

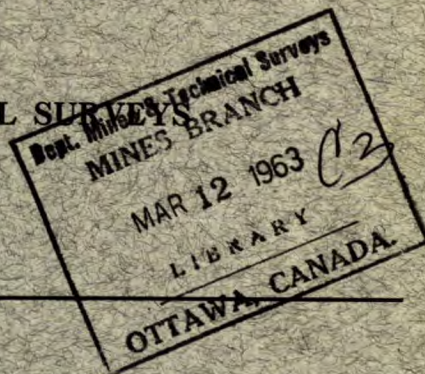
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CANADA

DEPARTMENT OF MINES AND TECHNICAL SURVEYS

MINES BRANCH  
MINERAL PROCESSING DIVISION



INDUSTRIAL WATER RESOURCES OF CANADA

WATER SURVEY REPORT NO. 13

THE LOWER ST. LAWRENCE RIVER DRAINAGE BASIN IN CANADA, 1955-60

BY  
J. F. J. THOMAS

Price: two dollars

*Report*  
Mines Branch ~~Monograph~~ No. 869



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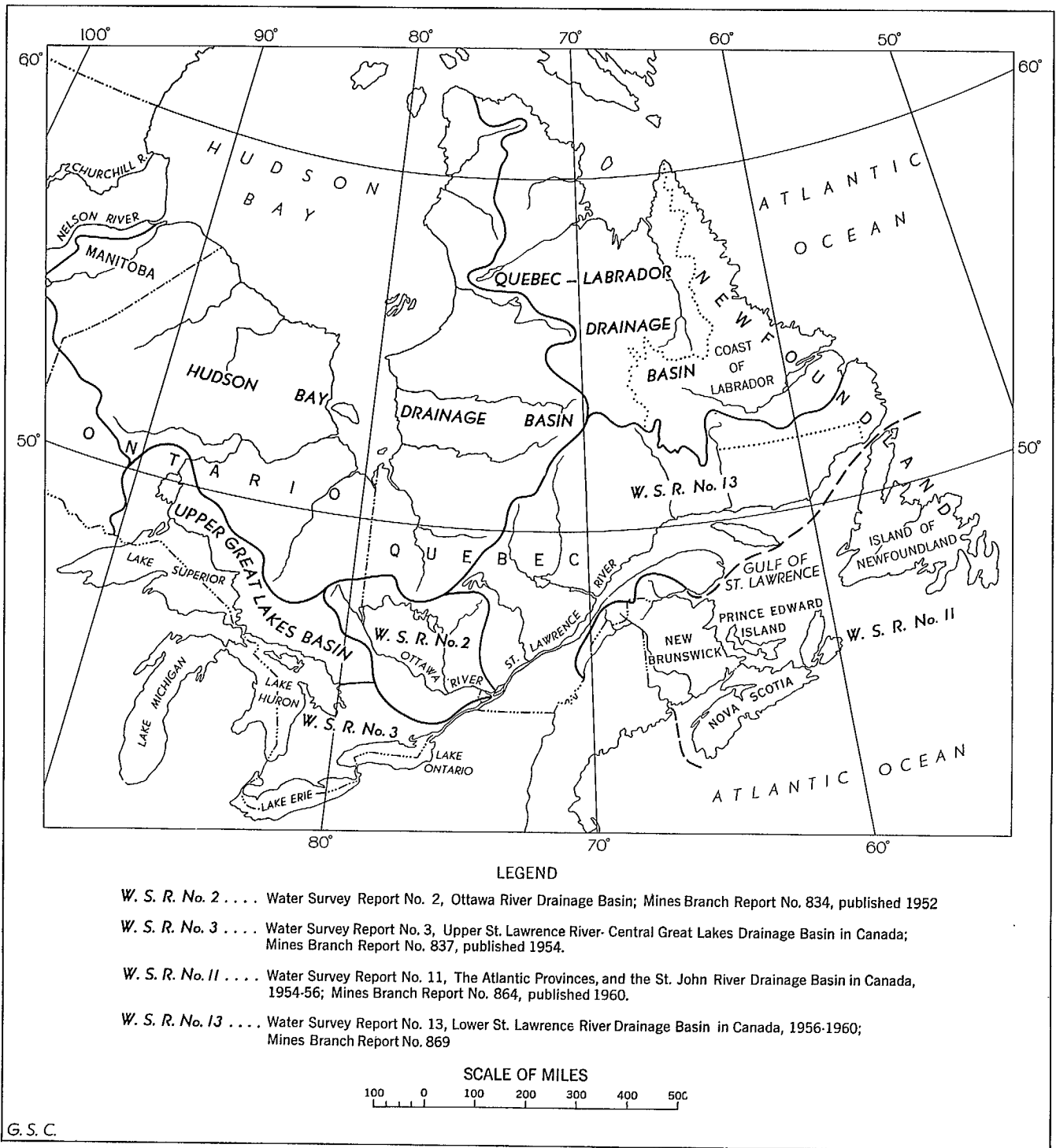


FIGURE 1. REFERENCE MAP OF DRAINAGE BASINS IN EASTERN CANADA

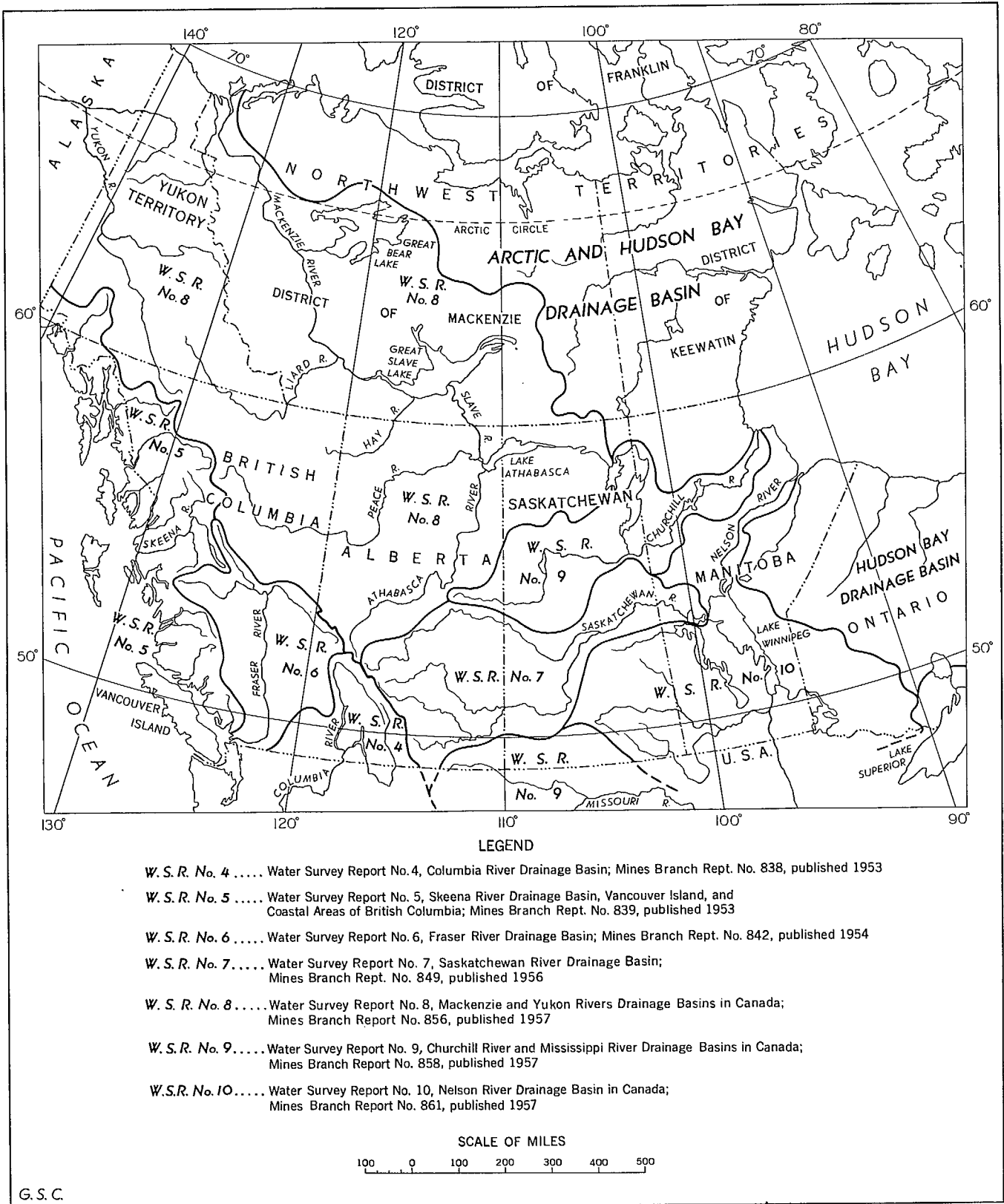
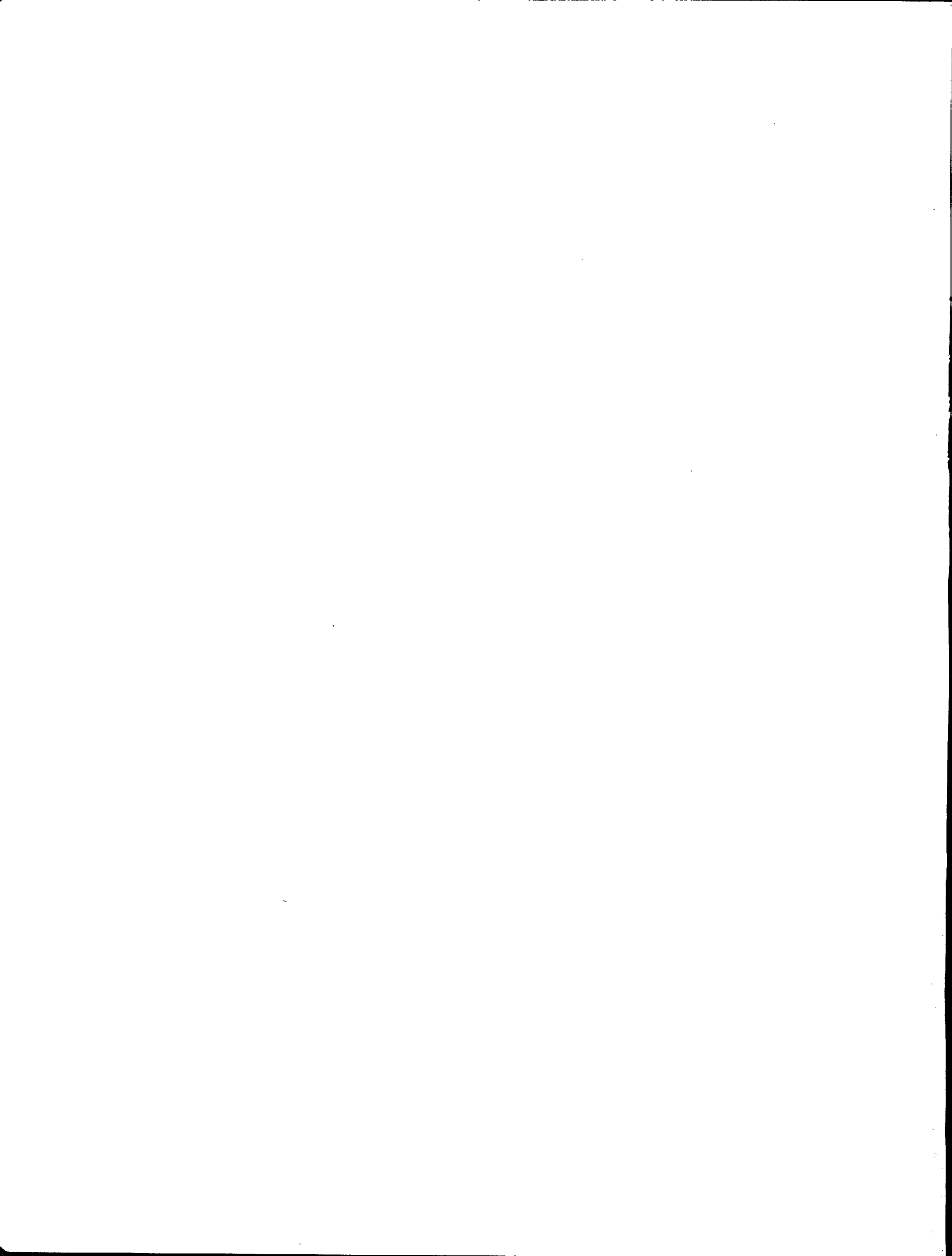


FIGURE 2. REFERENCE MAP OF DRAINAGE BASINS IN WESTERN CANADA



**Chemical Quality of Surface and Municipal Water Supplies in the Lower  
St. Lawrence River Drainage Basin in Canada, 1955-1960**

INTRODUCTION

This report is the thirteenth in a series tabulating data on the chemical quality of surface and municipal water supplies available for industrial and domestic use in Canada. Water Survey Report No. 1<sup>1</sup> introduced this series and outlines the aim, scope and general procedure of the country-wide survey; it also includes general information, tables and graphs for use in interpreting the analytical results appearing in subsequent reports.

Studies on water quality in the specific areas or drainage basins outlined in Figures 1 and 2 are reported in detail in Water Survey Reports Nos. 2 to 11, inclusive, and in this report, No. 13. These figures serve as indices to these eleven reports. Water Survey Report No. 12<sup>2</sup> tabulated information on water quality at army installations in Canada and supplements the data given in the other reports of this series.

The drainage basins of the Upper Great Lakes, of the Hudson Bay area and of the New Quebec - Labrador region are still to be reported (see Figures 1 and 2). Studies have been completed but data on water quality are still being collected from relatively inaccessible parts of these basins.

Water-quality studies are continuing, with a five-year programme of monthly or quarterly sampling now underway at some 60 locations on surface waters in western Canada. These locations are on major water supplies in the area shown in Figure 2. Additional information is also being obtained on water quality in the northern territories and on new municipal water supplies in Canada.

This report records the results of studies begun in 1955 in the highly industrialized and heavily populated area of the Lower St. Lawrence River drainage system in Canada. This basin is defined as beginning above Montreal at the Quebec-Ontario boundary and including all drainage into the St. Lawrence River below this point, except the Ottawa River system, which basin was previously reported in Water Survey Report No. 2. Because the area has been long settled, is highly industrialized and heavily populated, studies were necessarily carried out over a period of several years.

The method of presentation in this report remains essentially the same as that employed in previous reports in order that continuity of the series be maintained. No attempt is made to discuss in detail all the information recorded herein or obtained during the survey. However, some statistics on water quality and use at the time of this survey are presented and briefly discussed.

Table I and Figures 1, 2 and 3 show the relationship of area and population (1956 and 1958) in the basin covered by this report and the other basins or areas studied or under study. Reference should be made to tables and maps included in other reports of this series (Figures 1 and 2) for details on various basin boundaries.

Table II gives in detail most of the analytical results obtained on surface waters in this basin over the period 1955 to 1960, and Figure 3 (in pocket) shows the location of the sampling stations which are listed alphabetically in Appendix A.

Some of the data in Table II on water hardness in the Lower St. Lawrence River system in Canada are graphically presented in Figure 4. Even though this information covers several years it is still considered to show the variation in total and non-carbonate hardness of this river as it flows to the sea.

Some relation between dissolved mineral content and river drainage is graphically shown in Figures 5, 6, and 7; these figures respectively report some of the data of Table II on St. Lawrence River at Levis, Que., Magpie River at Magpie, Que. and St. Francis River at East Angus, Que. Similar graphs can be prepared from Table II for a number of other rivers and locations.

Table III reports the chemical quality of most waters supplied during the period of this report by organized municipal systems within the drainage basin. These municipalities are listed alphabetically in Appendix B; their locations are shown on the map of the area (Figure 3, in pocket) to classify them as to water hardness.

Table IV summarizes information available on the number of water systems, the character of the water sources, type of water treatment, if any, and the population served by these systems, in 1956 and 1958. A description of the systems and water-works plants and their operation in 1956 or later is also given. Additional statistics, especially on water hardness of municipal waters, are in Table V.

<sup>1</sup> Department of Mines and Technical Surveys, Mines Branch. *Scope, procedure and interpretation of survey studies*. Water Survey Report No. 1, Mines Branch Report No. 833. Ottawa. 1953. 69 p.

<sup>2</sup> Department of Mines and Technical Surveys, Mines Branch. *Water quality at some Canadian military establishments, 1956-57*. Water Survey Report No. 12, Mines Branch Report No. 865. Ottawa. 1959. 125 p.



TABLE I  
Area and Population Distribution in the Drainage Basins of Eastern Canada (1956)

Drainage basin	Approximate area drained, square miles in								Per cent of area drained in							
	Ont.	Que.	N.B.	N.S.	P.E.I.	Island of Nfld.	Labrador	Total basin	Ont.	Que.	N.B.	N.S.	P.E.I.	Island of Nfld.	Labrador	Total basin
ST. LAWRENCE RIVER Lower St. Lawrence River (This report)	0	189,600* (94.4)†	0	0	0	0	11,200 (5.6)	200,800	0	31.9	0	0	0	0	9.8	16.5
ST. LAWRENCE RIVER Upper St. Lawrence River-Central Great Lakes (W.S. Report No. 3)	55,200 (100)	0	0	0	0	0	0	55,200	13.4	0	0	0	0	0	0	4.6
ST. LAWRENCE RIVER Ottawa River (W.S. Report No. 2)	20,675 (34.9)	38,560 (65.1)	0	0	0	0	0	59,235	5.0	6.5	0	0	0	0	0	4.9
ST. LAWRENCE RIVER Upper Great Lakes	68,500 (100)	0	0	0	0	0	0	68,500	16.6	0	0	0	0	9	0	5.6
The Atlantic Provinces and the Saint John River (W.S. Report No. 11)	0	4,700 (4.8)	28,354 (28.3)	21,425 (21.4)	2,184 (2.2)	43,359 (43.3)	0	100,022	0	0.8	100	100	100	100	0	8.1
Nelson River (W.S. Report No. 10)	47,045 (100)	0	0	0	0	0	0	47,045***	11.4	0	0	0	0	0	0	3.9
Hudson Bay	221,162 (51.6)	207,250 (48.4)	0	0	0	0	0	428,412***	53.6	34.8	0	0	0	0	0	35.3
Labrador	0	154,750 (60.4)	0	0	0	0	101,626 (39.6)	256,376	0	26.0	0	0	0	0	90.2	21.1
Total province	412,582	594,860	28,354	21,425	2,184	43,359	112,826	1,215,590	100	100	100	100	100	100	100	100
Per cent of Canada (3,851,809 sq miles)	10.71	15.44	0.74	0.55	0.057	1.13	2.92	31.55								

\* Includes areas comprising the larger part of the Island of Montreal and parts of the Electoral Districts of Berthier, Joliette and Terrebonne originally included in Water Survey Report No. 2 as part of the Ottawa River drainage basin and the Electoral District of Beauharnois-Salaberry and part of Vaudreuil-Soulanges Electoral District, originally included in Water Survey Report No. 3, as part of the Upper St. Lawrence River-Central Great Lakes drainage basin. These "overlap" areas account for about 1,135 square miles, 1,569,490 population and 250 square miles, 63,730 population respectively.

\*\* Per cent of total basin area

\*\*\* Total basin area in eastern Canada only

† 1,577,063 population in the metropolitan Montreal area (1956 census); 4,150,426 in total area by 1958 (provincial estimate)

†† 1,440,601 and 1,412,207 population in the metropolitan Toronto area in the 1956 census and 1958 provincial estimate, respectively

+ Per cent of total basin population

++ Total basin population in eastern Canada

TABLE I—(concluded)  
 Area and Population Distribution in the Drainage Basins of Eastern Canada (1956)

Year	Estimated total population in hundreds in drainage basins in								Per cent of total population in various drainage basins in						
	Ont.	Que.	N.B.	N.S.	P.E.I.	Island of Nfld.	Labrador	Total basin	Ont.	Que.	N.B.	N.S.	P.E.I.	Island of Nfld.	Labrador
1956	0	39,287** (99.95)+	0	0	0	0	19 (0.05)	39,306	0	84.18	0	0	0	0	17.4
1956	42,722†† (100)	0	0	0	0	0	0	42,722	79.0	0	0	0	0	0	0
1956	6,043 (54.1)	5,120 (45.9)	0	0	0	0	0	11,163	11.2	11.06	0	0	0	0	0
1956	3,939 (100)	0	0	0	0	0	0	3,939	7.3	0	0	0	0	0	0
1956	0	910 (4.9)	5,546 (30.1)	6,947 (37.7)	993 (5.4)	4,043 (21.9)	0	18,439	0	1.97	100	100	100	100	0
1956	695 (100)	0	0	0	0	0	0	695 <sup>++</sup>	1.3	0	0	0	0	0	0
1956	650 (40.9)	938 (59.1)	0	0	0	0	0	1,588 <sup>++</sup>	1.2	2.03	0	0	0	0	0
1956	0	29 (24.4)	0	0	0	0	90 (75.6)	119	0	0.06	0	0	0	0	82.6
1956	50,049	46,284	5,546	6,947	993	4,043	109	117,971	100	100	100	100	100	100	100
1956	55,041	48,944													
1956	59,520	49,990	5,900	7,160	1,020	4,490		128,080							

Table VI gives the information on water hardness of municipal supplies by county.

Survey studies in the area covered by this report were greatly facilitated by the cooperation of provincial and municipal officials, many of the latter collecting water samples and providing information on the operation of their water works. The assistance in the collection of surface-water samples from a number of industrial firms is also gratefully acknowledged.

Officials of the Water Resources Branch, Department of Northern Affairs and National Resources supplied the data on river discharge .

Much of the field work as well as assistance in the preparation of this report was done by J. Ungar, chemist, Industrial Waters Section of the Department of Mines and Technical Surveys.

#### THE LOWER ST. LAWRENCE RIVER DRAINAGE BASIN IN CANADA\*

The St. Lawrence River - Great Lakes system, some 2,280 miles in length, drains about 383,735 square miles in Canada comprising large portions of the provinces of Ontario and Quebec. Since these areas include some of the more heavily industrialized and highly populated regions of Canada, this large drainage basin was initially divided into four basins for survey purposes: namely the Upper Great Lakes basin, the Central Great Lakes-Upper St. Lawrence River basin, the Ottawa River basin and the Lower St. Lawrence River basin (see Figure 1). Studies in the Upper Great Lakes basin are complete and a report is in preparation; Water Survey Reports Nos. 2 and 3 cover studies in the Ottawa River basin and in the Central Great Lakes-Upper St. Lawrence River basin respectively. This report covers survey studies carried out from 1955 to 1960 in the remainder of this huge system - the Lower St. Lawrence River basin.

In this report about 1,135 square miles of an area previously included within the Ottawa River drainage system has been included in the Lower St. Lawrence River basin, and 250 square miles in Quebec previously included in the Upper St. Lawrence River basin (Water Survey Report No. 3) has been included in the Lower St. Lawrence River basin as defined in this report.

Figure 3 shows the boundaries of the basin area herewith reported. This area extends from the Ontario-Quebec boundary to the sea and includes all drainage in Canada, except the Ottawa River, north and south into the main St. Lawrence River. Most of the basin lies within the province of Quebec and comprises about 31.9 per cent of the province's area.

Since the discovery of the St. Lawrence River in 1535, this river, its lakes and tributary streams, have been of major importance to the settlement and industrial development, not only of Quebec, but of all Canada. For 300 years this river system was the main route to settled areas of Upper Canada and to western Canada.

The large tributary rivers of this basin have contributed greatly to the development of Quebec, especially in recent years, due to the harnessing of hydro-electric power. Besides the long Ottawa River system, twelve rivers of over 100 miles in length enter the lower St. Lawrence River from the north and four from the south. Some of these major tributaries are the Natashquan - 240 miles, Manichouagan - 310 miles, Outarde - 270 miles, Bersimis - 240 miles, Saguenay (including Peribonca River) - 475 miles, St. Maurice - 325 miles, Chaudiere - 120 miles, St. Francis - 165 miles and Richelieu - 210 miles (only 75 miles in Canada). The Saguenay River has three tributaries of over 100 miles in length.

The St. Lawrence River is navigable for about 950 miles from its mouth in the Gulf of St. Lawrence to the Lachine Rapids. Canals and locks, recently enlarged, now permit sea-going vessels to navigate the entire St. Lawrence River - Great Lakes system to the head of Lake Superior.

The Lower St. Lawrence drainage basin includes three major geological and topographical regions: the Canadian Shield, the St. Lawrence Lowlands and the Appalachian Highlands.

The surface of the Canadian Shield in this basin is an elevated plateau of comparatively low relief (800 to 2000 feet above sea level). In some areas a few hills stand well above the level of the plateau. The Shield is heavily wooded, and is dissected by many streams; lakes and swamps are numerous. With minor exceptions the Shield is made up of Precambrian rocks formed by complex sequences of sedimentation, volcanism, metamorphism, mountain-building, igneous intrusion, erosion and glaciation. It now consists of granite and granitic gneisses

\* Department of Mines, Geological Surveys Branch, *Geology of Quebec*. V. II. Geol. Rep. No. 20. Quebec, 1944. 3 v.

Department of Mines and Technical Surveys, Geological Survey of Canada. *Geology and economic minerals of Canada*. Econ. Geol. Ser. No. 1. 4th. ed. Ottawa. 1957. 517 p.

Dominion Bureau of Statistics. *Canada year book 1960*. Ottawa. 1960. 1304 p.

with areas of sedimentary and volcanic rocks and their metamorphic equivalents. Pleistocene glaciation has had much to do with the nature and types of drainage systems and the numerous lakes and streams.

Most of the southern margin of the Shield is an escarpment about 300 to 800 feet high. From the Strait of Belle Isle to a point a few miles downstream from Quebec city, it forms the shore of the Gulf of St. Lawrence and the St. Lawrence River. The escarpment then extends southwesterly in a fairly regular course to the Ottawa River just west of Hull, Que.

The southern and eastern parts of the basin, about 35,000 square miles in area, lie in the Appalachian Highlands - part of the Appalachian fold belt extending from Georgia to Newfoundland. The dividing line between this geological region and the St. Lawrence Lowlands is known as the Champlain fault or "Logan's line" which extends from the international border near Lake Champlain to the St. Lawrence River near Levis. East of the Chaudiere River, the Appalachian Highlands include the Eastern Townships, and extend eastward to form the Gaspé Peninsula.

These highlands are composed of folded Palaeozoic rocks, quartzite, sandstone, slate and limestone with some granitic and ultrabasic intrusions. Ranges of hills and intervening basins make up most of these highlands. The major range is the Notre Dame Mountains known in the Gaspé Peninsula as the Shickshock Mountains. The Shickshock Mountains run for a distance of about 150 miles and rise to 4,000 feet above sea level.

In the latitude of Montreal, the Appalachian Highlands portion of the basin is about 75 to 80 miles wide but decreases to about 30 miles in the counties of L'Islet and Kamouraska.

Between the Canadian Shield and the Appalachian Highlands lies the wedge-shaped St. Lawrence Lowlands - about 15,000 square miles in area including Anticosti Island (3,043 square miles). It is an almost flat plain with elevations of 100 to 500 feet above sea level. This plain is underlain by Palaeozoic sedimentary rocks, shales, sandstones and limestones with only a few isolated topographic features, such as the Monteregian Hills, formed by resistant intrusive igneous rocks, rising to 1,000 feet above sea level in the area south and east of Montreal.

Most of the agricultural and industrial activity of the basin is in the Lowlands region, although some parts of the Appalachian Highlands, especially in the Eastern Townships, offer good agricultural areas. Only in the Lake St. John district of the Canadian Shield region of this basin is there suitable agricultural land. Here, a lowland of some 2,000 square miles of stratified Palaeozoic rocks, not of Precambrian age, are found; the lake itself occupies 375 square miles. The terraces formed by the accumulation of recent marine clays and sands around the lake give fertility to this area.

Within this Lower St. Lawrence River basin dwell about 84 per cent of the population of Quebec, and most of the industry and agriculture of the province are found there. Hydro-electric power, which is abundant from the many rivers falling from the northern and southern hilly plateaus to the main river in the lowlands area, has contributed largely to recent, rapid industrial development. Mineral resources in the basin are important with large asbestos deposits occurring in the Eastern Townships. In the Gaspé Peninsula copper mining is an established industry.

The basin is heavily forested, except for the cultivated lands of the lowlands, and the production of pulp and paper is a major industry. The beauty of the main river and particularly the Canadian Shield and Appalachian region with their many lakes and rivers has given rise to a large tourist industry.

## SURVEY PROCEDURE

The methods of sampling and the survey procedure employed in this investigation were essentially the same as those used in previous surveys in this series and outlined in detail in Water Survey Report No. 1.

Some of the sampling stations were established in this basin in 1954 when field work was underway in the Atlantic provinces and the St. John River. A year-long programme of monthly, bimonthly or quarterly sampling was initiated at about 38 stations in the summer of 1955 and at about 28 additional locations, mostly in the area southeast of Montreal, in the summer of 1956. These sampling stations, listed in Appendix A and shown in Figure 3 (in pocket), were chosen, where possible, to give representative samples of the river or lake waters. No daily sampling stations were operated, but, at each location attempts were made to obtain extra samples at periods of high and low water.

Field work was carried out during the summers of 1956 and 1957 when samples of municipal water supplies and surface waters were collected and partially analysed using field tests. Samples were also collected at this time at most of the monthly and bimonthly stations. These field results are reported in Tables II and III in brackets beside the results obtained later on the same water samples in the Ottawa laboratory. These field results indicate certain qualities of the waters *in situ* and show if significant changes in quality occur during storage and shipment.

Additional field work in parts of the basin was carried out in the summers of 1958 and 1959 to obtain samples from and information on many of the smaller municipally owned and privately owned systems. A few additional samples of major rivers were also collected during these periods.

During preparation of the report in 1960, additional data and water samples from municipalities were obtained, usually to complete information or to bring older data up to date.

## ANALYTICAL PROCEDURE

The analytical methods and techniques used in this study are essentially those employed in the survey studies published in Water Survey Reports Nos. 10 and 11. Basic analytical techniques and interpretation of data are also discussed in Water Survey Report No. 1.

Standard procedures for the analysis of water published by the American Public Health Association<sup>1</sup> and by the American Society for Testing Materials<sup>2</sup> were employed for most determinations. However, close cooperation between the Mineral Processing Division of the Mines Branch and committees of these societies enabled the Division to use certain newer techniques and procedures prior to publication.

The analytical work of this report was carried out mainly during the period 1955 to 1957 inclusive, although a number of municipal waters were collected and analysed in later years. Although changes in analytical procedure discussed in Water Survey Report No. 11 are applicable to most waters reported for this basin, the analytical methods used during the period of this report are briefly outlined as follows.

Water samples were analysed in the laboratory as soon as possible after receipt for those constituents which could significantly change in storage. Although these *immediate tests* were usually carried out within 4 to 7 days after sample collection, longer storage sometimes resulted because of unforeseen circumstances including delay in shipping. In Tables II and III, the first figure listed under storage period is the number of days from sampling until these *immediate tests* were begun, the second figure is the number of days from sampling until the remaining tests were started.

The *immediate tests* carried out were as follows.

*pH* – measured by a pH meter.

*Specific Conductance* – measured with a 60-cycle current, 115-volt enclosed switch-type Wheatstone bridge, a pointer-type a.c. galvanometer, an insulating transformer, and a pipette-type conductivity cell of about 0.3 cell constant.

*Colour* – by visual comparison of the supernatant or filtered water against Hazen colour standards in a commercial comparator or in Nessler tubes.

*Turbidity* – with the Jackson candle or Hellige turbidimeters.

*Total Hardness* – by titration with a standard solution of sodium ethylenediaminetetraacetic acid (EDTA) using Erichrome Black T as visual endpoint indicator.

*Calcium* – by titration with standard EDTA using murexide or calcon (after February 13, 1959) as visual endpoint indicator.

*Magnesium* – calculated as the difference between the values found by titration for total hardness and for calcium.

*Alkalinity* – by titration with standard (0.02N) sulfuric acid employing a potentiometric endpoint. After February 11, 1959 alkalinities were determined by the technique developed in this Division's laboratories where by errors caused by variations in the titration endpoint with total alkalinity concentration are eliminated<sup>3</sup>.

<sup>1</sup> Amer. Public Health Assoc. *Standard methods for the examination of water, sewage, and industrial wastes*. 10th ed. New York. 1955.

<sup>2</sup> Amer. Soc. for Testing Materials. *Manual on industrial water*. Spec. Tech. Publ. No. 148b. Philadelphia. 1959

<sup>3</sup> Thomas, J.F.J., and J.J. Lynch. *Determination of carbonate alkalinity in natural waters*. New York. J. Am. Water Works Assoc. 1960 p. 259-268. V. 52, No. 2.

*Oxygen Consumed by Permanganate (KMnO<sub>4</sub>)*—carried out on a selected number of surface waters and on most municipal waters.

*Copper and Zinc*—spot tests, done on the supernatant water using a sensitive field method employing dithizone<sup>1</sup>.

*Ammonia*—by direct Nesslerization of the supernatant water with visual comparison against prepared standards. No attempt was usually made to determine ammonia by distillation, even when direct Nesslerization failed because of interference by other constituents present in the water.

The remaining tests were usually done at a later date.

*Aluminum*—was determined spectrophotometrically by the aluminon method until about August 1957; it has since been determined by a mixed ferron-orthophenathroline procedure<sup>2</sup>.

*Total Iron and Total Manganese*—After July 28, 1959 separate samples of all ground waters were collected for the determination of iron and manganese. These samples, assumed clear when drawn, were acidified in the sample container and the total iron determined by the 2,2'-dipyridyl procedure; the total manganese, by the periodate method or, after November 26, 1958, the persulphate method, or both.

*Dissolved Iron and Dissolved Manganese*—were determined on the supernatant or filtered portions of all waters by the same procedures as used for total iron and total manganese.

*Copper and Zinc*, when shown to be present in significant amounts by the rapid field test, were determined until September 1959 by the cuprethol and dithizone procedures, respectively; thereafter many zinc determinations were also made using the zincon procedure<sup>3</sup>.

*Sulphate*—A turbidimetric procedure was employed for waters with low and medium sulphate contents; when the sulphate content was high the standard gravimetric procedure was used. However, after March 1956 most sulphates were determined by titration with barium chloride using thorin as a visual endpoint indicator<sup>3</sup>. This method is particularly suited to waters with very low sulphate content, ion exchange being used to remove cation interference.

*Chloride* was determined by titration with a standard mercuric nitrate solution, using accurate microburettes and visual endpoint detection.

*Fluoride* ion was determined by the standard zirconium-alizarin procedure, distillation being employed only when interferences were suspected or high fluorides were found. After December 12, 1960 the fluoride content was periodically checked by the SPADNS procedure<sup>4</sup>. Nitrate was determined by the phenoldisulphonic - acid method with comparison against standards in Nessler tubes. High nitrate waters were checked by the brucine method<sup>3</sup>, with comparison being made in a spectrophotometer.

*Silica*—The standard spectrophotometric procedure for silica employing reduction with stannous chloride was used, no attempt being made to solublize any silica present in a form not measured by this procedure.

In late 1960 the determination of total and dissolved *phosphate* became routine on most waters, the procedure using the reductant stannous chloride being used<sup>3</sup>.

*Boron* was determined only on major surface-water supplies once or twice yearly, usually at or near times of high and low flow; the standard titration procedure with added mannitol was employed.

Modifications in techniques and equipment are continually being tested in the laboratory and other procedures for aluminum, nitrate, and magnesium are currently under study.

*Suspended Matter and Residue on Evaporation*—In order to permit increased coverage on waters, determination of suspended matter and residue on evaporation, as well as tests for copper, zinc, iron, aluminum and manganese were omitted on two out of three samples received from the monthly-sampling stations. Suspended matter was determined only when the turbidity was 3 units or over. It is considered that sufficient information is still obtained from this abbreviated analysis to show if significant seasonal variation is occurring.

Calculated "averages" for water quality at monthly-sampling stations are omitted from this report. Such averages mean little if the water quality varies widely or if adequate discharge records are not available. Averages should be determined from numerous samples weighted as to discharge.

*Saturation Index, Stability Index and Per Cent Sodium* are reported for all waters. Interpretation of these calculated values has already been discussed in Water Survey Reports Nos. 1, 10 and 12. In brief, per cent

<sup>1</sup> Warren, H.V., R.E. Delavault, and Ruth I. Irish. *Acetonic dithizone in geochemistry*. Econ. Geol. Ser. V. 48, No. 4. 1953. p. 306-311.

<sup>2</sup> Rainwater, F.H. and L.L. Thatcher. *Methods for collection and analysis of water samples*. Geol. Surv. Water-Supply Paper 1454. Washington, U.S. Govt. Print Off. 1960. p 297.

<sup>3</sup> See footnote <sup>2</sup>, page 12

<sup>4</sup> See footnote <sup>1</sup>, page 12

sodium when correlated with total mineralization and boron content, indicates the suitability of a water for irrigation; the saturation and stability indices are useful for assessing the corrosive and scaling tendency of a water. Care, however, must be exercised in interpreting these indices since many other factors are important. For example, when the calcium hardness is less than about 10 ppm and the alkalinity is correspondingly low, there is no pH at which calcium carbonate can precipitate, and the indices have little significance. This is the case with many of the very soft and low-mineralized waters of this area. These indices and the free carbon-dioxide content of the waters are calculated and reported for each water at the temperature of analysis. These values change significantly with changing temperature, pH and alkalinity. The carbon-dioxide content of a cold, deep well-water may be markedly different from the content of the same water at laboratory temperature.

*Dissolved Oxygen* was not determined on surface waters at sampling because it varies so widely with location, depth and temperature; in most rivers the dissolved oxygen content, unless depleted by algae growth or pollution, is always near saturation. A survey of the dissolved oxygen content or B.O.D. (Bio Oxygen Demand) of a river requires a detailed and specially designed survey of the river.

Elements other than those reported in this survey are in solution in trace amounts in surface and ground waters. Some of these have greatly increased in importance, but lack of personnel and laboratory facilities did not permit their routine determination. Separate samples, filtered and acidified at the time of collection, are required if an accurate figure is to be obtained for these trace elements, such as barium, silver, cobalt and nickel. These requirements limit the location of sampling stations and raise difficulties in obtaining suitable collectors; however, spectrographic analyses of residues are done from time to time for special studies.

**TABLE II**  
**CHEMICAL ANALYSES OF SURFACE WATERS IN THE**  
**LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**



**TABLE II**  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
<b>STATION NO. 1--ST. LAWRENCE RIVER</b>																		
1	Apr. 16/51	4:44	.....	.....	40	.....	1	8.1	20	6	8.1	5.3	141	.....	.....	54.8	207	29.0
2	Apr. 30	2:23	.....	.....	46	.....	1.5	8.0	20	4	.....	.....	.....	.....	.....	.....	232	31.4
3	May 14	12:22	.....	.....	52	.....	2	7.9	5	6	.....	.....	.....	.....	.....	.....	255	34.5
4	May 29	16:21	.....	.....	55	.....	2	8.0	7	1	.....	.....	181	.....	.....	66.2	262	36.3
5	June 11	7:8	.....	.....	58	.....	2	7.9	7	1.5	.....	.....	185	.....	.....	43.6	265	37.6
6	July 9	2:21	.....	.....	68	.....	2	7.9	20	0.2	.....	.....	172	.....	.....	42.8	263	36.0
<b>STATION NO. 2--ST. LAWRENCE RIVER (LAKE ST. FRANCIS)</b>																		
7	Sept. 26/58	52:87	.....	.....	70	3.5	2	7.9	3	2	.....	.....	179	.....	.....	54.8	299	36.0
<b>STATION NO. 3--ST. LAWRENCE RIVER</b>																		
8	June 13/51	5:21	.....	.....†	61	.....	3	7.9	7	2	.....	.....	.....	.....	.....	.....	274	37.9
9	Aug. 21/56	230:359	.....	.....	71	3.4	3	(8.2) 7.8 (8.1)	(10) 5	(5) 3	.....	.....	188	.....	.....	47.6	(260) 302	37.3
10	Oct. 2	37:40	.....	.....	58	11	1	8.1	10	9	7.0	4.0	190	.....	.....	38.4	302	38.3
11	Nov. 5	9:16	.....	.....	53	.....	1	8.1	5	2	.....	.....	.....	.....	.....	.....	304	40.0
12	Dec. 4	9:38	.....	.....	34	.....	2	8.0	20	3	.....	.....	.....	.....	.....	.....	311	(39.3) 40.2
13	July 5/57	6:60	.....	.....	70	3.1	2	8.2	5	2	.....	.....	188	.....	.....	32.8	304	38.7
14	Aug. 5	15:29	.....	.....	72	.....	2	7.9	5	0.9	.....	.....	.....	.....	.....	.....	303	36.4
15	Sept. 10	8:9	.....	.....	68	.....	1.5	8.1	5	0.4	.....	.....	.....	.....	.....	.....	303	37.0
† Flow through "Lost Channel" between Salaberry Island and Valleyfield estimated at 500 to 700 cfs during the period of study.																		
<b>STATION NO. 4--ST. LAWRENCE RIVER</b>																		
16	Aug. 21/56	230:359	.....	.....	72	3.6	3	7.8 (8.0)	5	35	34	27	198	.....	.....	44.0	321	37.9
<b>STATION NO. 5--ST. LAWRENCE RIVER (LAKE ST. LOUIS)</b>																		
17	June 16/59	3:16	.....	.....	55	4.5	3	7.8	15	0.7	.....	.....	162	.....	.....	37.6	250	31.9
<b>STATION NO. 6--ST. LAWRENCE RIVER</b>																		
18	Jan. 21/50	17	.....	.....	.....	.....	5	7.6	8	6	9.8	7.8	168	.....	.....	22.6	280	36.9
19	June 12	8	.....	.....	64	.....	0	8.3	10	5	6.0	4.4	171	.....	.....	23.4	278	36.0
20	June 26	31	.....	.....	68	.....	0	8.3	7	0.4	.....	.....	176	.....	.....	23.8	280	37.0
21	July 10	7	.....	.....	73	.....	0	8.3	3	7	12.8	9.8	185	.....	.....	40.0	282	36.0
22	July 26	56	.....	.....	70	.....	0	8.3	3	7	5.2	3.4	183	.....	.....	30.6	285	37.1
23	Aug. 14	42	.....	.....	68	.....	0	8.3	6	0.9	.....	.....	199	.....	.....	41.8	304	36.4
24	Sept. 6	16	.....	.....	65	.....	0	8.3	3	2	.....	.....	196	.....	.....	36.8	279	36.8
25	Apr. 10/51	10:50	.....	.....	43	.....	2	7.9	15	8	17	14	159	.....	.....	65.8	230	29.1
26	Apr. 16	4:10	.....	.....	45	.....	1.5	8.0	.....	70	.....	.....	.....	.....	.....	.....	208	27.9
27	Apr. 23	5:7	.....	.....	44	.....	3	7.7	25	9	.....	.....	.....	.....	.....	.....	241	32.0
28	Apr. 30	2:23	.....	.....	52	.....	2	8.0	35	15	54	43	167	.....	.....	30.8	241	32.1
29	May 14	12:22	.....	.....	49	.....	3	7.8	15	6	.....	.....	.....	.....	.....	.....	241	32.1
30	May 29	11:11	.....	.....	62	.....	6	7.5	5	.....	.....	.....	.....	.....	.....	.....	262	35.4
31	June 12	6:7	.....	.....	64	.....	0	8.3	15	4	.....	.....	162	.....	.....	36.8	272	35.5
32	July 9	2:21	.....	.....	72	.....	2	7.9	25	0.2	6.4	3.4	182	.....	.....	57.4	265	37.4
33	Aug. 17/56	231:354	.....	.....	74	2.9	3	7.7	5	0.9	.....	.....	175	.....	.....	69.2	264	35.5
			.....	.....	.....	.....	(0)	(8.6)	.....	.....	.....	.....	189	.....	.....	42.8	312	25.5

\* See also Water Survey Report No. 3

**TABLE II**  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
near ST. REGIS, HUNTINGDON CO.																								
6.4	0.37	0.03	.....	.....	.....	.....	6.1	0.8	.....	0.0	87.8	18.1	13.0	0.35	0.5	1.4	.....	26.7	98.7	119	12	-0.1	8.3	1
6.0	.....	.....	.....	.....	.....	.....	6.6	1.1	.....	0.0	90.3	23.9	14.7	.....	.....	1.4	.....	29.0	103	130	12	-0.1	8.2	2
7.4	.....	.....	.....	.....	.....	.....	8.3	0.9	.....	0.0	102	22.0	17.9	.....	0.0	1.1	.....	32.7	117	142	13	+0.1	7.7	3
7.4	.....	0.12	.....	.....	.....	.....	7.7	1.2	.....	0.0	108	22.6	17.1	0.2	0.6	1.1	.....	32.6	121	147	12	0.0	8.0	4
7.8	.....	0.07	.....	.....	.....	.....	8.1	1.2	.....	0.0	110	23.0	18.4	0.1	0.6	0.7	.....	35.9	126	152	12	0.0	7.9	5
6.5	.....	0.04	.....	.....	.....	.....	8.6	1.3	.....	0.0	103	21.4	18.8	0.25	2.4	1.6	.....	32.6	117	147	14	0.0	7.9	6
at COTEAU LANDING, SOULANGES CO.																								
8.4	.....	0.04	0.00	0.02	Trace	0.4	9.7	1.2	0.05	0.0	107	26.6	23.8	0.0	0.4	3.5	.....	37.0	124	163	14	-0.1	8.1	7
at VALLEYFIELD (Salaberry de Valleyfield), BEAUHARNOIS CO.																								
7.5	.....	.....	.....	.....	.....	.....	8.3	1.4	.....	0.0	110	23.9	19.5	.....	0.8	1.9	.....	35.2	125	155	12	-0.1	8.1	8
8.3	.....	Trace	0.00	0.07	.....	0.05	9.6	1.2	0.0	0.0	109	26.1	22.0	0.0	0.8	3.5	.....	35.9	126	163	14	-0.1	8.0	9
7.3	.....	Trace	0.00	0.07	0.00	0.00	9.6	1.3	0.0	0.0	113	22.0	21.4	0.0	0.8	2.4	.....	32.8	126	159	14	+0.2	7.7	10
6.8	.....	.....	.....	.....	.....	.....	9.7	1.2	0.0	0.0	113	24.5	21.5	.....	0.8	1.3	.....	35.2	128	161	14	+0.2	7.7	11
7.1	.....	.....	.....	.....	.....	.....	10.8	1.3	0.2	0.0	115	27.5	22.7	.....	0.8	2.8	0.52	35.3	130	170	15	+0.1	7.8	12
6.9	.....	0.00	0.00	0.03	0.00	0.00	11.8	1.2	0.05	0.0	119	25.8	21.0	0.0	0.8	2.8	.....	27.0	125	168	17	+0.3	7.6	13
7.8	.....	.....	.....	.....	.....	.....	12.3	1.1	0.0	0.0	118	25.2	21.5	.....	0.3	0.7	.....	26.2	123	163	18	0.0	7.9	14
8.1	.....	.....	.....	.....	.....	.....	10.0	1.2	0.0	0.0	112	26.7	22.0	.....	0.1	2.3	.....	33.6	126	163	15	+0.2	7.7	15
near BEAUHARNOIS, BEAUHARNOIS CO.																								
9.1	.....	0.04	0.00	0.17	.....	0.05	12.2	1.6	0.05	0.0	123	28.7	22.5	0.0	0.6	3.0	.....	31.2	132	177	16	0.0	7.8	16
at DORVAL ISLAND, ILE DE MONTREAL																								
6.4	0.18	0.18	0.00	0.01	0.00	0.2	7.9	1.0	0.00	0.0	92.2	20.6	17.1	0.0	0.2	0.8	.....	30.3	106	132	14	-0.3	8.4	17
at CAUGHNAWAGA*, LAPRAIRIE CO.																								
6.6	0.46	0.04	.....	.....	.....	.....	8.7	1.9	.....	0.0	106	28.0	17.3	0.1	0.8	2.3	.....	32.5	119	155	14	-0.4	8.4	18
7.3	0.6	0.13	.....	.....	.....	.....	8.0	1.2	.....	6.5	96.4	24.4	17.3	0.1	0.5	0.9	.....	30.0	120	150	13	0.0	8.0	19
7.6	.....	0.10	.....	.....	.....	.....	8.7	1.2	.....	4.8	101	27.8	18.1	0.1	0.4	3.3	.....	33.0	124	159	13	+0.2	7.7	20
7.5	0.52	0.05	.....	.....	.....	.....	9.2	1.1	.....	3.6	97.8	27.7	18.9	0.1	0.6	2.0	.....	34.5	121	155	14	-0.2	7.7	21
7.5	0.56	0.06	.....	.....	.....	.....	9.2	1.2	.....	2.4	107	24.7	19.2	0.1	0.5	4.2	.....	31.5	124	159	14	+0.1	7.8	22
7.8	.....	0.11	.....	.....	.....	.....	9.4	1.0	.....	7.2	98.6	26.3	20.5	0.05	0.4	0.8	.....	30.1	123	159	14	+0.2	7.8	23
7.5	.....	0.15	.....	.....	.....	.....	8.8	1.1	.....	2.2	106	22.2	18.0	0.1	0.4	4.0	.....	31.9	123	154	13	+0.1	7.9	24
7.6	0.72	0.05	.....	.....	.....	.....	6.5	1.2	.....	0.0	94.4	21.8	13.6	0.25	0.9	1.6	.....	26.5	104	129	12	-0.2	8.3	25
7.3	.....	.....	.....	.....	.....	.....	4.4	1.5	.....	0.0	86.9	24.3	7.9	.....	.....	3.4	.....	28.4	99.6	119	8.6	-0.2	8.4	26
6.6	0.92	0.18	.....	.....	.....	.....	7.6	1.1	.....	0.0	100	21.6	18.5	0.0	0.0	2.5	.....	25.0	107	139	13	-0.3	8.3	27
7.0	.....	.....	.....	.....	.....	.....	6.6	1.3	.....	0.0	97.6	24.3	13.6	.....	.....	3.2	.....	28.8	109	136	12	0.0	8.0	28
7.4	.....	.....	.....	.....	.....	.....	8.2	1.1	.....	0.0	106	22.6	17.7	.....	0.4	2.1	.....	31.8	119	147	13	-0.1	8.0	29
7.8	.....	0.16	.....	.....	.....	.....	7.8	1.2	.....	0.0	115	22.5	17.0	0.1	0.0	2.1	.....	26.7	121	151	12	-0.4	8.3	30
7.5	2.7	0.04	.....	.....	.....	.....	8.1	1.2	.....	2.6	103	22.4	17.9	0.1	0.5	1.1	.....	35.6	124	149	12	+0.2	7.8	31
7.8	.....	0.05	.....	.....	.....	.....	8.3	1.3	.....	0.0	105	22.6	17.9	0.2	1.8	3.2	.....	34.7	121	150	13	0.0	7.9	32
8.8	.....	0.00	0.00	0.04	0.00	0.00	21.6	1.4	.....	0.0	92.2	42.2	20.7	0.0	0.8	3.5	.....	24.2	99.8	170	10	-0.4	8.5	33

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
(In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 7-ST. LAWRENCE RIVER

1	Nov. 8/49	20	.....	.....	.....	5.3	6	7.3	20	5	.....	.....	.....	.....	.....	.....	.....	28.8
2	Oct. 5/53	10	.....	.....	.....	1.8	0	8.7	5	0.7	.....	.....	.....	.....	.....	.....	.....	36.0

\* See also Montreal municipal supply, page 119  
\*\* Analyses by the Permutit Co. of Canada Ltd.

