However, the pilchard fishery proved to be a passing phase of the fishing industry. From 1940 onwards the fishery fell off, until today it is but a memory.

Another marine product which flared into prominence for a brief period was not even a whole fish but only a part of its insides. In the late twenties medical science was making headway in the study of vitamins and their beneficial effects on humans and animals. Cod liver oil, of course, had long been recognized. Next came halibut liver oil with even greater vitamin value. Then came the turn of dogfish livers. For a time there was a thriving fishery for dogfish and the sale of the livers of this species formed one of the major items in annual fishery values. From 1943 to 1949 the marketed value of dogfish livers exceeded a million dollars annually; in the peak year of 1944 a total sum of $3,750,000 was paid for dogfish liver oil extracted by B.C. processors from raw material provided by B.C. fishermen. Science, which had pointed the way in, also showed the way out. Cheaply manufactured synthetic vitamins of potencies equal to or better than those in dogfish livers were produced in the eastern United States in quantity. This, coupled with heavy imports of Japanese caught dogfish livers, brought large scale B.C. operations to an end.

Tuna is another species which aroused bright hopes in the B.C. fishing industry, only to fade out as completely as the pilchards. At one period in the late '40's of this century B.C. tuna landings exceeded 2,000,000 pounds annually. The marketed value of tuna products in 1951 was a little more than $1,600,000

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EARLY SUPERVISION

In early days supervision of the fisheries was the responsibility of the Canadian naval authority. Then for several decades fisheries was one of the two branches of the Canadian Department of Marine and Fisheries. These were federal agencies. In addition there was an active supervision of fishery matters under the provincial government in Victoria, and it should be recorded here that much valuable pioneering work was done in these years by the late John P. Babcock who headed that branch for most of his life. The present federal Department of Fisheries was established 28 years ago.

By the turn of the present century fisheries administration was becoming grooved into at least a semblance of the pattern of things to come. Fishery Officers were established at centres from the Naas to the Fraser. Federal fisheries headquarters for B.C. were established in New Westminster, and later moved to Vancouver.

Exactly 50 years ago the Fisheries Research Board of Canada established a station on the E.C. coast and the study of the various fish species indigenous to the area was begun in earnest. The Fisheries Research Board is the scientific arm of the Department and its main branches -- biology, technology and oceanography -- have played a very important part in the long term regulation and maintenance of the resource.

This union of scientific knowledge with practical administration is the basis of the Department of Fisheries' method of operation. Under the British North America Act the regulation of the fisheries of Canada is a federal responsibility, hence all British Columbia fishery laws come under federal statute. In the case of the B.C. salmon fisheries the federal Fisheries Act is the governing control. In addition to providing basic regulatory requirements it gives authority to the Governor General in Council -- in other words the Government of the day -- to promulgate detailed regulations to meet developing control and conservation needs of the various fisheries.

The importance and character of the salmon fisheries have made it necessary over the years to provide a fairly extensive set of basic regulations. These include such fundamentals as type, size and dimensions of fishing gear permissible, licensing requirements, prohibitions of various sorts including descriptions of prohibited areas, dates for opening and closing of fishing in the several areas, division of the coastal fishing grounds into areas for administrative and statistical purposes and so on.

To meet the day-to-day needs of vagaries and fluctuations of salmon runs throughout the extensive coastline, wide powers are bestowed on the Chief Supervisor of Fisheries and his officers. These permit of 24-hour action by the local administration when emergency situations warrant.

Turning back to the fishery itself for a few moments, very significant changes have occurred in the past two decades. The application of electronic principles, a heritage of the first World War, resulted in a very sharp increase in the efficiency of the fishing fleets. When, for example, the echo sounder superseded the old piano wire "feeler" technique the problem of locating herring schools passed from trial and error into a matter of routine. Fishing boats became more mobile with the installation of radar and other aids. The radio telephone has brought added benefits both socially and economically. A great advance was made in the change-over from linen to nylon in the manufacture of gillnets.

This overall increase in the efficiency of fishing has brought its own peculiar problems. A healthy and prosperous fishing industry is, and always will be, the concern of the Department of Fisheries, but above all else it must place first in importance the conservation of the species. Without this there could be at best an uncertain future for the fishing industry, with the serious possibility that the millions of dollars invested in vessels, gear and plants would be slowly dissipated.

To maintain proper and sufficiently elastic regulation of the British Columbia fisheries, the Department of Fisheries has kept itself geared to the changing conditions of the fishery itself. Thus the rapid advances of recent years within the industry have their counterpart in the Department.

Since 1945 the Department has been completely reorganized. In the Pacific Area its basic field force of fishery officers has been recruited from veterans of the armed services. In most cases they have undergone an extensive training course before being assigned to their local areas. Behind these officers is a tightly knit group of specialists, under the Chief Supervisor of Fisheries in Vancouver, who are attached to individual special branches which have their headquarters in Ottawa.

One of the pressing problems besetting the Department today is the industrial expansion which has been taking place within the province for the past ten years, and its possible effect on the fisheries. In many cases plans for the construction or expansion of existing establishments such as pulpwood mills and other types threaten possible damage to fish runs in the locality, through the discharge of harmful chemical effluents. The constant demand for hydro-electric power poses an equally constant threat to fisheries.