STATION NO. 8-ST. LAWRENCE RIVER

3	Aug. 17/56	231:354	.....	.....	74	2.9	3 (0)	7.7 (8.6)	5	0.9	.....	.....	189	.....	.....	42.8	312	25.5
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STATION NO. 9-ST. LAWRENCE RIVER

4	June 19/47	5	.....	.....	61	.....	2 (3)	7.9 (7.9)	40 (60)	10	.....	.....	181	.....	.....	70.4	.....	33.8
5	Mar. 17/49	15	.....	.....	.....	.....	3	7.9	40	0.8	.....	.....	.....	.....	.....	47.2	281	37.2
6	July 28/55	46:57	.....	.....	71	.....	2	8.0	5	10	47.3	47.3	168	.....	.....	54.8	301	38.6
7	Aug. 23	3:84	.....	.....	74	12	2	7.9	5	2	.....	.....	179	.....	.....	56.4	291	36.3
8	Sept. 19	4:43	.....	.....	65	.....	3	7.7	5	0	.....	.....	.....	.....	.....	.....	300	36.1
9	Oct. 19	6:34	.....	.....	53	.....	1	8.2	10	25	.....	.....	.....	.....	.....	.....	301	37.6
10	Nov. 20	4:138	.....	.....	42	18	1	8.1	.....	30	33.5	29.6	184	.....	.....	1.6	308	38.0
11	Dec. 20	7:62	.....	.....	35	.....	0	8.3	0	20	.....	.....	.....	.....	.....	.....	309	39.3
12	Jan. 19/56	7:105	.....	.....	34	2.3	1	8.2	10	3	.....	.....	177	.....	.....	31.6	301	39.0
13	Mar. 19	29:58	.....	.....	36	.....	1.5	8.1	10	3	.....	.....	.....	.....	.....	.....	296	38.3
14	Apr. 19	28:41	.....	.....	35	5.8	2	7.9	20	15	14.3	12.0	178	.....	.....	50.4	252	33.7
15	May 22	8:14	.....	.....	50	.....	2	8.0	20	25	.....	.....	.....	.....	.....	.....	278	37.4
16	June 19	1:8	.....	.....	62	.....	1	8.1	30	20	.....	.....	.....	.....	.....	.....	278	35.5
17	July 29	7:20	.....	.....	68	8.3	2	8.0	10	20	16.9	8.9	184	.....	.....	31.2	297	37.7

\* See also Water Survey Reports Nos. 2 and 3

STATION NO. 10-ST. LAWRENCE RIVER

18	Feb. 6/48	238	.....	253,000	34	.....	.....	8.4	15	0.8	.....	.....	.....	.....	.....	.....	.....	303	40.5
19	Mar. 30/48	219	.....	281,000	37	.....	0	9.1	10	.....	.....	.....	149	.....	.....	55.2	227	30.0	
20	June 10	125	318,000	311,000	58	.....	.....	8.1	5	4	.....	.....	.....	.....	.....	.....	.....	278	37.0
21	Aug. 14/56	205:350	.....	.....	73	2.0	2	7.9	5	35	26.6	26.6	177	.....	.....	26.8	299	37.7	

\* See also Water Survey Reports Nos. 2 and 3

STATION NO. 11-ST. LAWRENCE RIVER

22	Aug. 14/56	192:350	.....	.....	73	10	1	8.2	10	15	8.2	8.2	178	.....	.....	26.4	300	37.5
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STATION NO. 12-ST. LAWRENCE RIVER

23	Aug. 13/56	193:346	.....	.....	69	9.9	1.5	8.0 (8.2)	5	15	5.2	3.1	190	.....	.....	35.6	298	37.6
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STATION NO. 13-ST. LAWRENCE RIVER

24	Aug. 13/56	195:346	341,000	336,000	70	9.9	2	7.9 (8.2)	10	.....	.....	.....	198	0.269	182	41.6	302	37.6
25	Nov. 14	12:94	306,000	314,000	54	11	1	8.1	10	30	41	35	182	0.248	151	43.2	297	37.6
26	Dec. 3	10:39	321,000	308,000	34	.....	1.5	8.1	10	2.5	.....	.....	.....	.....	.....	.....	299	38.7
27	Jan. 4/57	7:26	293,000	329,000	33	.....	2	7.9	10	6	.....	.....	.....	.....	.....	.....	312	40.5

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.	
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total						
at MONTREAL*, ILE DE MONTREAL																									
5.1	0.1	.....	.....	.....	.....	.....	7.8	.....	.....	0.0	84.2	20.2	15.6	.....	.....	.....	.....	24.0	93.0	.....	.....	.....	.....	1	
6.8	0.1	.....	0.00	.....	.....	.....	9.7	.....	.....	3.6	90.3	21.1	23.4	.....	.....	0.6	.....	38.0	118	.....	.....	.....	.....	2	
at LA PRAIRIE, LAPRAIRIE CO.																									
8.8	.....	0.00	0.00	0.04	0.00	0.00	21.6	1.4	.....	0.0 (4.9)	92.2 (80.5)	42.2	20.7	0.0	0.8	3.5	.....	24.2	99.8	170	10	-0.4	8.5	3	
at ST. LAMBERT*, CHAMBLY CO.																									
7.8	0.73	.....	.....	.....	.....	.....	6.4	.....	.....	0.0	101 (97.6)	23.7	.....	.....	3.5	2.9	.....	33.4	116	.....	11	-0.1	8.1	4	
8.2	.....	0.07	.....	.....	.....	.....	7.7	1.2	.....	0.0	112	26.0	17.6	0.15	0.35	3.6	.....	34.6	127	.....	13	-0.1	8.1	5	
5.9	.....	0.02	0.00	0.05	0.02	0.1	9.0	1.3	.....	0.0	110	22.5	21.1	0.05	0.6	3.4	.....	30.8	121	157	14	+0.1	7.8	6	
8.0	.....	0.01	0.00	0.04	0.04	.....	8.4	1.2	.....	0.0	109	22.9	19.8	0.0	1.2	3.1	.....	34.5	124	155	13	0.0	7.9	7	
8.0	.....	.....	.....	.....	.....	.....	9.3	1.3	0.0	0.0	101	28.2	21.4	.....	1.2	1.0	0.15	.....	39.8	123	157	14	-0.3	8.3	8
7.7	.....	.....	.....	.....	.....	.....	11.2	1.6	0.0	0.0	115	27.2	20.5	.....	1.2	2.5	.....	31.3	126	166	16	+0.3	7.6	9	
7.8	.....	0.04	0.00	0.10	0.01	0.01	10.8	1.6	.....	0.0	115	27.8	20.6	0.0	1.2	2.6	.....	32.5	127	167	15	+0.2	7.7	10	
7.5	.....	.....	.....	.....	.....	.....	10.0	1.8	0.0	0.0	117	26.4	20.6	.....	2.4	2.4	.....	32.9	129	166	14	+0.5	8.8	11	
7.3	.....	0.00	0.00	0.04	Trace	0.00	8.7	1.4	0.0	0.0	114	24.7	20.2	0.05	2.4	2.2	.....	33.7	127	162	13	+0.3	7.6	12	
7.4	.....	.....	.....	.....	.....	.....	9.0	1.5	0.0	0.0	112	25.4	20.1	.....	3.2	1.5	.....	34.4	126	162	13	+0.2	7.7	13	
6.2	.....	0.03	0.00	0.03	Trace	0.00	6.8	1.3	0.0	0.0	92.6	24.4	15.2	0.05	2.8	2.3	.....	33.6	110	139	12	-0.2	8.3	14	
6.6	.....	.....	.....	.....	.....	.....	8.0	1.4	0.0	0.0	109	24.2	17.4	.....	2.4	1.5	.....	31.5	121	152	13	+0.1	7.8	15	
6.7	.....	.....	.....	.....	.....	.....	9.0	1.4	0.1	0.0	109	24.4	15.5	.....	4.0	1.9	.....	27.1	116	152	14	+0.1	7.9	16	
7.6	.....	0.01	0.00	0.24	.....	0.00	9.3	1.3	0.1	0.0	108	24.7	20.7	0.05	4.8	3.4	.....	36.9	125	163	14	+0.1	7.8	17	
at LONGUEUIL*, CHAMBLY CO.																									
9.6	.....	.....	.....	.....	.....	.....	8.7	1.6	.....	2.4	112	.....	17.5	.....	.....	7.4	.....	44.7	141	163	12	+0.6	7.2	18	
7.8	.....	0.05	.....	.....	.....	.....	6.5	1.6	.....	9.6	72.2	.....	17.5	12.9	0.1	0.0	1.9	.....	31.7	107	124	12	+1.1	6.9	19
8.2	.....	.....	.....	.....	.....	.....	7.5	1.3	.....	0.0	116	.....	15.8	.....	.....	2.4	.....	34.7	126	127	11	+0.1	7.9	20	
7.6	.....	Trace	0.00	0.04	0.00	0.00	10.0	1.2	0.0	0.0	110	.....	27.0	20.9	.....	0.4	2.4	.....	34.7	125	162	15	-0.1	8.1	21
at VARENNES, VERCHERES CO.																									
7.5	.....	0.02	0.00	0.00	0.02	0.30	9.7	1.2	0.0	0.0	110	24.8	21.7	0.0	0.2	4.5	.....	33.8	124	162	14	+0.2	7.8	22	
at VERCHERES, VERCHERES CO.																									
7.8	.....	Trace	0.00	Trace	0.01	0.01	9.5	1.3	0.0	0.0	107 (118)	25.5	21.8	0.1	0.8	2.8	.....	37.8	126	160	14	0.0	8.0	23	
near CONTRECOEUR, VERCHERES CO.																									
7.5	.....	0.1	0.00	0.00	.....	0.00	9.3	1.3	.....	0.0	108	26.3	21.8	0.1	1.3	3.5	.....	36.0	125	162	14	0.0	7.9	24	
7.3	.....	0.05	0.00	0.21	0.00	0.00	9.3	1.4	0.0	0.0	109	25.8	21.6	0.0	0.4	3.0	.....	34.8	124	160	14	+0.2	7.7	25	
6.8	.....	.....	.....	.....	.....	.....	10.0	1.3	.....	0.0	112	24.6	21.3	.....	1.2	2.0	0.10	.....	32.8	125	161	15	+0.2	7.7	26
6.8	.....	.....	.....	.....	.....	.....	9.6	1.5	0.1	0.0	115	26.5	23.1	.....	0.8	2.4	.....	34.9	129	168	14	0.0	7.9	27	

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
(In parts per million)

No.	Date of collection	Storage period (Days)	Stream/discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 13-ST. LAWRENCE RIVER

1	Feb. 5/57	23:38	339,000	311,000	34	10	2	8.0	5	5	5.4	4.6	192	0.261	175,600	34.4	301	37.7
2	Mar. 6	12:16	317,000	324,000	35	.....	3	7.8	10	4	.....	.....	.....	.....	.....	.....	289	36.2
3	Apr. 3	14:28	327,000	340,000	35	.....	9	7.3	15	15	.....	.....	.....	.....	.....	.....	285	35.0
4	May 6	3:61	366,000	340,000	53	3.9	1	8.1	10	15	10.0	7.0	199	0.271	196,540	52.8	293	37.7
5	June 6	8:13	338,000	322,000	.....	.....	2	8.0	10	15	.....	.....	.....	.....	.....	.....	288	36.3
6	July 1	7:15	330,000	378,000	65	.....	1	8.1	10	30	.....	.....	.....	.....	.....	.....	301	37.8
7	Aug. 2	18:35	323,000	303,000	75	3.3	3	7.8	5	6	7.1	6.7	197	0.268	171,510	30.0	295	36.6
8	Sept. 3	3:16	289,000	301,000	68	.....	4	7.7	5	6	.....	.....	.....	.....	.....	.....	296	36.2
9	Oct. 4	7:18	308,000	302,000	59	.....	1	8.1	10	9	.....	.....	.....	.....	.....	.....	296	36.7

STATION NO. 14-ST. LAWRENCE RIVER\* (North Channel)

10	June 7/55	6:85	.....	.....	50	.....	2	7.7 7.6	25	20	20	15	128	.....	.....	.....	37.6	185	23.1
11	July 10	10:23	.....	.....	77	14	1	8.0	25	20	.....	.....	165	.....	.....	.....	69.6	208	24.9
12	Aug. 22	2:15	Low	.....	76	.....	2	7.8	20	5	.....	.....	.....	.....	.....	.....	.....	235	37.1
13	Sept. 21	2:41	Very low	.....	67	.....	2	7.8	35	0.9	.....	.....	.....	.....	.....	.....	.....	165	20.7
14	Oct. 21	6:168	Very low	.....	53	17	2	7.4	35	25	25	20	98.4	.....	.....	.....	31.2	113	12.5
15	Nov. 21	3:73	Low	.....	39	.....	2	7.5	.....	40	.....	.....	.....	.....	.....	.....	.....	113	13.6
16	Dec. 21	13:82	Very low	.....	32	.....	3	7.5	45	10	.....	.....	.....	.....	.....	.....	.....	136	17.0
17	Jan. 21/56	5:103	Low	.....	35	10	3	7.4	45	7	8.7	6.8	96.8	.....	.....	.....	38.4	110	13.7
18	Feb. 21	17:76	Low	.....	35	.....	2	7.5	40	3	.....	.....	.....	.....	.....	.....	.....	119	12.9
19	Mar. 21	33:58	Low	.....	35	.....	2	7.5	35	4	.....	.....	.....	.....	.....	.....	.....	115	13.6
20	Apr. 21	26:45	Very low	.....	40	11	5	7.1	50	35	41	38	96.3	.....	.....	.....	33.2	103	12.7
21	May 21	8:15	Low	.....	54	.....	3	7.4	50	30	.....	.....	.....	.....	.....	.....	.....	101	13.1
22	June 21	4:13	Low	.....	67	.....	3	7.5	40	25	.....	.....	.....	.....	.....	.....	.....	133	17.0

\* Apparently a mixture of St. Lawrence River and other river water, probably Bayonne River (Station No. 45) - from north channel  
† Collector's estimate of river level

STATION NO. 15-ST. LAWRENCE RIVER

23	Feb. 24/55	.....	.....	.....	.....	.....	4	6.3	.....	2	.....	.....	44	.....	.....	.....	.....	.....	4.0
24	Jan. 24/56	.....	.....	.....	.....	.....	7	6.7	15	2	.....	.....	100	.....	.....	.....	.....	.....	14.4

\* Analyses by Alchem Ltd., Burlington, Ont.

STATION NO. 16-ST. LAWRENCE RIVER\*

25	May 24/54	.....	.....	.....	.....	.....	5	6.7	.....	3	.....	.....	60	.....	.....	.....	.....	.....	5.6
26	Jan. 24/56	.....	.....	.....	.....	.....	2	7.1	50	2	.....	.....	75	.....	.....	.....	.....	.....	7.2

\* Apparently a mixture of St. Lawrence River and other river water, probably St. Maurice River (Station No. 93).  
\*\* Analyses by Alchem Ltd., Burlington, Ont.

STATION NO. 17-ST. LAWRENCE RIVER

27	Aug. 22/55	7:92	.....	.....	70	12	1	8.1	5	3	10.8	8.9	174	.....	.....	.....	33.2	272	33.2
28	Sept. 22	5:40	.....	.....	67	.....	4	7.6	10	3	.....	.....	.....	.....	.....	.....	.....	278	34.3
29	Oct. 22	12:31	.....	.....	56	.....	2	8.0	10	15	.....	.....	.....	.....	.....	.....	.....	278	34.9
30	Nov. 22	3:72	.....	.....	34	14	3	7.7	.....	50	26.7	26.0	148	.....	.....	.....	29.6	221	28.5
31	Dec. 23	11:105	.....	.....	34	.....	1.5	8.1	20	45	.....	.....	.....	.....	.....	.....	.....	272	35.5
32	Jan. 23/56	17:74	.....	.....	32	.....	4	7.6	35	15	.....	.....	.....	.....	.....	.....	.....	242	31.0
33	Feb. 23	19:83	.....	.....	.....	6.4	1	8.1	20	8	9.1	4.3	163	.....	.....	.....	17.6	267	34.7
34	Mar. 22	43:57	.....	.....	36	.....	0	8.3	20	0.3	.....	.....	.....	.....	.....	.....	.....	251	33.0
35	May 22	9:31	.....	.....	54	9.9	2	7.8	70	50	38	37	132	.....	.....	.....	.....	170	23.3
36	June 22	4:12	.....	.....	68	.....	2	7.8	.....	70	.....	.....	.....	.....	.....	.....	.....	182	25.3

STATION NO. 18-ST. LAWRENCE RIVER

37	July 5/55	7:133	.....	.....	74	.....	0.9	8.2 (8.0)	15	9	20	15	164	.....	.....	.....	39.6	247	31.1
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TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
near CONTRECOEUR, VERCHERES CO. (Concluded)																								
7.6	.....	0.00	0.00	0.08	0.00	0.00	9.3	1.4	0.0	0.0	110	26.0	21.1	0.0	1.0	1.5	.....	35.4	125	160	14	+0.1	7.8	1
7.3	.....	.....	.....	.....	.....	.....	8.8	1.5	0.05	0.0	108	24.0	21.2	.....	0.8	1.2	.....	32.1	120	154	14	-0.2	8.2	2
7.5	.....	.....	.....	.....	.....	.....	9.1	1.4	0.05	0.0	105	24.5	19.7	.....	0.4	1.2	.....	31.7	118	151	14	-0.7	8.7	3
8.0	.....	0.02	0.00	0.00	0.00	0.00	9.2	1.2	0.0	0.0	117	24.9	20.0	0.0	0.4	3.1	0.06	30.7	127	162	14	+0.2	7.7	4
7.5	.....	.....	.....	.....	.....	.....	8.9	1.6	0.0	0.0	111	23.5	18.7	.....	0.2	0.8	.....	30.2	121	152	14	+0.1	7.8	5
7.6	.....	.....	.....	.....	.....	.....	9.3	1.4	0.0	0.0	110	25.6	21.8	.....	0.2	1.5	.....	35.8	126	159	14	+0.2	7.7	6
7.5	.....	Trace	0.00	0.03	0.00	0.00	9.1	1.4	0.0	0.0	106	26.0	20.5	0.0	1.0	1.2	.....	34.9	122	156	14	-0.1	8.0	7
8.3	.....	.....	.....	.....	.....	.....	9.6	1.5	0.0	0.0	107	26.6	22.0	.....	1.6	1.3	.....	36.6	125	160	14	-0.3	9.3	8
8.0	.....	.....	.....	.....	.....	.....	9.7	1.3	.....	0.0	109	27.2	22.3	.....	0.4	1.3	.....	34.8	125	161	14	+0.2	7.7	9
at BERTHIERVILLE, BERTHIER CO.																								
4.4	.....	0.02	0.00	0.03	0.00	.....	5.2	1.0	0.0	0.0	68.1 (61.0)	16.2	10.8	0.0	Trace	4.6	.....	19.8 (23.0)	75.7 (73.0)	98.0	13	-0.6	8.9	10
5.3	.....	0.01	0.00	0.04	0.00	.....	5.8	1.0	0.0	0.0	74.5	19.2	12.6	.....	0.8	4.3	0.00	22.8	83.9	77.7	13	-0.2	8.4	11
0.4	.....	.....	.....	.....	.....	.....	7.2	1.4	0.2	0.0	87.0	19.4	15.0	.....	0.8	2.1	0.00	22.8	94.2	125	14	-0.2	8.2	12
3.2	.....	.....	.....	.....	.....	.....	5.1	1.2	0.3	0.0	57.4	15.8	9.5	.....	1.6	3.0	.....	17.7	64.8	88.4	14	-0.6	9.0	13
3.1	.....	0.06	0.00	0.07	Trace	0.00	3.9	1.1	0.1	0.0	36.8	14.0	5.7	0.0	1.6	5.2	.....	13.7	43.9	65.4	16	-1.4	10	14
2.8	.....	.....	.....	.....	.....	.....	3.3	1.0	.....	0.0	38.5	12.9	4.0	.....	3.2	4.9	.....	13.9	45.5	64.7	13	-1.2	9.9	15
3.4	.....	.....	.....	.....	.....	.....	4.0	1.0	0.1	0.0	45.8	17.1	6.1	.....	2.4	5.7	.....	18.8	56.4	79.3	13	-1.5	9.9	16
3.1	.....	0.10	0.00	0.00	Trace	0.00	3.5	1.2	0.1	0.0	38.5	15.2	4.5	0.0	2.4	5.2	.....	15.3	46.9	67.9	14	-1.4	10	17
2.8	.....	.....	.....	.....	.....	.....	3.5	1.0	0.1	0.0	37.1	13.2	3.5	.....	2.4	5.4	0.00	13.3	43.7	63.0	15	-1.3	10	18
2.9	.....	.....	.....	.....	.....	.....	3.7	1.0	0.1	0.0	37.5	12.9	4.9	.....	6.0	5.2	.....	15.1	45.9	68.7	15	-1.3	10	19
2.4	.....	0.11	0.00	0.07	0.00	0.00	2.8	1.3	0.0	0.0	35.4	13.2	3.0	0.0	2.4	6.0	.....	12.6	41.6	61.3	12	-1.8	11	20
2.4	.....	.....	.....	.....	.....	.....	2.6	1.0	0.0	0.0	37.8	12.6	2.7	.....	1.6	4.8	.....	11.6	42.6	59.4	11	-1.4	10	21
3.5	.....	.....	.....	.....	0.00	0.00	3.5	1.0	0.0	0.0	49.5	13.2	6.1	.....	1.2	3.8	.....	16.2	56.8	73.7	12	-1.1	9.7	22
at THREE RIVERS, ST. MAURICE CO.																								
1.0	0.2	.....	.....	0.1	.....	.....	.....	.....	.....	0.1	0.1	12.2	0.0	4.9	.....	.....	4.4	.....	4	14	.....	.....	.....	23
2.4	0.4	.....	.....	0.25	.....	.....	.....	.....	.....	0.1	0.0	25.6	23.0	13.3	.....	.....	5.6	.....	24	46	.....	.....	.....	24
at CAP-DE LA MADELEINE, CHAMPLAIN CO.																								
0.4	1.4	.....	.....	0.05	.....	.....	.....	.....	0.3	0.0	17.1	9.5	3.6	.....	.....	4.8	.....	2	16	.....	.....	.....	.....	25
2.9	Trace	.....	.....	0.1	.....	.....	.....	.....	0.1	0.0	19.5	10.8	6.1	.....	.....	4.2	.....	14	30	.....	.....	.....	.....	26
at LOTBINIERE, LOTBINIERE CO.																								
6.5	.....	0.00	0.00	0.00	Trace	.....	7.8	1.2	0.1	0.0	96.1	23.0	17.4	0.05	2.4	2.3	.....	30.8	110	141	13	+0.1	7.9	27
5.7	.....	.....	.....	.....	.....	.....	7.1	1.8	0.6	0.0	94.8	23.0	18.6	.....	4.0	2.0	0.00	31.2	109	143	12	-0.4	8.4	28
6.8	.....	.....	.....	.....	.....	.....	8.4	1.4	0.01	0.0	103	23.6	18.2	.....	1.6	1.2	.....	30.2	115	147	13	0.0	8.0	29
6.0	.....	0.07	0.00	0.00	0.00	0.00	7.0	1.3	.....	0.0	89.9	21.4	12.3	0.0	4.0	3.8	.....	27.0	95.8	126	14	-0.4	8.5	30
6.6	.....	.....	.....	.....	.....	.....	8.3	1.3	0.0	0.0	105	24.7	17.9	.....	0.8	3.1	.....	29.9	116	150	13	+1.0	7.9	31
5.5	.....	.....	.....	.....	.....	.....	7.2	1.6	0.0	0.0	89.0	24.2	13.5	.....	2.0	3.8	.....	27.0	100	133	13	-0.5	8.6	32
6.0	.....	0.60	0.00	0.40	Trace	0.00	8.6	1.3	0.0	0.0	100	22.4	17.2	0.0	6.0	3.3	0.05	29.2	111	149	14	+0.1	7.9	33
5.8	.....	.....	.....	.....	.....	.....	8.0	1.3	0.0	0.0	95.1	22.2	14.4	.....	3.2	3.3	.....	28.2	106	138	14	+0.3	7.7	34
3.7	.....	0.31	0.00	0.00	0.00	0.00	4.7	1.2	0.0	0.0	65.7	16.9	7.7	0.0	3.2	2.3	.....	19.5	73.4	95.6	12	-0.5	8.8	35
4.0	.....	.....	.....	.....	0.00	0.00	5.7	1.4	0.2	0.0	75.6	16.5	7.9	.....	0.8	3.1	.....	17.6	79.6	102	13	-0.4	8.6	36
at ST. ROMUALD D'ETCHEMIN, LEVIS CO.																								
5.9	.....	0.02	0.00	0.03	Trace	.....	7.2	1.0	0.4	0.0	92.0 (0)	21.8	14.6	0.0	1.2	4.0	.....	26.4 (20)	107 (98)	132	13	+0.2	7.8	37

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-foot)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 19-ST. LAWRENCE RIVER

1	July 26/55	52:223	.....	.....	74	.....	2	7.9	20	20	20	14	146	.....	.....	30.0	236	30.7
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STATION NO. 20-ST. LAWRENCE RIVER

2	July 5/55	8:143	382,000	363,000	76	.....	2	7.9	25	40	99	79	158	0.215	163	35.2	252	31.0
3	Aug. 24	2:83	347,000	347,000	76	12	3	7.7	15	2	.....	.....	153	0.208	143	35.2	253	30.8
4	Sept. 26	7:32	348,000	335,000	68	.....	3	7.7	15	0.3	.....	.....	.....	.....	.....	.....	255	31.3
5	Oct. 24	3:29	338,000	338,000	65	.....	3	7.8	5	0	.....	.....	.....	.....	.....	.....	261	32.1
6	Nov. 24	8:139	399,000	395,000	55	5.8	2	7.8	20	25	14	12	161	0.219	173	34.0	239	30.2
7	Dec. 27	7:101	327,000	358,000	65	.....	2	7.9	20	15	.....	.....	.....	.....	.....	.....	256	31.6
8	Jan. 24/56	13:73	327,000	352,000	65	.....	1	8.0	20	4	.....	.....	.....	.....	.....	.....	250	30.7
9	Feb. 23	15:83	319,000	334,000	60	6.4	1	8.1	15	3	4.1	1.0	165	0.224	142	12.0	256	32.8
10	Apr. 5	39:55	328,000	509,000	63	.....	1	8.0	10	15	.....	.....	.....	.....	.....	.....	250	33.0
11	Apr. 25	23:41	575,000	509,000	68	6.6	2	7.7	.....	15	21	16	129	0.175	200	36.0	192	23.4
12	May 24	6:12	556,000	560,000	65	.....	1.3	7.9	10	3	.....	.....	.....	.....	.....	.....	202	25.1
13	June 26	2:21	433,000	480,000	67	.....	2	7.8	30	20	.....	.....	.....	.....	.....	.....	214	28.1
14	July 23	4:28	391,000	403,000	70	11	1	8.1	20	15	34	28	160	0.218	169	42.0	241	31.8
15	Oct. 20	25:107	408,000	386,000	57	.....	2	7.8	30	10	13.7	8.2	146	0.199	161	28.0	225	28.3
16	Nov. 19	24:53	362,000	352,000	45	.....	3	7.9	30	20	.....	.....	.....	.....	.....	.....	245	31.2
17	Dec. 20	19:41	355,000	344,000	39	.....	2	7.8	20	10	.....	.....	.....	.....	.....	.....	246	31.9
18	Jan. 21/57	10:22	354,000	366,000	39	13	1	8.0	20	3	4.5	1.3	155	0.211	148	34.8	242	30.3
19	Feb. 20	14:23	340,000	349,000	39	.....	2	7.9	20	0	.....	.....	.....	.....	.....	.....	244	31.4
20	Mar. 20	28:42	370,000	374,000	39	.....	3	7.7	15	15	.....	.....	.....	.....	.....	.....	235	29.0
21	Apr. 23	6:21	458,000	419,000	48	6.4	3	7.7	15	35	.....	.....	.....	.....	.....	.....	199	24.8
22	May 21	6:52	391,000	408,000	32	6.2	2	7.9	20	30	15	15	150	0.204	158	29.6	230	29.7
23	June 20	6:26	362,000	375,000	70	.....	1	8.1	20	30	.....	.....	.....	.....	.....	.....	237	29.6
24	July 22	8:22	439,000	444,000	72	.....	2	7.8	25	15	.....	.....	.....	.....	.....	.....	206	25.4
25	Aug. 21	6:23	330,000	346,000	.....	6.4	1	8.0	10	10	17.2	9.2	152	0.207	136	44.4	249	29.8
26	Sept. 23	16:22	353,000	344,000	.....	.....	1	8.0	20	7	.....	.....	.....	.....	.....	.....	232	28.5
27	Sept. 3/58	7:15	340,000	344,000	.....	4.4	4	7.5	15	6	12.2	8.6	156	0.212	143	43.6	232	28.1
28	Sept. 25	53:88	342,000	344,000	.....	4.9	7	7.3	15	5	27	17	143	0.194	131	39.2	226	26.6
29	Dec. 3	12:33	348,000	345,000	39	4.4	3	7.6	20	8	12.8	8.6	133	0.181	125	26.8	236	28.4
30	Apr. 20/59	1:11	551,000	549,000	.....	8.1	1.5	7.8	15	25	41	38	112	0.152	166	40	164	19.6
31	Apr. 29	8:22	578,000	549,000	.....	4.9	0.9	8.1	25	5	23	19	144	0.196	225	41	186	23.6
32	May 27	33:73	448,000	485,000	60	4.5	3	7.6	15	6	16	11	160	0.218	194	53.2	230	27.8
33	June 16	3:16	404,000	405,000	65	6.8	5	7.4	30	15	38	17	137	0.186	149	31.2	205	26.4
34	July 21	3:17	345,000	355,000	74	5.1	1.5	7.9	20	10	17.4	8.5	172	0.234	160	42.8	247	30.9
35	Aug. 25	9:10	345,000	333,000	70	.....	3	7.7	25	15	.....	.....	.....	.....	.....	.....	232	28.1
36	Sept. 22	3:34	314,000	322,000	.....	.....	1	8.0	10	10	.....	.....	.....	.....	.....	.....	235	28.8
37	Oct. 14	19:48	321,000	332,000	.....	8.0	3	7.7	20	15	24	23	154	0.209	133	44.0	225	27.9
38	Nov. 11	5:13	390,000	397,000	45	.....	3	7.8	35	25	.....	.....	.....	.....	.....	.....	215	26.6

\* Monthly sampling at this station is being continued on a long term basis

STATION NO. 21-ST. LAWRENCE RIVER

39	Aug. 25/58	20:24	342,000	.....	.....	4.1	4	7.5	20	1.5	.....	.....	155	0.211	143	39.6	229	26.9
40	Sept. 24	51:82	366,000*	344,000	.....	5.1	3	7.6	20	7	13.8	8.5	142	0.193	140	22.0	231	27.5
41	Sept. 24	51:82	366,000*	344,000	.....	4.9	5	7.4	20	15	17	16	132	0.180	131	23.6	218	25.7
42	Apr. 23/59	32:34	550,000	549,000	.....	6.5	3	7.6	20	15	.....	.....	.....	.....	.....	.....	189	23.3

\* High water, tidal effect  
 \*\* Low water, tidal effect

STATION NO. 22-ST. LAWRENCE RIVER

43	Aug. 6/55	9:84	.....	.....	43	27	3	7.9	25	0.3	.....	.....	30,900	.....	.....	2,950	46,700	336
44	Sept. 14	7:11	.....	.....	42	.....	3	7.8	5	0.3	.....	.....	.....	.....	.....	.....	43,600	349
45	Oct. 11	9:42	.....	.....	41	.....	3	7.8	5	3	.....	.....	.....	.....	.....	.....	41,600	329
46	Oct. 31	10:158	.....	.....	42	.....	4	7.7	0	7	10.4	9.8	31,400	.....	.....	3,010	44,400	343
47	Dec. 1	8:102	.....	.....	30	.....	4	7.8	10	30	.....	.....	.....	.....	.....	.....	40,200	317
48	Dec. 19	8:63	.....	.....	32	.....	4	7.8	5	10	.....	.....	.....	.....	.....	.....	43,100	335

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non- car- bonate	Total					
at SILLERY, (BERGERVILLE) QUEBEC CO.																								
4.4	.....	0.01	0.00	0.00	0.00	0.00	7.3	1.1	0.0	0.0	86.5	19.0	15.1	0.0	2.4	4.6	.....	23.7	94.7	127	14	-0.2	8.3	1
at LEVIS,* LEVIS CO.																								
5.9	.....	0.02	0.00	0.21	0.01	.....	6.7	1.2	0.15	0.0	84.0	24.7	17.5	0.00	1.6	0.7	.....	32.7	102	131	12	-0.2	8.2	2
6.0	.....	0.02	0.00	0.05	0.00	.....	7.4	1.1	0.35	0.0	85.6	24.0	16.4	0.00	1.6	1.3	.....	31.3	102	131	14	-0.4	8.5	3
5.3	.....	.....	.....	0.33	.....	.....	7.4	1.2	0.0	0.0	85.6	25.0	18.4	.....	0.6	1.4	.....	29.7	99.9	133	14	-0.4	8.5	4
6.3	.....	.....	.....	.....	.....	.....	7.6	1.2	0.0	0.0	89.7	23.2	17.8	.....	0.5	1.3	.....	32.4	106	134	13	-0.2	8.2	5
6.0	.....	0.09	0.00	0.13	Trace	0.00	7.3	1.2	0.1	0.0	83.9	20.7	17.5	0.0	1.2	2.5	0.00	31.2	100	128	13	-0.3	8.4	6
6.9	.....	.....	.....	.....	.....	.....	7.7	1.2	0.0	0.0	86.5	28.4	17.9	.....	0.8	1.7	.....	36.2	107	139	13	-0.1	8.5	7
6.1	.....	.....	.....	.....	.....	.....	7.5	1.3	0.0	0.0	84.4	26.0	16.9	.....	0.6	1.8	.....	32.5	102	133	14	-0.3	8.2	8
6.4	.....	0.06	0.00	0.44	0.00	0.05	7.9	1.2	0.0	0.0	91.7	24.1	18.2	0.0	4.0	1.3	0.00	33.0	108	142	13	0.0	8.1	9
6.7	.....	.....	.....	.....	.....	.....	7.8	1.1	0.3	0.0	90.2	24.9	17.5	.....	2.0	1.4	.....	35.9	110	139	13	0.0	8.0	10
4.8	.....	0.09	0.00	0.90	0.00	0.10	5.2	1.2	0.0	0.0	56.2	24.8	12.0	0.0	4.0	2.9	.....	33.1	78.1	107	12	-0.7	9.1	11
5.5	.....	.....	.....	.....	.....	.....	5.4	1.0	0.0	0.0	63.4	25.5	12.9	.....	1.6	2.6	.....	33.2	85.2	111	12	-0.4	8.7	12
5.1	.....	.....	.....	.....	0.00	0.40	6.3	1.3	0.1	0.0	78.1	19.0	13.4	.....	3.2	2.4	.....	27.0	91.1	117	13	+0.4	7.4	13
5.1	.....	0.04	0.00	0.07	0.00	0.00	7.4	1.2	0.2	0.0	86.5	20.8	16.8	0.0	1.6	2.7	.....	29.3	100	130	14	0.0	8.1	14
5.2	.....	0.01	0.00	0.08	Trace	0.00	7.7	1.2	0.05	0.0	81.3	19.4	15.5	0.0	0.6	4.2	.....	25.3	92.0	122	15	-0.4	8.6	15
5.5	.....	.....	.....	.....	.....	.....	8.9	1.2	0.1	0.0	89.6	21.3	16.7	.....	0.6	3.7	0.28	27.0	101	133	16	-0.2	7.7	16
5.5	.....	.....	.....	.....	.....	.....	7.7	1.2	0.2	0.0	90.7	21.8	16.4	.....	1.2	3.6	.....	27.8	102	134	14	-0.3	8.4	17
6.0	.....	0.06	0.00	0.00	0.00	0.00	7.1	1.2	0.1	0.0	88.0	20.6	16.4	0.0	0.8	2.2	.....	28.1	100	128	13	-0.1	8.2	18
5.9	.....	.....	.....	.....	.....	.....	7.3	1.3	0.0	0.0	88.9	22.4	17.0	.....	1.2	2.1	.....	29.7	103	132	13	-0.2	8.3	19
6.2	.....	.....	.....	.....	.....	.....	7.2	1.2	0.05	0.0	86.2	22.0	15.6	.....	1.2	2.5	.....	27.2	97.9	127	14	-0.4	8.5	20
5.2	.....	.....	.....	.....	.....	.....	5.9	1.2	0.0	0.0	76.7	17.8	11.8	.....	1.2	2.6	.....	20.4	83.3	108	13	-0.6	8.9	21
5.6	.....	0.07	0.00	0.05	Trace	0.00	7.0	1.1	0.05	0.0	86.4	20.1	14.9	0.0	0.2	1.9	0.00	26.2	97.1	123	13	-0.2	8.3	22
6.4	.....	.....	.....	.....	.....	.....	7.1	1.2	0.05	0.0	88.3	21.1	15.3	.....	0.8	1.1	.....	27.8	100	126	13	0.0	8.1	23
5.5	.....	.....	.....	.....	.....	.....	6.6	1.0	0.05	0.0	76.2	19.4	13.4	.....	0.8	3.7	.....	23.5	86.0	114	14	-0.4	8.6	24
7.0	.....	0.04	0.01	0.01	0.00	0.00	7.7	1.1	0.0	0.0	90.9	23.3	17.2	0.0	0.5	1.9	.....	28.5	103	133	14	-0.1	8.2	25
6.0	.....	.....	.....	.....	.....	.....	7.3	1.2	0.0	0.0	81.7	22.8	16.3	.....	0.3	2.3	.....	28.8	95.8	125	14	-0.2	8.4	26
6.2	1.17	0.02	0.00	0.07	0.00	0.00	7.4	1.0	0.05	0.0	81.3	21.3	16.9	0.1	0.2	1.9	0.11	28.9	95.6	123	14	-0.7	8.9	27
6.7	0.91	0.02	0.00	Trace	0.00	0.00	8.0	1.2	0.1	0.0	81.7	21.0	16.2	0.1	0.1	1.8	.....	26.9	93.9	122	15	-0.9	9.1	28
4.2	2.0	0.05	0.02	0.00	Trace	0.00	6.9	1.0	0.0	0.0	84.2	22.7	15.8	0.0	0.1	0.7	0.00	31.0	100	125	13	-0.5	8.6	29
4.9	0.09	0.05	0.00	0.00	0.00	0.00	5.1	0.9	0.0	0.0	68.6	18.0	10.6	0.0	0.5	2.4	.....	21.7	79.0	101	12.1	-0.2	8.5	31
5.7	0.42	0.07	0.00	0.21	0.00	0.00	5.9	1.2	0.0	0.0	80.7	20.1	14.4	0.0	0.4	1.3	.....	26.6	92.8	117	12	-0.5	8.6	32
8.0	1.4	0.03	0.00	0.00	0.00	0.00	6.0	1.1	.....	0.0	76.6	18.0	12.7	0.0	0.2	1.3	.....	23.6	86.4	108	13	-0.8	9.0	33
6.5	0.48	0.07	0.00	0.16	Trace	0.10	7.6	1.2	0.1	0.0	89.1	21.1	18.6	0.0	0.6	1.3	.....	30.7	104	132	13	-0.1	8.1	34
6.4	1.1	.....	.....	.....	.....	.....	7.3	1.4	0.2	0.0	81.6	21.2	16.7	.....	0.4	3.1	.....	29.5	96.4	125	14	-0.4	8.5	35
6.3	0.64	0.01	.....	.....	.....	.....	7.8	1.1	0.2	0.0	84.1	22.3	17.3	.....	1.0	2.6	.....	28.8	97.8	129	15	-0.2	8.4	36
6.6	0.79	0.04	0.00	0.04	0.00	0.00	7.5	1.2	0.0	0.0	80.2	22.6	16.8	0.0	0.1	2.5	.....	31.0	96.8	125	14	-0.5	8.7	37
5.8	1.26	.....	.....	.....	.....	.....	6.6	1.2	0.0	0.0	75.9	20.6	14.8	.....	0.2	2.6	.....	27.9	90.2	116	14	-0.4	8.6	38
at QUEBEC, QUEBEC CO.																								
6.3	.....	0.02	0.0	0.02	0.00	0.00	7.4	1.1	0.1	0.0	80.1	20.5	16.6	0.1	0.2	1.7	0.05	27.3	93.0	121	14	-0.7	8.9	39
6.5	.....	0.01	0.0	0.05	0.02	0.05	7.1	1.1	0.1	0.0	81.9	20.2	16.6	0.1	0.1	1.8	0.05	28.1	95.3	121	14	-0.6	8.8	40
6.3	.....	0.03	0.0	0.04	0.00	0.00	7.0	1.1	0.1	0.0	78.0	21.3	15.7	0.1	0.1	2.0	0.05	26.0	90.0	118	14	-0.8	9.0	41
5.3	.....	0.09	0.0	0.00	0.00	0.00	5.0	1.0	0.1	0.0	69.8	18.8	10.4	0.0	0.6	4.0	.....	22.6	79.2	103	12	-0.6	8.8	42
at TROIS PISTOLES, RIVIERE DU LOUP CO.																								
1,090	.....	Trace	0.00	.....	.....	.....	9,160	334	.....	0.0	132	2,175	16,100	.....	.....	.....	.....	5,200	5,300	29,300	78	.....	.....	43
1,030	.....	.....	.....	.....	.....	.....	8,800	440	0.0	0.0	131	2,165	16,300	.....	.....	.....	.....	5,000	5,100	29,100	77	.....	.....	44
1,010	.....	.....	.....	.....	.....	.....	8,200	342	.....	0.0	129	2,100	15,600	.....	.....	.....	.....	4,870	4,980	27,700	76	.....	.....	45
1,070	.....	.....	.....	.....	.....	.....	9,000	380	.....	0.0	133	2,240	16,500	.....	.....	.....	3.69	5,150	5,260	29,600	77	.....	.....	46
973	.....	.....	.....	.....	.....	.....	8,200	316	.....	0.0	131	1,980	14,600	.....	.....	.....	.....	4,690	4,790	26,500	77	.....	.....	47
1,040	.....	.....	.....	.....	.....	.....	8,860	340	.....	0.0	134	1,900	15,600	.....	.....	.....	.....	5,060	5,170	28,100	78	.....	.....	48



TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 22-ST. LAWRENCE RIVER

1	Jan 12/56	5:98			30		3	7.8	10	40	42	36	27,800			3,335	39,600	309
2	Feb. 15	20:70			32		4	7.8	5	10							42,150	337
3	Mar. 28	43:51			32		3	7.6	10								41,500	336
4	Apr. 21	27:45			35		4	7.6	10	10	20.3	19.7	20,100		2,530		28,800	235
5	May 25	6:17			41		3	7.8	20	80							34,000	268
6	June 10	4:12			33		4	7.7	5	9							42,000	330
7	July 12	6:15			45		2	8.0	5	6							41,200	322

STATION NO. 23-CHATEAUGUAY RIVER

8	July 27/47	13					5	7.4	45	6			106			43.2		18.8
9	May 28/53	6:15			60		3	7.8 (8.1)	20 (25)	0			104			18.8	163 (166)	22.9
10	Aug. 20/56	231:360			70	3.5	1.5	7.9 (8.0)	10	2			100			21.6	159	19.6
11	Oct. 23	22:104			55	11	2	7.8	20	0.3			126			32.8	189	24.6
12	Dec. 23	17:46			35	13	2	7.7	20	2			125			20.8	171	22.5
13	Feb. 23/57	11:95			10	2	2	7.9	10	1			134			21.6	184	23.3
14	Apr. 23	6:73				8.0	2	7.6	4	8	2.6	0.0	130			59.2	128	15.5
15	June 25	13:63			75	3.9	6	7.2	15	2			88.0			26.4	143	17.7
16	Aug. 23	4:21			68	5.6	0.9	8.1	10	3			92.8			22.0	143	18.2

STATION NO. 24-CHATEAUGUAY RIVER

17	Jan. 26/56	14:43	135	289	33	13	3	7.7	20	2			148	0.201	53.8	34.8	207	25.1
18	July 26*		224	237			3	7.4	15	2	Trace		140	0.190	84.4			24.0
19	Sept. 27	33:40	186	195	55	12	2	7.9	10	4	6.2	2.9	127	0.173	63.8	22.4	195	22.7
20	Oct. 26	19:26	186	179	50		3	7.7	20	3							204	25.0
21	Nov. 27	15:44	213	206	34		2	7.8	20	9							207	25.1
22	Jan. 29/57	15:21	651	528	33		5	7.1	40	30							134	14.3
23	Feb. 27	8:16	4,680 <sup>e</sup>	680	33		5	7.3	20								176	21.9
24	Mar. 25	21:102	4,340 <sup>e</sup>	2,140 <sup>e</sup>	34		6	7.1	40	20	23	14	124	0.169	145	40.4	147	17.1
25	Apr. 28	3:16	577	1,180	64		3	7.7	35	15							195	23.8
26	May 27	7:23	905	966	65		3	7.5	45	25							155	19.4
27	June 28	10:67	386	507	78	5.8	1	8.0	25	2			120	0.163	125	23.2	194	22.6
28	July 3	20:34	395	331			3	7.7	15	2							217	25.1
29	Aug. 27	14:14	135	197	69		8	7.2	20	2							162	18.3

\* Analysis by Alchem Ltd., Burlington, Ont.  
<sup>e</sup> Estimate

STATION NO. 25-CHATEAUGUAY RIVER

30	Aug. 17/56	232:354			78	3.6	2 (0)	8.0 (8.6)	10	2			153			30.0	237	23.5
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STATION NO. 26-ENGLISH RIVER (RIVIERE DES ANGLAIS)

31	Aug. 20/56	230:351			68	5.0	1.5	8.0 (7.5)	20	6	9.8	5.2	122			37.6	183	22.0
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STATION NO. 27-SALMON RIVER

32	Aug. 21/56	230:359			69	3.8	3	7.6 (7.8)	10	2			86.0			37.6	150	17.9
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TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminium (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.	
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total						
at TROIS PISTOLES, RIVIERE DU LOUP CO. (Concluded)																									
956	.....	.....	.....	.....	.....	.....	8,080	300	.....	0.0	121	2,060	14,500	.....	.....	.....	.....	.....	4,600	4,700	26,200	78	.....	.....	1
1,020	.....	.....	.....	.....	.....	.....	8,520	340	.....	0.0	127	1,920	15,800	.....	.....	.....	3.35	.....	4,930	5,040	28,000	77	.....	.....	2
1,000	.....	.....	.....	.....	.....	.....	8,320	340	.....	0.0	134	2,070	15,300	.....	.....	.....	.....	.....	4,860	4,970	27,500	77	.....	.....	3
687	.....	0.00	.....	.....	0.00	.....	5,640	220	.....	0.0	107	1,560	10,400	.....	.....	.....	.....	.....	3,320	3,410	18,800	77	.....	.....	4
803	.....	.....	.....	.....	.....	.....	6,880	300	.....	0.0	111	1,790	12,100	.....	.....	.....	.....	.....	3,880	3,970	22,200	77	.....	.....	5
1,020	.....	.....	.....	.....	.....	.....	8,660	334	.....	0.0	125	2,130	15,200	.....	.....	.....	.....	.....	4,910	5,010	27,700	78	.....	.....	6
984	.....	.....	.....	.....	.....	.....	8,160	312	.....	0.0	123	2,160	14,700	.....	.....	.....	.....	.....	4,750	4,850	26,700	77	.....	.....	7
at HUNTINGDON, HUNTINGDON CO.																									
6.5	0.35	.....	.....	.....	.....	.....	2.3	.....	.....	0.0	76.9	10.0	0.0	.....	2.7	3.4	.....	10.7	73.7	81.5	6.3	-0.9	9.2	8	
5.5	.....	0.07	.....	.....	.....	.....	3.2	1.6	.....	0.0	87.8	15.2	1.5	0.05	0.4	1.8	.....	8.0	80.0	95.5	7.8	-0.5	8.8	9	
5.8	.....	Trace	0.00	0.00	.....	.....	2.9	1.0	0.05	0.0	76.7	11.9	1.8	0.0	1.5	6.9	.....	9.9	72.8	89.3	7.8	-0.4	8.7	10	
6.7	.....	0.02	0.00	0.23	0.00	0.00	2.7	1.4	0.05	0.0	93.4	18.0	2.2	0.0	0.6	4.1	0.05	12.3	88.9	107	6.0	-0.4	8.6	11	
5.4	.....	0.01	0.00	0.00	0.00	0.05	2.3	1.0	0.1	0.0	69.2	22.8	2.4	0.0	1.2	7.7	.....	21.5	78.3	99.4	5.9	-0.7	9.1	12	
6.6	.....	0.01	0.00	0.22	Trace	0.00	2.4	1.0	0.0	0.0	79.5	23.5	1.9	0.0	1.2	9.1	.....	20.1	85.3	108	5.6	-0.3	7.6	13	
5.0	.....	0.05	0.00	0.02	Trace	0.00	1.7	0.8	0.05	0.0	56.6	14.7	1.4	0.0	0.6	3.3	0.00	12.8	59.2	71.0	5.7	-1.0	9.6	14	
5.0	.....	Trace	0.00	Trace	0.00	0.00	2.0	1.0	0.05	0.0	67.4	12.7	1.4	0.0	1.8	4.2	.....	11.4	64.7	77.9	6.2	-1.2	9.6	15	
5.1	.....	Trace	0.00	0.02	0.00	0.00	2.0	0.9	0.0	0.0	67.2	13.4	1.5	0.0	0.6	3.0	.....	11.3	66.4	77.8	6.0	-0.3	8.7	16	
at STE. MARTINE, (PRIMEAUVILLE), CHATEAUGUAY CO.																									
7.1	.....	0.01	0.00	0.00	0.00	0.00	4.1	1.7	0.2	0.0	80.8	27.9	4.7	0.0	1.2	7.7	.....	25.5	91.8	119	8.6	-0.6	8.9	17	
8.7	0.50	.....	.....	0.00	.....	.....	.....	.....	0.2	0.0	102	13.5	3.6	.....	.....	1.6	.....	12	96	.....	.....	.....	.....	18	
7.0	.....	Trace	Trace	0.03	0.00	0.00	5.7	1.4	0.05	0.0	87.8	17.6	4.4	0.0	0.8	1.4	.....	13.4	85.4	105	13	-0.3	8.5	19	
6.3	.....	.....	.....	.....	.....	.....	5.7	1.5	0.05	0.0	95.0	17.7	4.6	.....	1.2	0.7	.....	10.4	88.3	110	12	-0.4	8.5	20	
6.5	.....	.....	.....	.....	.....	.....	5.5	1.5	0.1	0.0	92.3	19.0	4.9	.....	0.4	2.0	1.06	13.7	89.4	110	12	-0.4	8.6	21	
4.0	.....	.....	.....	.....	.....	.....	2.7	3.2	0.05	0.0	41.2	18.5	4.4	.....	4.0	4.5	.....	18.3	52.1	75.9	9.4	-1.7	11	22	
5.9	.....	.....	.....	.....	.....	.....	3.5	1.6	0.0	0.0	71.4	22.5	3.6	.....	2.4	6.6	.....	20.3	78.9	103	8.6	-1.0	9.3	23	
5.5	.....	0.04	0.00	0.00	0.00	0.00	1.6	1.6	0.0	0.0	48.4	24.5	2.0	0.0	2.5	4.6	0.06	25.6	65.3	83.3	4.9	-1.5	10	24	
7.4	.....	.....	.....	.....	.....	.....	3.0	1.2	0.05	0.0	77.5	29.5	2.8	.....	0.8	2.0	.....	26.2	89.8	109	6.7	-0.6	8.9	25	
5.8	.....	.....	.....	.....	.....	.....	2.3	0.9	0.05	0.0	64.9	20.1	1.4	.....	1.2	3.9	.....	19.1	72.3	87.0	6.4	-0.9	9.3	26	
7.3	.....	Trace	0.00	0.00	0.00	0.00	4.9	1.2	0.05	0.0	90.7	18.4	4.0	0.0	0.1	2.6	.....	12.0	86.4	106	11	-0.2	8.4	27	
7.4	.....	.....	.....	.....	.....	.....	7.2	1.3	0.05	0.0	100	16.2	7.9	.....	0.05	2.1	.....	10.9	93.1	117	14	-0.4	8.5	28	
6.3	.....	.....	.....	.....	.....	.....	4.2	1.1	0.05	0.0	75.9	15.2	3.8	.....	0.6	1.6	.....	9.3	71.6	88.5	11	-1.0	9.2	29	
at CHATEAUGUAY, CHATEAUGUAY CO.																									
8.8	.....	0.00	0.00	0.07	Trace	0.00	10.7	1.5	0.00	0.0	103	21.9	10.5	0.0	0.8	5.4	.....	10.3	94.8	134	19	-0.1	8.2	30	
at ST. CHRYSOSTOME, CHATEAUGUAY CO.																									
7.8	.....	Trace	0.02	Trace	0.00	0.00	2.2	1.8	0.05	0.0	94.4	10.9	2.9	0.0	1.2	3.1	.....	9.6	87.0	98.5	5.1	-0.2	8.4	31	
at DUNDEE, HUNTINGDON CO.																									
5.7	.....	0.01	0.00	0.17	0.00	0.00	2.6	1.0	0.05	0.0	73.0	9.8	1.9	0.0	1.7	6.1	.....	7.4	67.3	82.9	7.5	-0.8	9.2	32	

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Secnd-feet)		Water temperature (°F.)	Oxygen consumed by $K_2MnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 28-OTTAWA RIVER																		
1	Dec. 5/56	13:61	17,200	16,400	33	20	3	7.0	50	4	3.1	0.0	72.4	0.098	3,354	25.2	69.4	8.4
2	Jan. 5/57	3:25	20,600	20,000	32	.....	3	7.1	50	2	.....	.....	.....	.....	.....	.....	68.5	8.1
3	Feb. 5	23:31	17,700	17,500	35	.....	3	7.1	45	3	.....	.....	.....	.....	.....	.....	71.8	8.7
4	Mar. 5	13:64	17,300	19,300	35	13	5	6.9	45	3	.....	.....	78.4	0.107	3,650	65.6	76.6	9.2
5	Apr. 5	12:26	18,200	20,200	33	.....	4	7.5	45	2	.....	.....	.....	.....	.....	.....	110	14.7
6	May 6	3:16	25,000	19,600	52	.....	4	7.1	40	5	.....	.....	.....	.....	.....	.....	79.4	9.7
7	June 6	8:36	14,800	14,600	62	11	3	7.1	45	8	7.0	4.3	63.6	0.086	2,546	25.4	73.8	8.6
8	July 6	6:11	36,200	30,900	68	.....	3	7.1	50	7	.....	.....	.....	.....	.....	.....	68.0	7.8
9	Aug. 5	15:29	16,000	13,200	72	.....	3	7.0	40	0.9	.....	.....	.....	.....	.....	.....	62.2	7.2
10	Sept. 5	7:8	8,200	13,000	65	12	2	7.2	.....	8	10.4	2.8	86.8	0.118	1,919	36.4	67.2	8.0
11	Oct. 5	6:17	18,800	18,200	55	.....	2	7.2	50	5	.....	.....	.....	.....	.....	.....	60.7	7.6
12	Nov. 5	8:13	21,600	24,100	42	11	1.5	7.4	55	5	11.1	4.4	72.4	0.098	4,212	35.6	67.1	7.7
STATION NO. 29-L'ASSOMPTION RIVER																		
13	May 4/59	3:17	.....	.....	46	6.5	0.9	7.1	35	4	15	10	38.8	.....	.....	22.0	34.7	3.7
* See also Water Survey Report No. 2.																		
STATION NO. 30-L'ASSOMPTION RIVER																		
14	Sept. 23/58	52:83	.....	.....	64	2.5	1	7.1	15	0	.....	.....	79.2	.....	.....	24.8	124	13.0
* See also Water Survey Report No. 2.																		
STATION NO. 31-L'ASSOMPTION RIVER																		
15	Aug. 19/60	6:13	.....	.....	80	.....	8	7.0	25	4	.....	.....	.....	.....	.....	.....	136	12.4
* Phosphate ( $PO_4$ ) : 0.21 ppm																		
STATION NO. 32-OUAREAU RIVER																		
16	Feb. 5/52*	27	554	460	.....	4.7	2	6.9	20	3	.....	.....	.....	.....	.....	.....	.....	.....
17	Feb. 28/55*	.....	317	340	.....	3	3	7.1	.....	6	.....	.....	78.0	0.106	66.6	.....	.....	7.2
18	Jan. /56*	.....	.....	.....	.....	3	3	7.2	25	2	.....	.....	70.0	.....	.....	.....	.....	7.2
19	May 14/58	9:14	1,230	1,690	.....	4.8	1	7.1	25	.....	.....	.....	43.2	0.059	144	28.0	43.4	4.3
* Analysis by the Permutit Co. of Canada Ltd. ** Analysis by Alchem Ltd., Burlington, Ont.																		
STATION NO. 33-L'ACHIGAN RIVER																		
20	Oct. 30/53	19	.....	.....	.....	5.0	3	7.4	25	8	.....	.....	.....	.....	.....	.....	.....	15.6
* Analysis by the Permutit Co. of Canada Ltd.																		
STATION NO. 34-LAKE CHAMPLAIN																		
21	Sept. 6/60	14:20	.....	.....	.....	5.0	3	7.3	15	0.4	.....	.....	.....	.....	.....	.....	87.9	10.4
STATION NO. 35-LAKE CHAMPLAIN (RICHELIEU RIVER)																		
22	Aug. 16/56	232:355	.....	.....	75	3.6	3	7.4	10	0	.....	.....	88.0	.....	.....	21.6	115	13.9
23	Oct. 1	38:41	.....	.....	55	.....	2	7.7	10	4	4.0	0.3	84.8	.....	.....	20.4	118	15.5
24	Nov. 5	9:16	.....	.....	48	.....	1	7.8	10	4	.....	.....	.....	.....	.....	.....	123	15.9
25	Dec. 4	9:50	.....	.....	35	.....	1	7.8	20	2	.....	.....	.....	.....	.....	.....	124	16.1
26	Jan. 12/57	19:31	.....	.....	35	12	2	7.6	5	0	.....	.....	92.0	.....	.....	27.2	138	17.5
27	Feb. 2	11:30	.....	.....	35	.....	3	7.5	10	0.9	.....	.....	.....	.....	.....	.....	131	17.2
28	Mar. 4	14:18	.....	.....	35	.....	2	7.7	10	0	.....	.....	.....	.....	.....	.....	122	15.3
29	Apr. 6	9:90	.....	.....	40	4.5	1	7.9	10	7	2.1	0.0	.....	.....	.....	.....	118	14.5
30	May 4	10:18	.....	.....	55	.....	2	7.7	10	1	.....	.....	.....	.....	.....	.....	115	14.3
31	June 6	8:13	.....	.....	58	.....	2	7.6	10	6	.....	.....	.....	.....	.....	.....	117	14.5
32	July 1	10:64	.....	.....	.....	3.4	2	7.5	10	2	.....	.....	73.2	.....	.....	10.8	114	14.7
33	Aug. 5	15:29	.....	.....	70	.....	3	7.5	10	0.9	.....	.....	.....	.....	.....	.....	117	14.5
34	Sept. 3	15:16	.....	.....	55	.....	2	7.7	5	0.4	.....	.....	.....	.....	.....	.....	118	14.8

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at STE. ANNE DE BELLEVUE, ILE DE MONTREAL																								
1.8	.....	0.10	0.00	0.15	Trace	0.00	1.5	0.8	0.2	0.0	21.8	11.0	1.5	0.0	1.2	5.0	0.11	10.5	28.4	42.3	9.7	-2.2	11	1
1.9	.....	.....	.....	.....	.....	.....	1.5	1.0	0.2	0.0	23.0	10.5	1.7	.....	1.2	5.0	.....	9.1	28.0	42.5	9.8	-2.1	11	2
1.5	.....	.....	.....	.....	.....	.....	1.5	0.9	0.0	0.0	22.6	10.1	1.4	.....	0.8	5.4	.....	9.4	27.9	41.4	10	-2.0	11	3
1.8	.....	0.05	0.00	0.00	0.00	0.00	2.1	0.8	0.1	0.0	24.1	10.1	2.1	0.0	0.8	5.3	.....	10.6	30.4	44.2	13	-2.2	11	4
2.9	.....	.....	.....	.....	.....	.....	1.9	1.0	0.05	0.0	46.3	11.6	2.0	.....	1.2	5.1	.....	10.6	48.6	55.7	7.6	-1.2	9.5	5
2.1	.....	.....	.....	.....	.....	.....	1.6	0.8	0.1	0.0	29.5	11.3	1.2	.....	0.6	4.3	.....	8.6	32.8	46.2	9.3	-1.8	11	6
2.1	.....	0.09	0.00	0.00	.....	.....	1.5	0.8	0.05	0.0	25.0	10.6	1.5	0.0	0.6	2.7	.....	9.6	30.1	40.8	9.4	-2.0	11	7
1.9	.....	.....	.....	.....	.....	.....	1.6	0.9	0.0	0.0	21.9	10.8	1.0	.....	0.6	4.2	.....	9.3	27.3	39.8	11	-2.1	11	8
1.7	.....	.....	.....	.....	.....	.....	1.4	0.6	0.1	0.0	20.1	10.4	0.8	.....	0.3	3.6	.....	8.5	25.0	36.0	11	-2.3	12	9
2.0	.....	0.12	0.00	0.00	0.00	0.00	1.4	0.8	0.1	0.0	21.8	10.1	1.3	0.0	0.4	3.6	.....	10.3	28.2	38.6	9.3	-2.0	11	10
1.6	.....	.....	.....	.....	.....	.....	1.2	0.7	.....	0.0	19.6	10.6	1.4	.....	0.05	3.8	.....	9.4	25.5	36.6	9.0	-2.1	11	11
2.3	.....	0.10	0.00	0.00	Trace	0.00	2.0	0.8	0.1	0.0	24.1	11.0	1.2	0.0	0.4	4.4	.....	8.9	28.7	41.9	13	-1.8	11	12
at JOLIETTE,* JOLIETTE CO. - drainage area, 460 square miles																								
0.8	0.05	0.05	0.00	0.00	Trace	0.00	0.8	0.4	0.1	0.0	6.9	8.4	0.6	0.0	0.2	5	.....	6.8	12.5	23.5	12	-2.9	13	13
at L'ASSOMPTION,* L'ASSOMPTION CO.																								
3.1	.....	0.01	0.02	0.05	0.03	0.20	2.6	1.4	0.1	0.0	11.7	37.1	3.0	0.0	0.2	6.2	.....	35.6	45.2	72.7	11	-2.1	11	14
at ST. PAUL L'ERMITE, L'ASSOMPTION CO.																								
3.4	0.40	0.03	0.00	Trace	Trace	0.05	8.5	1.8	0.2	0.0	49.6	7.8	10.0	0.0	1.6	4.0	.....	3.7	44.4	74.2	28	-1.7	10	15
at CRABTREE (CRABTREE MILLS), JOLIETTE CO.																								
.....	0.10	.....	.....	.....	.....	.....	2.3	.....	.....	0.0	9.8	8.6	2.1	.....	.....	6.8	.....	6	14	.....	.....	.....	.....	16
1.9	0.10	.....	.....	.....	.....	.....	.....	.....	0.1	0.0	19.5	6.8	4.9	.....	.....	9.0	.....	10	26	.....	.....	.....	.....	17
1.5	0.60	.....	.....	0.00	.....	.....	.....	.....	0.1	0.0	22.0	6.8	8.5	.....	.....	6.8	.....	6	24	.....	.....	.....	.....	18
0.9	.....	0.04	0.00	0.00	0.00	0.00	1.6	0.4	0.1	0.0	9.8	6.4	2.0	0.00	0.2	5.1	.....	6.4	14.4	25.7	18	-2.7	13	19
at L'EPIPHANIE, L'ASSOMPTION CO.																								
3.6	0.15	.....	.....	.....	.....	.....	6.4	.....	.....	0.0	57.3	10.1	5.7	.....	.....	4.2	.....	7.0	54.0	.....	.....	.....	.....	20
at PHILIPSBURG, MISSISQUOI CO.																								
2.6	0.05	0.01	Trace	0.08	0.01	0.57	1.8	0.8	0.2	0.0	34.3	12.3	3.2	0.0	0.0	1.6	.....	8.6	36.7	50.3	9.0	-1.6	11	21
at LACOLLE, ST. JEAN CO.																								
3.9	.....	0.10	0.00	0.05	Trace	0.00	2.2	0.8	0.0	0.0	48.9	13.0	2.2	0.0	0.6	4.0	.....	10.6	50.7	64.8	8.4	-1.2	9.8	22
3.2	.....	0.00	0.00	0.05	0.00	0.00	2.0	0.9	0.0	0.0	52.2	12.1	2.0	.....	0.8	1.8	.....	9.0	51.8	64.1	7.6	-0.9	9.5	23
3.5	.....	.....	.....	.....	.....	.....	2.1	1.0	0.05	0.0	54.1	11.7	2.3	.....	0.4	1.0	.....	9.7	54.1	64.6	7.6	-0.8	9.4	24
3.3	.....	.....	.....	.....	.....	.....	2.2	0.9	0.1	0.0	52.4	12.1	2.9	.....	1.2	3.4	0.00	10.7	53.7	67.9	8.1	-0.8	9.4	25
3.6	.....	0.01	0.00	0.02	0.00	0.00	2.5	1.6	0.3	0.0	58.3	13.2	3.6	.....	1.2	2.2	.....	10.7	58.5	74.1	8.1	-0.9	9.4	26
3.2	.....	.....	.....	.....	.....	.....	2.2	1.2	0.1	0.0	54.7	13.1	2.8	0.2	0.8	1.6	.....	11.2	56.1	69.3	7.6	-1.1	9.7	27
3.6	.....	.....	.....	.....	.....	.....	2.1	1.0	0.0	0.0	50.3	12.4	3.0	.....	0.6	1.8	.....	11.7	53.0	64.6	7.8	-0.9	9.5	28
3.7	.....	.....	.....	.....	.....	.....	2.0	1.0	.....	0.0	48.9	13.0	2.2	0.0	1.1	2.0	0.00	11.3	51.4	63.7	7.6	-0.8	9.5	29
3.5	.....	0.02	0.00	0.05	.....	.....	2.0	0.9	0.05	0.0	48.0	12.7	2.0	.....	0.4	1.8	.....	10.7	50.1	61.2	7.8	-0.9	9.5	30
3.4	.....	.....	.....	.....	.....	.....	2.1	1.0	0.0	0.0	50.2	11.4	2.2	.....	0.0	1.0	.....	9.0	50.2	60.4	8.2	-1.0	9.6	31
3.4	.....	0.00	0.00	Trace	0.00	0.00	2.1	0.9	0.0	0.0	48.5	12.2	2.2	0.0	0.7	1.4	.....	10.9	50.7	61.9	8.1	-1.1	9.7	32
3.5	.....	.....	.....	.....	.....	.....	2.0	0.8	0.0	0.0	48.9	12.3	2.1	.....	0.5	1.6	.....	10.5	50.6	61.4	7.8	-0.3	9.7	33
3.6	.....	.....	.....	.....	.....	.....	2.2	0.9	0.0	0.0	48.4	13.6	2.2	.....	0.4	2.3	.....	12.0	51.7	63.9	8.3	-1.0	9.7	34

TABLE II. - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 36-RICHELIEU RIVER																		
1	May 28/53	6:15	22,900	28,200	54	.....	4	7.4 (7.8)	10 (10)	0 (0)	.....	.....	74.2	0.101	4,580	11.9	116 (110)	18.4
2	Aug. 17/56	23:359	5,450	5,820	73	3.2	3	7.4 (7.7)	0	0.9	.....	.....	88.0	0.120	1,292	28.4	115	13.7
STATION NO. 37-RICHELIEU RIVER																		
3	Aug. 15/56	226:349	.....	.....	73	.....	1	7.9 (7.9)	10	0	.....	.....	87.6	.....	.....	35.3	119	15.1
4	Nov. 14	9:91	.....	.....	54	12	2	7.6	10	2	.....	.....	86.4	.....	.....	24.0	123	15.5
5	Dec. 5	8:64	.....	.....	40	.....	1	7.8	20	0.9	.....	.....	.....	.....	.....	.....	126	16.3
6	Jan. 7/57	24:36	.....	.....	35	12	2	7.6	10	0	.....	.....	90.4	.....	.....	25.2	126	16.6
7	Feb. 5	23:31	.....	.....	38	.....	2	7.6	10	0	.....	.....	.....	.....	.....	.....	133	16.3
8	Mar. 5	10:17	.....	.....	35	.....	3	7.5	10	0	.....	.....	.....	.....	.....	.....	124	15.5
9	Apr. 8	7:88	.....	.....	45	5.1	2	7.7	15	20	9.5	4.4	84.0	.....	.....	32.4	126	15.5
10	May 7	7:15	.....	.....	53	.....	2	7.6	10	1	.....	.....	.....	.....	.....	.....	116	14.6
11	June 5	6:14	.....	.....	66	.....	1	7.8	10	5	.....	.....	.....	.....	.....	.....	120	14.7
12	July 5	13:60	.....	.....	68	4.0	3	7.5	10	1	.....	.....	79.2	.....	.....	16.8	116	14.3
13	Aug. 5	15:29	.....	.....	73	.....	2	7.5	10	0.4	.....	.....	.....	.....	.....	.....	116	14.4
14	Sept. 6	12:13	.....	.....	66	.....	2	7.6	5	0.4	.....	.....	.....	.....	.....	.....	120	14.8
STATION NO. 38-RICHELIEU RIVER																		
15	Apr. 2/54*	.....	21,400 <sup>†</sup>	27,600 <sup>†</sup>	.....	.....	4	7.7	.....	7	.....	.....	100	0.136	5,771	.....	.....	16.0
16	Aug. 15/56	226:349	4,860	6,220	73	.....	1	7.9 (7.9)	10	0	.....	.....	87.6	0.119	1,147	35.3	119	15.1
17	Sept. 26/58	52:87	.....	.....	62	4.2	2	7.7	10	0.8	.....	.....	80.0	.....	.....	24.8	131	15.6
* Analysis by Alchem Ltd., Burlington, Ont. <sup>†</sup> Records at Fryer's Rapid; drainage area 8,581 square miles																		
STATION NO. 39-RICHELIEU RIVER																		
18	Dec. 11/53*	.....	.....	.....	.....	.....	3	7.5	.....	6	.....	.....	92.0	.....	.....	.....	.....	16.8
19	Apr. 26/55*	.....	.....	.....	.....	.....	6	7.1	.....	2	.....	.....	84.0	.....	.....	.....	.....	14.4
* Analysis by Alchem Ltd., Burlington, Ont.																		
STATION NO. 40-RICHELIEU RIVER																		
20	Oct. 18/58	13:30	.....	.....	.....	4.9	1	7.9	20	6	11	5.9	97.2	.....	.....	29.6	155	17.3
* See also analyses for municipal supplies A and E at St. Marc.																		
STATION NO. 41-RICHELIEU RIVER																		
21	Aug. 11/56	195:348	.....	.....	75	11	1	7.9 (8.5)	10	10	0.3	0.0	90.4	.....	.....	13.2	120	14.6
STATION NO. 42-RICHELIEU RIVER																		
22	Aug. 13/56	50:57	.....	.....	75	.....	3	7.5 (7.6)	10	20	.....	.....	.....	.....	.....	.....	124	15.0
STATION NO. 43-PIKE RIVER (RIVIERE AUX BROCHETS)																		
23	Aug. 16/56*	232:355	.....	.....	71	3.5	9	7.1 (7.7)	10	0.9	.....	.....	114	.....	.....	29.6	159	22.9
* Chlorinated water, sampled at tap in Bedford.																		

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at ST. JOHNS (ST. JEAN) , ST. JEAN CO. - drainage area, 8,523 square miles																								
2.1	.....	0.05	.....	.....	.....	.....	3.2	1.6	.....	0.0 (0.0)	57.5 (48.8)	13.6	2.0	0.05	0.4	1.7	.....	7.6 (9.0)	54.8 (49.0)	71.4	11	-1.1	9.6	1
3.8	.....	0.00	0.00	0.00	.....	.....	2.3	0.9	.....	0.0 (0.0)	46.9 (55.3)	13.1	2.1	0.0	0.6	3.2	.....	11.3	49.8	61.2	8.9	-1.2	9.8	2
at RICHELIEU, ROUVILLE CO.																								
2.9	.....	0.02	0.00	0.00	.....	0.05	2.2	0.8	.....	0.0	47.7	12.8	2.4	0.0	0.0	3.6	.....	10.4	49.6	63.4	8.6	-0.7	9.3	3
3.6	.....	0.05	0.00	0.03	0.00	0.00	2.1	1.2	0.05	0.0	50.8	11.9	3.2	0.0	0.6	1.8	0.05	11.8	53.5	65.1	7.6	-1.0	9.6	4
3.3	.....	.....	.....	.....	.....	.....	2.5	1.1	0.2	0.0	52.8	13.3	2.9	.....	0.8	3.1	.....	10.9	54.2	69.3	8.8	-0.8	9.4	5
3.3	.....	0.00	0.00	0.00	0.00	0.00	2.1	1.1	0.1	0.0	53.6	11.4	3.0	0.0	1.2	2.0	.....	11.0	55.0	67.1	7.5	-1.0	9.6	6
3.7	.....	.....	.....	.....	.....	.....	2.1	1.1	0.0	0.0	53.4	12.1	2.7	.....	1.2	1.6	.....	12.1	55.9	67.1	7.4	-1.0	9.6	7
3.8	.....	.....	.....	.....	.....	.....	2.1	1.1	0.0	0.0	50.6	13.6	2.9	.....	1.0	1.9	.....	12.8	54.3	66.8	7.6	-1.1	9.7	8
3.9	.....	0.05	0.00	0.00	0.00	0.00	2.2	1.0	0.0	0.0	49.0	15.2	2.6	0.0	0.9	2.3	0.11	14.5	54.7	67.8	7.9	-0.9	9.5	9
3.4	.....	.....	.....	.....	.....	.....	2.0	0.9	0.05	0.0	38.2	14.2	1.6	.....	0.4	2.3	.....	10.9	50.4	63.2	7.8	-1.0	9.6	10
3.7	.....	.....	.....	.....	.....	.....	2.0	0.9	0.05	0.0	51.0	13.2	2.1	.....	0.0	1.2	.....	10.1	51.9	63.0	7.6	-0.8	9.4	11
3.9	.....	0.00	0.00	Trace	0.00	0.00	2.3	0.9	0.0	0.0	50.2	13.1	2.1	0.0	0.8	2.3	.....	10.5	51.7	64.5	8.6	-1.1	9.7	12
3.5	.....	.....	.....	.....	.....	.....	2.1	0.8	0.0	0.0	47.7	12.6	2.3	.....	0.5	1.2	.....	11.2	50.3	60.9	8.2	-1.1	9.7	13
3.8	.....	.....	.....	.....	.....	.....	2.3	0.9	0.0	0.0	49.4	14.5	2.5	.....	0.4	1.6	.....	12.1	52.6	65.1	8.5	-1.6	9.6	14
at CHAMBLY, CHAMBLY CO.																								
3.8	1.0	.....	.....	0.10	.....	.....	.....	.....	0.0	0.0	61.0	9.5	3.6	.....	.....	3.5	.....	6.0	56.0	.....	.....	.....	.....	15
2.9	.....	0.02	0.00	0.00	.....	0.05	2.2	0.8	.....	0.0	47.7	12.8	2.4	0.0	0.0	3.6	.....	10.4	49.6	63.4	8.6	-0.7	9.3	16
4.2	.....	0.05	0.01	0.01	Trace	0.05	2.7	1.1	0.0	0.0	50.8	13.9	4.8	0.0	0.4	3.5	.....	14.5	56.2	71.3	9.2	-0.9	9.5	17
at MC MASTERVILLE, VERCHERES CO.																								
4.8	0.90	.....	.....	0.05	.....	.....	.....	.....	0.0	0.0	53.6	14.9	7.3	.....	.....	2.3	.....	18.0	62.0	.....	.....	.....	.....	18
5.3	0.10	.....	.....	0.00	.....	.....	.....	.....	0.1	0.0	48.4	12.2	9.7	.....	.....	3.0	.....	18.0	58.0	.....	.....	.....	.....	19
at ST. MARC*, VERCHERES CO.																								
4.9	0.46	0.15	0.01	0.03	0.00	0.50	4.8	1.4	0.05	0.0	63.1	15.0	5.3	.....	0.4	2.2	.....	11.5	63.3	83.2	14	-0.5	8.9	20
at ST. DENIS, ST. HYACINTHE CO.																								
3.1	.....	Trace	Trace	0.00	Trace	0.00	3.5	0.9	0.0	0.0 (4.9)	48.3 (45.3)	12.1	3.6	0.1	0.8	3.5	.....	9.6	49.2	66.0	13	-0.7	9.3	21
at TRACY, RICHELIEU CO.																								
3.6	.....	.....	.....	.....	0.00	0.00	2.6	0.8	0.1	0.0 (0)	49.2 (57.8)	11.8	3.3	.....	1.2	1.7	.....	11.8	52.2	64.3	9.6	-1.1	9.7	22
at BEDFORD, MISSISQUOI CO.																								
3.4	.....	0.00	0.00	0.00	.....	0.05	2.3	1.4	0.05	0.0 (0)	70.6 (82.9)	11.5	3.5	0.0	5.0	3.2	.....	13.2	71.1	88.1	6.4	-1.2	9.5	23

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 44-LITTLE MONTREAL RIVER																		
1	Aug. 14/56	227:350	.....	.....	80	10	1.5	8.3 (8.4)	45	15	.....	.....	243	.....	.....	34.4	437	47.5
STATION NO. 45-BAYONNE RIVER																		
2	June 27/47	~:361	.....	.....	.....	.....	(3)	(7.6)	35	.....	.....	.....	136	.....	.....	23.6	145	10.8
STATION NO. 46-CHICOT RIVER																		
3	June 7/55	6:84	.....	.....	53	.....	2	7.0 (6.9)	90 (120)	38	34	25	51.2	.....	.....	24.8	38.7	4.1
STATION NO. 47-CENTRE YAMASKA RIVER (BROME LAKE)																		
4	Aug. 8/56	195:273	13	11†	77	9.8	2	7.3	10	0.9	.....	.....	50.8	0.069	1.8	20.0	67.6	9.0
† Records at lower dam at outlet of Brome Lake, drainage area, 78 square miles																		
STATION NO. 48-CENTRE YAMASKA RIVER																		
5	Aug. 8/56	195:273	.....	.....	84	10	1	7.7	10	0.9	.....	.....	55.2	.....	.....	20.4	77.9	10.3
STATION NO. 49-NORTH YAMASKA RIVER																		
6	Aug. 9/56	194:276	.....	.....	71	12	2	7.6 (7.0)	20 (50)	2	.....	.....	74.0	.....	.....	21.2	107	13.2
STATION NO. 50-YAMASKA RIVER																		
7	Sept. 17/56	43:50	.....	.....	54	11	3	7.6	5	2	.....	.....	86.4	.....	.....	13.2	133	18.5
8	Nov. 16	10:80	.....	.....	43	.....	4	7.4	20	3	.....	.....	97.6	.....	.....	22.0	130	18.5
9	Jan. 21/57	10:22	.....	.....	33	11	3	7.5	10	.....	7.4	2.4	.....	.....	.....	.....	119	16.4
10	Mar. 20	26:107	.....	.....	33	3.1	3	7.1	10	3	.....	.....	54.0	.....	.....	17.2	70.7	8.5
11	May 21	6:52	.....	.....	49	5.0	4	7.1	20	7	3.7	3.0	63.6	.....	.....	27.2	74.7	11.5
12	July 16	9:52	.....	.....	65	3.1	4	7.3	10	2	.....	.....	72.0	.....	.....	3.2	108	15.0
13	Sept. 16	18:23	.....	.....	.....	3.4	4	7.5	10	1.5	.....	.....	82.8	.....	.....	14.0	134	18.9
STATION NO. 51-YAMASKA RIVER																		
14	Aug. 16/56	232:355	.....	.....	74	5.7	2	7.6	20	2	.....	.....	132	.....	.....	30.0	193	15.5
15	Sept. 13	40:42	.....	.....	63	12	1	8.0	30	6	.....	.....	119	.....	.....	29.2	194	17.3
16	Oct. 13	31:39	.....	.....	50	.....	2	7.5	30	3	5.1	1.0	.....	.....	.....	.....	135	15.3
17	Nov. 13	14:60	.....	.....	39	.....	4	7.4	20	0.9	.....	.....	.....	.....	.....	.....	183	17.7
18	Dec. 13	27:57	.....	.....	33	15	7	6.9	30	5	3.3	0.0	105	.....	.....	26.8	143	15.0
19	Feb. 13/57	19:23	.....	.....	44	.....	5	7.1	20	8	.....	.....	.....	.....	.....	.....	121	14.1 (14.0)
20	Mar. 13	33:77	.....	.....	43	5.2	6	7.0	20	3	6.0	4.9	102	.....	.....	32.0	112	13.2
21	May 13	8:9	.....	.....	67	.....	6	7.1	35	10	.....	.....	.....	.....	.....	.....	113	13.1
22	June 13	13:29	.....	.....	80	8.6	3	7.3	40	9	3.1	3.1	83.6	.....	.....	26.8	102	12.7
23	July 13	5:31	.....	.....	79	.....	3	7.5	35	3	.....	.....	.....	.....	.....	.....	95.1	11.9
24	Aug. 13	13:31	.....	.....	74	8.4	9	6.9	10	8	1.1	0.0	97.2	.....	.....	26.4	119	12.9

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at CHAMBLY, CHAMBLY CO.																								
14.2	.....	Trace	0.00	0.00	Trace	0.00	23.0	3.7	0.0	0.0 (6.2)	196 (174)	46.8	15.0	.....	1.6	9.6	.....	16.2	177	258	21.6	0.7	6.9	1
near BERTHIERVILLE, BERTHIER CO.																								
1.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.2	8.2	.....	.....	.....	.....	0	33.6	.....	.....	.....	.....	2
at ST. CUTHBERT, BERTHIER CO.																								
0.9 (0.8)	.....	0.32	0.00	0.34	0.00	.....	1.9	0.4	0.1	0.0 (0.0)	14.3 (17.1)	4.3 (2.8)	1.1	0.0	1.2	7.0	.....	2.2	13.4	28.7	19.6	-2.7	12	3
near FOSTER, BROME CO.																								
1.5	.....	0.00	Trace	0.00	Trace	0.05	1.4	0.6	0.05	0.0	25.8	8.3	0.9	0.05	0.6	3.6	.....	7.4	28.6	38.9	9.3	-1.8	11	4
at WEST SHEFFORD, WEST SHEFFORD CO.																								
1.7	.....	0.00	0.02	0.00	Trace	0.05	1.6	0.8	0.05	0.0	30.6	8.6	1.6	0.0	1.2	3.5	.....	7.6	32.7	44.5	9.3	-1.3	10	5
at GRANBY, SHEFFORD CO.																								
2.6	.....	0.00	0.00	0.00	0.00	0.05	3.3	1.1	0.1	0.0	45.7	8.6	3.7	0.1	1.6	4.2	.....	6.1	43.6	61.1	14	-1.2	10	6
at KNOWLTON, BROME CO.																								
3.6	.....	0.00	0.00	0.07	0.00	0.00	1.8	0.9	0.0	0.0	65.3	9.8	1.5	0.0	2.4	4.0	.....	7.4	61.0	75.1	5.9	-0.8	9.2	7
2.9	.....	0.11	0.00	0.09	Trace	0.00	1.8	1.1	0.1	0.0	59.7	11.0	2.3	0.0	2.0	8.2	0.05	9.1	58.1	77.4	6.1	-1.0	9.4	8
2.8	.....	0.07	0.00	0.05	Trace	0.00	1.4	0.9	0.3	0.0	49.5	10.0	1.6	0.0	4.8	6.7	.....	11.8	52.4	69.2	5.3	-2.1	9.7	9
1.9	.....	0.06	0.00	0.24	0.00	0.05	1.0	0.5	0.0	0.0	24.5	9.1	0.9	0.0	2.3	5.1	.....	9.9	29.0	41.7	6.5	-2.0	11	10
0.7	.....	0.06	0.00	Trace	0.00	0.00	1.2	0.6	0.05	0.0	28.3	9.3	1.4	0.0	0.2	3.9	0.00	8.4	31.6	42.8	7.4	-1.8	11	11
2.6	.....	Trace	Trace	0.00	0.00	0.00	1.4	0.7	0.0	0.0	49.4	9.0	1.3	0.0	1.5	4.2	.....	7.6	41.8	64.1	5.8	-1.3	9.9	12
3.2	.....	0.07	Trace	Trace	Trace	0.00	1.7	1.2	0.0	0.0	60.2	11.1	2.3	0.0	3.0	4.0	.....	20.9	60.3	75.2	5.6	-1.0	9.5	13
at FARNHAM, MISSISQUOI CO. - drainage area, 480 square miles																								
3.6	.....	0.01	0.00	0.02	0.00	0.00	16.0	1.1	0.0	0.0	56.2	12.5	18.1	0.0	6.0	4.0	.....	7.4	53.5	105	39	-1.6	9.6	14
2.8	.....	0.03	0.00	0.07	0.00	0.00	17.5	2.1	0.1	0.0	69.5	13.7	16.2	0.0	2.0	0.7	.....	0.0	54.7	107	40	-0.4	8.8	15
2.7	.....	.....	.....	.....	.....	.....	6.0	1.5	0.05	0.0	45.7	16.0	5.6	.....	1.6	2.1	.....	11.8	49.3	73.3	20	-1.2	9.9	16
2.8	.....	.....	.....	.....	.....	.....	13.9	2.3	0.05	0.0	61.0	15.0	14.2	.....	6.0	1.5	0.34	5.7	55.7	104	34	-1.1	9.6	17
2.8	.....	0.02	0.00	0.00	0.00	0.00	2.0	1.6	0.1	0.0	31.0	22.8	9.6	0.0	3.4	6.0	.....	23.5	48.9	83.5	23	-1.9	11	18
2.5 (2.6)	.....	.....	.....	.....	.....	.....	4.0 (3.9)	1.2	0.0	0.0	36.2 (36.0)	16.6 (15.6)	4.9 (4.1)	.....	0.6	4.9	.....	15.8	45.5	66.6	16	-1.7	11	19
2.8	0.00	.....	0.00	0.16	0.00	0.00	3.1	1.2	0.05	0.0	34.4	17.2	3.6	0.0	2.4	5.3	.....	16.3	44.5	65.9	13	-1.9	11	20
2.4	.....	.....	.....	.....	.....	.....	4.1	1.1	0.1	0.0	40.7	12.3	4.6	.....	1.2	2.1	.....	9.2	42.6	60.9	17	-1.7	11	21
2.6	.....	0.11	0.00	0.08	0.00	0.00	1.9	1.0	0.05	0.0	39.5	10.3	2.7	0.0	2.0	2.1	0.00	10.0	42.4	45.7	8.5	-1.4	10	22
2.1	.....	.....	.....	.....	.....	.....	2.4	0.8	0.05	0.0	37.8	10.0	2.3	.....	1.5	2.4	.....	7.3	38.3	59.8	12	-1.5	10	23
2.9	.....	0.04	0.00	0.00	0.00	0.00	5.6	1.0	0.05	0.0	43.8	10.0	6.2	.....	3.0	2.6	.....	8.2	44.1	65.9	21	-1.8	11	24



TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 52-YAMASKA RIVER

1	May /53**							7.7	110	7							
2	Dec. /53**							7.2	35	10							
3	May /55**							7.7	50	2							
4	Dec. /55**							8.0	60	6							
5	Aug. 10/56	53:60			76			1	7.9 (7.9)	30	10					195	21.3
6	Nov. 13/56	10				5.5		7	6.9	30	10						21.6
7	July /58*							8.0	35	10							

\* See also St. Hyacinthe municipal supply.  
 \*\* Analyses supplied by St. Hyacinthe Municipal Waterworks.  
 \*\*\* Analysis supplied by Permutit Co. of Canada Ltd.