For this reason one of the most important branches of the federal fisheries administration is the Conservation and Development Service. Its right wing is the protection branch which includes the field fishery officers and

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the departmental patrol fleet; its left wing is the Fish Culture Development branch, staffed by engineers and biologists. Any industrial project which may, in any way, affect fish in the locality is reported from the field. Plans are examined by fisheries experts and, when necessary, biological and engineering surveys are made. If the plans indicate any possible damage to fish, alternatives are suggested and in most cases have been adopted by the companies concerned. In the past few years many valuable stocks of fish have been protected in this manner.

As has already been pointed out a healthy and prosperous fishery industry is always a matter of concern to the Department. One of the agencies towards this objective is the Inspection and Consumer Service. Canada's yearly export of canned fish is valued at well over $100,000,000 and it is therefore of vital importance to the nation that the quality of canned fish is maintained at highest possible standards.

On the B.C. coast a system of canned fish inspection was introduced in 1932, when a board of salmon brokers operated for the Government under contract. Three years later the Department established its own canned fish inspection laboratory. Since the start of this service approximately 65,000 inspection of canned fish parcels have been made.

CONSUMER WORK

Coincidental with these measures to maintain B.C. fish products at the highest quality level are the efforts made by the Department of Fisheries to promote the best use of them. To interest and educate Canadians in the proper methods of preparing fish dishes the Consumer Section employs a number of home economists who give lectures and practical cooking demonstrations wherever an audience is waiting.

An important service is rendered the entire industry by the Economics Service which provides valuable knowledge to meet the dual demand by (1) the fishery scientists who require detailed data on the catches of fish and the localities in which they wre caught, and (2) the fishermen and industrialists who must have knowledge of trends and cycles in order to plan from one season to another. The sales slip statistical system introduced in British Columbia in 1950 has proved to be the answer to modern demands. The Economics Service also administers the Fishermen's Indemnity Plan, which provides low cost insurance for owners of medium-sized fishing boats.

The Information and Education Service of the Department is responsible for keeping the public abreast of departmental activities and of the progress of the industry. When necessary the press and radio are supplied with prepared releases. A considerable amount of pamphlet type material is distributed every year, mostly to school students and teachers. This work is supplemented by motion pictures in keeping with modern trends.

VISITS CANADIAN TROOPS

German General Hans Speidel, the Commander of NATO land forces in Central Europe, paid his first visit May 30 to troops of the 4th Canadian Infantry Brigade Group in West Germany.

The 60-year old German General, former wartime Chief-of-Staff to Field Marshal Erwin Romel, conferred with the Canadian Commander, Brig. Donald C. Cameron of Alexandria, Ont. General Speidel's headquarters is at Fontainbleau, on the outskirts of Paris.

Military policemen of the Canadian Provost Corps met and escorted the German General from the Canadian brigade headquarters, near the town of Soest.

At Fort Henry, the Canadian formation headquarters, he was greeted by a 15-man guard of honour from the 2nd Battalion, The Canadian Guards, under the command of Lt. Robert D. Partridge, 28, of Toronto and London, Ont.

During his brief two-hour visit, Gen. Speidel met senior staff officers and unit commanders of the brigade group. His command is one of four principal sub-headquarters under Allied Command in Europe and includes troops of the United Kingdom, the United States, Canada, France, Germany, Belgium and Denmark.

In June of last year Gen. Speidel visited the 2nd Canadian Infantry Brigade Group, which was on NATO duty in Europe at that time.

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BUILDING PERMITS, 1957

Building permits issued in 1957 were valued at $1,827,291,000, virtually unchanged from the record 1956 total of $1,827,880,000, Dominion Bureau of Statistic reports. Values were smaller in 1957 than a year earlier in Prince Edward Island, Nova Scotia, Quebec, Manitoba, Alberta and British Columbia, offsetting larger values in the other provinces. Totals were (in thousands): Newfoundland, $9,120 ($8,974 in 1956); Prince Edwwrd Island, $855 ($1,348); Nova Scotia, $17,724 ($22,908); New Brunswick, $22,557 ($21,993); Quebec, $390,674 ($398,340); Ontario, $828,616 ($810,025); Manitoba, $74,425 ($75,470); Saskatchewan, ,$65,768 ($53,629); Alberta, $172,851 ($188,104); and British Columbia, $244,701 ($247,096).

Value of building permits issued in March climbed sharply to $165,638,000 from $114,290,000 in March last year, gains occurring in all provinces except New Brunswick. Prince Edward Island recorded no change. Totals (in thousands): Newfoundland, $413 ($123 a year earlier); Prince Edward Island, $23 ($23); Nova Scotia, $1,151 ($745); New Brunswick, $1,087 ($1,383); Quebec, $31,591 ($21,644); Ontario, $79,401 ($57,627); Manitoba, $4,398 ($3,027); Saskatchewan, $4,549 ($2,013); Alberta, $15,507 ($8,744); and British Columbia, $27,518, ($18,961).

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