STATION NO. 53-YAMASKA RIVER

8	Aug. 13/56	193:346			77	13	2	7.9 (8.3)	60	20	31	27	182			22.0	308	29.4
9	Oct. 15	29:112			54	14	1	8.0	20				165			26.0	264	24.9
10	Nov. 12	15:56			36		3	7.7	30								303	27.4
11	Dec. 13	26:41			37		4	7.4	40	25							236	22.5
12	Jan. 16/57	15:57			39	16	3	7.6	20	5	6.9	1.7	168			39.6	249	25.6 (25.0)
13	Feb. 14	18:29			37		2	7.7	30	4							195	19.0
14	Mar. 13	33:49			34			7.3	15	10							186	15.6
15	May 16	11:57			54	11	3	7.6	40	140	118	113	158			38.0	214	23.7
16	June 14	12:28			73		2	7.8	30	70	45	43	148			37.2	200	21.5
17	July 12	6:32			71		2	7.7	colloid	35							193	22.7
18	Sept. 10	8:29			65	7.9	2	7.9		65			162			40.8	246	22.8

STATION NO. 54-BLACK RIVER

19	Aug. 10/56	195:280			78	12	2	7.9 (8.1)	30 (30)	2			123			16.4	185	25.2
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STATION NO. 55-MOOSE RIVER

20	Aug. 10/56	195:275			74	13	3	7.6 (7.3)	30 (50)	2			108			22.4	140	22.2
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STATION NO. 56-MASKINONGE RIVER

21	June 28/47	343						7.4	30				30.6			11.6	30.7	3.6
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STATION NO. 57-MASKINONGE RIVER

22	July 25/55	3:21	44	97	73	13	1	7.2	30	2			20.2	.027	2.4	9.8	45.4	4.3
23	Sept. 26	7:58	108	110	59	5.2	1	7.3	30	0.2			42.4	.058	12.3	16.0	48.0	4.7
24	Nov. 28	11:71	177	476	35		1	7.2	30	2							42.0	4.1
25	Jan. 25/56	15:99	185	248	34	5.6	2	6.9	35	2			42.0	.057	21.0	20.4	44.4	4.3
26	Mar. 26	38:53	106	124	38		1	7.2	30	0							49.1	5.0
27	May 25	7:28	1,360	1,790	47	7.9	2	6.7	40	3			38.8	.053	142	12.0	34.3	3.6
28	June 25	2:22	261	565	69		1	7.1	40	9							38.4	3.9

STATION NO. 58-MASKINONGE RIVER

29	June 8/55	7:49			66		1	7.2 (7.3)	40	8							49.1	3.8
30	Sept. 23/58					8.1	3	6.9	50				41.6			10.4	54.2	4.4

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.		
	Total	Dissolved					Non-carbonate	Total																		
at ST. HYACINTHE*, ST. HYACINTHE CO.																										
.....	.....	0.40	.....	.....	.....	.....	.....	.....	.....	61.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....	48.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	
.....	.....	0.50	.....	.....	.....	.....	.....	.....	.....	48.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	
.....	.....	0.30	.....	.....	.....	.....	.....	.....	.....	58.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	
3.9	.....	.....	.....	.....	0.08	0.02	10.4	1.8	0.1	0.0	71.6	14.2	13.2	.....	2.4	2.6	.....	10.5	69.2	105	24	-0.4	8.7	.....	5	
4.9	0.30	.....	.....	.....	.....	.....	5.1	.....	.....	0.0	40.3	39.4	5.0	.....	.....	2.8	.....	41.0	74.0	.....	.....	.....	.....	.....	6	
.....	.....	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	
at YAMASKA, YAMASKA CO.																										
7.4	.....	Trace	0.00	0.02	Trace	0.00	21.1	2.8	0.0	0.0	116 (0.0)	24.5	21.8	0.0	1.5	4.8	.....	8.8	104	170	30	-0.1	8.1	.....	8	
4.6	.....	0.00	0.00	0.00	Trace	0.00	20.6	2.8	0.0	0.0	88.0 (123)	21.1	22.8	0.0	1.6	3.6	.....	3.8	81.0	145	35	-0.2	8.4	.....	9	
5.2	.....	.....	.....	.....	.....	.....	24.7	3.1	.....	0.0	96.9	26.9	27.9	.....	1.2	3.8	.....	10.2	89.7	168	36	-0.4	8.5	.....	10	
4.6	.....	.....	.....	.....	.....	.....	15.5	2.8	0.1	0.0	64.0	29.4	18.7	.....	2.4	5.5	0.16	21.1	73.6	128	30	-1.0	9.4	.....	11	
5.4	.....	0.10	0.00	0.10	Trace	0.20	13.7	2.1	0.3	0.0	73.5 (71.1)	33.6 (32.7)	15.4 (15.4)	0.0	1.6	5.8	.....	25.8	86.1 (85.8)	140	25	-0.7	9.0	.....	12	
(5.7)	.....	.....	.....	.....	.....	.....	10.3	2.2	0.0	0.0	48.9	27.5	12.8	.....	3.2	5.6	.....	23.8	63.9	109	25	-0.8	9.3	.....	13	
4.0	.....	.....	.....	.....	.....	.....	13.8	2.0	0.0	0.0	44.2	22.9	17.2	.....	2.4	4.8	.....	18.2	54.5	105	34	-1.4	10	.....	14	
3.8	.....	.....	.....	.....	.....	.....	10.0	2.0	0.0	0.0	76.4	25.8	10.7	0.0	2.0	2.8	0.00	19.9	82.6	121	20	-0.7	9.0	.....	15	
5.7	.....	0.28	0.00	0.00	0.00	0.00	8.0	1.9	0.05	0.0	76.3	19.8	10.3	.....	1.8	1.6	.....	13.3	75.9	110	21	-0.4	8.6	.....	16	
5.4	.....	.....	.....	.....	.....	.....	8.0	1.9	0.0	0.0	77.5	19.4	8.0	.....	1.5	4.0	.....	13.2	76.8	109	18	-0.7	8.9	.....	17	
4.9	.....	.....	.....	.....	.....	.....	18.6	2.5	.....	0.0	86.7	18.6	22.1	0.0	1.0	1.7	.....	6.8	77.9	135	33	-0.4	8.7	.....	18	
5.1	.....	0.10	0.00	0.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
at ST. PIE, BAGOT CO.																										
3.3	.....	0.00	0.00	0.03	Trace	0.05	6.0	1.7	0.1	0.0	79.0 (85.3)	16.3	5.8	0.0	1.2	3.9	.....	11.6	76.4	103	14	-0.3	8.5	.....	19	
at ACTON VALE, BAGOT CO.																										
2.2	.....	0.00	0.00	0.10	0.00	0.00	2.8	1.0	0.0	0.0	66.7 (76.7)	12.1	2.3	0.0	2.4	5.2	.....	9.7	64.4	83.1	8.4	-0.8	9.2	.....	20	
at ST. GABRIEL DE BRANDON, BERTHIER CO.																										
1.0	0.08	.....	.....	.....	.....	.....	.....	.....	.....	0.0	14.6	5.3	0.0	.....	0.0	5.8	.....	1.1	13.1	.....	.....	.....	.....	.....	.....	21
at STE. URSULE FALLS, MASKINONGE CO. - drainage area, 400 square miles																										
0.9	.....	0.09	0.00	0.00	0.00	.....	2.0	0.7	.....	0.0	14.0	4.9	1.1	0.0	3.2	7.9	.....	2.9	14.4	32.2	22	-2.4	12	.....	22	
0.8	.....	0.07	0.00	Trace	Trace	0.00	2.2	0.8	0.0	0.0	14.6	6.1	1.2	0.0	1.2	4.4	0.14	3.0	15.0	28.7	23	-2.4	13	.....	23	
0.9	.....	.....	.....	.....	.....	.....	1.7	0.6	0.0	0.0	9.6	6.1	1.5	.....	1.6	4.5	.....	6.0	13.9	25.7	20	-2.7	13	.....	24	
1.0	.....	.....	.....	.....	.....	.....	1.6	0.7	0.0	0.0	10.1	7.6	1.0	0.0	2.4	5.0	.....	6.5	14.8	28.7	18	-2.9	13	.....	25	
0.9	.....	0.05	0.00	0.03	0.00	0.00	2.0	0.8	0.1	0.0	11.7	7.8	1.2	.....	3.2	6.4	0.02	6.6	16.2	33.1	20	-2.5	12	.....	26	
0.7	.....	.....	.....	.....	.....	.....	8.0	1.2	0.5	0.1	6.1	6.7	1.0	0.0	2.8	4.6	.....	6.9	11.9	24.2	17	-3.4	14	.....	27	
1.2	.....	.....	.....	.....	.....	.....	1.5	0.7	0.1	0.0	9.1	6.6	1.3	.....	2.8	4.4	.....	7.2	14.7	26.9	17	-2.8	13	.....	28	
at MASKINONGE, MASKINONGE CO.																										
1.1	.....	.....	.....	.....	.....	.....	3.0	0.6	0.3	0.0	12.7 (14.6)	6.5	2.5	.....	0.8	4.8	.....	3.6	14.0	29.4	31	-2.6	12	.....	29	
1.8	0.60	.....	0.02	0.00	0.11	0.05	2.7	0.8	0.05	0.0	15.5	6.2	3.4	0.0	0.2	4.8	.....	5.7	18.4	32.2	23	-2.7	12	.....	30	

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 59-LAKE ST. LOUIS

1	June 8/55	7:83	.....	.....	55	.....	7	6.8	5	0	.....	.....	56.4	.....	.....	12.0	67.2	9.8
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STATION NO. 60-RIVIERE DU LOUP

2	Oct. 27/53*	23	106	110	.....	2.7	3	7.0	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	4.8
3	June 8/55	7:97	949	1,040	72	.....	4	7.0 (7.0)	20 (20)	20	.....	.....	.....	.....	.....	.....	.....	108	4.3
4	July 4	8:15	949	813	76	15	7	6.4	35	3	9.6	4.3	45.2	0.061	116	20.8	42.3	3.2	
5	Aug. 4	11:34	303	262	76	.....	3	6.8	30	10	.....	.....	.....	.....	.....	.....	59.4	3.8	
6	Sept. 3	5:20	143	136	76	.....	3	6.9	30	5	.....	.....	.....	.....	.....	.....	63.4	4.4	
7	Oct. 4	2:175	143	157	54	4.3	2	7.2	35	5	6.4	0.7	59.6	0.081	23.0	17.6	86.1	4.5	
8	Nov. 4	.....	470	341	47	.....	5	6.5	45	10	.....	.....	.....	.....	.....	.....	54.0	4.6	
9	Dec. 3	6:100	215	185	34	.....	2	7.1	30	3	.....	.....	.....	.....	.....	.....	82.5	3.9	
10	Jan. 4/56	6:98	183	355	32	5.6	3	6.9	20	0.8	.....	.....	61.2	0.083	30.2	16.8	74.5	4.5	
11	Jan. 24**	.....	341	355	.....	.....	6	6.8	10	2	Trace	.....	150	0.204	138	.....	.....	20.0	
12	Feb. 4	13:62	149	190	32	.....	3	6.9	40	2	.....	.....	.....	.....	.....	.....	72.7	4.5	
13	Mar. 5	11:68	141	163	32	.....	2	7.1	30	6	.....	.....	.....	.....	.....	.....	74.8	4.6	
14	Apr. 4	36:51	205	1,780	32	9.8	1	7.4	.....	24.5	58	44	93.6	0.127	51.7	27.2	84.2	5.0	
15	May 4	18:31	1,930	2,050	43	.....	4	6.5	40	25	.....	.....	.....	.....	.....	.....	43.9	3.7	
16	June 5	3:17	2,310	1,220	60	.....	2	6.8	50	10	.....	.....	.....	.....	.....	.....	36.7	3.6	
17	July 5	4:18	627	1,070	68	.....	3	6.6	40	7	.....	.....	.....	.....	.....	.....	38.7	3.2	

\* Analysis by Permutit Co. of Canada Ltd.  
 \*\* Analysis by Alchem Ltd.

STATION NO. 61-ST. FRANCIS RIVER

18	July 30/56	188:257	802†	558†	61	16	2	7.0 (7.7)	50 (55)	0	.....	.....	60.0	0.081	130	25.2	61.9	6.7
19	Oct. 13	27:114	627	686	48	19	2	7.3	70	0	.....	.....	67.6	0.092	114	37.2	61.4	6.2
20	Nov. 13	14:55	1,510	471	42	.....	2	7.3	70	2	.....	.....	.....	.....	.....	.....	63.3	7.0
21	Jan. 8/57	26:41	608	163	34	.....	2	7.3	70	0	.....	.....	.....	.....	.....	.....	66.6	7.2
22	Feb. 13	19:41	608	242	33	19	1.5	7.5	75	0	.....	.....	68.0	0.092	111	38.2	69.5	7.9
23	Mar. 13	33:49	1,200	903	35	.....	3	7.2	55	8	.....	.....	.....	.....	.....	.....	69.9	7.6
24	Apr. 13	12:39	56	1,710	38	.....	3	7.2	70	10	.....	.....	.....	.....	.....	.....	66.8	4.6
25	May 13	10:60	69	925	35	11	2	7.4	65	6	.....	.....	51.6	0.070	9.6	22.4	62.1	7.2
26	June 14	12:28	78	319	65	.....	1	7.6	40	6	4.1	2.4	72.4	.....	.....	28.4	65.8	6.8
27	July 13	21:31	500	268	60	.....	1	7.5	50	0.4	.....	.....	.....	.....	.....	.....	65.7	7.4
28	Aug. 14	13:30	802	294	55	14	2	7.3	50	3	.....	.....	64.4	0.088	140	32.4	63.5	6.2
29	Sept. 13	12:32	58	329	62	.....	1	7.5	45	0.4	.....	.....	.....	.....	.....	.....	67.7	7.2

† Records at outlet of Lake St. Francis (Allard Dam); drainage area 564 square miles

STATION NO. 62-ST. FRANCIS RIVER (LAKE ALYMER)

30	Aug. 23/56*	228:357	1,130	1,020†	63	9.2	2	7.3	40	0	.....	.....	57.2	0.078	174	38.4	72.1	7.5
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\* Chlorinated sample, taken at tap in Beaulac.  
 † Records at outlet of Lake Alymer (St. Gerard); drainage area, 660 square miles

STATION NO. 63-ST. FRANCIS RIVER

31	Apr. 12/56	15:56	3,760†	4,350†	39	.....	3	7.2	60	2	.....	.....	.....	.....	.....	.....	76.7	8.7
32	Aug. 3	192:253	1,300	1,410	65	15	4	7.2 (7.1)	40 (50)	2	.....	.....	71.2	0.097	250	32.4	81.0	9.3
33	Sept. 12	41:43	1,730	1,770	61	17	4	7.1	60	7	1.0	0.3	75.2	0.102	351	29.2	78.1	9.7
34	Oct. 13	16:24	1,610	1,930	45	.....	4	7.1	60	2	.....	.....	.....	.....	.....	.....	74.7	9.6
35	Dec. 12	27:54	2,490	2,010	33	18	3	7.3	50	0.9	.....	.....	66.0	0.090	443	23.6	71.5	9.0
36	Jan. 14/57	30:36	1,570	1,830	33	.....	2	7.4	50	1	.....	.....	.....	.....	.....	.....	84.4	10.1
37	Feb. 14	20:29	1,350	1,550	33	.....	3	7.2	55	0	.....	.....	.....	.....	.....	.....	80.5	9.8
38	Mar. 12	31:78	2,190	2,330	33	7.8	4	7.1	40	4	4.6	2.9	74.0	0.101	438	33.2	84.5	9.6
39	Apr. 12	5:84	1,990	2,970	38	8.9	3	7.2	40	9	3.5	1.5	68.4	0.093	366	32.8	72.2	9.0
40	May 10	11:12	1,740	1,970	57	.....	4	7.1	40	10	.....	.....	.....	.....	.....	.....	72.6	9.4
41	June 12	14:34	1,270	1,290	64	.....	3	7.2	40	8	.....	.....	.....	.....	.....	.....	72.5	9.1
42	July 12	6:53	1,530	1,480	67	9.4	3	7.2	45	2	.....	.....	65.2	0.089	269	26.8	74.2	8.8
43	Aug. 12	14:22	1,250	1,080	.....	.....	11	6.8	40	7	.....	.....	.....	.....	.....	.....	92.0	11.7

† Records at Westbury; drainage area, 1,280 square miles

TABLE II -- (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colormetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Non-carbonate	Total																

at ST. ZENON, BERTHIER CO.

0.3	.....	0.00	0.00	0.67	0.00	.....	0.9	0.4	0.0	0.0 (0.0)	27.4 (29.3)	9.5	0.3	0.0	0.2	9.6	.....	3.2 (3.1)	25.7 (27.1)	45.2	5.9	-2.2	11	1
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at LOUISEVILLE, MASKINONGE CO.

2.2	0.15	.....	0.00	.....	.....	.....	11.5	.....	.....	0.0	19.5	5.8	18.4	.....	.....	.....	.....	5.0	21.0	.....	.....	.....	.....	2
1.4	.....	.....	.....	.....	.....	.....	13.4	1.0	0.1	0.0	21.3	19.4	6.4	.....	.....	0.8	3.3	.....	0.0	16.5	60.5	62	-2.5	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
0.8	.....	0.19	0.00	0.01	0.00	.....	2.4	0.9	0.2	0.0	10.4	4.5	3.2	0.0	0.2	3.7	0.00	2.8	11.3	24.2	29	-3.4	13	4
1.1	.....	.....	.....	.....	.....	.....	4.6	0.9	0.0	0.0	13.7	3.6	6.3	.....	0.0	3.7	.....	2.8	14.0	30.7	40	-2.8	12	5
0.7	.....	.....	.....	.....	.....	.....	5.5	0.7	0.0	0.0	14.1	4.3	7.3	.....	0.4	3.7	.....	2.3	13.9	34.0	44	-2.8	13	6
1.0	.....	0.04	0.00	0.02	0.00	0.00	8.6	1.0	0.0	0.0	14.7	4.7	12.7	0.1	0.4	5.9	.....	3.2	15.3	46.2	53	-2.5	12	7
1.0	.....	.....	.....	.....	.....	.....	3.2	0.9	0.1	0.0	9.8	7.7	3.5	.....	3.2	6.1	.....	7.6	15.6	35.0	29	-3.2	13	8
1.1	.....	.....	.....	.....	.....	.....	5.2	0.7	0.0	0.0	11.0	7.4	6.6	.....	2.4	5.6	0.00	5.3	14.3	38.3	43	-2.8	13	9
1.1	.....	0.17	0.01	0.00	0.00	0.00	7.3	0.8	0.3	0.0	13.2	7.2	10.1	0.0	1.6	7.2	.....	5.0	15.8	46.5	48	-2.7	12	10
18.0	1.0	.....	.....	0.00	.....	.....	.....	.....	0.1	.....	.....	20.6	20.7	.....	.....	6.2	.....	.....	38	.....	.....	.....	.....	11
1.3	.....	.....	.....	.....	.....	.....	6.4	1.8	0.2	0.0	13.4	8.1	9.2	.....	1.6	7.0	.....	5.6	16.6	46.5	42	-2.9	13	12
1.2	.....	.....	.....	.....	.....	.....	6.9	0.9	0.1	0.0	13.8	7.8	9.5	.....	3.2	6.9	0.00	5.1	16.4	47.8	46	-2.6	12	13
1.9	.....	0.28	0.00	0.09	Trace	0.00	8.2	1.8	0.3	0.0	19.5	8.5	9.5	.....	2.4	6.6	.....	4.3	20.3	53.8	43	-2.0	11	14
0.7	.....	.....	.....	.....	.....	.....	1.6	0.7	0.0	0.0	6.7	6.8	1.8	.....	1.2	4.8	.....	6.6	12.1	24.6	21	-3.6	14	15
0.6	.....	.....	.....	.....	.....	.....	1.8	0.6	0.2	0.0	8.7	5.6	1.6	.....	2.8	4.5	.....	4.3	11.4	25.4	24	-3.1	13	16
0.7	.....	.....	.....	.....	0.00	0.00	2.0	0.7	0.15	0.0	8.0	4.9	2.3	.....	.....	3.5	.....	4.3	10.9	23.3	26	-3.4	13	17

at DISRAELI, WOLFE CO.

2.7	.....	0.02	0.00	0.05	Trace	0.05	1.1	0.5	0.1	0.0	26.3 (27.5)	6.6	1.1	0.0	1.2	4.8	.....	6.2	27.8	37.9	7.6	-2.2	11	18
3.4	.....	0.03	0.00	Trace	0.00	0.00	0.6	0.5	0.05	0.0	26.6	6.8	1.4	0.0	1.2	5.0	.....	7.7	29.5	38.2	4.1	-2.0	11	19
3.1	.....	.....	.....	.....	.....	.....	0.8	0.5	0.2	0.0	27.4	6.9	1.4	.....	1.2	4.5	.....	7.7	30.2	39.3	5.2	-1.8	11	20
3.5	.....	.....	.....	.....	.....	.....	0.8	0.5	0.1	0.0	27.4	7.9	1.3	.....	1.6	4.9	0.11	9.9	32.4	41.2	5.0	-1.9	11	21
3.2	.....	0.08	0.00	0.11	0.00	0.00	1.0	0.6	0.0	0.0	29.6	8.0	1.1	0.0	1.2	4.9	.....	8.6	32.9	42.7	5.9	-1.6	11	22
3.4	.....	.....	.....	.....	.....	.....	0.9	0.6	0.1	0.0	28.0	9.1	1.2	.....	1.2	5.0	.....	9.9	32.9	42.9	5.4	-1.9	11	23
5.1	.....	.....	.....	.....	.....	.....	0.8	0.5	0.0	0.0	30.2	7.6	1.2	.....	0.4	5.0	.....	7.6	32.4	41.1	5.0	-2.1	11	24
2.9	.....	0.05	0.00	0.00	Trace	0.00	0.7	0.4	0.1	0.0	26.2	8.3	1.1	0.0	0.9	4.2	0.00	8.4	29.9	38.8	4.7	-1.8	11	25
3.3	.....	.....	.....	.....	.....	.....	0.9	0.5	0.1	0.0	27.5	7.1	1.6	0.0	0.6	3.5	.....	7.9	30.5	38.0	5.9	-1.5	11	26
2.9	.....	.....	.....	.....	.....	.....	0.7	0.5	0.1	0.0	27.7	8.1	0.9	.....	0.6	3.8	.....	7.7	30.4	38.6	4.6	-1.6	11	27
3.6	.....	0.05	0.00	0.00	0.00	0.00	0.7	0.5	0.0	0.0	29.0	7.0	1.1	0.0	0.3	4.0	.....	6.5	30.3	37.8	4.7	-1.9	11	28
3.3	.....	.....	.....	.....	.....	.....	0.7	0.5	.....	0.0	27.7	8.8	1.1	.....	0.6	3.5	.....	8.8	31.5	39.4	4.5	-1.7	11	29

at BEAULAC, WOLFE CO.

2.9	.....	0.06	0.00	0.00	.....	0.30	1.5	0.7	0.05	0.0	28.3	8.7	1.5	0.0	0.6	4.6	.....	7.1	30.3	42.4	9.3	-1.8	11	30
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at EAST ANGUS, COMPTON CO.

3.4	.....	.....	.....	.....	.....	.....	1.1	0.6	0.2	0.0	34.6	7.9	1.6	.....	1.2	5.0	.....	7.5	35.9	46.4	6.1	-1.8	11	31
3.0	.....	0.10	0.00	0.11	.....	0.05	1.9	0.5	0.1	0.0	35.6	8.3	1.1	0.0	1.2	5.2	.....	6.3	35.5	48.3	10	-2.7	11	32
3.0	.....	0.12	0.00	0.03	0.00	0.00	1.0	0.5	0.1	0.0	35.8	8.8	1.2	0.0	1.2	4.3	.....	7.1	36.5	47.6	5.4	-1.7	11	33
2.7	.....	.....	.....	.....	.....	.....	0.9	0.6	0.4	0.0	32.3	9.2	1.3	.....	0.8	4.6	.....	8.6	35.1	45.5	5.0	-1.8	11	34
2.7	.....	0.08	0.00	0.14	0.00	0.00	0.9	0.6	0.1	0.0	28.8	8.6	1.4	0.0	1.6	5.2	0.06	10.5	33.6	44.1	5.3	-1.8	11	35
3.2	.....	.....	.....	.....	.....	.....	0.9	0.6	0.2	0.0	35.2	9.3	1.4	.....	1.6	16	.....	9.5	38.4	60.1	4.7	-1.5	10	36
3.2	.....	.....	.....	.....	.....	.....	1.1	0.5	0.05	0.0	33.9	9.6	1.4	.....	2.0	5.4	.....	9.8	37.6	49.7	5.8	-1.7	11	37
3.1	.....	0.05	0.00	Trace	0.00	0.00	1.4	0.7	0.05	0.0	33.4	10.3	1.1	0.0	1.2	5.3	.....	9.3	36.7	49.2	7.5	-1.9	11	38
2.4	.....	0.06	0.00	0.16	Trace	0.00	1.2	0.5	0.05	0.0	30.1	7.6	0.6	0.0	0.6	4.7	0.00	6.6	31.3	37.9	7.3	-2.0	13	39
2.5	.....	.....	.....	.....	.....	.....	0.9	0.6	0.05	0.0	32.1	8.8	0.4	.....	0.6	3.6	.....	7.4	33.7	42.6	5.3	-2.0	11	40
2.4	.....	.....	.....	.....	.....	.....	1.0	0.6	0.05	0.0	30.4	9.8	1.0	.....	0.6	3.6	.....	7.7	32.6	43.2	6.1	-1.7	11	41
3.0	.....	0.12	0.00	0.00	0.00	0.00	1.0	0.4	0.1	0.0	32.5	7.6	1.8	0.0	0.1	3.2	.....	7.5	34.2	42.2	5.8	-1.8	11	42
3.6	.....	.....	.....	.....	.....	.....	1.2	0.6	0.1	0.0	45.8	7.4	0.9	.....	0.7	3.4	.....	6.4	44.0	52.2	5.5	-1.9	11	43

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance $K \times 10^6$ at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 64-ST. FRANCIS RIVER																		
1	Aug. 6/56	192:263	.....	.....	68	15	5	7.3	50	8	5.5	0.9	91.6	.....	.....	32.4	114	13.7
STATION NO. 65-ST. FRANCIS RIVER																		
2	Jan. 30/50*	11	.....	.....	.....	4.2	3	7.4	17	3	.....	.....	.....	.....	.....	.....	.....	14.4
* Analysis by Permutit Co. of Canada Ltd.																		
STATION NO. 66-ST. FRANCIS RIVER																		
3	Dec. 12/35*	.....	.....	.....	.....	.....	7	7.0	50	10	.....	.....	.....	.....	.....	.....	.....	.....
* Analysis by Permutit Co. of Canada Ltd.																		
STATION NO. 67-ST. FRANCIS RIVER																		
4	Sept. 29/56	31:38	2,670†	3,190†	55	21	6	7.3	70	15	112	4.4	112	0.152	806	27.6	146	20.2
5	Oct. 28	5:14	2,200	3,330	47	.....	1.5	7.9	70	1	.....	.....	.....	.....	.....	.....	128	19.2
6	Nov. 30	13:48	3,220	3,230	43	.....	3	7.6	70	8	.....	.....	.....	.....	.....	.....	141	18.6
7	Dec. 29	11:40	.....	.....	32	32	3	7.8	50	45	81	44	157	.....	.....	30.0	179	29.0
8	Jan. 29/57	15:21	.....	.....	32	.....	2	7.6	40	5	.....	.....	.....	.....	.....	.....	137	19.8
9	Mar. 1	14:21	.....	.....	32	.....	9	7.1	35	15	.....	.....	.....	.....	.....	.....	169	25.3
10	Mar. 28	18:99	.....	.....	37	8.1	4	7.4	40	15	19	13	120	.....	.....	55.2	121	16.5
11	Apr. 29	2:18	7,040	9,040	58	.....	3	7.4	0	10	.....	.....	.....	.....	.....	.....	105	11.9
12	May 29	5:21	6,530	6,150	59	.....	3	7.6	40	20	.....	.....	.....	.....	.....	.....	124	17.5
13	June 29	9:59	3,540	3,080	.....	9.2	5	7.3	45	5	9.7	0.6	97.6	0.133	931	33.6	143	20.4
14	July 30	7:14	4,400	3,770	72	.....	5	7.4	35	7	.....	.....	.....	.....	.....	.....	153	19.8
15	Aug. 29	8:21	2,980	3,240	66	.....	10	7.1	35	2	.....	.....	.....	.....	.....	.....	146	20.8
† Records at highway bridge between Richmond and Melbourne; drainage area, 3,525 square miles																		
STATION NO. 68-ST. FRANCIS RIVER																		
16	Aug. 1/56	194:255	2,330†	2,150†	68	11.3	2	7.7 (6.9)	10 (7)	10	22	13	118	0.160	741	56.8	175	23.6
† Records at Hemming Falls; drainage area, 3,692 square miles																		
STATION NO. 69-ST. FRANCIS RIVER																		
17	Aug. 1/56*	64:71	.....	.....	68	15	5	7.4 (7.2)	30 (45)	5	6.0	3.0	114	.....	.....	27.6	172	23.5
18	Oct. 8	8:22	.....	.....	55	18	3	7.6	60	20	2.9	0.6	104	.....	.....	19.6	151	20.6
19	Nov. 6	21:36	.....	.....	60	.....	4	7.4	50	3	.....	.....	.....	.....	.....	.....	145	19.2
20	Dec. 7	6:47	.....	.....	37	.....	5	7.3	60	6	.....	.....	.....	.....	.....	.....	151	20.2
21	Jan. 9/57	22:34	.....	.....	38	18	4	7.4	50	0.9	.....	.....	126	.....	.....	37.2	155	21.1
22	Feb. 6	22:30	.....	.....	38	.....	2	7.8	45	3	.....	.....	.....	.....	.....	.....	150	19.6
23	Mar. 8	10:18	.....	.....	37	.....	3	7.4	40	3	.....	.....	.....	.....	.....	.....	124	17.0
24	Apr. 8	7:88	.....	.....	37	8.5	3	7.4	40	30	40	28	113	.....	.....	51.6	112	15.2
25	May 7	.....	.....	.....	53	.....	3	7.4	35	10	.....	.....	.....	.....	.....	.....	117	16.6
26	July 8	10:36	.....	.....	70	.....	3	7.5	50	5	.....	.....	.....	.....	.....	.....	138	20.5
27	Aug. 5	15:32	.....	.....	65	9.8	4	7.4	45	5	2.4	0.7	114	.....	.....	32.8	149	21.6
28	Sept. 9	9:10	.....	.....	63	.....	2	7.9	40	65	.....	.....	.....	.....	.....	.....	169	22.8
* Chlorinated sample.																		

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (in parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non- carbonate	Total					
at LENNOXVILLE, SHERBROOKE CO.																								
3.4	.....	0.10	0.00	0.08	0.00	0.05	3.9	0.7	0.2	0.0	55.6 (53.9)	9.1	1.2	0.0	1.2	4.8	....	2.6	48.2	65.7	14	-1.3	9.9	1
at SHERBROOKE, SHERBROOKE CO.																								
2.2	0.10	.....	0.00	.....	.....	.....	2.8	.....	.....	0.0	45.1	8.6	2.1	.....	.....	.....	.....	0	45	.....	.....	.....	.....	2
at WINDSOR, RICHMOND CO.																								
.....	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	3	.....	.....	.....	.....	.....	43	.....	.....	.....	.....	3
at MELBOURNE, RICHMOND CO.																								
3.1	.....	0.11	0.00	0.03	Trace	0.00	4.8	0.8	0.2	0.0	71.6	11.6	2.9	0.0	0.4	3.8	.....	4.4	63.1	83.0	14	-1.0	9.3	4
3.2	.....	.....	.....	.....	.....	.....	2.3	0.6	0.0	0.0	68.5	9.7	0.6	.....	0.8	5.4	.....	4.9	61.1	74.7	7.4	-0.5	8.9	5
2.8	.....	.....	.....	.....	.....	.....	5.3	0.9	0.1	0.0	60.3 (62.2)	13.8	3.1	.....	2.4	5.1 (5.0)	0.22	8.4	57.9	81.7	16	-0.9	9.4	6
3.0	.....	0.05	0.00	0.00	0.00	0.00	3.7	0.8	0.2	0.0	93.9	11.4	3.9	0.0	0.8	4.3	.....	7.8	84.7	103.2	8.5	-0.4	8.6	7
2.6	.....	.....	.....	.....	.....	.....	2.6	1.0	0.1	0.0	59.7	11.9	3.9	.....	1.2	5.2	.....	11.1	60.1	77.6	8.4	-0.8	9.2	8
2.7	.....	.....	.....	.....	.....	.....	2.7	2.2	0.05	0.0	68.6	16.1	4.8	.....	3.6	4.3	.....	18.2	74.5	96.5	7.0	-1.1	9.3	9
3.0	.....	0.05	0.00	0.06	Trace	0.05	3.1	0.8	0.05	0.0	56.2	10.8	2.2	0.0	1.6	7.7	0.00	7.4	53.5	73.6	11	-1.1	9.6	10
2.6	.....	.....	.....	.....	.....	.....	1.7	0.6	0.0	0.0	40.7	8.3	1.9	.....	0.6	3.4	.....	7.0	40.4	51.0	8.2	-1.4	10	11
3.1	.....	.....	.....	.....	.....	.....	2.5	0.7	0.05	0.0	60.0	9.8	1.8	.....	0.6	3.1	.....	7.2	56.4	68.7	8.6	-0.9	9.4	12
3.2	.....	0.10 (0.05)	0.00 (0.00)	0.00	0.00	0.00	3.4	0.9	0.0	0.0	69.0	11.3	2.1	0.0	0.9	3.5	.....	7.5	64.1	79.8	10	-1.0	9.3	13
5.3	.....	.....	.....	.....	.....	.....	3.2	0.8	0.05	0.0	77.2	10.8	2.5	.....	0.3	3.0	.....	7.9	71.2	83.8	8.8	-0.9	9.2	14
3.8	.....	.....	.....	.....	.....	.....	3.5	0.8	0.05	0.0	73.6	11.3	2.7	.....	0.1	3.1	.....	7.1	67.5	82.5	10	-0.4	7.9	15
at DRUMMONDVILLE, DRUMMOND CO.																								
3.5	.....	0.00	0.01	0.19	0.00	0.00	5.1	0.8	0.2	0.0	61.8 (70.2)	27.0	4.7	0.0	0.8	2.6	.....	22.6	73.3	98.9	13	-1.1	9.9	16
at PIERREVILLE, YAMASKA CO.																								
4.0	.....	0.05	0.00	0.15	.....	.....	5.2	0.9	0.3	0.0	80.2 (85.4)	11.1	6.8	0.0	1.0	4.6	.....	9.3	75.1	97.2	12.7	-0.8	9.0	17
3.2	.....	0.17	0.00	0.05	0.00	0.00	4.5	0.9	0.2	0.0	73.5	12.5	3.1	0.0	0.2	2.7	.....	4.3	64.6	84.1	12.8	-0.7	9.0	18
3.4	.....	.....	.....	.....	.....	.....	4.7	0.7	0.2	0.0	65.3	11.7	5.8	.....	0.4	2.2 (2.7)	.....	8.3	61.9	80.3	14.0	-1.0	9.4	19
3.2	.....	.....	.....	.....	.....	.....	4.9 (5.0)	0.9	0.2	0.0	64.2 (62.2)	14.7 (25.1)	4.5	.....	1.6	5.0 (4.8)	0.16	10.9	63.6	86.7	11.9	-1.2	9.7	20
3.6	.....	0.20	Trace	0.30	Trace	0.30	4.0	0.9	0.2	0.0	69.5 (67.5)	15.3	4.7	0.0	1.6	5.5	.....	10.5	67.5	90.0	10.8	-0.9	9.2	21
3.1	.....	.....	.....	.....	.....	.....	4.2	1.0	0.0	0.0	62.8 (61.0)	12.9	4.1	.....	1.2	4.6	.....	10.1	61.6	81.7	12.7	-0.6	9.0	22
2.7	.....	.....	.....	.....	.....	.....	2.9	0.8	0.05	0.0	52.5	11.9	3.0	.....	1.2	4.8	.....	10.4	53.5	70.2	10.3	-1.2	9.8	23
2.4	.....	0.10	0.00	0.05	0.00	0.05	2.4	0.8	0.05	0.0	47.9	10.9	3.0	0.0	1.4	4.1	0.06	9.7	49.0	64.4	9.3	-1.3	10	24
2.4	.....	.....	.....	.....	.....	.....	2.7	0.7	0.0	0.0	51.4	10.8	3.0	.....	0.8	5.1	.....	9.1	51.3	67.4	10.1	-1.2	9.8	25
3.1	.....	.....	.....	.....	.....	.....	3.0	0.8	0.05	0.0	67.2	11.1	2.7	.....	0.4	2.6	.....	8.8	63.9	74.4	9.1	-0.8	8.1	26
3.3	.....	0.13	Trace	0.00	0.00	0.20	3.2	1.0	0.05	0.0	71.6	10.5	3.8	0.0	0.6	2.9	.....	8.8	67.5	82.6	9.1	-0.9	9.2	27
5.1	.....	.....	.....	.....	.....	.....	4.9	0.9	0.0	0.0	86.7	11.7	5.4	.....	0.2	2.6	.....	6.8	77.9	96.3	11.9	-0.3	8.5	28

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 70-SALMON RIVER																		
1	Aug. 3/56	193:259	45	143	64	14	0.8	7.8 (7.4)	30 (40)	2	.....	.....	60.0	0.082	7.3	15.2	72.6	8.9
STATION NO. 71-EATON RIVER																		
2	Aug. 3/56	193:253	51	106	68	12	2	7.8 (7.8)	10	0	.....	.....	108	0.147	14.8	20.4	156	23.6
STATION NO. 72-COATICOOK RIVER																		
3	Aug. 7/56	192:263	.....	.....	72	10	1	7.7	10	3	.....	.....	76.8	.....	.....	28.8	89.1	10.7
4	Sept. 28	41:44	.....	.....	45	13	3	7.5	30	5	1.6	0.4	108	.....	.....	26.4	155	21.6
5	Nov. 28	49:71	.....	.....	35	13	2	7.6	25	0.9	.....	.....	82.4	.....	.....	14.4	122	16.4
6	Jan. 28/57	3:15	.....	.....	32	15	2	7.5	30	0	.....	.....	84.8	.....	.....	25.6	93.4	13.2
7	Mar. 28	18:99	.....	.....	39	5.4	3	7.3	20	10	11.5	8.1	91.6	.....	.....	41.2	90.1	12.5
8	May 28	6:91	.....	.....	60	6	2	7.5	25	7	6.3	0.0	77.6	.....	.....	25.6	105	13.9
9	July 29	8:39	.....	.....	70	5	3	7.6	25	2	.....	.....	90.8	.....	.....	21.6	127	19.1
10	Sept. 28	11:17	.....	.....	45	7.4	2	7.8	40	0.9	.....	.....	136	.....	.....	30.4	182	25.2
STATION NO. 73-COATICOOK RIVER																		
11	Nov. 20/50	4:44	.....	.....	39	.....	3	7.7	35	5	7.1	4.6	108	.....	.....	42.8	179	26.2
12	Dec. 21	4:13	.....	.....	34	.....	8	7.3	25	15	3.3	0.9	122	.....	.....	30.0	194	28.3
13	Jan. 22/51	3:31	.....	.....	32	.....	4	7.3	45	9	15	12	72.2	.....	.....	22.6	113	16.7
14	Feb. 20	1:28	.....	.....	34	.....	4	7.3	20	8	15	11	72.2	.....	.....	16.8	116	16.9
15	Mar. 20	15:43	.....	.....	34	.....	8	7.1	25	110	85	81	72.8	.....	.....	20.0	122	19.0
16	Apr. 23	5:7	.....	.....	40	.....	3	7.5	30	15	18	15	80.0	.....	.....	16.0	126	20.1
17	May 21	5:19	.....	.....	65	.....	2	7.6	35	2	.....	.....	78.2	.....	.....	20.8	110	17.3
18	June 20	5:26	.....	.....	75	.....	3	7.5	25	1	.....	.....	74.0	.....	.....	31.2	111	16.4
19	July 20	7:10	.....	.....	67	.....	4	7.6	25	10	.....	.....	.....	.....	.....	.....	180	28.8
20	Aug. 22	7:17	.....	.....	62	.....	3	7.6	7	15	.....	.....	.....	.....	.....	.....	145	21.4
21	Sept. 27	12:20	.....	.....	53	.....	4	7.5	3	6	.....	.....	.....	.....	.....	.....	133	19.9
22	Oct. 22	9:36	.....	.....	52	.....	4	7.5	4	4	5.0	3.7	98.2	.....	.....	14.2	163	24.6
23	Nov. 22	6:21	.....	.....	34	.....	3	7.7	15	4	3.7	2.2	117	.....	.....	23.0	177	28.1
STATION NO. 74-COATICOOK RIVER																		
24	June 18/56	192:263	.....	.....	70	9.7	2	7.8	5	10	13	10	120	.....	.....	18.8	181	26.7
STATION NO. 75-LAKE MASSAWIPPI																		
25	Aug. 6/56*	192:263	72	69	67	9.7	1	8.1 (8.0)	10	0	.....	.....	106	.....	.....	18.0	168	25.5
STATION NO. 76-ORFORD LAKE																		
26	Aug. 8/56	191:261	.....	.....	68	9.8	3	7.2 (7.0)	10	4	7.2	3.7	56.8	.....	.....	19.6	64.2	5.9
STATION NO. 77-MAGOG RIVER (LAKE MEMPHREMAGOG)																		
27	Apr. 20/54*	.....	683.84	No data	.....	.....	4	7.3	.....	3	.....	.....	86	0.117	.....	.....	.....	12.8

\* Chlorinated sample at tap in North Hatley.

\* Analysis supplied by Alchem Ltd., Burlington, Ont.

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.	
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total						
at SCOTSTOWN, COMPTON CO.																									
2.3	.....	0.09	0.00	0.13	Trace	0.05	1.6	0.5	0.2	0.0	35.8 (37.7)	5.1	0.5	0.0	1.6	6.8	....	2.3	31.7	45.5	9.3	-1.1	10	1	
at COOKSHIRE, COMPTON CO.																									
4.1	.....	0.00	Trace	0.03	Trace	0.20	2.0	0.5	0.2	0.0	85.9 (87.9)	9.0	1.1	0.0	2.0	5.6	....	5.2	75.7	90.7	5.3	-0.4	8.6	2	
at COATICOOK, STANSTEAD CO.																									
1.4	.....	0.02	0.00	0.12	Trace	0.10	4.1	0.7	0.05	0.0	34.3 (30.1)	6.6	5.0	0.0	0.8	7.2	....	4.4	32.5	53.5	2.1	-1.3	10	3	
2.7	.....	0.40	0.00	0.30	0.00	0.00	4.6	0.9	0.05	0.0	70.1	12.5	4.4	0.0	1.2	5.0	....	7.5	65.0	87.6	13	-0.8	9.1	4	
2.8	.....	0.01	0.00	0.02	0.00	0.00	3.4	0.9	0.05	0.0	51.1	11.2	4.4	0.0	2.0	6.2	....	10.5	52.4	72.6	12	-1.1	9.8	5	
2.0	.....	0.09	0.00	0.00	0.00	0.00	1.3	0.9	0.2	0.0	37.1 (36.0)	9.9	2.1	0.0	2.4	5.2	0.05	10.8	41.2	55.3	6.2	-1.3	10	6	
1.9	.....	0.02	0.00	0.16	0.00	0.00	1.5	1.7	0.0	0.0	40.2	7.4	1.8	0.0	1.4	5.1	0.00	6.0	39.0	53.3	7.2	-1.5	10	7	
2.4	.....	Trace	0.00	0.00	0.00	0.00	2.8	0.9	0.05	0.0	45.8	9.2	2.9	0.0	0.9	4.2	....	7.0	44.6	59.9	12	-1.2	9.9	8	
3.2	.....	Trace	0.00	0.00	0.00	0.00	2.2	0.8	0.1	0.0	64.1	9.5	2.2	0.0	1.0	4.2	....	8.2	60.8	73.9	7.2	-0.8	9.2	9	
3.9	.....	0.14	Trace	0.00	0.00	0.00	5.0	1.0	0.0	0.0	83.4	14.1	6.9	0.0	1.5	5.6	....	10.5	78.9	104	12	-0.4	8.6	10	
at WATERVILLE, SHERBROOKE CO.																									
3.4	0.88	0.30	.....	.....	.....	.....	2.4	0.9	.....	0.0	92.2	13.0	0.4	.....	1.8	4.3	...	3.7	79.3	98.1	6.1	-0.5	8.7	11	
3.7	0.64	0.27	.....	.....	.....	.....	3.7	1.1	.....	0.0	97.1	17.3	1.5	.....	2.7	5.5	.....	6.2	85.8	111	8.4	-0.7	8.7	12	
2.1	0.50	0.14	.....	.....	.....	.....	1.5	1.2	.....	0.0	54.2	9.7	0.0	.....	0.0	1.1	.....	.....	50.3	59	5.9	-1.3	9.9	13	
2.5	1.3	0.08	.....	.....	.....	.....	1.6	0.9	.....	0.0	55.6	11.7	0.0	0.0	2.2	4.6	.....	6.9	52.5	69.7	6.1	-1.3	9.9	14	
3.0	.....	0.08	.....	.....	.....	.....	1.6	1.4	.....	0.0	61.2	4.8	2.0	.....	1.8	4.4	0.00	9.6	59.8	68.2	5.4	-1.3	9.7	15	
2.8	0.41	0.17	.....	.....	.....	.....	3.3	0.4	.....	0.0	65.9	9.2	1.0	0.0	0.4	5.8	.....	7.7	61.7	75.6	10.3	-0.9	9.3	16	
2.4	.....	0.26	.....	.....	.....	.....	1.5	0.9	.....	0.0	54.4	6.9	1.9	0.4	0.0	2.2	.....	8.4	53.0	60.6	5.7	-0.9	9.4	17	
2.6	.....	0.10	.....	.....	.....	.....	2.2	1.1	.....	0.0	57.9	8.9	0.3	0.15	2.4	2.9	.....	4.2	51.6	65.5	8.3	-1.0	9.5	18	
4.8	.....	.....	.....	.....	.....	.....	2.2	1.3	.....	0.0	103	7.2	2.5	.....	2.0	4.8	.....	7.6	91.6	104	4.9	-0.4	8.4	19	
3.0	.....	.....	.....	.....	.....	.....	3.8	1.2	.....	0.0	74.2	9.5	3.4	0.1	0.1	1.0	.....	4.9	65.7	80.0	10.9	-0.7	9.0	20	
3.0	.....	.....	.....	.....	.....	.....	2.0	0.2	.....	0.0	67.1	4.5	4.5	0.1	0.1	3.7	.....	9.5	64.5	72.5	6.5	-0.9	9.3	21	
3.5	0.72	0.02	.....	.....	.....	.....	5.8	1.3	.....	0.0	80.8	10.8	4.2	0.3	1.0	3.5	.....	9.6	75.8	92.9	9.6	-0.7	8.9	22	
3.7	0.68	0.14	.....	.....	.....	.....	2.3	0.6	.....	0.0	84.2	15.5	3.4	0.3	0.3	6.5	.....	16.3	85.3	102	5.4	-0.5	8.5	23	
at LENNOXVILLE, SHERBROOKE CO.																									
4.4	.....	0.17	0.00	0.06	0.00	0.05	2.9	1.1	0.1	0.0	91.6	11.6	3.2	0.0	0.8	4.1	....	9.6	84.7	100	6.7	-0.3	8.4	24	
at NORTH HATLEY, STANSTEAD CO.																									
3.8	.....	0.03	0.00	0.09	0.00	0.10	2.2	0.8	0.1	0.0	86.7 (90.4)	10.1	2.8	0.0	0.8	5.8	....	8.2	79.3	94.8	5.6	0.0	8.1	25	
at EASTMAN, BROME CO.																									
2.8	.....	0.01	0.01	0.07	0.00	0.10	1.6	0.3	0.1	0.0	23.8	5.6	2.3	0.0	1.2	2.4	....	6.7	26.2	34.1	11	-2.1	11	26	
at MAGOG, STANSTEAD CO.																									
2.9	0.5	.....	.....	0.00	.....	.....	.....	.....	0.3	0.0	41.4	6.8	2.4	.....	.....	4.7	.....	.....	44.0	.....	.....	.....	.....	.....	27



TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 77-MAGOG RIVER (LAKE MEMPHREMAGOG)

No.	Date of collection	Storage period (Days)	Gauge height in feet		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
1	Feb. 2/55*	.....	681.74†	No data†	.....	.....	4	7.2	.....	2	.....	.....	115	0.156	.....	.....	14.4	
2	Apr. 28*	.....	683.24	No data†	.....	.....	2	7.1	.....	2	.....	.....	62	0.084	.....	.....	8.0	
3	Sept. 14/56	39:41	680.64	680.58	66	9.3	2	7.7	10	5	4.9	2.5	76.4	0.104	.....	14.4	109	
4	Oct. 15	14:22	680.59	680.44	56	.....	2	7.6	10	0.2	.....	.....	.....	.....	.....	.....	109	
5	Nov. 14	15:59	680.14	680.27	46	.....	1	7.9	20	0	.....	.....	.....	.....	.....	.....	110	
6	Dec. 14	26:56	680.94	680.91	33	12.0	2	7.7	10	0	.....	.....	86.4	0.118	.....	22.4	107	
7	Jan. 14/57	30:36	681.19	681.36	34	.....	1	7.8	10	0	.....	.....	.....	.....	.....	.....	116	
8	Feb. 14	18:22	681.19	681.18	35	.....	2	7.7	10	0	.....	.....	.....	.....	.....	.....	111	
9	Mar. 14	32:76	680.84	681.04	35	4.2	3	7.4	10	2	.....	.....	89.6	0.122	.....	21.6	109	
10	Apr. 14	9:24	681.69	681.91	37	.....	2	7.6	10	5	.....	.....	.....	.....	.....	.....	105	
11	May 14	13:36	682.44	682.65	54	.....	2	7.7	10	4	.....	.....	.....	.....	.....	.....	105	
12	June 14	12:28	682.44	682.40	68	3.6	2	7.7	10	0	.....	.....	72.8	0.099	.....	14.0	108	
13	July 14	11:30	682.19	682.29	70	.....	2	7.7	10	0.4	.....	.....	.....	.....	.....	.....	114	
14	Aug. 14	12:27	681.84	681.73	68	.....	2	7.7	0	0.9	.....	.....	.....	.....	.....	.....	112	

\* Analysis supplied by Alchem Ltd., Burlington, Ont.  
 † Gauge on Colin MacPherson's wharf

STATION NO. 78-MAGOG RIVER

15	Apr. 24/50**	16	5,680	3,680	.....	4.0	4	7.3	35	8	.....	.....	.....	.....	.....	.....	.....	12.8
16	Aug. 6/56*	192:263	470	453	69	9.5	2	7.9 (7.2)	10	2	.....	.....	79.2	0.108	101	15.2	117	15.6

\* Chlorinated water, sampled at tap in Sherbrooke  
 \*\* Analysis supplied by Permutit Co. of Canada Ltd.

STATION NO. 79-WATOPEKA RIVER

17	Aug. 2/56*	192:254	42	37	60	15.0	5	7.0 (7.0)	40 (70)	5	10.4	3.1	76.4	0.104	8.65	28.0	80.5	9.7
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\* Chlorinated water, sampled at tap in Windsor

STATION NO. 80-BROMPTON RIVER

18	Aug. 2/56*	193:254	.....	.....	65	13.0	4	7.0 (7.0)	30 (30)	0.8	.....	.....	49.2	.....	.....	19.6	63.3	5.8
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\* Chlorinated water, sampled at tap in Richmond

STATION NO. 81-NICOLET RIVER

19	July 30/56	188:253	.....	.....	63	15.2	1	7.7 (7.9)	40 (50)	0	.....	.....	63.6	.....	.....	27.6	75.7	10.0
20	Oct. 22	23:105	.....	.....	52	13.0	5	7.1	20	.....	.....	.....	80.4	.....	.....	18.8	93.3	12.6
21	Dec. 27	20:42	.....	.....	35	13.0	2	7.4	25	0	.....	.....	64.0	.....	.....	21.6	83.0	10.9
22	Feb. 28/57	15:69	.....	.....	33	4.6	7	6.6	25	35	77	63	60.0	.....	.....	45.6	71.6	8.4
23	Apr. 27	4:69	.....	.....	55	6.9	2	7.3	35	6	.....	.....	.....	.....	.....	.....	58.9	7.0
24	June 28	10:67	.....	.....	70	4.9	2	7.5	25	0.4	.....	.....	61.2	.....	.....	12.8	86.0	11.3
25	Aug. 30	7:14	.....	.....	54	2.8	4	7.4	5	0.9	.....	.....	77.2	.....	.....	16.4	128	18.3

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at MAGOG, STANSTEAD CO. (Concluded)																								
4.8	0.2	.....	.....	0.00	.....	.....	.....	.....	0.1	0.0	61.0	6.8	4.9	.....	.....	10	.....	6.0	56.0	.....	.....	.....	.....	1
6.3	0.3	.....	.....	0.00	.....	.....	.....	.....	0.0	0.0	48.8	3.4	3.6	.....	.....	4.6	.....	6.0	46.0	.....	.....	.....	.....	2
2.1	.....	0.00	0.00	0.00	0.00	0.10	1.5	0.7	0.1	0.0	48.4	9.8	2.7	0.0	1.2	3.6	.....	9.1	48.8	61.7	6.1	-0.9	9.5	3
2.4	.....	.....	.....	.....	.....	.....	1.4	0.8	0.0	0.0	52.2	8.8	1.9	.....	0.2	3.4	.....	6.7	49.5	61.1	5.7	-0.9	9.4	4
2.4	.....	.....	.....	.....	.....	.....	1.9	0.8	0.05	0.0	50.8	9.3	2.2	.....	0.4	13	0.06	8.3	50.0	71.0	7.5	-0.7	9.3	5
2.4	.....	0.00	0.00	0.00	0.00	0.00	1.4	0.8	0.1	0.0	54.7	9.1	2.6	0.0	0.8	3.5	.....	7.0	48.8	60.9	5.7	-1.0	9.7	6
2.4	.....	.....	.....	.....	.....	.....	1.6	0.9	0.1	0.0	53.1	9.9	2.5	.....	0.8	5.5	.....	8.4	52.0	66.7	6.1	-0.8	9.4	7
2.5	.....	.....	.....	.....	.....	.....	1.4	0.8	0.0	0.0	50.8	9.1	2.3	.....	0.6	3.8	.....	8.8	50.5	61.7	5.6	-0.9	9.5	8
2.7	.....	0.00	0.00	0.00	0.00	0.00	1.5	0.9	0.0	0.0	51.4	9.3	1.9	0	0.4	3.8	.....	8.1	50.3	61.6	6.0	-1.2	9.8	9
2.6	.....	.....	.....	.....	.....	.....	1.3	0.8	0.05	0.0	46.4	8.6	2.1	.....	0.8	4.3	.....	8.5	46.6	57.8	5.6	-1.0	9.6	10
2.4	.....	.....	.....	.....	.....	.....	1.4	0.8	.....	0.0	49.7	8.6	2.0	.....	0.6	4.2	.....	7.7	48.5	60.0	5.8	-0.8	9.5	11
2.6	.....	0.02	0.00	Trace	0.00	0.00	1.5	0.8	0.05	0.0	51.4	9.4	2.3	0.0	0.5	3.7	0.00	43.1	85.3	61.9	6.0	-0.8	9.3	12
2.6	.....	.....	.....	.....	.....	.....	1.5	0.9	.....	0.0	52.8	9.0	2.2	.....	0.6	1.7	.....	8.1	50.9	60.3	5.9	-0.8	9.3	13
2.6	.....	.....	0.00	.....	.....	.....	1.6	0.8	0.0	0.0	54.0	8.9	2.0	0.0	0.4	2.4	.....	6.6	50.9	61.4	6.3	-0.8	9.3	14
at SHERBROOKE, SHERBROOKE CO. - drainage area, 765 square miles																								
2.4	0.6	.....	.....	.....	.....	.....	4.6	.....	.....	0.0	46.4	6.7	6.4	.....	.....	4.0	.....	4.0	42.0	.....	.....	.....	.....	15
2.5	.....	Trace	0.00	0.07	0.00	0.05	3.5	0.9	0.2	0.0	52.8	8.6	3.8	0.0	0.8	3.8	.....	5.9	49.2	65.8	13	-0.7	9.3	16
at WINDSOR, RICHMOND CO. - drainage area, 125 square miles																								
2.0	.....	0.25	0.02	0.07	.....	1.0	1.9	0.4	0.1	0.0	30.4	8.3	3.4	0.0	1.2	5.2	.....	7.5	32.4	48.5	10	-2.0	11	17
at RICHMOND, RICHMOND CO.																								
3.1	.....	0.05	0.01	0.13	Trace	0.05	0.7	0.3	0.2	0.0	21.8	7.6	2.3	0.0	0.8	3.2	.....	9.3	27.2	35.0	5.0	-2.4	12	18
at ARTHABASKA, ARTHABASKA CO.																								
1.8	.....	0.04	0.00	0.10	Trace	0.05	2.1	0.7	0.1	0.0	34.3	6.6	1.3	0.0	0.8	4.7	.....	4.3	32.4	45.2	12	-1.3	10	19
1.9	.....	0.02	0.00	0.02	Trace	0.05	1.8	1.1	0.05	0.0	38.5	7.6	2.5	0.0	2.4	3.2	0.10	7.7	39.3	52.2	8.8	-1.7	11	20
2.3	.....	0.03	Trace	0.09	0.04	0.00	1.6	0.7	0.05	0.0	30.6	10.0	2.3	0.0	1.6	4.8	.....	11.6	36.7	49.4	8.3	-1.6	11	21
1.3	.....	0.02	Trace	0.00	Trace	0.00	1.7	1.5	0.5	0.0	18.4	8.6	2.2	0.0	6.0	3.2	.....	11.2	26.3	42.5	11	-2.6	12	22
1.7	.....	0.04	0.00	0.08	0.00	0.00	0.9	0.6	0.05	0.0	21.5	7.1	1.1	0.0	0.3	2.6	0.00	6.9	24.5	32.1	7.0	-2.0	11	23
2.3	.....	0.00	0.00	0.00	0.00	0.00	1.2	0.7	0.0	0.0	37.8	8.8	1.1	0.0	0.6	1.9	.....	6.6	37.7	46.6	6.4	-1.3	10	24
3.1	.....	0.01	0.00	0.04	0.00	0.00	2.2	1.0	0.0	0.0	64.1	9.0	2.1	0.0	0.4	2.6	.....	5.8	58.4	70.4	7.4	-1.1	9.6	25

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Toos per day			
STATION NO. 82-NICOLET RIVER																		
1	July 31/56	189:252	.....	.....	65	12	1	7.9 (7.5)	30 (40)	5	7.5	2.6	112	.....	.....	26.0	155	23.8
2	Oct. 3	36:39	.....	.....	58	13	1	8.0	30	7	5.6	0.6	120	.....	.....	26.8	172	26.8
3	Dec. 3	15:63	.....	.....	38	17	2	7.8	60	10	17	10	136	.....	.....	26.0	199	29.0
4	Mar. 19/57	27:50	.....	.....	35	7.7	4	7.0	35	15	22	17	72.8	.....	.....	30.0	76.7	9.9
5	May 22	5:97	.....	.....	49	9.2	2	7.7	50	6	6.6	0.0	87.2	.....	.....	28.8	126	20.3
6	July 25	5:43	.....	.....	70	5.5	1	8.0	25	3	.....	.....	112	.....	.....	20.0	171	24.8
7	Oct. 4	7:18	.....	.....	53	5.6	0.9	3.0	30	1	.....	.....	100	.....	.....	23.6	133	19.1
STATION NO. 83-NICOLET RIVER																		
8	July 31/56	63:70	.....	.....	68	10	3	7.6 (7.3)	10	0	.....	.....	.....	.....	.....	.....	205	31.1
9	Oct. 10	30:117	.....	.....	48	18	1	7.7	70	15	18	14	100	.....	.....	43.2	102	15.4
10	Nov. 12	15:56	.....	.....	30	.....	2	7.8	20	6	.....	.....	.....	.....	.....	.....	196	29.1
11	Dec. 10	29:44	.....	.....	32	.....	3	7.4	30	5	.....	.....	.....	.....	.....	.....	130	18.0
12	Feb. 11/57	21:32	.....	.....	32	11	2	7.8	15	2	.....	.....	119	.....	.....	22.4	159	22.8
13	Mar. 11	7:15	.....	.....	37	.....	2	7.7	25	1	.....	.....	.....	.....	.....	.....	127	17.8
14	Apr. 10	5:86	.....	.....	33	7.8	1	7.7	50	80	90	84	97.2	.....	.....	33.6	111	16.0
15	May 14	9:24	.....	.....	56	.....	2	7.6	35	15	.....	.....	.....	.....	.....	.....	116	17.7
16	June 10	4:9	.....	.....	.....	.....	2	7.6	40	6	.....	.....	.....	.....	.....	.....	133	14.5
17	July 10	8:55	.....	.....	75	9.3	2	7.7	50	15	14	11	101	.....	.....	23.2	145	19.5
18	Aug. 12	14:22	.....	.....	69	.....	3	7.7	15	20	.....	.....	.....	.....	.....	.....	161	23.4
19	Sept. 10	4:9	.....	.....	58	.....	1	7.8	25	3	.....	.....	.....	.....	.....	.....	128	17.7
STATION NO. 84-BULSTRODE RIVER																		
20	July 27/56*	188:249	.....	.....	63	13	2	7.8 (7.2)	20	5	4.9	1.6	85.2	.....	.....	15.6	130	21.6
* Chlorinated water, sampled at tap in Princeville.																		
STATION NO. 85-SOUTH-WEST NICOLET RIVER																		
21	Aug. 2/56	193:254	109	56	69	14	3	7.3 (7.5)	25 (30)	0.9	.....	.....	78.0	0.106	22.9	26.0	91.1	11.7
STATION NO. 86-SOUTH-WEST NICOLET RIVER																		
22	Oct. 12/56	28:115	.....	.....	48	20	4	7.1	70	2	.....	.....	85.2	.....	.....	30.4	94.2	10.2
23	Dec. 15	25:59	.....	.....	32	15	3	7.2	40	6	6.6	1.0	81.2	.....	.....	28.4	92.8	11.1
24	Feb. 16/57	18:102	.....	.....	32	14	6	7.1	35	10	20	10	88.8	.....	.....	20.8	132	14.2
25	Apr. 16	7:80	.....	.....	44	6.4	3	7.2	25	15	6.5	0.8	60.0	.....	.....	26.0	78.0	8.2
26	June 19	13:69	.....	.....	79	8.1	9	7.0	25	7	1.7	0.0	103	.....	.....	46.8	134	14.1
27	Aug. 16	10:28	.....	.....	69	18	9	7.1	50	5	5.4	0.7	128	.....	.....	43.2	168	17.5
28	Oct. 15	18:13	.....	.....	55	12	4	7.3	60	3	.....	.....	94.8	.....	.....	45.6	132	14.9
STATION NO. 87-SOUTH-WEST NICOLET RIVER																		
29	July 31/56	189:253	.....	.....	66	13	3	7.6 (7.6)	30 (40)	2	.....	.....	100	.....	.....	16.4	154	21.1
STATION NO. 88-ST. MAURICE RIVER																		
30	Aug. 15/55	3:63	13,500	5,600	72	16	2	6.5	40	0.0	.....	.....	29.2	0.040	1,067	17.6	22.7	2.0
31	Sept. 14	7:21	5,290	8,120	55	.....	3	6.5	60	2	.....	.....	.....	.....	.....	.....	24.2	3.0
32	Oct. 15	5:38	8,540	10,700	52	.....	2	6.6	40	0.8	.....	.....	.....	.....	.....	.....	24.9	2.2

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at ST. LEONARD D'ASTON, NICOLET CO.																								
2.2	.....	0.04	0.00	0.09	Trace	0.05	2.9	1.5	0.1	0.0	69.5 (72.7)	12.6	3.6	0.0	2.4	5.9	.....	11.4	68.4	89	8.1	-0.4	8.7	1
2.5	.....	0.80	0.00	0.30	Trace	0.00	3.6	1.0	0.0	0.0	80.9	17.0	2.8	0.0	0.8	2.4	.....	10.7	77.1	96.9	9.0	-0.1	8.2	2
3.4	.....	0.18	0.00	0.12	0.02	0.00	4.8	1.2	0.2	0.0	76.6	27.5	4.1	0.0	2.4	7.8	0.05	23.4	86.3	118	10	-0.4	8.6	3
1.5	.....	0.01	0.00	0.00	0.00	0.00	1.6	1.5	0.05	0.0	25.7	10.3	1.5	0.0	3.2	3.1	0.00	9.8	30.9	45.3	9.6	-2.1	11	4
1.3	.....	0.14	Trace	0.00	0.00	0.00	2.7	0.8	0.1	0.0	53.5	14.3	2.4	0.0	0.6	2.6	.....	12.1	56.0	71.6	9.3	-0.7	9.1	5
3.1	.....	0.00	0.01	0.00	0.00	0.00	4.8	1.4	0.05	0.0	80.3	13.9	3.9	0.0	0.6	2.3	.....	8.7	74.6	94.5	12	-0.2	8.4	6
2.7	.....	0.14	0.00	0.00	0.00	0.00	2.9	1.0	0.0	0.0	55.5	16.1	3.4	0.0	0.6	2.8	.....	13.3	58.8	76.1	9.4	-0.5	9.0	7
at NICOLET, NICOLET CO.																								
2.9	.....	0.03	0.00	0.13	0.00	0.00	3.3	1.4	0.2	0.0	63.4 (70.2)	39.9	4.5	.....	0.8	2.6	.....	37.5	89.5	118	7.2	-0.6	8.8	8
1.7	.....	0.07	0.00	0.02	Trace	0.00	1.6	1.3	0.1	0.0	39.3	12.4	2.9	0.0	1.6	5.0	.....	3.2	45.4	62.7	6.8	-1.0	9.7	9
3.0	.....	.....	.....	.....	.....	.....	5.4	1.3	0.05	0.0	88.0	16.9	5.1	.....	0.8	3.2	.....	12.7	84.9	108	12	-0.3	8.4	10
2.5	.....	.....	.....	.....	.....	.....	2.4	1.3	0.1	0.0	47.2	16.1	2.9	.....	4.0	5.4	0.05	16.5	55.2	75.9	8.4	-1.2	9.8	11
2.9	.....	0.05	0.00	0.05	0.00	0.00	3.7	1.3	0.0	0.0	64.4	16.6	3.7	0.0	3.6	6.3	.....	15.7	68.5	92.7	10	-0.5	8.8	12
2.3	.....	.....	.....	.....	.....	.....	2.7	1.0	0.5	0.0	48.9	14.4	3.5	.....	1.6	5.3	.....	13.8	53.9	72.7	9.6	-0.9	9.5	13
2.2	.....	0.17	0.00	0.08	0.00	0.00	2.1	1.1	.....	0.0	45.8	12.7	2.1	0.0	1.1	4.4	0.00	11.4	49.0	64.6	8.2	-0.9	9.5	14
2.1	.....	.....	.....	.....	.....	.....	2.3	0.9	0.05	0.0	52.1	12.7	1.8	.....	0.4	1.9	.....	10.1	52.8	65.5	8.5	-0.9	9.4	15
3.4	.....	.....	.....	.....	.....	.....	2.6	1.0	0.0	0.0	50.2	12.3	1.9	.....	0.2	2.1	.....	9.0	50.2	62.8	9.9	-1.0	9.6	16
3.7	.....	0.11	0.00	0.00	0.00	0.00	4.3	1.1	0.1	0.0	68.5	13.4	2.5	0.0	0.5	2.8	.....	7.7	63.9	81.8	13	-0.6	8.6	17
5.9	.....	.....	.....	.....	.....	.....	4.6	1.3	0.05	0.0	81.4	12.9	3.9	.....	0.3	1.3	.....	15.8	82.6	93.8	11	-0.5	8.7	18
2.6	.....	.....	.....	.....	.....	.....	3.0	1.3	0.0	0.0	50.1	16.8	2.8	.....	0.15	2.0	.....	13.8	54.9	71.1	10	-0.8	9.4	19
at PRINCEVILLE, ARTHABASKA CO.																								
1.7	.....	0.02	0.00	0.10	Trace	0.3	1.3	0.7	0.1	0.0	61.0	9.1	3.1	0.0	0.6	5.0	.....	10.9	60.9	73.5	4.3	-0.6	9.0	20
at ASBESTOS, RICHMOND CO.																								
2.8	.....	0.01	0.00	0.05	0.00	0.05	1.7	0.6	0.2	0.0	42.5	7.1	1.2	0.0	1.6	5.0	.....	5.8	40.7	52.9	8.0	-1.5	10	21
at DANVILLE, RICHMOND CO.																								
3.8	.....	0.08	0.00	0.00	0.00	0.00	1.9	1.4	0.2	0.0	36.4	10.5	3.6	0.0	1.6	4.8	0.05	11.2	41.1	55.9	8.7	-1.8	11	22
3.0	.....	0.04	Trace	0.02	0.00	0.00	1.5	1.0	0.1	0.0	32.8	11.0	2.7	0.0	2.4	5.2	.....	13.1	40.0	54.2	7.2	-1.8	11	23
4.8	.....	0.03	0.00	0.22	0.00	0.00	2.7	1.5	0.05	0.0	48.5	14.7	5.3	0.0	1.2	6.0	.....	15.4	55.2	74.6	9.1	-1.5	10	24
2.8	.....	0.05	0.00	0.14	0.00	0.00	1.5	0.8	0.05	0.0	28.4	9.6	2.6	0.0	0.4	3.7	0.00	8.7	32.0	43.8	8.7	-1.8	11	25
6.2	.....	Trace	0.00	0.00	0.00	0.00	2.4	1.2	0.5	0.0	55.3	12.9	6.5	0.0	1.0	2.7	.....	15.3	60.7	74.8	7.6	-1.6	10	26
7.0	.....	0.01	0.00	0.00	Trace	0.00	3.5	2.0	0.1	0.0	68.1	12.2	9.5	0.0	0.6	4.1	.....	16.6	72.5	90.1	9.2	-1.3	9.7	27
4.9	.....	0.05	0.00	0.00	0.00	.....	2.1	1.3	0.0	0.0	48.3	15.0	5.4	0.0	0.1	4.4	.....	17.7	57.3	72.0	7.2	-1.3	9.9	28
at N.D. DU BON CONSEIL, DRUMMOND CO.																								
4.2	.....	0.04	0.00	0.11	Trace	0.05	3.2	1.0	0.1	0.0	77.4	9.6	3.4	0.0	0.8	3.9	.....	6.4	69.9	85.6	8.8	-0.7	9.0	29
at SANMAUR, CHAMPLAIN CO.																								
0.6	.....	0.05	0.00	0.00	0.00	.....	0.8	0.5	0.1	0.0	4.9	4.0	0.6	0.0	1.2	1.9	.....	3.5	7.5	14.1	18	-3.8	14	30
0.2	.....	.....	.....	.....	.....	.....	0.8	0.4	0.1	0.0	4.9	4.4	0.9	.....	0.4	5.2	0.00	4.3	8.3	17.7	17	-3.8	14	31
0.3	.....	.....	.....	.....	.....	.....	0.7	0.6	0.1	0.0	4.6	2.3	0.4	.....	1.2	3.4	.....	2.9	6.7	13.4	17	-3.8	14	32

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 88-ST. MAURICE RIVER

1	Nov. 14/55	3:141	9,670 <sup>e</sup>	11,800	38	15	2	6.6	45	0.7	.....	.....	36.4	0.050	948	15.2	22.7	2.4
2	Dec. 15	12:57	12,900 <sup>e</sup>	3,310	32	.....	2	6.7	30	0.8	.....	.....	.....	.....	.....	.....	20.9	2.4
3	Jan. 14/56	9:96	13,000 <sup>e</sup>	2,760	32	4.8	3	6.5	25	0.2	.....	.....	28.8	0.039	1,014	13.2	22.6	2.4
4	Feb. 14	20:71	16,200 <sup>e</sup>	3,090	32	.....	2	6.6	25	0.2	.....	.....	.....	.....	.....	.....	22.8	2.4
5	Mar. 14	9:59	14,500 <sup>e</sup>	2,760	33	.....	1	6.8	30	0.2	.....	.....	.....	.....	.....	.....	24.3	2.2
6	Apr. 14	32:46	8,480 <sup>e</sup>	9,970	35	8.7	5	6.2	30	2.2	.....	.....	36.4	0.050	831	18.4	26.5	2.9
7	May 14	15:21	12,100	28,100	45	.....	3	6.2	60	0.8	.....	.....	.....	.....	.....	.....	19.3	2.1
8	June 14	6:13	7,940	19,300	69	.....	4	6.2	70	0.8	.....	.....	.....	.....	.....	.....	20.6	1.9
9	July 16	8:16	12,600	15,700	59	16	3	6.4	55	0.7	.....	.....	35.6	0.048	1,210	17.2	19.5	2.8

<sup>e</sup> estimated

STATION NO. 89-ST. MAURICE RIVER

10	June 13/55	17:136	15,700	16,100	63	.....	4	6.4 (6.5)	45	0.3	3	.....	31.6	0.043	1,335	15.6	21.8	2.2
11	July 18	7:22	27,900	17,500	71	15	2	6.7	50	2	.....	.....	33.6	0.046	2,539	16.4	22.2	2.2
12	Aug. 16	3:28	17,500	15,500	73	.....	2	6.8	50	0.2	.....	.....	.....	.....	.....	.....	23.8	2.1
13	Sept. 16	5:42	18,300	16,500	59	.....	2	6.7	40	0.3	.....	.....	.....	.....	.....	.....	22.7	2.8
14	Oct. 18	7:43	190	173	52	13	2	6.7	45	0.7	.....	.....	34.4	0.047	17.7	16.4	21.2	2.1
15	Nov. 18	4:27	188	189	36	.....	2	6.6	55	2	.....	.....	.....	.....	.....	.....	21.1	1.9
16	Dec. 21	13:51	253	184	33	.....	2	6.7	40	0.3	.....	.....	.....	.....	.....	.....	22.3	2.6
17	Feb. 3/56	13:103	198	185	33	13	3	6.6	40	0.2	.....	.....	37.6	0.051	20.0	20.0	20.8	2.4
18	Mar. 9	14:64	195	188	34	.....	1	7.0	35	0.3	.....	.....	.....	.....	.....	.....	23.2	2.6
19	Apr. 19	28:46	243	178	34	.....	3	6.5	40	0.9	.....	.....	.....	.....	.....	.....	25.0	2.6
20	May 28	4:30	216	240	48	.....	3	6.4	60	2	.....	.....	30.0	0.041	17.5	11.6	20.3	1.8
21	June 21	5:13	200	213	60	.....	2	6.7	70	5	.....	.....	.....	.....	.....	.....	19.2	3.2

STATION NO. 90-ST. MAURICE RIVER

22	June 13/55	15:44	.....	.....	61	.....	2	7.1 (7.0)	50 (55)	2	.....	.....	.....	.....	.....	.....	41.9	5.3
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STATION NO. 91-ST. MAURICE RIVER

23	June 11/55	17:46	183	226	64	.....	2	6.9	50	2	.....	.....	.....	.....	.....	.....	35.3	4.6
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STATION NO. 92-ST. MAURICE RIVER

24	Aug. 3/45*	49	.....	.....	.....	.....	6	6.9	.....	.....	.....	.....	34.9	.....	.....	.....	.....	.....
25	Apr. 11/46*	.....	.....	.....	.....	.....	5	6.7	30	8	8	.....	28.0	.....	.....	.....	.....	2.0
26	May 6/54*	.....	.....	.....	.....	.....	2	6.9	.....	3	.....	.....	48.0	.....	.....	.....	.....	4.8
27	Jan. 30/56*	.....	.....	.....	.....	.....	2	7.0 (6.9)	120	2	.....	.....	66.0	.....	.....	.....	.....	4.8
28	July 17*	.....	.....	.....	.....	.....	4	6.8 (6.6)	65	2	.....	.....	40.0	.....	.....	.....	.....	4.8

\* Analysis by Alchem Ltd., Burlington, Ont.  
 \*\* Analysis by Inflico Inc., Chicago, Ill.

STATION NO. 93-ST. MAURICE RIVER

29	Jan. 29/54*	.....	.....	.....	.....	.....	4	6.1	.....	3	.....	.....	38.0	.....	.....	.....	.....	4.8
30	Apr. 3*	.....	.....	.....	.....	.....	6	6.3	.....	3	.....	.....	55.0	.....	.....	.....	.....	4.8
31	Feb. 19/55	8:53	.....	.....	32	.....	3	6.8	45	3	.....	.....	.....	.....	.....	.....	53.2	4.5
32	Feb. 22*	.....	.....	.....	.....	.....	5	6.4	.....	2	.....	.....	38.0	.....	.....	.....	.....	4.0
33	June 9	13:74	.....	.....	67	20	4	6.6 (6.8)	50 (80)	3	14	12	49.6	.....	.....	35.2	36.6	4.3

\* Analysis by Alchem Ltd., Burlington, Ont.

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at SANMAUR, CHAMPLAIN CO. (Concluded)																								
0.3	.....	0.05	0.00	0.00	Trace	0.00	1.0	0.5	0.1	0.0	4.9	4.6	0.6	0.0	0.8	5.0	.....	3.2	7.2	17.7	22	-3.8	14	1
0.2	.....	.....	.....	.....	.....	.....	0.7	0.5	0.0	0.0	5.1	2.4	0.3	.....	0.8	4.2	.....	2.6	6.8	14.0	17	-3.6	14	2
0.3	.....	Trace	0.00	0.04	0.00	0.00	0.8	0.5	0.0	0.0	5.5	3.5	0.6	0.0	0.6	5.1	.....	2.7	7.2	16.5	18	-3.8	14	3
0.4	.....	.....	.....	.....	.....	.....	0.9	0.5	.....	0.0	4.9	4.3	0.8	.....	1.2	4.9	0.05	3.6	7.6	17.8	19	-3.7	14	4
0.6	.....	.....	.....	.....	.....	.....	0.9	0.7	.....	0.0	5.2	4.0	0.7	.....	2.0	5.5	.....	3.7	8.0	19.2	18	-3.6	14	5
0.5	.....	0.09	0.00	Trace	Trace	0.00	0.8	0.5	0.0	0.0	5.4	4.2	0.7	0.0	2.4	6.0	.....	4.9	9.3	20.7	15	-4.1	14	6
0.3	.....	.....	.....	.....	.....	.....	0.6	0.4	.....	0.0	2.8	3.5	0.5	.....	1.2	4.9	.....	4.2	6.5	14.9	16	-4.5	15	7
0.4	.....	.....	.....	.....	.....	.....	0.7	0.4	0.3	0.0	3.5	3.5	0.6	.....	2.0	4.6	.....	3.5	6.4	16.1	16	-4.4	15	8
0.0	.....	0.12	0.00	0.13	.....	.....	0.7	0.4	0.3	0.0	4.9	3.8	0.6	0.0	0.8	4.1	.....	3.0	7.0	15.9	15	-3.9	14	9
at LA TUQUE, CHAMPLAIN CO.																								
0.5	.....	0.06	0.00	0.03	0.04	.....	0.9	0.6	0.2	0.0	6.1 (9.8)	2.5	0.6	0.0	0.8	5.2	.....	2.6	7.6	16.4	18	-3.8	14	10
0.3	.....	0.22	0.01	0.08	0.04	.....	0.6	0.5	0.0	0.0	5.9	3.0	0.5	0.0	0.4	3.9	.....	1.9	6.7	14.6	14	-3.5	14	11
0.5	.....	.....	.....	.....	.....	.....	0.9	0.5	0.3	0.0	6.1	1.5	0.9	.....	1.2	3.6	.....	2.3	7.3	14.2	20	-3.4	14	12
0.1	.....	.....	.....	.....	.....	.....	0.7	0.4	0.1	0.0	6.7	1.6	0.5	.....	0.4	3.4	.....	1.9	7.4	13.2	16	-3.5	14	13
0.4	.....	0.18	0.00	0.05	0.05	Trace	0.9	0.4	0.1	0.0	6.1	2.3	0.5	0.0	1.2	4.4	0.00	1.9	6.9	15.4	21	-3.6	14	14
0.6	.....	.....	.....	.....	.....	.....	0.8	0.4	0.2	0.0	5.2	3.3	0.6	.....	0.8	4.6	.....	2.5	6.8	15.6	19	-3.8	14	15
0.4	.....	.....	.....	.....	.....	.....	0.8	0.4	0.0	0.0	5.5	3.1	0.5	.....	2.0	4.2	.....	3.5	8.1	16.8	17	-3.6	14	16
0.3	.....	0.08	0.00	0.17	Trace	0.05	0.8	0.4	0.1	0.0	5.9	3.1	0.6	0.0	0.6	4.2	0.05	2.4	7.2	15.6	17	-3.8	14	17
0.4	.....	.....	.....	.....	.....	.....	0.9	0.5	0.1	0.0	6.1	3.1	1.0	.....	2.0	4.4	.....	3.1	8.1	17.9	18	-3.2	13	18
0.4	.....	.....	.....	.....	.....	.....	0.8	0.5	0.0	0.0	5.7	3.3	0.5	.....	2.4	4.5	.....	3.4	8.1	17.8	17	-3.8	14	19
0.5	.....	0.14	0.01	0.21	0.00	0.05	0.8	0.5	0.3	0.0	4.3	3.4	0.6	0.0	1.6	4.9	.....	3.0	6.5	16.5	17	-4.1	15	20
0.4	.....	.....	.....	.....	0.00	0.05	0.7	0.5	0.3	0.0	7.3	3.7	0.2	.....	1.2	5.1	.....	3.6	9.6	18.6	13	-3.4	14	21
at MATTAWIN, CHAMPLAIN CO.																								
0.7	.....	.....	.....	.....	.....	.....	1.1	0.5	0.1	0.0	15.5 (19.5)	3.9	0.9	.....	0.8	5.4	.....	3.4	16.1	25.6	13	-2.3	12	22
at GRAND'MERE, CHAMPLAIN CO.																								
0.4	.....	.....	.....	.....	.....	.....	1.2	0.5	0.1	0.0	11.7	4.8	0.8	.....	0.8	5.1	.....	3.5	13.1	24.0	16	-2.8	13	23
at SHAWINIGAN, ST. MAURICE CO.																								
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	14.6	3.5	1.0	.....	.....	6.0	.....	1.7	13.7	.....	.....	.....	.....	24
2.0	.....	0.40	0.00	.....	.....	.....	.....	1.0	.....	0.0	14.6	2.0	3.0	0.0	.....	9.0	.....	3.0	15.0	.....	.....	.....	.....	25
1.0	0.00	.....	.....	0.00	.....	.....	.....	.....	0.2	0.0	14.6	6.8	1.2	.....	.....	4.9	.....	4.0	16.0	.....	.....	.....	.....	26
1.0	0.50	.....	.....	0.15	0.8	.....	.....	.....	0.1	0.0	21.9	0.0	3.6	.....	.....	4.0	.....	0.0	16.0	.....	.....	.....	.....	27
0.5	0.50	.....	.....	0.00	0.2	.....	.....	.....	0.2	0.0	19.5	2.7	3.6	.....	.....	4.9	.....	0.0	14.0	.....	.....	.....	.....	28
at THREE RIVERS, ST. MAURICE CO.																								
0.5	0.50	.....	.....	0.00	.....	.....	.....	.....	0.0	0.0	14.6	6.8	3.7	.....	.....	4.4	.....	2.0	14.0	.....	.....	.....	.....	29
1.0	0.60	.....	.....	0.00	.....	.....	.....	.....	0.3	0.0	12.2	4.1	6.1	.....	.....	6.6	.....	6.0	16.0	.....	.....	.....	.....	30
0.7	.....	.....	.....	.....	.....	.....	1.5	0.4	0.1	0.0	9.4	5.9	1.5	.....	0.8	4.5	.....	6.3	14.1	24.5	18	-3.0	13	31
1.4	0.20	.....	.....	0.00	.....	.....	.....	.....	0.1	0.0	12.2	0.0	10.9	.....	.....	4.0	.....	6.0	16.0	.....	.....	.....	.....	32
0.5	.....	0.33	0.00	0.00	0.00	0.01	0.9	0.6	0.2	0.0	10.0 (12.2)	5.9	1.2	0.0	1.0	4.9	.....	4.6	12.8	24.7	12	-3.2	13	33

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 93-ST. MAURICE RIVER																		
1	July 18/55	7:22			71	20	2	7.0	50	2			49.6			21.2	42.9	5.3
2	Aug. 18	5:19			74		3	6.9	50	2							42.7	6.1
3	Sept. 19	4:43			63		4	6.7	50	0.8							47.7	5.6
4	Oct. 18	7:43			52	14	2	7.0	45	5	9.5	6.5	48.4		20.4	43.1	5.3	
5	Nov. 18	4:54			38		2	6.9	45	5						39.2	4.4	
6	Jan. 18/56	8:15			33	8.2	3	6.9	40	0.8						42.0	5.0	
7	Jan. 26*						0.9	7.3	35	2			70.0				5.6	
8	Feb. 18	17:67			33		3	6.8	35	0.8						44.7	5.5	
9	Mar. 17	31:60			33		4	6.6	35	2						40.1	4.7	
10	Apr. 18	29:42			35	11	4	6.7	40	10	13.2	9.0	52.0		24.4	46.0	5.7	
11	May 18	12:18			48		4	6.4	50	6						34.9	4.4	
12	June 18	4:16			63	17	4	6.6	60	2						39.6	4.6	
* Analysis by Alchem Ltd., Burlington, Ont.																		
STATION NO. 94-VERMILION RIVER																		
13	Aug. 16/55	3:62			75	18	2	6.8	50	0			36.8			18.4	25.9	2.6
14	Oct. 15	10:38	753	804	55		2	6.8	55	0.9							29.4	2.6
15	Dec. 17	10:65	570	531	35		2	6.8	60	0.9							28.1	3.0
16	Mar. 21/56	33:58	321	359	35		2	6.8	40	2			42.4	0.058	36.6	21.2	30.5	3.2
17	May 16	13:20	2,770	3,250	46		4	6.2	60	0.3							22.6	2.5
18	July 17	7:15	860	1,010	69	14	3	6.6	60	0.8			39.2	0.053	91.2	24.4	26.1	2.6
STATION NO. 95-CROCHE RIVER																		
19	June 13/55	16:44	2,260	2,020	62		2	7.0 (6.8)	45	3							29.3	3.3
20	July 18	7:22	3,960	2,440	68	25	5	6.2	130	30	51	47	58.4	0.079	622	35.6	25.4	2.8
21	Sept. 16	5:46	899	1,300	52		3	6.5	90	3							27.3	3.5
22	Nov. 18	6:27	1,140 <sup>e</sup>	1,560 <sup>e</sup>	34		2	6.7	80	2							26.6	3.1
23	May 27/56	4:30	2,030	3,250	51		2	6.6	60	3			32.8	0.045	179	11.2	25.8	2.6
24	June 21	5:13	901	1,300	63		2	6.9	60	6							21.4	3.4
<sup>e</sup> estimated																		
STATION NO. 96-BOSTONNAIS RIVER																		
25	June 13/55	16:44			65		2	6.8 (6.7)	50	0.8							24.4	2.8
26	July 18	7:22			69	21	2	6.6	70	4	7.2	3.9	42.0			25.2	23.6	2.4
27	Sept. 16	5:42			55		3	6.6	60	0.9							25.4	3.4
28	Nov. 18	6:12			34		2	6.8	55	2							25.9	3.0
29	May 21/56	5:13			64		1	6.9	50	4							20.7	3.2
30	May 28	4:25			51	11	2	6.7	50	2			39.6			18.8	27.2	3.4
STATION NO. 97-WAYAGAMACK LAKE																		
31	June 13/55	17:146			50		2	6.7 (6.5)	20	0			29.6			10.0	26.1	2.9
STATION NO. 98-MATTAWIN RIVER (LAC TORO RESERVOIR)																		
32	June 7/55	8:50	1,230	953	69		4	6.4 (6.9) (100)	50	3							29.9	3.1
33	July 13	21:33	262	351	70	15	3	6.8	50	2			20.8	0.028	14.7	12.0	37.9	4.2
34	Aug. 19	11:35	210	308	80		2	7.1	50	0.0							40.1	5.3
35	Sept. 7	7:28	170	271	61		1	7.3	50	0.0							40.7	4.6
36	Oct. 6	11:173	290	238	48	7.0	2	7.0	45	0.8			43.2	0.059	33.9	16.8	37.3	4.2
37	Dec. 5	9:64	338	294	32		2	7.0	50	2							38.3	4.2
38	Feb. 7/56	27:78	206	226	32		3	6.8	40	0.8							41.8	4.6
39	Apr. 8	36:47	719	796	32	8.8	5	6.5	40	5	10.7	4.4	71.6	0.097	139	27.6	72.6	5.0
40	May 13	16:32	2,110	2,370	49	9.4	4	6.4	50	2			41.6	0.057	236	25.2	28.5	3.1
41	June 7	6:15	1,960	1,290	57		4	6.4	60	2							27.6	3.2

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at THREE RIVERS, ST. MAURICE CO. (Concluded)																								
0.5	.....	0.21	0.00	0.00	0.00	.....	1.3	0.6	0.1	0.0	14.3	5.4	1.5	0.0	0.2	4.9	....	3.6	15.3	27.0	15	-2.5	12	1
0.1	.....	.....	.....	.....	.....	.....	1.5	0.5	0.3	0.0	12.7	6.5	1.6	.....	0.6	3.6	....	5.2	15.6	27.1	17	-2.6	12	2
0.5	.....	.....	.....	.....	.....	.....	2.0	0.5	0.4	0.0	13.8	5.8	1.8	.....	1.6	4.1	....	4.6	16.0	28.8	21	-2.8	12	3
0.7	.....	0.19	0.00	0.04	Trace	Trace	1.4	0.5	0.1	0.0	12.4	5.3	1.1	0.0	1.6	4.3	....	5.9	16.1	26.5	15	-2.6	12	4
0.8	.....	.....	.....	.....	Trace	0.00	1.5	0.5	0.1	0.0	10.2	7.3	1.6	.....	0.2	4.5	....	5.9	14.3	25.8	18	-2.9	13	5
0.5	.....	.....	.....	.....	Trace	0.00	1.2	0.4	0.1	0.0	12.2	4.5	1.2	.....	0.8	4.3	....	4.5	14.5	23.9	15	-2.8	13	6
1.4	0.50	.....	.....	0.1	.....	.....	.....	.....	0.1	0.0	12.2	0.0	4.8	.....	.....	3.9	....	10.0	20.0	.....	.....	.....	.....	7
0.5	.....	.....	.....	.....	.....	.....	1.4	0.4	0.1	0.0	11.7	5.6	2.6	.....	0.4	4.6	0.05	6.3	15.9	26.8	16	-2.8	12	8
0.5	.....	.....	.....	.....	.....	.....	1.4	0.5	.....	0.0	9.1	5.3	2.9	.....	2.4	4.2	.....	6.3	13.8	26.4	17	-3.2	13	9
0.4	.....	0.17	0.00	Trace	Trace	0.02	1.5	0.5	0.1	0.0	11.6	5.6	1.8	0.0	2.8	4.7	.....	6.4	15.9	28.9	16	-3.0	13	10
0.5	.....	.....	.....	.....	.....	.....	1.2	0.5	0.4	0.0	6.1	5.3	2.4	.....	1.6	5.5	.....	8.0	13.0	24.4	16	-3.6	14	11
0.4	.....	.....	.....	.....	0.00	0.00	1.6	0.6	0.6	0.0	11.1	4.9	1.4	.....	0.8	4.8	.....	4.0	13.1	24.6	20	-3.1	13	12
at RAPIDE BLANC, CHAMPLAIN CO.																								
0.5	.....	0.17	0.00	0.00	0.00	.....	0.9	0.6	0.3	0.0	7.3	3.6	0.5	0.0	0.6	4.5	....	2.5	8.5	17.6	17	-3.2	13	13
0.7	.....	.....	.....	.....	.....	.....	1.0	0.6	0.2	0.0	7.9	3.0	0.5	.....	2.4	6.0	....	2.9	9.4	20.7	18	-3.3	13	14
0.6	.....	.....	.....	.....	.....	.....	1.0	0.5	0.1	0.0	8.5	3.0	0.7	.....	2.4	7.5	.....	3.0	10.0	23.0	17	-3.3	13	15
0.7	.....	0.09	0.00	0.00	0.00	0.00	1.1	0.7	0.1	0.0	9.1	3.3	0.7	0.0	1.6	7.8	0.05	3.4	10.9	23.7	17	-3.2	13	16
0.3	.....	.....	.....	.....	.....	.....	0.7	0.5	0.1	0.0	3.9	4.2	0.6	.....	1.6	5.3	.....	4.3	7.5	17.6	16	-4.2	15	17
0.6	.....	0.25	0.00	0.05	0.00	0.00	1.0	0.6	0.3	0.0	6.7	4.2	0.6	0.0	0.4	5.2	.....	3.5	9.0	18.8	17	-3.6	14	18
near LA TUQUE, CHAMPLAIN CO.																								
0.5	.....	.....	.....	.....	.....	.....	1.1	0.6	0.0	0.0	9.3 (9.8)	3.9	.....	.....	0.8	6.4	0.00	2.7	10.3	21.2	18	-2.9	13	19
0.6	.....	0.38	0.01	0.18	0.03	.....	0.6	0.6	0.5	0.0	5.2	4.4	0.7	.....	1.6	5.2	.....	5.2	9.5	19.7	9.8	-4.2	14	20
0.2	.....	.....	.....	.....	.....	.....	0.8	0.5	0.2	0.0	5.2	5.8	0.9	.....	0.2	5.9	.....	5.3	9.6	20.4	15	-3.7	14	21
0.5	.....	.....	.....	.....	.....	.....	1.1	0.5	0.1	0.0	7.2	4.3	0.5	.....	1.6	6.7	.....	3.9	9.9	21.8	19	-3.4	14	22
0.5	.....	0.18	0.01	0.05	0.00	0.05	0.8	0.6	0.2	0.0	4.4	4.2	0.7	0.6	2.4	5.3	0.00	4.9	8.2	20.1	15	-3.8	14	23
0.4	.....	.....	.....	.....	0.00	0.00	0.9	0.7	0.3	0.0	8.2	4.5	0.4	.....	1.2	5.5	.....	3.4	10.1	21.0	15	-3.1	13	24
near LA TUQUE, CHAMPLAIN CO.																								
0.4	.....	.....	.....	.....	.....	.....	0.9	0.5	0.0	0.0	7.6 (9.8)	3.9	0.3	.....	0.8	5.1	0.00	2.4	8.6	18.4	17	-3.2	13	25
0.6	.....	0.14	Trace	0.12	Trace	.....	0.6	0.6	0.1	0.0	5.7	4.0	0.6	.....	1.2	4.1	.....	3.8	8.5	17.1	11	-3.7	14	26
0.2	.....	.....	.....	.....	.....	.....	0.7	0.5	0.2	0.0	6.2	3.3	0.7	.....	0.8	4.9	.....	4.2	9.3	17.6	13	-3.5	14	27
0.4	.....	.....	.....	.....	.....	.....	0.9	0.5	.....	0.0	6.9	2.0	0.5	.....	1.6	6.0	.....	3.4	9.1	18.3	10	-3.3	13	28
0.3	.....	.....	.....	0.00	0.05	0.05	0.8	0.7	0.2	0.0	6.6	6.1	0.3	.....	1.2	4.9	.....	3.8	9.2	20.4	15	-3.2	13	29
0.2	.....	0.15	0.00	0.15	0.00	0.00	0.8	0.6	0.0	0.0	6.6	3.8	0.6	0.0	1.6	5.8	.....	4.9	9.3	20.3	14	-3.5	14	30
near LA TUQUE, CHAMPLAIN CO.																								
0.2	.....	0.01	0.01	0.07	0.10	.....	1.1	0.5	0.0	0.0	6.3 (8.1)	3.1	0.5	0.05	1.6	3.8	.....	2.9	8.1	17.1	21	-3.4	14	31
at ST. MICHEL DES SAINTS, BERTHIER CO.																								
0.5	.....	.....	.....	.....	.....	.....	0.9	0.7	0.2	0.0	6.7 (12.2)	5.8	0.3	.....	1.2	4.9	0.08	4.3	9.8	20.7	16	-3.7	14	32
0.8	.....	0.34	0.00	0.00	0.00	.....	0.8	0.6	0.2	0.0	11.5	6.4	0.4	0.0	0.8	5.1	.....	4.4	13.8	25.2	10	-2.8	12	33
0.4	.....	.....	.....	.....	.....	.....	1.0	0.7	0.3	0.0	14.4	3.4	1.2	.....	0.6	4.0	.....	3.1	14.9	23.7	12	-2.4	12	34
0.9	.....	.....	.....	.....	.....	.....	1.0	0.7	0.3	0.0	13.4	4.5	0.8	.....	0.4	4.4	.....	4.2	15.2	23.9	12	-2.3	12	35
0.8	.....	0.03	0.00	0.00	Trace	0.00	1.2	0.7	0.2	0.0	12.8	5.2	0.8	0.0	0.8	6.3	.....	3.3	13.8	26.3	15	-2.7	12	36
0.9	.....	.....	.....	.....	.....	.....	1.0	0.7	0.1	0.0	10.4	5.6	0.7	.....	1.2	6.7	.....	5.7	14.2	26.1	13	-2.8	13	37
1.0	.....	.....	.....	.....	.....	.....	1.3	0.8	.....	0.0	12.1	7.0	0.7	.....	1.2	8.0	0.00	5.9	15.8	30.5	14	-2.9	13	38
0.8	.....	0.18	0.00	0.00	0.00	0.00	1.2	1.0	0.6	0.0	10.7	6.6	0.9	0.0	4.0	6.7	.....	7.0	15.8	31.6	13	-3.2	13	39
0.6	.....	0.10	0.00	0.07	0.00	0.00	0.7	0.7	0.0	0.0	5.9	5.2	0.8	0.0	1.6	5.1	.....	5.4	10.2	20.9	12	-3.8	14	40
0.5	.....	.....	.....	.....	.....	.....	0.7	0.6	0.3	0.0	5.5	5.6	0.7	.....	2.0	4.2	.....	5.5	10.0	20.2	12	-3.8	14	41



TABLE II - (Continued)

## Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 99-MATTAWIN RIVER																		
1	June 13/55	16:136	6,500	2,130	61	.....	3	6.6 (6.6)	45 (55)	2	.....	.....	36.8	0.050	644	16.4	28.2	3.0
STATION NO. 100-MEKINAC RIVER																		
2	June 13/55	17:99	329	1,700	59	.....	2	6.7 (6.4)	35 (55)	7	10.8	8.2	46.4	0.063	41.1	19.6	31.4	3.5
STATION NO. 101-ERIC LAKE (ERIC BROOK)																		
3	June 11/55	17:99	.....	.....	58	.....	2	6.7 (6.5)	20	0	.....	.....	29.2	.....	.....	10.8	26.1	3.2
STATION NO. 102-LAC LA PECHE																		
4	Nov. 7/51*	22	.....	.....	.....	5.5	5	6.4	45	8	.....	.....	.....	.....	.....	.....	.....	6.4
* Analysis supplied by Permut Co. of Canada Ltd.																		
STATION NO. 103-LAC DES PILES																		
5	June 10/55	16:96	.....	.....	48	.....	2 (4)	6.7 (6.5)	5	0	.....	.....	27.6	.....	.....	11.2	28.4	3.4
STATION NO. 104-SHAWINIGAN RIVER																		
6	June 10/55	17:96	.....	.....	67	.....	2 (2)	6.8 (7.1)	20	9	.....	.....	44.4	.....	.....	16.8	38.8	3.7
STATION NO. 105-LITTLE SHAWINIGAN RIVER																		
7	Mar. 31/54*	.....	.....	.....	.....	.....	4	6.3	.....	7	.....	.....	88.0	.....	.....	.....	.....	5.6
8	Sept. 21*	.....	.....	.....	.....	.....	2	6.9	.....	5	.....	.....	46.0	.....	.....	.....	.....	5.6
* Analysis supplied by Alchem Ltd., Burlington, Ont.																		
STATION NO. 106-CARIBOU LAKE																		
9	July 27/56	188:224	.....	.....	61	20	4	7.3 (7.2)	80 (100)	2	.....	.....	97.2	.....	.....	42.4	90.0	1.8
STATION NO. 107-TROUT LAKE																		
10	July 27/56	188:224	.....	.....	60	15	2	7.1 (7.0)	30 (20)	0.9	.....	.....	55.2	.....	.....	28.8	48.1	4.8
STATION NO. 108-BECANCOUR RIVER																		
11	July 27/56	67:74	587	563	70	.....	3	7.3 (7.5)	40 (50)	9	7.9	1.0	68.0	0.092	107	20.4	94.7	11.7
12	Oct. 8	32:52	2,530	1,140	.....	17	5	7.1	50	15	5.5	3.5	72.4	0.099	496	24.0	78.4	8.7
13	Nov. 8	19:34	373	761 <sup>e</sup>	45	.....	2	7.5	40	10	.....	.....	.....	.....	.....	.....	107	12.5
14	Dec. 8	31:46	732 <sup>e</sup>	732 <sup>e</sup>	35	.....	3	7.3	30	4	.....	.....	.....	.....	.....	.....	98.2	10.8
15	Feb. 8/57	20:35	435 <sup>e</sup>	364 <sup>e</sup>	35	12	3	7.3	25	10	21	18	96.0	0.131	113	27.2	119	11.8
16	May 8	13:14	792	514	53	.....	3	7.3	10	40	.....	.....	.....	.....	.....	.....	84.7	9.4
17	June 8	11:34	778	402	53	8.5	2	7.3	35	15	9.9	9.9	65.2	0.089	137	20.0	87.9	10.1
18	July 8	10:36	643	295	63	.....	3	7.3	30	5	.....	.....	.....	.....	.....	.....	95.2	11.3

<sup>e</sup> estimated

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
near MATTAWIN, CHAMPLAIN CO.																								
0.5	.....	0.05	0.00	0.04	0.00	.....	0.7	0.6	0.1	0.0 (0)	6.6 (9.8)	3.6	0.5	0.0	1.2	5.0	....	4.0	9.4	18.4	13	-3.4	13	1
at ST. ROCHE DE MEKINAC, CHAMPLAIN CO.																								
0.5	.....	0.13	Trace	0.00	0.02	.....	1.1	0.5	0.1	0.0 (0)	7.3 (9.8)	5.5	0.6	0.0	0.6	5.0	....	5.0	11.0	21.1	17	-3.2	13	2
at STE. TITE, CHAMPLAIN CO.																								
0.4	.....	0.05	0.00	0.08	0.07	0.07	0.6	0.3	0.0	0.0	6.0	6.1	0.3	0.0	0.4	3.8	....	4.7	9.6	18.3	11	-3.4	14	3
near GRAND'MERE, CHAMPLAIN CO.																								
0.5	0.1	.....	.....	.....	.....	.....	1.8	.....	.....	0.0	8.5	13.4	1.4	.....	.....	4.0	.....	11.0	18.0	.....	.....	.....	.....	4
near GRAND'MERE, CHAMPLAIN CO.																								
0.3	.....	0.04	Trace	Trace	0.01	.....	0.7	0.3	0.0	0.0 (0)	5.5 (7.3)	5.3	0.6	0.0	0.2	1.7	....	5.2	9.7	15.3	13	-3.5	14	5
at SHAWINIGAN, ST. MAURICE CO.																								
0.7	.....	0.08	Trace	0.03	0.00	.....	1.8	0.4	0.1	0.0 (0)	8.5 (14.6)	5.3	1.8	0.0	0.8	4.3	....	5.1	12.1	23.3	23	-3.2	13	6
at SHAWINIGAN, ST. MAURICE CO.																								
1.4 0.0	..... 4.2	.....	.....	0.00 0.26	.....	.....	.....	.....	0.1 0.4	0.0 0.0	14.6 14.6	6.8 8.1	3.6 3.6	.....	.....	7.3 0.5	.....	8.0 2.0	20.0 14.0	.....	.....	.....	.....	7 8
at BLACK LAKE, MEGANTIC CO.																								
0.3	.....	0.08	0.00	0.00	0.00	0.10	0.5	0.3	0.1	0.0 (0)	48.4 (48.3)	5.6	1.2	0.0	1.4	8.8	....	7.1	46.8	54.1	2.2	-2.2	12	9
at THETFORD MINES, MEGANTIC CO.																								
2.2	.....	0.08	0.01	0.00	Trace	0.10	0.7	0.5	0.1	0.0	14.4	6.6	2.5	0.0	1.2	3.3	....	9.2	21.0	29.0	6.4	-2.5	12	10
at LYSTER, MEGANTIC CO.																								
2.8	.....	0.12	Trace	0.02	0.01	0.05	2.0	0.8	0.2	0.0	39.7	9.2	2.4	0.0	0.6	3.1	....	8.1	40.7	52.4	9.3	-1.5	10	11
3.3	.....	Trace	0.00	0.07	Trace	0.00	1.2	0.9	0.1	0.0	33.0	7.6	1.5	0.05	1.2	4.3	....	8.2	35.3	45.2	6.6	-1.9	11	12
4.0	.....	.....	.....	.....	.....	.....	2.1	0.8	0.1	0.0	50.2	10.0	1.5	.....	1.2	4.1	....	8.6	47.6	59.6	8.5	-1.2	9.9	13
3.3	.....	.....	.....	.....	.....	.....	1.9	1.0	0.1	0.0	36.8	10.2	2.2	.....	2.4	5.8	0.05	10.3	40.5	55.8	8.9	-1.6	11	14
4.1	.....	0.02	0.00	0.05	0.00	0.00	3.0	1.4	0.0	0.0	41.4	12.1	3.9	0.0	4.0	5.6	....	12.3	46.3	66.4	12	-1.5	10	15
3.5	.....	.....	.....	.....	.....	.....	1.6	1.0	0.0	0.0	35.8	9.3	1.0	.....	1.6	4.1	....	8.4	37.8	49.2	8.2	-1.7	11	16
2.5	.....	0.02	0.00	0.05	0.00	0.00	1.8	0.7	0.1	0.0	32.2	9.3	2.7	0.0	0.9	3.9	0.00	9.1	35.5	48.0	9.6	-1.6	11	17
3.4	.....	.....	.....	.....	.....	.....	2.0	0.8	0.1	0.0	42.6	9.5	1.5	.....	1.0	3.6	....	8.1	42.2	53.7	9.1	-1.5	10	18

TABLE II - (Continued)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 108-BECANCOUR RIVER																		
1	Aug. 8/57	18:33	1,460	1,320	.....	.....	4	7.3	45	25	.....	.....	.....	.....	.....	109	12.9	
2	Sept. 7	27:28	464	512	60	6.8	3	7.4	30	5	2.8	0.7	71.6	0.097	89.3	18.4	113	14.4
STATION NO. 109-BECANCOUR RIVER																		
3	July 31/56	189:252	.....	.....	68	15	2	7.8 (8.0)	50 (70)	7	8.6	4.1	86.4	.....	.....	22.0	112	15.1
4	Oct. 3	13:27	.....	.....	59	16	0.9	8.0	50	8	1.6	0.8	91.2	.....	.....	24.0	124	16.1
5	Jan. 10/57	21:33	.....	.....	.....	13	2	7.8	20	.....	.....	.....	.....	.....	.....	158	18.9	18.9
6	Feb. 28	6:69	.....	.....	35	12	5	7.2	30	6	5.9	2.3	110	.....	.....	47.2	149	17.4
7	May 26	8:57	.....	.....	65	13	2	7.6	100	10	4.1	0.0	133	.....	.....	73.6	98.4	12.5
8	July 27	3:43	.....	.....	60	7.2	2	7.8	35	2	.....	.....	104	.....	.....	22.4	153	17.9
9	Sept. 18	21:27	.....	.....	65	7.8	3	7.5	40	2	.....	.....	107	.....	.....	25.6	137	16.4
STATION NO. 110-BELAIR RIVER																		
10	Sept. 24/60	6:11	.....	.....	.....	7.2	3	7.6	30	0	.....	.....	.....	.....	.....	152	23.4	
STATION NO. 111-BATISCAN RIVER																		
11	June 11/55	17:99	2,490	2,980	68	.....	.....	6.8 (6.9)	30	0.8	.....	.....	36.4	0.050	244	14.4	26.8	3.0
STATION NO. 112-BATISCAN RIVER																		
12	July 6/55	6:9	1,080	1,360	75	14	3	6.8	30	6	6.1	1.6	39.2	0.053	114	17.2	34.9	3.4
13	Aug. 6	5:31	1,080	1,850	75	.....	4	6.6	35	5	.....	.....	.....	.....	.....	38.3	3.7	3.7
14	Sept. 6	2:17	1,010	2,780	65	.....	1	7.0	35	0.8	.....	.....	.....	.....	.....	32.0	3.4	3.4
15	Oct. 7	5:172	2,490	1,780	49	6.9	2	6.7	45	5	5.6	2.9	38.4	0.052	259	17.2	28.5	3.2
16	Nov. 7	8:87	3,400	2,730	40	.....	2	6.7	45	4	.....	.....	.....	.....	.....	31.2	3.2	3.2
17	Jan. 6/56	11:59	783	952	33	.....	2	7.0	40	0.2	.....	.....	.....	.....	.....	35.2	3.2	3.2
18	Feb. 6	15:100	595	611	33	12	2	7.0	30	2	.....	.....	44.0	0.060	70.8	14.4	39.8	4.0
19	Mar. 6	10:67	610	576	33	.....	1	7.1	30	0.8	.....	.....	.....	.....	.....	39.7	3.8	3.8
20	Apr. 6	38:49	2,630	3,260	35	.....	5	6.5	30	40	.....	.....	.....	.....	.....	50.3	4.4	4.4
21	May 7	18:35	6,820	7,210	42	6.9	3	6.4	40	4	19	11	61.6	0.084	1,132	42.8	28.0	2.9
22	June 6	2:16	6,220	4,510	51	.....	3	6.6	40	6	.....	.....	.....	.....	.....	29.9	2.9	2.9
STATION NO. 113-BATISCAN RIVER																		
23	June 14/55	16:145	.....	.....	67.5	.....	2	7.0 (7.2)	30	3	.....	.....	39.2	.....	.....	14.0	33.7	3.4
STATION NO. 114-RIVIERE A LA TORTUE																		
24	June 14/55	16:45	.....	.....	67	.....	3	7.1 (6.8)	30	20	49	44	57.6	.....	.....	18.4	66.5	5.1
STATION NO. 115-STE. ANNE RIVER																		
25	July 26/55	55:223	.....	.....	74	.....	3	6.5 (7.0)	20	0.2	.....	.....	28.4	.....	.....	10.0	21.0	2.4
STATION NO. 116-STE. ANNE RIVER																		
26	June 14/55	16:145	171	388	67	.....	2	7.0 (7.0)	35	25	18	16	41.2	0.056	19.0	12.8	35.0	3.8

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminium (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at LYSTER, MEGANTIC CO. (Concluded)																								
4.2	.....	.....	.....	.....	.....	.....	2.0	1.1	0.0	0.0	50.6	9.5	2.1	.....	0.9	3.7	.....	8.0	49.5	61.3	7.9	-1.4	10	1
3.6	.....	0.05	Trace	0.00	Trace	0.00	1.7	0.9	0.0	0.0	49.1	11.7	1.9	0.0	0.6	3.5	.....	10.4	50.7	62.5	6.6	-1.3	10	2
at BECANCOUR, NICOLET CO.																								
2.7	.....	0.07	0.00	0.14	Trace	0.00	2.7	1.0	0.1	0.0	49.0 (0)	12.1	2.4	0.0	1.2	4.6	.....	8.6	48.8	66.2	10	-0.8	9.4	3
3.4	.....	0.21	0.00	0.03	0.00	0.00	3.2	1.0	0.2	0.0	55.7	13.9	2.5	0.0	1.6	3.8	.....	8.5	54.2	73.2	11	-0.5	9.0	4
4.2	.....	0.20	0.00	0.00	Trace	0.00	5.1	1.3	0.1	0.0	61.4	16.4	4.8	0.0	2.8	8.9	0.00	14.0	64.4	92.9	14	-0.7	9.2	5
3.7	.....	0.10	0.00	0.07	0.00	0.00	5.3	1.1	0.0	0.0	56.3	16.0	4.8	0.0	3.2	7.0	0.04	12.4	58.6	86.4	16	-1.3	9.8	6
2.7	.....	0.16	0.00	0.00	0.00	0.00	2.9	0.8	0.1	0.0	41.2	10.4	2.7	0.1	0.4	2.5	.....	8.4	42.3	55.6	13	-1.2	10	7
4.5	.....	0.02	0.00	0.00	0.00	0.00	5.8	1.1	0.1	0.0	67.2	13.8	4.7	0.0	0.3	1.2	.....	8.1	63.2	83.0	17	-0.6	9.0	8
3.6	.....	0.09	Trace	0.00	0.00	0.00	4.5	1.5	0.1	0.0	53.9	15.6	4.9	0.0	0.8	2.8	.....	11.5	55.7	76.8	14	-1.0	9.5	9
at STE. MARIE, BEAUCE CO.																								
2.8	0.04	0.00	0.00	0.00	0.01	0.00	2.4	0.7	0.2	0.0	65.0	17.2	2.9	0.0	0.2	5.7	.....	16.7	70.0	87.3	6.9	-0.8	9.2	10
at LAC AUX SABLES, PORTNEUF CO.																								
0.3	.....	0.09	0.02	0.04	0.02	.....	1.1	0.6	0.1	0.0	7.3 (9.8)	5.1	0.5	0.0	1.2	4.2	.....	2.7	8.7	19.8	20	-3.2	13	11
at ST. NARCISSE, CHAMPLAIN CO.																								
0.5	.....	0.08	0.00	0.08	Trace	.....	1.5	0.9	0.2	0.0	9.8	5.3	0.9	0.0	0.6	3.8	0.00	2.5	10.5	21.9	21	-3.0	13	12
0.4	.....	.....	.....	.....	.....	.....	1.7	1.0	0.1	0.0	8.8	5.4	0.8	.....	Trace	3.6	.....	3.7	10.9	21.0	23	-3.3	13	13
0.4	.....	.....	.....	.....	.....	.....	1.2	0.6	0.2	0.0	8.4	3.8	0.8	.....	1.2	3.8	.....	3.2	10.1	19.3	19	-3.0	13	14
0.2	.....	0.05	0.00	0.00	0.00	0.00	1.3	0.7	0.0	0.0	6.5	4.7	1.2	0.0	0.8	5.6	.....	3.5	8.8	21.0	22	-3.4	14	15
0.5	.....	.....	.....	.....	.....	.....	1.3	0.7	0.1	0.0	6.7	3.5	1.1	.....	2.4	5.1	.....	4.5	10.0	21.1	21	-3.4	14	16
0.7	.....	.....	.....	.....	.....	.....	1.6	0.7	0.4	0.0	9.0	4.8	0.6	.....	1.6	6.5	.....	3.5	10.9	24.1	23	-3.0	13	17
0.5	.....	0.13	0.00	0.12	Trace	0.10	1.9	0.7	0.1	0.0	9.0	5.5	1.5	0.0	2.4	7.0	.....	4.6	12.0	28.1	23	-2.9	13	18
0.7	.....	.....	.....	.....	.....	.....	2.0	0.7	.....	0.0	9.1	6.5	1.9	.....	3.2	7.0	0.00	4.9	12.4	30.3	25	-2.8	13	19
0.7	.....	.....	.....	.....	.....	.....	2.3	2.2	0.6	0.0	9.0	7.6	2.1	.....	6.0	4.7	.....	6.5	13.9	34.4	23	-3.3	13	20
0.4	.....	0.16	0.00	0.09	0.00	0.10	1.0	0.6	0.0	0.0	4.9	4.9	0.8	0.0	2.4	4.7	.....	4.9	8.9	20.3	17	-3.9	14	21
0.4	.....	.....	.....	.....	.....	.....	0.9	0.6	0.3	0.0	7.3	4.8	0.7	.....	2.0	4.1	.....	3.0	8.9	19.9	16	-3.5	14	22
at STE. GENEVIEVE DE BATISCAN, CHAMPLAIN CO.																								
0.5	.....	0.07	0.00	0.05	0.01	.....	1.7	0.7	0.00	0.0	9.3 (12.2)	3.3	0.6	0.0	2.4	5.6	.....	2.9	10.5	23.0	24	-2.9	13	23
at ST. STANISLAS, CHAMPLAIN CO.																								
1.4	.....	0.23	0.00	0.06	0.01	.....	4.5	1.0	0.1	0.0	19.3 (24.4)	5.3	4.6	0.0	2.4	4.6	.....	2.7	18.5 (20.9)	38.7	32	-2.3	12	24
at ST. RAYMOND, PORTNEUF CO.																								
0.1	.....	0.02	0.00	0.00	Trace	0.00	0.8	0.5	0.0	0.0	5.0 (9.8)	2.4	0.5	0.0	1.6	4.6	.....	2.3	6.4	15.4	20	-3.8	14	25
at ST. CASIMIR, PORTNEUF CO.																								
0.5	.....	0.23	0.00	0.06	0.02	.....	1.5	0.7	0.0	0.0	9.8 (12.2)	3.5	0.7	0.0	3.2	4.9	.....	2.5	11.5	24.6	20	-2.7	12	26

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 117--STE. ANNE RIVER

1	Sept. 19/55	4:65	.....	.....	58	16	1.3	7.0	40	0.2	.....	.....	35.6	.....	.....	16.8	29.1	3.2
2	Nov. 15	7:10	.....	.....	37	.....	2	6.9	30	4	.....	.....	.....	.....	.....	.....	35.3	3.9
3	Jan. 17/56	6:93	.....	.....	33	4.1	2	7.0	30	7	7.1	3.2	48.0	.....	.....	17.2	47.3	4.9
4	Mar. 19	29:58	.....	.....	34	.....	2	7.2	20	3	.....	.....	.....	.....	.....	.....	53.4	5.3
5	May 14	15:31	.....	.....	44	7.8	4	6.4	60	90	137	129	49.2	.....	.....	14.8	25.1	2.7
6	July 18	6:14	.....	.....	65	.....	2	6.9	40	8	.....	.....	.....	.....	.....	.....	29.8	3.8

STATION NO. 118--GRANDE RIVIERE DU CHENE

7	July 28/56	191:256	.....	.....	65	20	3	7.3	240 (320)	30	88	75	112	.....	.....	55.2	89.8	14.5
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STATION NO. 119--PETITE RIVIERE DU CHENE

8	July /50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	216	.....	.....	.....	.....	41.1
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STATION NO. 120--PORTNEUF RIVER

9	June 15/55	19:153	.....	.....	64	.....	0.7	7.7 (7.3)	40	10	20	15	47.2	.....	.....	16.4	45.0	4.5
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STATION NO. 121--JACQUES CARTIER RIVER

10	July 25/55	51:214	2,250	1,440	71	.....	2	6.7 (7.3)	40	0.8	.....	.....	28.8	0.039	176	13.2	24.3	2.1
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STATION NO. 122--JACQUES CARTIER RIVER

11	Dec. 15/53*	.....	.....	.....	.....	.....	0.6	7.4	.....	2	.....	.....	26.0	.....	.....	.....	.....	3.2
12	Feb. 18/55*	.....	.....	.....	.....	.....	8	7.2	.....	2	.....	.....	50.0	.....	.....	.....	.....	3.2
13	Apr. 29*	.....	.....	.....	.....	.....	2	6.6	.....	2	.....	.....	74.0	.....	.....	.....	.....	3.2
14	July 26	52:59	.....	.....	72	.....	3	6.7 (6.8)	40	3	.....	.....	38.0	.....	.....	21.2	28.5	3.5
15	Oct. 10	7:169	.....	.....	51	6.6	2	6.9	40	3	4.0	0.9	36.0	.....	.....	16.8	28.6	3.3
16	Nov. 15	7:10	.....	.....	41	.....	2	6.8	35	2	.....	.....	.....	.....	.....	.....	30.1	3.8
17	Dec. 12	7:70	.....	.....	35	.....	2	7.0	30	2	.....	.....	.....	.....	.....	.....	35.3	4.2
18	Dec. 29*	.....	.....	.....	.....	.....	6	6.5	35	2	.....	.....	65.0	.....	.....	.....	.....	3.2
19	Jan. 14/56	3:96	.....	.....	34	5.7	2	7.0	35	3	.....	.....	40.8	.....	.....	14.0	40.1	4.9
20	Feb. 10	24:61	.....	.....	34	.....	2	7.0	25	2	.....	.....	.....	.....	.....	.....	38.2	4.7
21	Mar. 13	10:60	.....	.....	35	.....	2	7.0	25	3	.....	.....	.....	.....	.....	.....	39.6	4.4
22	Apr. 13	33:47	.....	.....	35	6.4	3	6.8	20	10	23	19	46.4	.....	.....	21.2	42.4	5.6
23	May 12	17:23	.....	.....	48	.....	2	6.8	30	2	.....	.....	.....	.....	.....	.....	33.3	3.9
24	June 16	4:11	.....	.....	61	.....	3	6.7	50	2	.....	.....	.....	.....	.....	.....	29.8	3.8
25	July	.....	.....	.....	62	.....	2	7.1	45	.....	.....	.....	.....	.....	.....	.....	35.9	4.4
26	Aug. 1*	.....	.....	.....	.....	.....	2	6.8	.....	.....	.....	.....	16.0	.....	.....	.....	.....	4.0
27	Sept. 22	10:17	.....	.....	50	.....	4	6.5	40	20	.....	.....	.....	.....	.....	.....	27.5	3.5

\* Analysis supplied by Alchem Ltd., Burlington, Ont.

STATION NO. 123--ST. JOSEPH LAKE

28	Oct. 27/58	8:34	.....	.....	50	.....	0	9.2	30	0	.....	.....	38.0	.....	.....	12.8	40.9	4.9
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STATION NO. 124--MEGANTIC LAKE

29	July 28/56*	189:254	.....	.....	58	13	2	7.1 (7.3)	30	0.9	.....	.....	44.8	.....	.....	14.8	45.6	5.1
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\* Chlorinated sample at tap in Lac Megantic.

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at STE. ANNE DE LA PERADE, CHAMPLAIN CO.																								
0.4	.....	0.12	0.00	0.05	0.00	.....	1.1	0.5	0.2	0.0	8.5	2.0	0.6	0.0	1.6	5.6	0.15	3.2	9.6	19.0	19	-3.0	13	1
0.7	.....	.....	.....	.....	.....	.....	6.3	0.5	0.0	0.0	10.2	2.9	0.8	.....	1.6	5.7	.....	4.2	12.6	22.4	18	-2.9	13	2
0.8	.....	0.13	Trace	0.08	0.00	0.00	2.0	0.8	0.0	0.0	12.9	6.4	1.5	0.0	1.6	7.3	.....	4.9	15.5	31.9	20	-2.6	12	3
0.8	.....	.....	.....	.....	.....	.....	2.7	0.7	0.1	0.0	16.6	4.7	2.0	.....	3.2	9.3	.....	2.9	16.5	36.9	25	-2.3	12	4
0.4	.....	0.43	0.00	0.08	0.00	0.00	0.9	1.0	0.1	0.0	6.1	4.5	0.5	0.0	1.6	4.5	0.0	3.4	8.4	19.6	15	-3.8	14	5
0.4	.....	.....	.....	.....	0.00	0.00	1.0	0.5	0.2	0.0	8.5	4.7	0.9	.....	1.2	4.5	.....	4.1	11.1	21.2	15	-3.0	13	6
near LECLERCVILLE, LOTBINIERE CO.																								
1.4	.....	0.25	0.00	0.20	0.00	0.05	3.7	0.7	.....	.....	38.4	10.0	3.2	0.0	1.6	5.4	.....	10.4	41.9	59.9	15	-1.5	10	7
at MANSEAU, NICOLET CO.																								
1.8	.....	.....	.....	.....	.....	.....	9.8	1.7	.....	0.0	112	26.7	0.6	.....	10.6	7.0	.....	17.9	110	.....	.....	.....	.....	8
at ST. BASILE, PORTNEUF CO.																								
0.6	.....	0.20	0.00	0.02	0.04	.....	3.0	0.7	0.0	0.0	22.7 (21.9)	1.1	1.3	0.0	2.4	8.9	.....	0.0	13.7	34.0	30	-1.6	11	9
at STE. CATHERINE, PORTNEUF CO.																								
0.4	.....	0.07	0.00	0.04	0.00	0.01	1.1	0.6	0.2	0.0	5.9 (9.8)	2.3	0.6	.....	2.4	5.3	.....	2.1	6.9	17.9	23	-3.6	14	10
at DONNACONA, PORTNEUF CO.																								
0.0	0.40	.....	.....	0.00	.....	.....	.....	.....	0.0	0.0	9.7	0.0	Trace	.....	.....	6.6	.....	0.0	8.0	.....	.....	.....	.....	11
2.9	0.20	.....	.....	0.25	.....	.....	.....	.....	0.0	0.0	14.6	0.0	7.3	.....	.....	12.0	.....	8.0	20.0	.....	.....	.....	.....	12
0.0	0.20	.....	.....	0.00	.....	.....	.....	.....	0.0	0.0	14.6	Trace	4.9	.....	.....	4.4	.....	0.0	8.0	.....	.....	.....	.....	13
0.4	.....	0.14	0.00	0.01	0.00	0.00	0.8	0.4	0.1	0.0	8.9	1.9	0.6	0.0	1.2	4.9	.....	3.1	10.4	18.2	14	-3.3	13	14
0.5	.....	0.10	0.00	0.00	Trace	0.00	1.3	0.5	0.1	0.0	8.5	3.7	2.3	0.1	0.8	6.2	.....	3.3	10.3	23.0	20	-3.1	13	15
0.4	.....	.....	.....	.....	.....	.....	0.8	0.4	0.0	0.0	7.8	3.9	0.6	.....	1.6	5.9	0.06	4.7	11.1	21.2	13	-3.1	13	16
0.8	.....	.....	.....	.....	.....	.....	1.2	0.4	0.0	0.0	10.8	3.5	0.7	.....	2.4	7.3	.....	4.9	13.8	25.8	15	-2.9	13	17
1.5	0.00	.....	.....	0.05	.....	.....	.....	.....	0.2	0.0	14.6	0.0	4.9	.....	.....	9.5	.....	2.0	14.0	.....	.....	.....	.....	18
0.7	.....	0.04	0.00	0.01	Trace	0.00	1.2	0.6	0.3	0.0	12.3	5.0	0.8	0.0	1.4	7.2	.....	5.0	15.1	28.0	15	-2.7	12	19
0.6	.....	.....	.....	.....	.....	.....	1.4	0.6	0.0	0.0	12.7	4.6	0.9	.....	3.2	8.6	0.00	3.8	14.2	30.9	17	-2.7	12	20
0.6	.....	.....	.....	.....	.....	.....	1.3	0.5	0.0	0.0	12.1	4.7	0.9	.....	3.2	8.0	.....	3.5	13.4	29.5	17	-2.7	12	21
0.4	.....	0.16	0.00	0.00	Trace	0.00	1.0	0.5	0.0	0.0	11.0	6.3	0.8	0.0	3.2	6.2	.....	6.6	15.6	29.5	12	-2.9	13	22
0.4	.....	.....	.....	.....	.....	.....	0.9	0.5	0.1	0.0	8.0	4.9	0.6	.....	1.2	5.4	.....	4.8	11.4	21.8	14	-3.1	13	23
0.3	.....	.....	.....	.....	.....	.....	1.1	0.6	0.2	0.0	9.4	4.2	0.5	.....	4.0	6.0	.....	3.0	10.7	25.3	17	-3.2	13	24
0.4	.....	.....	.....	.....	.....	.....	.....	.....	0.3	0.0	13.0	.....	.....	.....	.....	.....	.....	1.9	12.6	.....	.....	.....	.....	25
0.0	.....	.....	.....	.....	.....	.....	1.0	.....	.....	0.0	12.2	0.0	3.6	.....	.....	4.6	.....	0.0	10.0	.....	.....	.....	.....	26
0.4	Trace	.....	.....	.....	0.00	0.00	0.8	0.3	0.3	0.0	6.8	5.4	0.9	.....	0.8	5.1	.....	4.8	10.4	20.6	14	-3.5	14	27
at DUCHESNAY, (STE. CATHERINE) PORTNEUF CO.																								
0.6	.....	0.06	0.00	0.04	0.00	0.05	1.1	1.0	0.1	2.3	9.6	4.8	0.3	0.0	0.2	4.9	.....	5.7	17.4	25.0	13	-0.4	10	28
at LAC MEGANTIC, FRONTENAC CO.																								
1.2	.....	0.03	.....	0.11	0.00	0.40	1.0	0.5	0.1	0.0	14.6 (17.6)	4.9	2.1	0.0	0.8	3.9	.....	5.9	17.7	27.3	9.9	-2.5	12	29

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 124-MEGANTIC LAKE

1	Oct. 10/56	30:117	.....	.....	50	13	2	7.1	30	6	.....	.....	.....	.....	.....	.....	44.2	5.1
2	Oct. 10	30:117	.....	.....	52	15	2	7.2	30	2	.....	.....	74.0	.....	.....	26.0	86.4	5.0
3	Oct. 10	30:60	.....	.....	.....	14	2	7.1	40	4	0.4	0.2	46.0	.....	.....	25.6	45.3	4.9
4	Nov. 13	14:60	.....	.....	42	.....	2	7.2	40	2	.....	.....	.....	.....	.....	.....	44.7	5.3
5	Dec. 12	27:42	.....	.....	38	.....	2	7.2	30	0	.....	.....	.....	.....	.....	.....	44.8	5.2
6	Jan. 18/57	13:25	.....	.....	35	15	1	7.3	30	0	.....	.....	44.0	.....	.....	29.6	44.9	5.6
7	Feb. 12	20:29	.....	.....	34	.....	2	7.2	35	0	.....	.....	.....	.....	.....	.....	44.4	5.8
8	Mar. 11	7:15	.....	.....	33	.....	4	6.9	25	0	.....	.....	.....	.....	.....	.....	48.4	5.5
9	Apr. 11	12:85	.....	.....	37	.....	2	7.1	25	4	0.8	0.0	55.6	.....	33.2	57.4	5.0	
10	May 15	8:23	.....	.....	42	.....	2	7.1	25	6	.....	.....	.....	.....	.....	46.9	5.4	
11	June 11	8:35	.....	.....	50	.....	2	7.1	20	5	.....	.....	.....	.....	.....	46.3	4.7	
12	July 11	7:54	.....	.....	55	6.4	2	7.0	20	0.8	.....	.....	48.4	.....	20.0	47.9	5.3	
13	Aug. 12	8:22	.....	.....	68	.....	3	7.0	20	0.4	.....	.....	.....	.....	.....	47.9	5.0	
14	Sept. 11	7:8	.....	.....	62	.....	1	7.2	20	.....	.....	.....	.....	.....	.....	48.4	5.0	

STATION NO. 125-CHAUDIERE RIVER

15	July 25/56	190:241	783	1,540	69	19	3	7.1 (7.1)	60 (60)	9	17	12	67.6	0.092	143	32.0	58.0	7.1
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STATION NO. 126-CHAUDIERE RIVER

16	Sept. 27/56	33:40	4,540	2,210	49	19	3	7.1	70	0	.....	.....	70.8	0.096	867	6.4	60.3	8.1
17	Oct. 24	9:18	1,510	2,200	40	.....	2	7.4	50	6	.....	.....	.....	.....	.....	.....	67.0	8.3
18	Nov. 28	15:50	1,720	1,360	34	.....	7	6.8	70	10	.....	.....	.....	.....	.....	.....	83.6	10.0
19	Dec. 27	13:42	1,300	1,640	30	15	2	7.4	30	0	.....	.....	62.8	0.085	220	21.6	81.9	10.5
20	Jan. 28/57	16:22	2,770	1,310	30	.....	2	7.3	45	.....	.....	.....	.....	.....	.....	.....	69.8	8.0
21	Feb. 28	15:23	.....	.....	32	.....	5	6.9	25	8	.....	.....	.....	.....	.....	.....	76.4	9.0
22	Mar. 27	19:100	3,540	3,280	33	6.5	5	6.9	20	7	20	15	79.2	0.108	758	22.4	74.7	7.6
23	Apr. 22	7:22	7,880	4,950	39	.....	3	6.8	.....	70	.....	.....	.....	.....	.....	.....	38.7	4.0
24	Apr. 29	10:18	7,050	4,950	48	.....	3	7.0	45	10	.....	.....	.....	.....	.....	.....	46.3	5.5
25	May 28	10:91	1,950	3,340	62	9.5	3	7.2	35	10	6.4	0.0	49.2	0.067	259	32.0	56.9	7.2
26	June 28	10:18	1,510	1,460	.....	.....	2	7.2	70	4	.....	.....	.....	.....	.....	.....	57.2	6.9
27	July 27	3:17	557	1,260	70	.....	2	7.4	25	2	.....	.....	.....	.....	.....	.....	65.6	7.6
28	Aug. 27	10:17	557	2,220	65	6.0	5	7.0	10	4	16	7.2	72.8	0.099	109	29.6	72.2	8.7

STATION NO. 127-CHAUDIERE RIVER

29	July 24/56	129:234	.....	.....	70	16	2	7.5 (7.5)	40	2	.....	.....	62.4	.....	.....	27.2	76.8	10.4
30	Oct. 15	29:112	.....	.....	48	21	2	7.4 (7.5)	80	2	.....	.....	80.0	.....	.....	32.4	79.5	11.0
31	Nov. 15	28:58	.....	.....	34	.....	2	7.6	40	0.9	.....	.....	.....	.....	.....	.....	88.5	11.4
32	Dec. 15	24:39	.....	.....	33	.....	4	7.2	40	1	.....	.....	.....	.....	.....	.....	92.7	12.2
33	Feb. 15/57	19:39	.....	.....	.....	15	5	7.0	35	0	.....	.....	50.8	.....	4.0	.....	82.3	10.5
34	Mar. 15	31:47	.....	.....	30	.....	5	7.0	30	3	.....	.....	.....	.....	.....	.....	84.8	9.8
35	Apr. 15	12:39	.....	.....	34	.....	3	7.2	70	10	.....	.....	.....	.....	.....	.....	66.8	4.6
36	May 15	8:58	.....	.....	.....	11	2	7.3	55	10	4.3	4.3	56.8	.....	.....	36.4	58.1	7.4
37	June 15	11:27	.....	.....	66	.....	2	7.4	50	9	2.4	2.4	68.0	.....	.....	30.0	68.7	8.7
38	July 15	10:29	.....	.....	69	.....	2	7.4	100	3	.....	.....	.....	.....	.....	.....	77.8	10.2
39	Aug. 23	6:21	.....	.....	64	8.7	5	7.1	40	2	.....	.....	62.4	.....	.....	31.6	84.1	10.4
40	Sept. 15	19:24	.....	.....	66	8.6	2	7.6	40	1	.....	.....	68.0	.....	.....	35.0	96.9	12.4

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at LAC MEGANTIC, FRONTENAC CO. (concluded)																								
1.3	.....	Trace	0.00	0.00	0.00	0.00	0.9	0.6	0.05	0.0	14.1	5.3	1.4	0.0	1.2	3.8	....	6.5	18.1	26.6	9.4	-2.5	12	1
1.6	.....	Trace	0.00	0.09	Trace	0.00	1.0	0.5	0.1	0.0	17.2	5.7	1.8	0.0	0.8	25.2	....	5.0	19.1	50.2	9.6	-2.3	12	2
1.5	.....	0.03	0.00	0.45	Trace	0.50	0.9	0.5	0.05	0.0	17.4	5.0	1.4	0.0	1.2	4.0	....	4.1	18.4	28.8	8.9	-2.4	12	3
1.3	.....	.....	.....	.....	.....	.....	1.2	0.5	0.15	0.0	16.2	5.8	0.9	.....	1.6	4.3	0.05	5.3	18.6	28.9	12.0	-2.3	12	4
1.5	.....	.....	.....	.....	.....	.....	1.0	0.5	0.1	0.0	17.1	5.4	1.0	.....	1.2	4.1	.....	5.1	19.1	28.3	9.7	-2.3	12	5
1.1	.....	0.04	0.00	0.00	0.00	0.00	1.0	0.6	0.2	0.0	16.3	5.5	0.7	0.0	1.2	4.2	.....	5.1	18.5	28.0	9.8	-2.1	12	6
1.0	.....	.....	.....	.....	.....	.....	0.8	0.6	0.05	0.0	16.5	6.3	0.6	.....	0.8	3.8	.....	5.1	18.6	28.0	8.2	-2.2	12	7
1.4	.....	.....	.....	.....	.....	.....	0.9	0.6	0.5	0.0	14.5	5.6	2.3	.....	1.2	3.8	.....	7.6	19.5	28.4	8.8	-2.7	12	8
1.7	.....	0.04	0.00	0.05	Trace	0.00	0.9	0.5	0.1	0.0	16.8	5.2	1.2	0.0	0.2	3.9	0.00	5.7	19.5	27.1	8.6	-2.4	12	9
1.2	.....	.....	.....	.....	.....	.....	0.9	0.5	0.05	0.0	17.1	6.4	0.3	.....	0.6	4.0	.....	4.4	18.4	27.8	9.2	-2.3	12	10
1.7	.....	.....	.....	.....	.....	.....	0.9	0.5	0.05	0.0	14.1	7.1	2.0	.....	0.2	3.6	.....	7.1	18.7	27.7	9.1	-2.4	12	11
1.5	.....	0.04	0.00	0.00	0.00	0.00	1.0	0.4	0.05	0.0	15.1	5.2	2.2	0.0	0.4	3.3	.....	7.0	19.4	26.8	9.8	-2.5	12	12
1.7	.....	.....	.....	.....	.....	.....	0.8	0.4	0.05	0.0	16.3	5.4	1.7	.....	0.2	2.8	.....	6.1	19.5	26.1	8.1	-0.4	12	13
1.7	.....	.....	.....	.....	.....	.....	0.9	0.5	0.0	0.0	15.7	7.3	1.6	.....	0.5	2.8	.....	6.6	19.5	28.1	8.9	-2.3	12	14
at BEAUCEVILLE, BEAUCE CO.																								
1.6	.....	0.07	0.02	0.18	Trace	0.50	1.4	1.1	0.2	0.0	23.9	5.6	2.2	0.0	1.2	3.5	....	4.7	24.3	36.4	9.8	-2.1	11	15
at ST. JOSEPH, BEAUCE CO.																								
1.7	.....	0.07	0.00	0.09	Trace	0.00	1.2	0.5	0.2	0.0	26.3	6.9	1.1	0.0	0.4	4.3	.....	5.6	27.2	37.2	8.4	-1.9	11	16
2.2	.....	.....	.....	.....	.....	.....	1.5	0.6	0.05	0.0	31.7	6.7	1.1	.....	0.4	3.2	.....	3.8	29.8	39.6	9.7	-1.6	11	17
2.6	.....	.....	.....	.....	.....	.....	1.5	0.9	0.15	0.0	26.6	11.5	2.2	.....	4.0	6.2	0.11	13.8	35.6	52.0	8.1	-2.3	11	18
2.2	.....	0.01	0.00	0.00	0.00	0.00	1.8	0.6	0.1	0.0	32.2	9.5	1.8	0.0	1.2	5.4	.....	8.8	35.2	48.9	9.7	-1.6	11	19
1.6	.....	.....	.....	.....	.....	.....	1.5	1.4	0.2	0.0	21.0	8.8	2.2	.....	0.8	4.9	.....	9.3	26.5	39.5	10	-1.9	11	20
1.7	.....	.....	.....	.....	.....	.....	1.9	1.0	0.1	0.0	24.6	9.3	2.0	.....	3.6	4.4	.....	9.2	29.4	45.1	12	-2.1	11	21
2.1	.....	0.03	0.00	0.05	0.00	0.00	1.9	1.6	0.0	0.0	25.2	6.9	2.4	0.0	3.0	4.2	0.00	6.9	27.6	42.2	12	-2.3	12	22
1.3	.....	.....	.....	.....	.....	.....	0.7	0.7	0.0	0.0	13.0	5.8	0.9	.....	0.8	3.3	.....	4.6	15.3	23.9	8.6	-2.9	13	23
1.4	.....	.....	.....	.....	.....	.....	0.9	0.5	0.1	0.0	17.2	5.8	1.3	.....	0.8	3.2	.....	5.4	19.5	28.0	8.7	-2.4	12	24
1.9	.....	0.02	0.00	0.00	0.00	0.00	1.2	0.5	0.1	0.0	23.8	8.5	0.6	0.0	0.3	2.6	.....	6.3	25.8	34.6	8.9	-2.0	11	25
2.0	.....	.....	.....	.....	.....	.....	1.1	0.5	0.1	0.0	20.0	8.5	1.3	.....	0.6	3.9	.....	9.0	25.4	34.8	8.4	-2.0	11	26
2.2	.....	.....	.....	.....	.....	.....	1.4	0.6	0.05	0.0	28.9	6.7	1.1	.....	0.2	1.6	.....	4.3	28.0	36.3	9.7	-1.7	11	27
2.5	.....	0.03	Trace	0.01	Trace	0.00	1.8	0.9	0.05	0.0	32.4	7.8	1.4	0.0	1.3	2.1	.....	5.4	32.0	42.6	11	-2.0	11	28
at CHARNY, LEVIS CO.																								
1.8	.....	0.06	0.00	0.05	.....	.....	1.9	0.7	0.1	0.0	35.0	7.3	1.5	0.0	1.0	3.9	.....	4.7	33.4	45.6	11	-1.5	11	29
1.7	.....	0.11	0.00	0.36	Trace	0.00	2.2	0.7	0.1	0.0	31.7	9.3	2.7	0.0	0.8	4.8	.....	8.8	34.4	49.0	11	-1.5	10	30
2.0	.....	.....	.....	.....	.....	.....	2.4	0.7	0.1	0.0	37.9	8.1	2.3	.....	0.4	3.1	0.16	5.6	36.7	49.1	12	-1.3	10	31
2.1	.....	.....	.....	.....	.....	.....	2.2	0.8	0.1	0.0	33.9	11.0	2.4	.....	2.4	5.9	.....	11.3	39.1	55.7	11	-1.7	11	32
1.7	.....	0.07	0.00	0.03	0.00	0.00	2.2	0.7	0.05	0.0	30.5	9.1	3.2	0.0	1.2	5.5	.....	8.2	33.2	49.3	12	-1.0	11	33
2.1	.....	.....	.....	.....	.....	.....	2.5	0.8	0.05	0.0	29.5	10.6	2.8	.....	2.4	5.6	.....	8.9	33.1	51.2	14	-2.0	11	34
5.1	.....	.....	.....	.....	.....	.....	1.6	0.6	0.1	0.0	30.2	7.6	1.8	.....	1.2	4.4	.....	7.6	32.4	41.9	9.5	-2.1	11	35
1.5	.....	0.60	0.00	0.00	0.00	0.00	1.4	0.5	0.1	0.0	22.6	7.8	1.6	.....	0.6	3.0	0.00	6.1	24.6	35.1	11	-1.9	11	36
1.8	.....	.....	.....	.....	.....	.....	1.8	0.6	0.1	0.0	28.8	8.2	1.5	.....	0.4	2.3	.....	5.5	29.1	39.6	12	-1.7	11	37
2.1	.....	.....	.....	.....	.....	.....	2.1	0.6	0.0	0.0	33.3	8.0	2.0	.....	0.4	2.8	.....	6.8	34.1	43.2	12	-1.5	10	38
3.1	.....	0.04	0.00	0.00	0.00	0.00	2.0	0.7	0.0	0.0	37.8	8.7	1.7	0.0	0.1	2.4	.....	7.7	47.8	47.8	9.9	+1.7	11	39
2.8	.....	0.09	0.00	0.00	Trace	.....	2.5	0.8	0.0	0.0	40.5	10.7	2.6	0.0	0.1	1.9	.....	9.3	42.5	53.9	11	-1.2	10	40



TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 128--FORTIN LAKE																		
1	July 25/56	190:251*	.....	.....	63	13	2	7.2 (7.1)	20	2	.....	.....	44.8	.....	.....	20.8	49.9	5.7
2	Mar. 24/59	13:23**	.....	.....	42	6.8	2	7.2	25	0.6	.....	.....	48.4	.....	.....	20.0	59.2	7.3
* At tap in Beauceville } No treatment																		
** At tap in Beauceville-E. }																		
STATION NO. 129--LIERE RIVER																		
3	July 26/56	189:250	.....	.....	59	20	2	7.0	60	9	10.4	5.3	58.4	.....	.....	33.2	44.1	5.3
STATION NO. 130--MORENCY RIVER																		
4	July 25/56	131:241	.....	.....	66	13	2	7.7 (7.9)	30	2	.....	.....	103	.....	.....	20.0	121	21.0
STATION NO. 131--CARTER RIVER																		
5	July 25/56	131:241	.....	.....	65	13	3	7.5 (7.5)	20	6	5.8	3.8	94.0	.....	.....	16.8	115	18.2
STATION NO. 132--BEAURIVAGE RIVER																		
6	July 24/56	129:223	158	241	70	21	3	7.5 (7.3)	120 (100)	6	6.9	3.0	130	0.177	55.5	47.6	131	17.4
STATION NO. 133--ETCHEMIN RIVER																		
7	July 5/55	8:56	103	275	75	.....	2	7.7 (8.1)	15	2	.....	.....	.....	.....	.....	.....	110	14.4
8	Aug. 5	6:83	151	1,350	80	15	2	7.5	25	3	.....	.....	62.4	0.085	25.4	16.0	88.7	11.7
9	Oct. 5	7:174	271	275	50	6.6	1	7.6	35	4	1.6	0.0	62.0	0.084	45.3	19.2	77.9	11.5
10	Dec. 9	10:73	230	205	32	.....	3	7.4	20	0	.....	.....	.....	.....	.....	.....	94.7	12.6
11	May 21/56	9:43	2,040	3,070	35	9.3	2	7.2	40	3	.....	.....	47.2	0.064	259	16.8	48.7	6.4
12	Aug. 9	34:48	185	591	70	12	2	7.5	25	3	.....	.....	.....	.....	.....	.....	87.5	12.2
STATION NO. 134--ST. CHARLES RIVER																		
13	July 25/55**	45:60	.....	.....	70	.....	2	6.9 (7.0)	20	2	.....	.....	39.2	.....	.....	15.6	40.2	5.1
14	Jan. 57**	.....	.....	.....	.....	.....	11	6.3	20	.....	.....	.....	.....	.....	.....	.....	49.4	4.5
* See also municipal supply analysis for annual average figures.																		
** Chlorinated water, sampled at taps in the city.																		
STATION NO. 135--MONTMORENCY RIVER																		
15	July 23/55*	51:276	.....	.....	68	.....	1	7.3 (7.6)	35	0	.....	.....	46.4	.....	.....	14.0	34.7	5.0
16	Aug. 29/55	4:37	.....	.....	62	12	1	7.2	30	0	.....	.....	38.8	.....	.....	11.2	29.6	3.2
17	Oct. 28	11:37	.....	.....	38	.....	2	7.1	20	0	.....	.....	.....	.....	.....	.....	28.1	3.2
18	Dec. 28	8:14	.....	.....	34	3.9	1	7.3	15	0	.....	.....	42.0	.....	.....	14.4	32.6	3.5
19	Feb. 28/56	14:74	.....	.....	32	.....	1	7.4	15	0	.....	.....	.....	.....	.....	.....	38.2	4.4
20	May 7	18:35	.....	.....	38	6.1	2	6.7	20	0	.....	.....	51.2	.....	.....	31.2	26.9	3.3
21	July 18	6:14	.....	.....	57	.....	2	6.8	30	0	.....	.....	.....	.....	.....	.....	21.8	2.8
* Chlorinated sample taken at Villeneuve.																		

TABLE II - (Continued)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at BEAUCEVILLE, BEAUCE CO.																								
1.5	.....	0.11	.....	0.08	Trace	0.05	1.2	0.6	0.1	0.0 (0)	18.4 (22.7)	5.6	1.3	0.0	0.4	1.8	.....	5.3	20.4	27.4	11	-2.2	12	1
1.8	.....	0.04	Trace	0.00	0.08	0.05	1.0	0.9	0.05	0.0	20.0	10.0	2.3	0.0	0.6	3.0	.....	9.2	25.6	25.6	7.4	-2.1	11	2
at ARMSTRONG, BEAUCE CO.																								
1.4	.....	0.08	0.00	0.16	Trace	0.05	1.0	0.3	0.05	0.0	14.4	5.1	3.9	0.0	0.8	4.2	.....	7.2	19.0	29.3	9.5	-2.5	12	3
at VALLEE JONCTION, BEAUCE CO.																								
1.5	.....	0.00	0.00	0.09	0.00	0.00	1.4	0.7	0.05	0.0 (0)	63.0 (62.8)	7.6	1.3	0.0	1.2	5.1 (4.5)	.....	6.9	58.6	71.0	4.8	-0.6	8.9	4
at STE. MARIE, BEAUCE CO.																								
1.5	.....	Trace	0.00	0.07	0.00	0.00	1.9	1.1	0.05	0.0	55.7	9.4	1.4	0.0	0.8	6.8 (5.8)	.....	5.9	51.6	68.7	7.2	-0.9	9.3	5
at ST. ETIENNE, LEVIS CO.																								
1.7	.....	0.32	0.01	0.30	0.16	0.30	6.1	1.5	0.3	0.0	53.2	11.1	8.1	.....	1.2	4.3	.....	6.8	50.4	79.0	19	-1.1	9.7	6
at ST. ROMUALD D'ETCHEMIN, LEVIS CO.																								
1.6	.....	.....	.....	.....	.....	.....	3.8	1.0	0.1	0.0 (0)	52.3 (51.2)	6.4	1.7	.....	0.0	4.1	0.06	0.0	42.5	58.9	16	-0.8	9.3	7
1.5	.....	Trace	0.00	0.02	0.00	.....	2.1	0.9	0.1	0.0	34.6	10.4	1.4	0.0	0.8	2.1	.....	7.0	35.4	48.0	11	-1.3	10	8
0.7	.....	0.01	0.00	0.06	.....	.....	2.3	0.6	.....	0.0	31.1	8.6	1.8	0.0	0.6	2.9	.....	6.1	31.6	44.4	13	-1.3	10	9
1.7	.....	.....	.....	.....	.....	.....	2.8	0.6	.....	0.0	36.4	9.4	1.5	.....	4.0	6.3	.....	8.5	38.4	56.9	13	-1.5	10	10
0.9	.....	0.04	0.00	0.00	.....	0.05	1.3	0.5	.....	0.0	15.8	7.1	1.1	0.0	2.4	2.9	0.16	6.7	19.7	30.4	12	-2.2	12	11
1.4	.....	0.02	0.00	0.03	.....	.....	2.5	0.7	0.1	0.0	38.2	7.8	1.4	0.0	0.6	3.5	.....	4.9	36.2	49.0	13	-0.4	8.3	12
at QUEBEC CITY*, QUEBEC CO.																								
0.1	.....	0.20	0.00	0.05	0.02	0.10	1.4	0.5	0.00	0.0 (0)	11.2 (12.2)	4.3	2.0	0.05	1.2	5.7	.....	3.9	13.1	26.2	17	-2.8	13	13
1.1	.....	0.35	.....	.....	.....	.....	1.7	0.9	.....	0.0	13.5	5.7	2.2	.....	1.6	8.7	.....	4.6	15.7	33.5	17	-3.4	13	14
at MONTMORENCY, QUEBEC CO.																								
0.3	.....	0.14	0.00	0.14	Trace	0.01	0.9	0.3	0.0	0.0 (0)	12.9 (17.1)	2.7	1.4	.....	1.2	16	.....	2.9 (0.0)	13.5 (14.0)	34.7	12	-2.4	12	15
0.8	.....	0.20	0.00	0.04	0.00	0.00	1.0	0.3	0.1	0.0	12.8	2.1	0.4	0.0	0.4	8.7	0.00	0.8	11.3	23.5	15	-2.6	12	16
0.6	.....	.....	.....	.....	.....	.....	1.0	0.3	0.2	0.0	11.3	0.6	0.5	.....	1.6	8.8	.....	1.2	10.5	22.2	17	-2.8	13	17
0.9	.....	0.12	0.00	0.00	0.00	0.00	1.1	0.3	0.0	0.0	13.4	3.3	0.5	0.0	1.6	10.4	.....	1.4	12.4	28.3	16	-2.4	12	18
0.6	.....	.....	.....	.....	.....	.....	1.4	0.4	0.0	0.0	15.2	2.5	0.4	.....	2.0	11.5	.....	0.9	13.4	30.7	18	-2.2	12	19
0.3	.....	0.05	0.00	0.03	0.00	0.00	0.7	0.4	0.0	0.0	7.3	4.2	0.4	0.0	3.2	6.0	.....	3.5	9.5	22.2	13	-3.4	14	20
0.3	.....	.....	.....	.....	0.00	0.00	0.8	0.2	0.2	0.0	6.7	3.8	0.8	.....	1.2	6.6	.....	2.7	8.2	19.8	16	-3.3	13	21

TABLE II - (Continued)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 136-LAVAL RIVER																		
1	July 23/55	51:216	.....	.....	64	.....	2	7.4 (7.3)	30	0	.....	.....	46.8	.....	.....	9.2	59.6	9.3
STATION NO. 137-STE. ANNE RIVER																		
2	July 22/55	49:53	976	711	63	.....	1	7.1 (7.3)	35	0	.....	.....	.....	.....	.....	.....	22.0	2.1
STATION NO. 138-RIVIERE DU SUD																		
3	July 5/55	8:143	214	363	81	.....	.....	7.8 (8.4)	20	3	.....	.....	70.4	0.096	40.7	13.6	94.9	11.4
STATION NO. 139-QUELLE RIVER																		
4	July 6/55	8:154	.....	.....	72	.....	1	7.6 (8.2)	35	3	.....	.....	58.0	.....	.....	18.4	67.9	9.6
STATION NO. 140-LA MALBAIE RIVER																		
5	July 21/55	50:210	.....	.....	68	.....	4	6.7	45	2	.....	.....	37.2	.....	.....	13.6	32.6	4.1
STATION NO. 141-LA MALBAIE RIVER																		
6	July 21/55	48:201	.....	.....	64	.....	3	6.4 (6.9)	40 (70)	3	.....	.....	27.6	.....	.....	10.4	20.5	2.6
STATION NO. 142-RIVIERE DU LOUP																		
7	July 6/55	8:21	391	164	73.5	.....	1	7.5 (7.4)	40	10	.....	.....	.....	.....	.....	.....	63.2	8.7
8	July 22	2:18	230	164	70	15	4	7.2	55	40	16	13	89.6	0.122	55.7	30.8	83.6	10.8
9	Aug. 22	3:24	138	115	74	.....	2	7.4	55	2	.....	.....	.....	.....	.....	.....	86.4	11.1
10	Sept. 22	5:47	830	285	52	.....	4	7.1	100	15	.....	.....	.....	.....	.....	.....	92.4	12.1
11	Oct. 27	12:162	126	94	40	15	2	7.5	50	6	5.0	3.4	80.8	0.110	27.5	30.4	87.5	11.3
12	Nov. 22	8:69	170	202	34	.....	4	7.2	60	6	.....	.....	.....	.....	.....	.....	91.5	12.4
13	Dec. 24	10:104	67	83	32	.....	4	7.3	35	5	.....	.....	.....	.....	.....	.....	130	15.5
14	Jan. 23/56	17:74	230	128	34	4.9	6	7.1	25	4	.....	.....	.....	.....	.....	.....	110	13.5
15	Feb. 22	16:80	51	67	32	.....	2	7.6	35	3	.....	.....	.....	.....	.....	.....	112	13.7
16	Mar. 22	35:57	75	59	34	.....	3	7.4	30	4	.....	.....	.....	.....	.....	.....	124	15.1
17	Apr. 26	26:40	1,050	1,090	48	15	4	6.8	70	6	10	8.1	72.4	0.098	205	29.6	61.1	8.9
18	May 22	8:14	1,180	1,680	51	.....	2	7.1	60	3	.....	.....	.....	.....	.....	.....	47.3	6.6
19	June 23	4:24	320	671	68	.....	3	7.2	80	10	.....	.....	.....	.....	.....	.....	69.2	9.3
STATION NO. 143-LAC DE LA RIVIERE NOIRE (LAC NOIR; RIVIERE NOIRE)																		
20	July 14/55	40:195	.....	.....	67	.....	3	7.0 (7.2)	15	0	.....	.....	30.6	.....	.....	10.6	40.2	5.0
STATION NO. 144-METABETCHOUAN RIVER																		
21	July 18/55	40:197	.....	.....	69	.....	5	6.5 (7.4)	80 (110)	0.3	.....	.....	40.4	.....	.....	20.0	42.0	4.3

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at ST. JEAN DE BOISCHATEL, MONTMORENCY NO. 1 CO.																								
0.4	.....	0.09	0.00	0.08	0.05	0.01	1.3	0.4	0.01	0.0 (0)	27.1 (31.7)	4.1	0.3	.....	1.6	9.0	.....	2.6	24.9 (25.1)	40.1	9.8	-1.7	11	1
near ST. FEREOLE, MONTMORENCY NO. 1 CO.																								
0.8	.....	.....	.....	.....	0.00	0.00	0.9	0.3	0.1	0.0 (0)	9.0 (12.2)	2.5	0.4	.....	0.8	6.0	.....	1.1	8.5	18.2	18	-3.1	13	2
at MONTMAGNY, MONTMAGNY CO.																								
1.1	.....	0.00	0.00	0.03	0.01	.....	4.7	0.9	0.1	0.0 (1.2)	38.0 (39.0)	4.8	4.6	0.05	1.6	5.1	.....	1.8	33.0	53.1	23	-1.0	9.8	3
at ST. PACOME, KAMOURASKA CO.																								
0.9	.....	0.03	0.00	Trace	Trace	.....	2.6	0.6	0.3	0.0 (0)	31.1 (34.1)	5.5	0.8	0.0	2.4	4.8	.....	2.2	27.7	42.5	16	-1.3	10	4
at LA MALBAIE, CHARLEVOIX E. CO.																								
0.5	.....	0.08	0.00	0.06	0.00	0.00	1.0	0.4	0.2	0.0	12.3	2.3	0.3	0.0	0.6	6.7	.....	2.2	12.3	22.2	15	-3.1	13	5
about 50 miles south of BAGOTVILLE, CHICOUTIMI CO.																								
0.1	.....	0.13	0.00	0.09	0.00	0.00	0.9	0.3	0.2	0.0 (0)	4.9 (12.2)	4.0	0.2	0.0	2.4	5.8	.....	2.9	6.9	18.9	20	-3.9	14	6
at RIVIERE DU LOUP, RIVIERE DU LOUP CO.																								
0.7	.....	.....	.....	.....	.....	.....	2.4	0.6	0.3	0.0 (0)	27.4 (29.3)	5.8	1.0	.....	0.4	3.7	0.06	2.1	24.6	36.8	17	-1.5	11	7
1.1	.....	0.09	0.00	0.03	0.00	.....	3.1	1.0	.....	0.0	36.6	6.8	1.6	.....	0.4	3.9	.....	1.4	31.4	45.8	17	-1.6	10	8
1.1	.....	.....	.....	.....	.....	.....	3.9	0.8	0.1	0.0	36.9	9.4	2.0	.....	0.4	4.0	.....	1.9	32.2	50.9	20	-1.4	10	9
1.1	.....	.....	.....	.....	.....	.....	3.2	1.1	0.2	0.0	27.4	14.5	1.2	.....	4.0	4.9	.....	12.2	34.7	55.6	16	-1.9	11	10
1.3	.....	0.12	0.00	0.00	Trace	0.00	4.5	0.8	0.2	0.0	35.2	10.5	2.2	0.0	1.2	5.9	.....	4.6	33.5	55.2	22	-1.4	10	11
1.1	.....	.....	.....	.....	.....	.....	4.3	0.8	0.1	0.0	34.7	11.0	2.6	.....	3.2	6.1	.....	7.0	35.5	58.6	20	-1.6	10	12
1.3	.....	.....	.....	.....	.....	.....	7.2	1.2	0.1	0.0	51.0	11.3	4.1	.....	3.2	8.2	.....	2.2	44.0	79.6	26	-1.4	10	13
1.5	.....	.....	.....	.....	0.00	0.00	5.8	1.0	0.0	0.0	44.0	11.2	2.8	.....	2.4	7.7	.....	3.8	39.9	67.6	24	-1.6	10	14
1.7	.....	.....	.....	.....	.....	.....	6.3	0.9	.....	0.0	45.1	11.7	3.0	.....	2.0	7.6	0.00	4.2	41.2	69.1	24	-1.1	9.8	15
1.5	.....	.....	.....	.....	.....	.....	7.0	1.0	0.1	0.0	50.1	11.5	3.5	.....	2.4	7.3	.....	2.7	43.8	74.0	25	-1.2	9.8	16
0.4	.....	0.04	0.00	0.04	Trace	0.00	2.3	0.7	0.0	0.0	17.6	9.6	1.9	0.0	3.2	4.4	.....	9.5	23.9	40.2	17	-2.5	12	17
0.6	.....	.....	.....	.....	.....	.....	1.6	0.4	0.2	0.0	14.1	6.8	3.8	.....	1.2	3.7	.....	7.3	18.9	31.7	15	-2.4	12	18
1.2	.....	.....	.....	.....	0.00	0.00	3.0	0.7	0.2	0.0	27.8	7.6	1.6	.....	3.6	3.4	.....	5.3	28.1	44.1	18	-1.8	11	19
at ST. SIMEON, CHARLEVOIX E. CO.																								
0.5	.....	0.02	0.00	0.15	0.00	0.00	1.5	0.5	0.1	0.0 (0)	18.4 (21.9)	1.2	0.0	0.0	3.2	6.5	.....	0.0 (0)	14.5 (14.8)	27.7	17	-2.5	12	20
at ST. EMILIE, (DESBIENS) LAC ST. JEAN E. CO.																								
0.5	.....	0.10	0.00	0.00	0.00	.....	0.7	0.5	0.3	0.0 (0)	9.5 (17.1)	3.6	0.5	0.0	2.4	2.7	.....	5.0	12.8	20.0	10	-3.3	13	21

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance $K \times 10^6$ at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 144-METABETCHOUAN RIVER

1	Aug. 23/55	3:91			68	17	2	7.0	70	0.8			41.2			22.4	37.2	4.0
2	Sept. 23	4:46			52		3	6.7	100	0.2							28.7	4.0
3	Nov. 3	7:33			43		1	7.2	90	3							61.0	5.1
4	Nov. 25	7:138			32	11	3	6.8	60	2			44.4			20.4	38.2	5.5
5	Jnn. 4/56	13:51			32		2	7.3	70	2							52.6	7.3
6	Feb. 6	15:65			32	8.8	0.9	7.6	45	0.8							52.9	8.0
7	Mar. 6	17:73				9.7	2	7.3	45	8	7.6	0.6	68.4			27.6	71.6	10.1
8	May 8	17:34			10		2	7.0	60	1			65.2			46.0	34.3	5.0
9	May 25	6:17					11	6.0	70	15							56.7	9.4
10	July 25	49:63					10	6.3	80	10							53.2	7.9
11	Aug. 29	28:41					4	6.9	90	25	12	0.8	103			60.0	59.4	10.0

STATION NO. 145-ASHUAPMUCHUAN RIVER

12	July 19/55	44:67			68		2	7.0	40	0.2							32.8	4.4
								(7.3)	(70)									
13	Aug. 23	3:91			69	16	1	7.3	45	0.2			40.8			15.2	33.4	4.1
14	Nov. 3	7:33			42		2	6.9	130	7							27.2	3.4
15	Jan. 4/56	6:43			32		1	7.3	60	0.2							51.7	4.5
16	Mar. 6	17:73				8.9	1	7.4	45	0.2			46.0			23.6	39.6	4.8
17	May 8	17:27					3	6.8	70	2							28.2	3.2
18	Aug. 29	35:55			21		2	7.0	80	3	5.9	1.2	44.4			24.8	40.0	3.6

STATION NO. 146-MISTASSIBI RIVER

19	July 19/55	44:203			70		1	7.0 (7.4)	35	0			26.0			10.0	23.4	3.0
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STATION NO. 147-MISTASSINI RIVER

20	July 19/55*	43:203			63		2	7.1 (7.2)	30 (40)	0.8			36.8			12.8	41.3	4.9
21	Aug. 26	4:110			68	14	1	7.4	35	0.2			40.4			11.2	37.3	4.6
22	Nov. 3	7:33			42		2	6.8	100	2							23.2	2.8
23	Jan. 4/56	6:43			32		2	7.2	50	0.8							36.7	4.1
24	Feb. 28	17:80			32	8.0	1	7.3	40	0			45.2			22.4	40.0	4.3
25	May 1	21:35			13		1	6.9	70	4	8.3	7.6	52.0			22.4	26.7	3.2
26	Aug. 28	36:56			22		4	6.4	75	2			49.6			34.8	22.1	2.4

\* Chlorinated water from tap at Dolbeau

STATION NO. 148-PERIBONCA RIVER

27	July 19/55	47:66	203	202	73		3	6.6 (7.0)	40 (55)	0.2							21.7	2.0
28	Aug. 26	4:110	224	215	65	14	2	7.0	35	0			37.6	0.051	22.6	11.6	35.5	4.5
29	Sept. 22	5:47	245	234	47		2	6.9	40	0							19.4	2.0
30	Nov. 3	7:33	241	192	43		2	6.8	40	2							18.3	1.9
31	Nov. 25	7:131	223	192	37	8.7	2	6.7	45	1			36.4	0.050	21.9	16.4	18.9	2.3
32	Feb. 7/56	27:64	119	109	32		0.8	7.1	35	0.2							19.1	2.3
33	Feb. 29	16:73	129	109			2	6.8	40	0.3							20.0	2.4
34	Mar. 30	41:49	175	114		12	1	6.9	40	0.2			37.6	0.051	17.7	22.0	24.1	2.5
35	May 1	21:34	155	169			1	6.9	40	0.9							21.4	2.6
36	May 25	6:17	186	169			1	7.0	40	5							25.4	2.7
37	Aug. 23	36:56	191	175		16	2	6.8	50	4	5.0	1.2	40.8	0.055	21.0	26.0	22.9	2.6

STATION NO. 149-ST. JOHN LAKE

38	July 18/55	44:67			69		2	7.3 (7.3)	50 (80)	3							53.5	9.4
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TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminium (Al)	Copper (Cu)	Zinc (Zn)	Alkalis			Carbonate (CO <sub>2</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)	Ammonia (NH <sub>3</sub> )									Non-carbonate	Total					
at ST. EMILIEN, (DESBIENS), LAC ST. JEAN E. CO. (Concluded)																								
0.4	.....	0.06	0.00	0.00	0.00	.....	0.8	0.5	0.3	0.0	9.6	3.0	0.3	.....	2.4	3.4	.....	3.7	11.6	19.6	12	-2.8	13	1
0.5	.....	.....	.....	.....	.....	.....	0.5	0.4	0.4	0.0	7.9	2.5	0.4	.....	3.2	4.5	0.00	5.5	12.0	19.9	8.0	-3.2	13	2
0.8	.....	.....	.....	.....	.....	.....	1.0	0.6	0.2	0.0	12.7	3.2	0.8	.....	4.0	4.9	.....	5.6	16.0	26.7	12	-2.4	12	3
0.6	.....	0.02	0.00	0.00	Trace	0.00	1.0	0.6	0.2	0.0	13.4	3.8	0.6	0.0	2.0	5.9	.....	5.2	16.2	26.6	11	-2.7	12	4
0.7	.....	.....	.....	.....	.....	.....	1.0	0.6	0.4	0.0	19.3	4.5	0.9	.....	3.2	6.3	.....	5.2	21.1	34.1	9.0	-2.0	11	5
0.7	.....	.....	.....	.....	Trace	0.50	1.3	0.6	0.1	0.0	21.8	5.3	1.1	.....	2.4	7.3	0.16	4.9	22.8	37.5	11	-1.6	11	6
1.0	.....	0.11	0.00	0.00	0.00	0.00	1.8	1.0	0.3	0.0	27.6	5.2	2.9	0.0	4.0	7.5	.....	6.6	29.3	47.2	11	-1.7	11	7
0.4	.....	0.12	0.00	0.07	0.00	0.00	0.8	0.5	0.2	0.0	11.7	3.0	0.6	0.0	3.2	5.1	.....	4.5	14.1	24.6	10	-2.7	12	8
0.3	.....	.....	.....	.....	.....	.....	0.7	0.6	.....	0.0	6.8	14.6	1.0	.....	4.0	3.8	.....	19.1	24.7	37.8	5.6	-3.6	13	9
0.6	.....	0.04	0.00	.....	0.00	0.00	0.9	0.7	0.1	0.0	12.2	8.4	1.0	0.0	0.8	2.6	.....	12.2	22.2	28.9	7.8	-2.2	11	10
0.7	.....	0.13	0.00	0.00	0.00	0.00	1.0	0.5	0.1	0.0	18.9	9.4	1.2	0.0	1.2	3.4	.....	12.3	27.8	36.8	7.0	-2.3	12	11
at ST. FELICIEN, LAC ST. JEAN W. CO.																								
0.5	.....	.....	.....	.....	.....	.....	0.8	0.3	0.2	0.0	13.4	1.9	0.5	.....	0.6	4.5	0.00	2.0	13.0	20.1	12	-2.6	12	12
0.9	.....	.....	.....	.....	.....	.....	0.9	0.4	0.5	0.0	15.0	1.8	0.4	0.0	1.6	4.4	.....	1.6	13.9	22.0	12	-2.3	12	13
0.9	.....	0.06	0.00	Trace	0.01	.....	0.8	0.4	0.0	0.0	9.4	3.3	0.7	.....	1.6	5.3	.....	4.5	12.2	21.0	12	-3.0	13	14
1.2	.....	.....	.....	.....	.....	.....	1.0	0.5	0.1	0.0	16.5	2.8	0.5	.....	0.6	6.7	.....	2.7	16.2	25.9	12	-2.3	12	15
1.4	.....	0.09	0.00	0.00	0.00	0.00	1.2	0.5	0.2	0.0	19.4	2.6	0.7	0.0	2.4	6.9	0.00	1.8	17.7	30.2	12	-2.1	12	16
0.8	.....	.....	.....	.....	.....	.....	0.8	0.3	0.4	0.0	10.4	2.4	0.5	.....	1.6	5.7	.....	2.8	11.3	20.4	13	-3.2	13	17
1.1	.....	0.21	0.00	0.06	0.00	0.00	2.3	0.4	0.2	0.0	14.5	3.9	1.1	0.0	0.8	6.7	.....	1.6	13.5	27.4	25	-2.2	11	18
at MISTASSINI, LAC ST. JEAN-W. CO.																								
0.1	.....	0.03	0.00	0.03	0.00	.....	0.9	0.5	0.0	0.0	8.0	2.9	0.3	0.0	2.4	5.1	.....	1.3	7.9	19.3	18	-3.0	13	19
at DOLBEAU, LAC ST. JEAN W. CO.																								
0.7	.....	0.18	0.00	0.55	Trace	.....	1.0	0.5	0.1	0.0	16.5	2.3	1.7	0.0	2.4	5.3	.....	1.6	15.1	27.7	10	-2.4	12	20
0.6	.....	.....	.....	.....	.....	.....	1.3	0.6	0.0	0.0	16.2	1.2	0.7	0.0	1.6	5.4	.....	0.6	13.9	24.1	16	-2.1	12	21
0.6	.....	0.08	0.00	Trace	Trace	.....	0.8	0.5	0.0	0.0	6.5	3.0	0.7	.....	1.6	6.1	0.26	4.2	9.5	19.3	15	-3.3	13	22
1.0	.....	.....	.....	.....	.....	.....	1.3	0.6	0.1	0.0	15.0	3.5	0.8	.....	0.8	7.7	.....	2.0	14.3	27.2	16	-2.5	12	23
1.3	.....	0.09	0.00	0.00	0.00	0.00	1.3	0.6	0.1	0.0	17.1	2.8	1.1	0.0	2.4	8.3	0.00	2.1	16.1	30.6	14	-2.3	12	24
0.5	.....	0.14	0.00	0.06	Trace	0.00	1.0	0.6	0.0	0.0	6.7	4.7	1.1	0.0	0.8	6.2	.....	4.5	10.0	21.5	16	-3.2	13	25
0.6	.....	0.13	0.00	0.07	0.00	0.00	0.9	0.4	0.2	0.0	6.0	3.6	0.9	0.0	1.2	5.3	.....	3.6	8.5	18.4	17	-3.9	14	26
at STE. MONIQUE (HONFLEUR), BELLECHASSE CO.																								
0.5	.....	.....	.....	.....	Trace	0.00	0.9	0.4	0.1	0.0	6.8	1.3	0.4	.....	1.6	3.3	.....	1.5	7.1	13.8	21	-3.7	14	27
0.3	.....	.....	.....	.....	.....	.....	1.6	0.5	0.0	0.0	12.1	1.0	1.0	0.0	3.2	5.9	.....	2.6	12.5	24.1	21	-2.7	12	28
0.4	.....	0.13	0.00	0.00	0.05	.....	0.7	0.3	0.0	0.0	6.9	1.9	0.4	.....	0.0	4.3	0.08	0.9	6.6	13.4	18	-3.4	14	29
0.5	.....	.....	.....	.....	.....	.....	0.8	0.5	0.2	0.0	5.7	1.7	0.3	.....	1.6	4.1	.....	2.1	6.8	14.2	19	-3.5	14	30
0.3	.....	0.04	0.00	0.03	Trace	0.00	0.7	0.3	0.2	0.0	5.2	3.8	0.4	0.0	0.8	4.9	.....	2.7	7.0	16.2	17	-3.6	14	31
0.4	.....	.....	.....	.....	.....	.....	0.8	0.4	0.1	0.0	6.2	3.6	0.6	.....	0.6	5.0	0.10	2.3	7.4	16.8	18	-3.2	14	32
0.3	.....	.....	.....	.....	.....	.....	0.8	0.4	0.2	0.0	7.7	2.8	0.3	.....	1.6	5.0	.....	0.9	7.2	17.4	17	-3.4	14	33
0.4	.....	0.11	0.00	0.00	Trace	0.00	0.8	0.4	0.5	0.0	6.5	2.5	0.5	0.0	1.6	5.6	.....	2.6	7.9	17.4	17	-3.3	14	34
0.3	.....	.....	.....	.....	.....	.....	0.8	0.4	.....	0.0	6.8	2.8	0.6	.....	1.6	5.7	.....	2.1	7.7	18.2	18	-3.3	14	35
0.4	.....	.....	.....	.....	.....	.....	0.8	0.6	0.4	0.0	8.0	3.3	0.7	.....	1.2	6.2	.....	1.8	8.4	19.9	16	-3.1	13	36
0.5	.....	0.12	Trace	0.08	0.00	0.00	1.3	0.5	0.2	0.0	7.7	3.2	1.3	0.0	0.4	5.3	.....	2.2	8.5	19.0	22	-3.3	13	37
at ROBERVAL, LAC ST. JEAN-W. CO.																								
0.2	.....	.....	.....	.....	.....	.....	0.9	0.3	0.2	0.0	26.3	2.0	0.7	.....	0.6	3.9	.....	2.7	24.3	31.0	7.3	-1.7	11	38

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			

STATION NO. 149-LAKE ST. JOHN

1	Aug. 23/56	3:91	.....	.....	67	17	2	7.4	55	0.2	.....	.....	51.6	.....	.....	18.0	46.5	7.2
2	Sept. 23	4:46	.....	.....	50	.....	2	7.5	70	0	.....	.....	.....	.....	.....	.....	59.3	9.5
3	Nov. 3	7:33	.....	.....	44	.....	1	7.5	.....	55	.....	.....	.....	.....	.....	.....	53.1	8.2
4	Nov. 25	7:138	.....	.....	32	9.5	4	7.1	65	1	.....	.....	62.4	.....	22.4	.....	66.5	10.7
5	Jan. 4/56	6:43	.....	.....	32	.....	2	7.5	50	0.8	.....	.....	.....	.....	.....	.....	61.6	9.4
6	Feb. 6	15:65	.....	.....	32	.....	1	7.9	35	5	.....	.....	.....	.....	.....	.....	98.0	17.0
7	Mar. 6	17:73	.....	.....	.....	5.6	2	7.6	25	0.8	.....	.....	72.0	.....	24.0	.....	92.1	15.5
8	Mar. 27	44:52	.....	.....	.....	.....	2	7.6	30	2	.....	.....	.....	.....	.....	.....	94.4	16.4
9	May 8	17:27	.....	.....	.....	.....	3	7.0	70	6	.....	.....	.....	.....	.....	.....	45.5	7.4
10	May 25	6:28	.....	.....	.....	11	2	7.2	70	2	.....	.....	45.2	.....	13.2	.....	40.9	6.9
11	July 25	44:51	.....	.....	.....	.....	2	7.4	75	5	.....	.....	.....	.....	.....	.....	52.3	8.4
12	Aug. 29	.....	.....	.....	.....	.....	2	7.4	50	3	.....	.....	.....	.....	.....	.....	56.4	8.3

STATION NO. 150-SAGUENAY RIVER

13	July 15/55	40:46	48,500	46,400	70	.....	2	6.9 (7.3)	40 (70)	0.8	.....	.....	.....	.....	.....	.....	26.7	3.6
14	Aug. 22	8:92	48,000	46,600	70	17	2	6.9	40	0.2	.....	.....	34.4	0.047	4,464	14.4	30.1	3.7
15	Sept. 26	7:43	47,900	46,100	48	.....	1	7.0	45	0.2	.....	.....	.....	.....	.....	.....	27.0	3.2
16	Nov. 2	13:57	40,800	45,100	43	.....	2	6.9	40	8	.....	.....	.....	.....	.....	.....	23.2	2.8
17	Nov. 26	6:137	40,300	45,100	33	11	2	6.8	50	4	7.3	5.6	47.6	0.065	5,199	26.0	24.3	2.7
18	Feb. 7/56	14:64	32,200	32,300	32	.....	1	7.1	70	0.8	.....	.....	.....	.....	.....	.....	27.7	3.3
19	Mar. 1	15:72	34,000	33,100	.....	.....	2	6.9	50	0.8	.....	.....	.....	.....	.....	.....	27.6	3.5
20	Apr. 2	42:53	33,600	34,500	.....	11	2	6.8	40	3	.....	.....	52.0	0.071	4,704	25.6	29.5	3.6
21	May 24	7:18	63,800	51,800	.....	.....	2	7.1	40	9	.....	.....	.....	.....	.....	.....	32.6	4.0
22	Aug. 29	28:35	69,100	60,300	.....	17	2	7.1	55	6	7.2	1.4	47.2	0.064	8,776	33.2	36.7	3.7

STATION NO. 151-SAGUENAY RIVER (HA-HA BAY)

23	June 26/50	14	.....	.....	.....	.....	27	5.9	110	35	97	.....	993	.....	.....	212	1,533	30.5
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Time of sampling†

STATION NO. 152-SAGUENAY RIVER

24	Sept. 5/55	7:30	High tide	.....	49	.....	3	7.7	20	.....	.....	.....	23,536	.....	.....	3,264	34,479	265
25	Sept. 27	20:31	Half tide	.....	46	.....	4	7.6	20	0	.....	.....	.....	.....	.....	.....	32,761	256
26	Oct. 27	12:41	Half tide	.....	39	.....	4	7.7	5	0	.....	.....	.....	.....	.....	.....	40,271	314
27	Nov. 27	12:114	High tide	.....	36	20	3	7.8	0	0.3	.....	.....	28,246	.....	2,670	.....	40,431	317
28	Dec. 27	14:101	.....	.....	31	.....	4	7.7	10	0	.....	.....	.....	.....	.....	.....	43,825	345
29	Jan. 27/56	17:53	Half tide	.....	32	.....	3	7.8	10	0.3	.....	.....	.....	.....	.....	.....	41,612	335
30	Feb. 27	15:79	Low tide	.....	32	23	3	7.8	5	0	.....	.....	29,834	.....	3,364	.....	42,313	337
31	Mar. 27	48:64	.....	.....	34	.....	4	7.7	10	4	.....	.....	.....	.....	.....	.....	43,100	341
32	Apr. 27	25:38	Low tide	.....	35	.....	3	7.8	10	0.9	.....	.....	.....	.....	.....	.....	59,998	311
33	May 27	5:26	Half tide	.....	36	26	4	7.7	5	0.3	.....	.....	30,798	.....	.....	3,730	43,285	335
34	June 27	12:20	Low tide	.....	45	.....	4	7.6	20	0	.....	.....	.....	.....	.....	.....	30,959	234
35	July 27	42:49	.....	.....	49	.....	3	7.7	25	0	.....	.....	.....	.....	.....	.....	33,432	260

† As reported by collector.

STATION NO. 153-RIVIERE AUX ECORCES

36	July 18/55	40:197	.....	.....	64	.....	4	6.5 (7.1)	80 (100)	0	.....	.....	37.6	.....	.....	20.0	26.4	3.2
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STATION NO. 154-KENOGAMI LAKE

37	Feb. 22/55*	.....	.....	.....	.....	.....	7	6.6	.....	2	Trace	.....	30.0	.....	.....	.....	.....	6.4
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\* Analysis by Alchem Ltd., Burlington, Ont.

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalies		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					

at ROBERVAL, LAC ST. JEAN W. CO. (Concluded)

0.4	.....	0.11	0.00	0.04	Trace	.....	1.0	0.4	0.4	0.0	22.6	1.0	0.5	.....	1.6	5.8	.....	1.1	19.6	29.1	9.6	-1.8	11	1
0.6	.....	.....	.....	.....	.....	.....	1.1	0.5	0.3	0.0	28.0	3.0	0.6	.....	2.4	6.1	0.06	3.2	26.2	37.0	8.2	-1.5	11	2
0.8	.....	.....	.....	.....	.....	.....	1.1	0.7	.....	0.0	24.1	3.0	0.8	.....	3.2	4.8	.....	4.0	23.8	34.5	8.9	-1.6	11	3
1.0	.....	0.06	0.00	0.00	Trace	0.00	1.5	0.6	0.2	0.0	33.5	4.0	1.3	0.0	2.4	7.9	.....	3.3	30.8	46.0	9.3	-1.8	11	4
1.0	.....	.....	.....	.....	.....	.....	1.3	0.6	0.0	0.0	30.4	3.8	0.9	.....	0.8	7.9	.....	2.7	27.5	38.9	9.1	-1.5	11	5
1.0	.....	.....	.....	.....	.....	.....	1.7	0.7	0.1	0.0	52.2	4.2	1.5	.....	2.4	10.8	0.14	3.7	46.5	65.0	7.2	-0.7	9.3	6
0.9	.....	0.08	0.00	0.00	0.00	0.00	1.9	0.8	0.1	0.0	48.5	3.1	2.0	0.0	1.6	9.9	.....	2.6	42.4	59.7	9.7	-1.0	9.6	7
0.8	.....	.....	.....	.....	Trace	0.00	1.9	0.7	0.4	0.0	49.4	4.7	1.6	.....	2.4	9.7	.....	4.8	44.2	61.9	8.4	-1.0	9.6	8
0.3	.....	.....	.....	.....	.....	.....	1.0	0.5	0.0	0.0	18.3	2.9	1.0	.....	4.0	5.5	.....	4.7	19.7	32.6	9.7	-2.3	12	9
0.3	.....	0.10	0.00	0.05	0.00	0.00	0.9	0.3	0.2	0.0	17.4	2.4	1.0	0.0	4.8	5.3	.....	4.2	18.5	30.7	9.2	-2.1	11	10
0.7	.....	.....	.....	.....	.....	.....	1.1	0.6	0.15	0.0	23.8	4.2	1.1	.....	1.2	5.8	.....	4.3	23.8	34.8	8.9	-1.7	11	11
0.6	.....	.....	.....	.....	.....	.....	2.2	0.6	0.15	0.0	26.2	5.0	1.0	.....	1.6	7.8	.....	1.7	23.2	40.0	17	-1.7	11	12

at SHIPSHAW, CHICOUTIMI CO.

0.2	.....	.....	.....	.....	.....	.....	0.8	0.3	.....	0.0	8.9 (0) (14.6)	3.3	0.5	.....	Trace	4.5	0.00	2.5	9.8	17.9	15	-3.0	13	13
0.2	.....	0.05	0.00	Trace	0.01	.....	0.8	0.3	0.3	0.0	8.3	3.9	0.6	0.0	1.6	4.7	.....	3.3	10.1	19.4	14	-3.0	13	14
0.5	.....	.....	.....	.....	.....	.....	0.8	0.3	0.0	0.0	9.5	1.3	0.6	.....	1.2	4.5	.....	2.2	10.0	16.9	14	-3.0	13	15
0.6	.....	.....	.....	.....	.....	.....	0.8	0.4	0.1	0.0	7.9	4.2	0.7	.....	1.2	4.7	.....	3.0	9.5	19.3	15	-3.2	13	16
0.7	.....	0.08	0.00	0.00	Trace	0.00	1.0	0.4	0.25	0.0	8.4	3.3	0.6	0.0	0.8	5.1	.....	2.7	9.6	18.8	18	-3.3	13	17
0.6	.....	.....	.....	.....	.....	.....	0.9	0.4	0.2	0.0	8.2	4.6	0.8	.....	0.8	5.3	0.00	4.0	10.7	20.7	15	-2.9	13	18
0.5	.....	.....	.....	.....	.....	.....	0.9	0.4	0.2	0.0	8.3	3.9	0.7	.....	1.6	4.8	0.00	4.0	10.8	20.4	15	-3.1	13	19
0.5	.....	0.09	0.00	0.04	0.00	0.00	0.9	0.5	0.8	0.0	9.8	3.1	1.0	0.0	2.8	5.1	.....	3.0	11.0	22.4	14	-3.0	13	20
0.7	.....	.....	.....	.....	.....	.....	1.0	0.4	0.2	0.0	11.9	3.8	0.9	.....	2.4	5.1	.....	2.6	12.6	24.2	14	-2.6	12	21
0.9	.....	0.08	0.00	0.17	0.00	0.05	0.7	0.4	0.0	0.0	14.9	2.8	0.9	0.0	0.8	5.6	.....	0.7	12.9	23.3	9.5	-2.6	12	22

at BAGOTVILLE, CHICOUTIMI CO.

28.7	.....	0.23	.....	.....	.....	.....	236	10.0	.....	0.0	14.6	131	396	.....	0.53	.....	.....	182	194	.....	.....	.....	.....	23
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at TADOUSSAC, SAGUENAY CO.

756	.....	0.01	.....	.....	0.00	0.01	6,840	318	.....	0.0	97.6	1,691	12,440	.....	.....	.....	2.90	3,690	3,770	22,358	78	.....	.....	24
779	.....	.....	.....	.....	.....	.....	6,680	240	.....	0.0	95.8	1,623	11,852	.....	.....	.....	.....	3,765	3,844	21,483	78	.....	.....	25
968	.....	.....	.....	.....	.....	.....	8,040	336	.....	0.0	115	2,017	14,623	.....	.....	.....	.....	4,671	4,765	26,354	77	.....	.....	26
983	.....	Trace	.....	.....	.....	0.00	8,160	340	.....	0.0	116	1,991	14,772	.....	.....	.....	.....	4,736	4,831	26,619	77	.....	.....	27
1,092	.....	.....	.....	.....	.....	.....	9,000	360	.....	0.0	124	2,180	16,507	.....	.....	.....	.....	5,248	5,350	29,575	77	.....	.....	28
1,033	.....	.....	.....	.....	.....	.....	8,740	340	.....	0.0	125	2,108	15,722	.....	.....	.....	.....	4,980	5,082	28,343	78	.....	.....	29
1,031	.....	0.02	.....	.....	.....	.....	8,520	320	.....	0.0	119	2,105	15,491	.....	.....	.....	3.24	4,984	5,082	27,877	77	.....	.....	30
1,050	.....	.....	.....	.....	.....	.....	8,860	330	.....	0.0	121	2,185	16,068	.....	.....	.....	.....	5,068	5,168	28,900	78	.....	.....	31
956	.....	.....	.....	.....	.....	.....	7,920	300	0.2	0.0	114	1,974	14,399	.....	.....	.....	.....	4,612	4,705	25,922	77	.....	.....	32
1,059	.....	0.02	.....	.....	0.00	0.00	8,740	336	.....	0.0	120	2,186	15,388	.....	.....	.....	0.00	5,092	5,190	28,102	77	.....	.....	33
795	.....	.....	.....	.....	0.00	0.05	6,340	240	.....	0.0	92.9	1,700	11,304	.....	.....	.....	.....	3,776	3,852	20,663	77	.....	.....	34
795	.....	.....	.....	.....	.....	.....	6,640	260	.....	0.0	93.9	1,650	11,934	.....	.....	.....	.....	3,843	3,920	21,576	77	.....	.....	35

south of NOTRE DAME D'HEBERTVILLE, LAC ST. JEAN E. CO.

0.4	.....	0.11	0.00	0.00	0.00	.....	0.9	0.4	0.1	0.0	7.9 (0) (12.2)	2.3	0.6	0.0	0.2	4.2	.....	3.1	9.6	16.2	16	-3.5	14	36
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at dam near JONQUIERE, CHICOUTIMI CO.

3.9	Trace	.....	.....	0.21	.....	.....	3.9	.....	0.1	.....	.....	0.0	6.1	.....	.....	5.4	.....	2.0	16.0	.....	.....	.....	.....	37
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TABLE II - (Continued)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Uoits)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 155-RIVIERE AUX SABLES																		
1	July 20/55	49:203	877	.....	66	23	5	6.5 (6.5)	30 (55)	3	.....	.....	32.8	0.045	77.2	13.6	31.7	4.1
2	Jan. 17/56*	.....	527	590	.....	.....	4	6.5	70	2	Trace	.....	48.0	0.065	68.0	.....	.....	6.4
3	Jan. 25/57*	.....	571	533	.....	.....	8	6.6 (6.3)	45	6	Trace	.....	40.0	0.054	61.7	.....	.....	7.2
STATION NO. 156-CHICOUTIMI RIVER																		
4	July 15/55	39:66	1,640	.....	69	.....	1	7.2 (7.2)	40 (55)	0.8	.....	.....	40.4	0.055	179	20.8	35.8	5.1
5	July 20*	49:55	1,660	.....	68	.....	4	6.8 (7.2)	35 (50)	0.8	.....	.....	.....	.....	.....	.....	34.1	5.1
6	Nov. 7	8:30	1,390	1,370	45	16	2	7.1	55	0.8	.....	.....	49.2	0.067	185	25.6	35.2	5.0
7	Dec. 6	13:96	1,200	1,060	34	.....	2	7.0	45	2	.....	.....	.....	.....	.....	.....	35.5	4.7
8	Feb. 8/56	26:98	714	711	32.5	9.9	1	7.3	45	0.2	.....	.....	46.4	0.063	89.3	20.4	41.7	6.1
9	Mar. 5	16:68	675	701	33	.....	0.9	7.5	50	0.2	.....	.....	.....	.....	.....	.....	52.8	6.4
10	May 7	18:35	1,610	1,780	38	.....	2	7.0	40	2	.....	.....	59.2	0.081	258	38.8	37.0	5.1
11	June 3	5:24	2,220	2,880	49	.....	2	7.0	50	2	.....	.....	41.2	0.056	246	16.4	34.6	4.6
12	Aug. 5	23:40	1,940	2,020	64	.....	3	6.7	45	0.9	.....	.....	.....	.....	.....	.....	32.8	4.7
13	Sept. 10	22:29	1,770	1,570	58	.....	2	7.1	40	0.8	.....	.....	.....	.....	.....	.....	39.4	5.1
14	Sept. 25	31:35	1,710	1,570	50	15	3	6.9	60	2	.....	.....	36.8	0.050	169	19.6	35.4	4.1
* At Arvida																		
STATION NO. 157-SHIPSHAW RIVER																		
15	July 15/55	40:46	2,540	1,760	68	.....	2	6.8 (7.0)	30 (40)	5	.....	.....	.....	.....	.....	.....	26.1	3.1
STATION NO. 158-SHIPSHAW RIVER																		
16	Aug. 22/55	8:14	1,270	1,440	70	14	2	6.8	35	0.2	.....	.....	33.6	0.046	116	13.0	26.5	3.5
17	Nov. 2	8:32	1,700	1,540	46	.....	1	7.1	40	0.8	.....	.....	.....	.....	.....	.....	24.6	3.3
18	Mar. 1/56	15:65	1,990	2,000	.....	6.4	1	7.0	35	0.2	.....	.....	37.6	0.051	201	14.4	25.8	3.5
19	July 24	50:64	1,670	1,900	.....	12	2	6.9	25	13	.....	.....	.....	.....	.....	.....	32.5	4.3
20	Aug. 29	35:41	4,700	3,540	.....	14	2	6.9	30	3	4.9	0.0	31.2	0.042	395	20.0	23.3	3.3
STATION NO. 159-RIVIERE DU MOULIN																		
21	July 16/55	41:99	.....	.....	62.5	.....	3	7.2 (7.3)	20 (40)	3	.....	.....	50.0	.....	.....	12.8	60.4	8.5
STATION NO. 160-MARS RIVER (RIVIERE A MARS)																		
22	July 16/55	41:193	.....	.....	63	.....	1	7.3 (7.3)	20 (40)	0.3	.....	.....	41.2	.....	.....	17.2	41.5	3.7
23	Apr. 21/58	8:15	.....	.....	.....	9.3	2	7.0	55	2	.....	.....	57.2	.....	.....	26.0	39.8	5.1
STATION NO. 161-HA HA RIVER																		
24	Apr. 6/54*	.....	.....	.....	.....	.....	Trace	7.4	.....	3	.....	.....	66.8	.....	.....	.....	.....	8.8
25	Sept. 28*	.....	.....	.....	.....	.....	4	6.7	.....	2	.....	.....	62.0	.....	.....	.....	.....	9.6
26	July 16/55	41:99	.....	.....	66	.....	2	7.4 (7.4)	25 (45)	2	.....	.....	50.0	.....	.....	16.4	54.6	8.3
27	Mar. 20/56*	.....	.....	.....	.....	.....	2	7.6	35	2	.....	.....	90.0	.....	.....	.....	.....	12.0

\* Analysis by Alchem Ltd., Burlington, Ont.

TABLE II - (Continued)

## Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at KENOGAMI, CHICOUTIMI CO.																								
0.2	.....	0.06	Trace	0.20	0.08	0.40	0.9	0.4	0.1	0.0 (0)	8.8 (14.6)	3.4	1.6	0.0	1.6	4.1	.....	3.9 (0.0)	11.1 (11.1)	21.0	13	-3.4	13	1
1.0	0.40	.....	.....	0.16	.....	.....	5.5	.....	0.2	0.0	17.1	4.0	8.5	.....	.....	3.6	.....	6.0	20.0	.....	.....	.....	.....	2
1.0	0.70	.....	.....	0.16	.....	.....	3.9	.....	0.4	0.0	14.6	0.0	6.1	.....	.....	1.7	.....	10.0	22.0	.....	.....	.....	.....	3
at CHICOUTIMI, CHICOUTIMI CO.																								
0.3	.....	0.10	Trace	0.00	Trace	.....	1.1	0.5	0.2	0.0 (0)	13.5 (17.0)	1.3	1.2	0.0	0.8	3.7	.....	2.9	14.0	21.0	14	-2.4	12	4
0.1	.....	.....	.....	.....	Trace	0.00	0.9	0.5	0.1	0.0 (0)	12.4 (19.5)	2.4	1.2	.....	0.8	4.0	.....	2.9 (0)	13.1 (11.3)	21.1	12	-2.8	12	5
0.5	.....	0.14	0.00	0.03	0.00	0.00	1.0	0.5	0.2	0.0	12.7	3.9	0.9	0.0	1.2	5.3	.....	4.1	14.5	24.8	9.9	-2.5	12	6
0.6	.....	.....	.....	.....	.....	.....	1.2	0.5	0.1	0.0	11.2	4.5	0.9	.....	3.2	5.6	.....	5.0	14.2	26.7	15	-2.7	12	7
0.6	.....	0.15	0.00	0.09	Trace	0.00	1.2	0.5	0.0	0.0	16.3	3.2	1.3	0.0	3.2	6.8	.....	3.3	17.7	31.8	12	-2.1	12	8
0.6	.....	.....	.....	.....	.....	.....	1.2	0.5	0.1	0.0	17.2	3.8	1.4	.....	3.2	7.7	0.00	4.3	18.4	33.3	12	-1.9	11	9
0.7	.....	0.15	0.00	0.05	0.00	0.00	0.9	0.5	0.0	0.0	13.8	3.1	0.7	0.0	3.2	6.0	.....	4.3	15.6	27.2	10	-2.6	12	10
0.6	.....	0.15	0.00	0.14	0.00	0.00	0.8	0.5	0.2	0.0	11.7	3.3	1.1	0.0	3.2	5.5	.....	4.3	13.9	25.7	10	-2.7	12	11
0.4	.....	.....	.....	.....	.....	.....	0.8	0.5	0.2	0.0	9.6	5.1	0.8	.....	1.6	5.2	.....	5.5	13.4	23.8	11	-3.1	13	12
0.6	.....	.....	.....	.....	.....	.....	1.1	0.4	0.3	0.0	13.9	3.3	2.0	.....	0.8	4.8	.....	3.8	15.2	25.0	13	-2.5	12	13
0.9	.....	0.08	0.00	Trace	0.00	0.00	0.9	0.4	0.2	0.0	13.9	4.3	0.8	0.0	0.8	5.2	.....	2.5	13.9	24.4	11	-2.8	13	14
above dam at SHIPSHAW, CHICOUTIMI CO.																								
0.1	.....	.....	.....	.....	.....	.....	0.9	0.4	.....	0.0 (0)	7.8 (9.8)	3.1	0.1	.....	0.4	1.2	0.05	1.8	8.2	13.4	18	-3.2	13	15
near mouth at SHIPSHAW, CHICOUTIMI CO.																								
0.0	.....	0.02	Trace	0.01	Trace	.....	1.0	0.5	0.0	0.0	9.2	2.3	0.8	0.0	1.6	2.2	.....	1.2	8.8	16.6	19	-3.1	13	16
0.2	.....	.....	.....	.....	.....	.....	1.0	0.6	0.2	0.0	8.9	1.9	0.6	.....	1.2	3.9	.....	1.8	9.1	17.1	18	-2.8	13	17
0.2	.....	0.02	0.00	0.01	0.00	0.00	0.9	0.4	0.1	0.0	8.0	3.0	0.7	0.0	1.2	5.0	0.00	3.0	9.6	18.9	16	-3.0	13	18
0.2	.....	0.00	0.01	0.06	0.00	0.00	1.3	0.4	0.1	0.0	11.2	2.6	1.2	0.0	0.8	4.4	.....	2.4	11.6	20.8	19	-2.9	13	19
0.0	.....	0.06	0.00	0.00	0.00	0.00	1.0	0.5	0.2	0.0	8.2	2.8	0.9	0.0	0.4	3.6	.....	1.5	8.2	16.6	19	-3.1	13	20
near CHICOUTIMI, CHICOUTIMI CO.																								
0.6	.....	0.07	0.00	0.00	0.00	.....	2.0	0.4	0.0	0.0 (0)	26.7 (31.3)	4.0	1.4	0.0	2.4	8.7	.....	1.6	23.7	41.3	15	-1.9	11	21
at PORT ALFRED, CHICOUTIMI CO.																								
1.5	.....	0.18	0.00	0.11	0.00	0.00	1.2	0.3	0.0	0.0 (0)	17.1 (21.9)	2.2	1.1	0.0	1.6	8.5	.....	1.4 (0.0)	15.4 (15.8)	28.8	14	-2.3	12	22
0.9	.....	0.18	0.00	0.00	0.00	0.00	0.9	0.3	0.1	0.0	12.7	3.8	1.7	0.0	1.0	7.3	.....	6.0	16.4	27.5	10	-2.6	12	23
near GRAND BAIE, CHICOUTIMI CO.																								
1.9	1.5	.....	.....	0.00	.....	.....	1.6	.....	0.0	0.0	34.1	4.1	2.4	.....	.....	6.7	.....	2.0	30.0	.....	.....	.....	.....	24
1.5	0.40	.....	.....	0.05	.....	.....	1.6	.....	0.2	0.0	31.7	Trace	2.4	.....	.....	6.5	.....	4.0	30.0	.....	.....	.....	.....	25
0.6	.....	0.06	0.00	0.00	0.00	.....	1.2	0.4	0.1	0.0 (0)	25.7 (29.3)	2.1	0.7	0.0	1.6	5.2	.....	2.1	23.2	32.9	9.9	-1.7	11	26
2.4	0.50	.....	.....	0.00	.....	.....	2.3	.....	0.1	0.0	43.9	0.0	3.6	.....	.....	6.8	.....	4.0	40.0	.....	.....	.....	.....	.....

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance K × 10 <sup>6</sup> at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 162-ST. JEAN RIVER																		
1	July 14/55	40:195	.....	.....	65	.....	2	7.4 (7.5)	25	0	.....	.....	50.4	.....	.....	18.4	62.3	9.8
STATION NO. 163-RIVIERE TROIS-PISTOLES																		
2	July 7/55	41:171	128	157	69	.....	0.8	8.1	25	0.9	.....	.....	100	0.136	34.6	28.0	144	19.2
STATION NO. 164-RSCOUAINS RIVER*																		
3	July 14/55	40:195	335	335	58	.....	5	7.2 (7.3)	20	0	.....	.....	8,952	1.217	808	7,948	14,594	118
* Tidal reach																		
STATION NO. 165-PORTRINEUF RIVER*																		
4	July 14/55	40:188	.....	.....	59.5	.....	2	7.6 (7.7)	15	0	.....	.....	9,764	.....	.....	1,067	15,585	117
* Tidal reach																		
STATION NO. 166-RIVIERE SAULT AU COCHON																		
5	July 13/55	37:189	.....	.....	69	.....	2	7.0 (7.1)	45	0.8	.....	.....	40.8	.....	.....	15.2	38.2	4.1
STATION NO. 167-RIMOUSKI RIVER																		
6	July 7/55	41:171	487	506	72.5	.....	1	8.0	20	3	14	10.0	101	0.137	132	23.6	143	21.2
STATION NO. 168-BERSIMIS (BETSIAMTES) RIVER																		
7	Sept. 28/56	41:62	2,970	3,240	47.5	10	3	6.6	50	4	2.7	0.5	38.0	0.052	303	22.0	16.9	1.2
8	Nov. 6	37:72	2,050	1,820	.....	.....	1	6.8	50	0	.....	.....	.....	.....	.....	.....	18.3	2.2
9	Feb. 7/57	25:47	1,400	1,400	33	14	2	6.9	35	0	.....	.....	36.0	0.049	136	20.0	23.2	2.7
10	Mar. 2	16:20	1,430	1,410	31	.....	2	6.8	35	0	.....	.....	.....	.....	.....	.....	24.0	2.9
11	Apr. 6	17:38	1,810	1,670	32	.....	2	7.0	30	4	.....	.....	.....	.....	.....	.....	24.5	2.2
12	May 2	25:71	1,950	3,750	.....	10	3	6.5	50	5	2.5	0.0	55.6	0.076	293	38.4	21.9	1.9
13	June 5	21:66	5,980	4,770	48	.....	3	6.7	25	0.4	.....	.....	.....	.....	.....	.....	15.9	1.3
14	July 15	42:57	5,950	4,920	61	.....	3	6.4	35	0.6	.....	.....	.....	.....	.....	.....	16.1	1.6
15	Aug. 12	37:46	4,590	4,420	.....	6.9	2	6.7	35	0.8	.....	.....	31.6	0.043	390	17.2	17.1	1.6
16	Sept. 6	14:33	4,660	5,550	54.0	13	3	6.5	30	0.8	.....	.....	26.8	0.036	336	20.0	20.1	1.9
STATION NO. 169-BERSIMIS (BETSIAMITES) RIVER																		
17	July 14/55	41:48	.....	.....	58	.....	2	6.7 (7.3)	35	0.8	.....	.....	.....	.....	.....	.....	25.4	1.2
18	Aug. 18*	5:89	.....	.....	65	14	2	7.0	35	3	.....	.....	1,065	.....	.....	169	1,915	12.1
19	Sept. 25*	8:192	.....	.....	51	.....	3	6.9	55	8	.....	.....	.....	.....	.....	.....	1,397	11.6
20	Oct. 3	8:99	.....	.....	45	.....	2	6.7	35	13	.....	.....	.....	.....	.....	.....	28.	2.1

\* Note tidal influence at some samples

**TABLE II - (Continued)**  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colometric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
near L'ANSE-ST. JEAN, CHICOUTIMI CO.																								
0.6	.....	0.03	0.00	0.03	0.00	.....	1.5	0.5	0.1	0.0 (0)	28.3 (31.7)	2.9	1.3	0.0	3.2	6.9	.....	3.7	26.9	40.7	11	-1.6	11	1
near TOBIN, RIMOUSKI CO.																								
2.1	.....	0.19	0.00	0.00	0.00	.....	6.2	0.7	0.0	0.0	63.4	8.0	6.1	0.0	2.0	8.2	.....	4.5	56.5	84.0	19	-0.2	8.5	2
at LES ESCOUAINS (ESCOUMINS), SAGUENAY CO.																								
331	.....	0.11	.....	1.0	0.00	.....	2,660	110	.....	0.0 (0)	46.8 (48.8)	635	4,744	.....	80.0	.....	.....	1,648	1,657	8,703	7.6	.....	.....	3
at STE. ANNE-DE PORTNEUF, SAGUENAY CO.																								
362	.....	0.01	0.00	.....	0.00	.....	2,760	123	.....	0.0	47.2	692	4,978	.....	80.0	.....	.....	1,739	1,778	9,134	75	.....	.....	4
near FORESTVILLE, SAGUENAY CO.																								
0.7	0.43	0.23	0.00	0.00	0.00	.....	1.8	0.8	0.1	0.0 (0)	15.4 (19.5)	3.0	1.1	0.0	3.0	8.1	.....	0.5	13.1	30.4	21	-2.5	12	5
at RIMOUSKI, RIMOUSKI CO.																								
2.9	.....	0.00	0.04	0.08	Trace	.....	2.9	0.7	0.0	0.0 (0)	73.7 (80.5)	9.4	1.3	0.0	1.6	5.1	.....	4.3	64.8 (62.7)	81.7	8.7	-0.2	8.4	6
at LABRIEVILLE, SAGUENAY CO.																								
0.7	.....	0.03	0.00	0.15	0.00	0.00	0.7	0.3	0.15	0.0	6.6	2.4	0.4	0.05	1.2	5.6	.....	0.5	5.9	16.1	17	-3.9	14	7
0.3	.....	.....	.....	.....	.....	.....	0.6	0.3	0.2	0.0 (0)	5.0 (5.6)	2.5	0.7	.....	0.8	5.7	0.09	2.6	6.7	15.6	16	-3.6	14	8
0.3	.....	0.05	0.00	0.09	0.02	.....	0.9	0.3	0.05	0.0	7.3	2.6	1.8	0.0	0.4	6.6	.....	2.0	8.0	19.4	18	-3.2	13	9
0.3	.....	.....	.....	.....	.....	.....	0.8	0.3	0.1	0.0	7.8	2.9	0.7	.....	0.6	6.5	.....	2.1	8.5	18.9	16	-3.3	13	10
0.8	.....	.....	.....	.....	.....	.....	0.9	0.3	0.05	0.0	9.1	2.1	0.7	.....	0.6	6.8	.....	1.3	8.8	19.0	17	-3.1	13	11
0.6	.....	0.11	0.00	0.05	0.00	0.00	1.0	0.5	0.2	0.0	6.5	3.2	1.3	0.0	0.4	5.4	0.00	1.9	7.2	17.9	20	-3.8	14	12
0.5	.....	.....	.....	.....	.....	.....	0.6	0.2	0.1	0.0	6.9	1.9	0.4	.....	0.1	4.6	.....	0.0	5.3	13.1	18	-3.8	14	13
0.5	.....	.....	.....	.....	.....	.....	0.6	0.2	0.1	0.0	5.6	2.5	0.4	.....	0.1	4.6	.....	1.4	6.0	13.3	17	-4.0	14	14
0.5	.....	0.05	0.00	0.01	.....	.....	0.6	0.2	0.05	0.0	5.0	2.4	0.6	0.0	0.2	4.5	.....	1.9	6.0	13.1	17	-3.2	12	15
0.5	.....	0.10	0.00	0.00	0.00	0.00	0.6	0.2	0.0	0.0	5.1	2.8	0.8	0.0	0.2	4.6	.....	2.6	6.8	14.2	15	-3.9	14	16
at BERSIMIS, SAGUENAY CO.																								
0.9	.....	.....	.....	.....	.....	.....	1.5	0.2	0.2	0.0 (0)	5.9 (9.8)	1.8	1.9	.....	0.0	4.3	0.00	1.9	6.7	14.9	32	-3.9	15	17
36.5	.....	0.04	0.00	0.08	0.00	.....	256	15.0	2.5	0.0	14.1	66.0	500	0.0	0.6	4.3	.....	169	180	898	74	-2.3	12	18
23.9	.....	.....	.....	.....	.....	.....	203	7.8	0.0	0.0	12.4	40.4	377	.....	0.4	4.9	.....	117	127	675	76	-2.6	12	19
0.4	.....	.....	.....	.....	.....	.....	1.9	0.4	0.2	0.0	5.0	2.9	2.6	.....	2.8	4.5	.....	2.8	6.9	20.1	36	-3.7	14	20

TABLE II - (Continued)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)	
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day				
<b>STATION NO. 169-BERSIMIS (BETSIAMITES) RIVER</b>																			
1	Dec. 6/55	8:105	.....	.....	32	6.5	1	7.0	40	3	.....	.....	79.2	.....	.....	14.4	125	3.2	
2	Jan 25/56	19:55	.....	.....	32	.....	2	6.8	35	0.8	.....	.....	.....	.....	.....	.....	213	3.2	
3	Mar. 3	20:76	.....	.....	33	7.6	1	7.0	35	0.2	.....	.....	397	.....	.....	77.2	693	6.6	
4	May 11	14:24	.....	.....	42	.....	1	6.9	60	30	.....	.....	.....	.....	.....	.....	56.5	2.3	
5	June 30	18:27	.....	.....	58	8.7	2	6.8	40	7	.....	.....	.....	.....	.....	.....	708	6.7	
6	Aug. 8	35:49	.....	.....	65	.....	3	6.6	35	4	.....	.....	.....	.....	.....	.....	135	2.9	
<b>STATION NO. 170-METIS (MITIS) RIVER</b>																			
7	July 8/55	12:71	658	631	59	.....	1	8.2 (7.4)	20	40	50	40.3	104	0.141	184	22.8	166	25.2	
8	Sept. 12	4:36	624	915	60	11	3	7.7	30	10	10.4	4.8	107	0.146	180	51.6	145	23.4	
9	Dec. 7	7:97	471	473	39	3.4	1	8.2	15	0.8	.....	.....	109	0.148	138	18.8	176	27.3	
10	July 24/56	3:27	520	479	62	10	2	7.9	10	0.8	.....	.....	102	0.139	143	10.4	173	26.8	
<b>STATION NO. 171-PAPINACHOIS RIVER</b>																			
11	July 13/55	37:189	.....	.....	71	.....	1.1	7.1 (7.1)	35	0.3	.....	.....	28.0	.....	.....	.....	13.6	30.1	2.9
<b>STATION NO. 172-OUTARDES RIVER</b>																			
12	July 13/55	37:189	10,600	10,100	69.5	.....	2	6.8 (6.9)	35	0	.....	.....	26.4	0.036	753	12.0	21.6	2.1	
<b>STATION NO. 173-MANICOUAGAN RIVER</b>																			
13	July 13/55	36:72	33,100	31,200	68	.....	3	6.6 (6.7)	35	6	.....	.....	.....	.....	.....	.....	20.8	2.1	
14	Sept. 6/55	6:29	14,500	17,400	64.5	15	2	7.0	65	10	14.4	11.0	36.8	0.050	1,436	16.8	37.8	2.5	
15	Oct. 31	8:17	22,300	22,600	.....	.....	2	6.8	40	6	.....	.....	.....	.....	.....	.....	26.5	2.5	
16	Jan. 11/56	4:102	8,480	8,630	37.5	7.2	1	7.1	45	3	.....	.....	34.4	0.047	789	14.4	25.1	2.6	
17	Mar. 2	21:71	6,360	5,860	.....	.....	0.8	7.3	35	0	.....	.....	.....	.....	.....	.....	24.8	3.0	
18	May 3	19:39	10,200	18,800	35	7.9	2	6.8	30	6	13	1.6	56.8	0.077	1,561	26.0	26.1	2.7	
19	July 2	7:21	116,000	81,900	11	.....	2	6.6	45	0.2	.....	.....	.....	.....	.....	.....	17.3	1.6	
<b>STATION NO. 174-LAKE COMEAU</b>																			
20	July 13/55	36:132	.....	.....	65.5	.....	5	6.0 (6.1)	45	2	.....	.....	33.2	.....	.....	16.4	28.5	2.4	
21	Aug. 24	9:30	.....	.....	.....	12	2	6.8	40	0	.....	.....	32.4	.....	.....	21.6	25.9	2.4	
22	Feb. 13/56	17:23	.....	.....	.....	9.8	2	6.8	40	0.2	.....	.....	31.6	.....	.....	20.4	22.9	2.4	
23	Sept. 8	11:16	.....	.....	60	14	2	7.0	40	0.3	.....	.....	30.0	.....	.....	13.6	28.6	3.9	
24	Mar. 20/57	8:19	.....	.....	34	7.2	2	6.6	35	0	.....	.....	.....	.....	.....	.....	26.0	1.9	
25	Sept.	.....	.....	.....	.....	6.9	4	6.6	30	1	.....	.....	42.8	.....	.....	18.0	27.3	2.0	
<b>STATION NO. 175-RIVIERE BLANCHE</b>																			
26	July 12/55	33:166	7	14	63.5	.....	1	8.3 (8.0)	10	5	15	11	14.6	0.199	2.8	19.2	245	39.2	
<b>STATION NO. 176-MATANE RIVER</b>																			
27	July 12/55	22:170	308	319	70	.....	2	8.1 (7.9)	15	2	.....	.....	122	0.166	101	20.4	208	31.8	

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at BERSIMIS, SAGUENAY CO. (Concluded)																								
1.9	.....	0.01	0.00	0.02	Trace	0.00	16.5	1.0	0.0	0.0	7.6	5.6	28.2	0.0	0.4	5.2	.....	9.6	15.8	65.7	68	-3.1	13	1
3.8	.....	.....	.....	.....	.....	.....	30.0	1.6	0.0	0.0	6.7	9.5	52.4	.....	4.0	5.6	.....	18.1	23.6	113	72	-3.3	13	2
12.0	.....	0.09	0.00	0.00	0.00	0.00	104	4.2	0.1	0.0	8.3	28.1	185	0.0	1.2	5.4	0.00	59.0	65.8	351	76	-2.8	13	3
1.1	.....	.....	.....	.....	.....	.....	6.1	0.7	0.1	0.0	5.6	4.2	10.2	.....	0.8	5.3	.....	5.7	10.3	33.5	54	-3.4	14	4
12.4	.....	.....	.....	.....	.....	.....	104	4.2	0.2	0.0	9.1	27.6	182	.....	Trace	4.7	.....	60.2	67.7	346	76	-3.0	13	5
2.3	.....	0.03	0.00	0.10	0.00	0.00	17.9	0.9	0.2	0.0	7.2	6.6	30.6	0.0	0.8	5.0	.....	10.8	16.7	70.6	68	-3.6	14	6
at MONT JOLI, RIMOUSKI CO.																								
4.2	.....	0.05	0.01	0.06	0.03	.....	1.7	0.5	0.1	0.0	95.1 (97.6)	4.1	1.3	0.0	1.2	3.5	.....	2.2	80.2	88.9	4.3	+0.2	7.8	7
2.7	.....	0.02	0.00	Trace	0.00	0.00	1.5	0.5	0.0	0.0	81.4	4.4	0.9	0.0	0.4	3.6	.....	3.2	70.0	77.5	4.4	-0.5	8.7	8
4.9	.....	Trace	0.00	0.03	Trace	0.02	2.4	0.5	.....	0.0	104	5.3	1.2	0.05	0.8	5.4	.....	3.3	88.3	99.0	5.5	+0.1	8.0	9
4.6	.....	.....	0.02	0.08	.....	.....	1.7	0.5	0.1	0.0	96.4	5.2	1.8	0.0	1.2	3.5	.....	6.8	85.8	93.0	4.1	.....	.....	10
at PAPINACHOIS, SAGUENAY CO.																								
0.4	.....	0.11	0.00	0.00	.....	.....	1.7	0.5	.....	0.0 (0)	8.8 (12.2)	3.5	1.9	0.0	1.6	3.0	.....	1.7	8.9	19.9	28	-2.8	13	11
near CHUTE AUX OUTARDES, SAGUENAY CO.																								
0.4	.....	0.03	0.00	0.00	.....	.....	0.9	0.5	.....	0.0 (0)	6.6 (12.2)	1.8	0.5	.....	2.4	4.6	.....	1.5	6.9	16.4	21	-3.4	14	12
at MANICOUAGAN, (BAIE COMEAU), SAGUENAY CO.																								
0.4	.....	.....	.....	.....	.....	.....	0.7	0.3	0.0	0.0	7.2 (9.8)	1.1 (0.6)	0.3	.....	0.4	4.3	.....	1.0	6.9	13.1	17	-3.5	14	13
0.4	.....	0.27	0.00	0.10	0.00	0.20	0.9	0.4	0.2	0.0	9.5	1.1	0.7	.....	0.2	4.9	0.00	0.1	7.9	16.2	17	-3.1	13	14
0.3	.....	.....	.....	.....	.....	.....	0.7	0.5	0.3	0.0	7.8	1.3	0.4	.....	1.6	4.7	.....	1.1	7.5	15.8	16	-3.4	14	15
0.5	.....	0.4	0.00	0.00	0.00	0.00	0.9	0.4	0.1	0.0	7.4	2.7	0.5	0.0	0.6	5.8	.....	2.4	8.5	17.7	18	-3.0	13	16
0.4	.....	.....	.....	.....	.....	.....	1.1	0.4	0.1	0.0	9.3	0.0	1.3	.....	2.4	5.9	0.00	1.5	9.1	19.1	20	-2.7	13	17
0.8	.....	0.06	0.00	0.05	Trace	0.10	1.0	0.5	0.1	0.0	8.8	2.5	1.0	0.0	1.6	5.5	.....	2.8	10.0	20.0	16	-3.3	13	18
0.9	.....	.....	.....	.....	0.00	0.00	0.7	0.3	0.2	0.0	6.0	1.8	0.3	.....	1.6	4.7	.....	2.8	7.7	14.8	16	-3.8	14	19
near BAIE COMEAU, SAGUENAY CO.																								
0.4	.....	0.09	0.00	0.06	0.01	.....	1.1	0.5	0.1	0.0	3.3 (4.9)	2.9	2.4	0.0	0.8	2.6	.....	4.9	7.6	14.9	21	-4.4	15	20
0.3	.....	0.08	0.00	0.02	0.00	0.00	0.9	0.5	0.3	0.0	6.3	1.8	1.8	0.0	Trace	1.9	.....	2.0	7.2	12.8	19	-3.4	14	21
0.3	.....	0.13	0.00	Trace	Trace	0.00	1.1	0.5	0.0	0.0	5.6	3.3	1.6	0.0	0.8	1.8	.....	2.7	7.3	14.7	23	-3.5	14	22
0.2	.....	0.09	0.00	0.09	Trace	0.00	1.0	0.6	0.2	0.0	9.1	4.4	1.5	0.0	Trace	1.1	.....	3.1	10.6	17.4	15	-3.0	13	23
0.8	.....	0.05	0.01	0.04	.....	.....	1.2	0.6	0.1	0.0	5.6	3.4	1.8	0.0	0.4	2.2	.....	3.4	8.0	15.3	22	-3.6	14	24
0.7	.....	0.07	0.02	0.00	Trace	0.00	1.5	0.6	0.1	0.0	8.3	3.5	2.1	0.0	0.5	1.4	.....	1.1	7.9	16.1	27	-3.6	14	25
at ST. ULRIC, MATANE CO.																								
4.6	.....	.....	0.04	0.05	0.00	.....	5.4	0.7	.....	0.0 (0)	140 (142)	8.2	4.3	.....	3.2	5.0	.....	2.3	117	140	9.1	+0.6	7.1	26
near MATANE, MATANE CO.																								
4.9	0.00	0.00	Trace	0.08	Trace	.....	2.8	0.8	0.1	0.0 (0)	117 (122)	9.2	2.3	0.0	1.6	4.6	.....	1.9	99.5 (90.1)	116	5.7	+0.3	7.5	27

TABLE II - (Continued)

Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin

(In parts per million)

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (°F.)	Oxygen consumed by KMnO <sub>4</sub>	Carbon dioxide (calculated) (CO <sub>2</sub> )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105°C. (Dissolved solids)			Loss on ignition at 550°C.	Specific conductance K × 10 <sup>6</sup> at 25°C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105°C.	Ignited at 550°C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 177-ROCK RIVER																		
1	May 28/58	6:15	.....	.....	44	11	2	6.4	60	0.8	.....	.....	28.8	.....	.....	22.4	20.3	1.8
STATION NO. 178-STE. ANNE RIVER																		
2	July 11/55	17:171	.....	.....	65	.....	0.7	8.3 (7.9)	0	0.3	.....	.....	94.4	.....	.....	13.2	155	22.2
STATION NO. 179-PETITE RIVIERE STE. ANNE																		
3	July 11/55	17:157	.....	.....	56.5	.....	1	8.4 (7.8)	0	0.9	.....	.....	172	.....	.....	20.4	300	46.3
STATION NO. 180-MADELEINE RIVER																		
4	July 11/55	17:157	398	386	68	.....	0.8	8.4 (8.2)	0	0.9	.....	.....	130	0.177	140	18.0	216	33.6
STATION NO. 181-MAGPIE RIVER																		
5	Aug. 16/55	14:120	3,220	3,150	64	14	2	7.0	25	0	.....	.....	22.4	0.030	190	5.6	18.6	2.2
6	Sept. 16	17:55	3,050	2,880	53	.....	1	6.9	30	0	.....	.....	.....	.....	.....	.....	15.7	2.0
7	Oct. 18	21:38	3,080	3,120	47	.....	1	6.9	25	0	.....	.....	.....	.....	.....	.....	17.3	2.2
8	Nov. 18	12:140	3,080	2,940	37	6.0	1	6.8	35	0	.....	.....	26.4	0.036	219	8.0	15.3	2.1
9	Dec. 18	30:150	1,570 <sup>e</sup>	1,740 <sup>e</sup>	40	.....	2	6.8	25	0	.....	.....	.....	.....	.....	.....	17.6	2.3
10	Jan. 18/56	30:119	1,650 <sup>e</sup>	1,560 <sup>e</sup>	32	.....	2	6.8	25	0	.....	.....	.....	.....	.....	.....	17.2	2.1
11	Feb. 18	86:102	1,430 <sup>e</sup>	1,530 <sup>e</sup>	32	6.6	1	7.0	30	2	.....	.....	34.4	0.047	133	18.4	20.0	2.7
12	Mar. 19	58:75	1,030 <sup>e</sup>	1,130 <sup>e</sup>	35	.....	2	6.9	20	0	.....	.....	.....	.....	.....	.....	18.4	2.4
13	Apr. 20	61:64	1,660 <sup>e</sup>	1,380 <sup>e</sup>	30	.....	4	6.3	30	0	.....	.....	.....	.....	.....	.....	15.5	2.1
14	May 23	27:35	4,490	3,750	35	12	2	6.6	30	0	.....	.....	21.2	0.029	256	6.8	15.3	1.7
15	June 20	79:86	24,300	23,300	39	.....	2	6.6	25	0	.....	.....	.....	.....	.....	.....	23.3	2.1
16	July 20	54:68	10,700	10,900	47	13	2	6.6	30	0	.....	.....	.....	.....	.....	.....	16.7	2.1
e estimated																		
STATION NO. 182-YORK RIVER																		
17	Apr. 20/55	5:25	1,240 <sup>e</sup>	950 <sup>e</sup>	32	.....	2	8.1	5	0.3	.....	.....	.....	.....	.....	.....	181	28.9
18	July 20	6:20	204 <sup>e</sup>	252 <sup>e</sup>	64	10	0.9	8.3	5	0	.....	.....	112	0.152	61.6	19.6	191	29.7
19	Sept. 2	6:63	438 <sup>e</sup>	480 <sup>e</sup>	45	5.9	1	8.2	30	0	.....	.....	99.6	0.135	117	25.2	157	24.8
20	Jan. 17/56	9:107	122 <sup>e</sup>	134 <sup>e</sup>	32	1.1	1	8.1	10	.....	.....	.....	113	0.154	37.2	18.8	180	28.1
21	Mar. 18	36:59	60 <sup>e</sup>	67 <sup>e</sup>	32	.....	0.9	8.3	0	0.3	.....	.....	.....	.....	.....	.....	204	32.1
22	May 22	9:31	3,910	2,720	40	7.3	1	7.9	30	6	23	21.5	79.6	0.108	841	4.0	125	18.8
23	June 21	5:13	1,770	2,260	49	11	2	7.8	20	4	.....	.....	.....	.....	.....	.....	133	21.7
e estimated																		
STATION NO. 183-YORK RIVER																		
24	July 11/55	17:50	.....	.....	64	.....	0.7	8.4 (8.0)	0	0.3	.....	.....	.....	.....	.....	.....	181	29.0
STATION NO. 184-ST. JOHN RIVER																		
25	Dec. 13/53*	.....	.....	.....	.....	.....	0	8.1	.....	2	.....	.....	125	.....	.....	.....	.....	37.6

\* Analysis supplied by Alchem Ltd., Burlington, Ont.

TABLE II - (Continued)  
 Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin  
 (In parts per million)

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total					
at SHELTER BAY, SAGUENAY CO.																								
0.5	.....	0.09	0.05	0.00	.....	.....	0.7	0.3	0.15	0.0	2.3	2.3	1.6	.....	0.1	3.6	.....	4.6	6.5	12.2	18	-4.2	15	26
near STE. ANNE DES MONTS, GASPE W. CO.																								
4.7	0.00	0.00	Trace	0.10	Trace	.....	2.3	0.5	.....	0.0 (0)	86.3 (90.2)	5.4	1.8	0.0	4.0	8.4	.....	3.9	74.7	92.0	6.2	+0.1	8.1	2
near STE. ANNE DES MONTS, GASPE W. CO.																								
6.6	.....	0.02	0.00	0.03	0.00	.....	5.2	0.6	0	2.4 (0)	161 (171)	7.4	6.7	0.0	0.8	6.4	.....	6.1	143	162	2.1	+0.8	6.8	3
near RIVIERE MADELEINE, GASPE W. CO.																								
5.2	.....	0.00	0.00	0.11	Trace	.....	2.8	0.5	0.0	2.4 (0)	122 (127)	5.7	22.0	0.0	0.6	5.8	.....	1.4	105	119	5.4	+0.6	7.2	4
at MAGPIE, SAGUENAY CO.																								
0.01	.....	Trace	0.00	0.04	0.00	.....	0.8	0.4	0.0	0.0	5.6	2.0	0.4	0.0	1.2	4.2	.....	1.3	5.9	14.1	22	-3.3	14	5
0.1	.....	.....	.....	.....	.....	.....	0.6	0.3	0.0	0.0	5.5	1.5	0.1	.....	1.2	4.1	0.00	0.9	5.4	12.6	18	-3.5	14	6
0.1	.....	.....	.....	.....	.....	.....	0.6	0.3	0.1	0.0	6.0	0.8	0.3	.....	1.6	4.2	.....	1.0	5.9	13.0	17	-3.4	14	7
0.1	.....	0.01	Trace	0.00	Trace	0.00	0.6	0.3	0.1	0.0	5.2	2.2	0.5	0.0	0.6	5.4	.....	1.4	5.7	14.4	18	-3.6	14	8
0.1	.....	.....	.....	.....	.....	.....	0.8	0.3	0.1	0.0	6.6	0.0	0.5	.....	1.6	4.8	0.00	0.8	6.2	13.6	21	-3.5	14	9
0.2	.....	.....	.....	.....	.....	.....	0.8	0.3	0.1	0.0	6.7	1.5	0.5	.....	1.2	4.7	.....	0.6	6.1	13.1	21	-3.5	14	10
0.1	.....	0.02	0.00	0.00	0.00	0.00	0.9	0.3	0.7	0.0	7.9	1.5	0.5	0.0	2.0	4.9	.....	0.6	7.1	16.8	21	-3.1	13	11
0.2	.....	.....	.....	.....	.....	.....	0.8	0.3	0.0	0.0	7.4	1.4	0.5	.....	1.6	4.6	.....	0.7	6.8	15.4	20	-3.3	14	12
0.0	.....	.....	.....	.....	.....	.....	0.6	0.2	0.2	0.0	5.0	1.2	0.6	.....	2.0	4.6	.....	1.1	5.2	13.8	18	-4.1	15	13
0.3	.....	0.09	0.00	0.16	0.00	0.00	0.6	0.3	0.2	0.0	5.0	0.9	0.9	0.4	2.8	4.1	.....	1.4	5.5	14.9	15	-3.9	14	14
0.1	.....	.....	.....	.....	.....	.....	0.7	0.4	0.1	0.0	4.6	1.5	0.4	.....	2.8	4.6	.....	1.9	5.7	14.9	20	-3.8	14	15
0.0	.....	0.00	0.01	0.14	0.00	0.00	0.7	0.3	0.2	0.0	5.6	2.1	0.4	0.0	0.6	4.9	.....	0.6	5.2	14.0	19	-3.8	14	16
at SUNNYBANK, GASPE CO.																								
4.4	.....	.....	.....	.....	.....	.....	2.7	0.4	0.0	0.0	106	4.9	2.5	.....	0.8	5.8	.....	3.0	90.2	103	6.1	+0.1	7.9	17
3.9	.....	.....	.....	.....	.....	.....	2.3	0.6	0.1	0.0	111	3.8	2.6	0.0	0.2	6.3	.....	0.0	90.1	104	5.1	+0.4	7.5	18
2.7	.....	0.00	0.00	0.07	0.00	.....	2.2	0.5	0.0	0.0	88.3	2.5	1.6	0.0	1.2	5.1	.....	0.6	73.0	84.1	6.1	0.0	8.2	19
3.9	.....	Trace	0.00	0.00	0.00	0.00	3.7	0.6	0.0	0.0	102	4.8	4.3	0.0	1.6	7.0	.....	2.7	86.1	104	8.5	0.0	8.1	20
4.5	.....	.....	.....	.....	.....	.....	3.8	0.5	0.0	0.0	114	5.2	5.0	.....	3.2	5.6	.....	5.0	98.6	116	7.6	+0.3	7.7	21
2.6	.....	0.02	0.00	0.05	0.00	0.00	1.5	0.4	0.0	0.0	63.1	3.3	1.4	0.0	6.8	4.6	0.14	5.8	57.6	70.6	5.3	-0.5	8.9	22
2.6	.....	.....	.....	.....	0.00	0.00	1.8	0.6	0.3	0.0	74.7	5.4	1.8	.....	0.8	4.5	.....	3.5	64.8	76.0	5.6	-0.5	8.8	23
near GASPE, GASPE E. CO.																								
4.6	.....	.....	.....	.....	.....	.....	2.5	0.4	0.0	2.2 (0)	102 (110)	2.9 (2.0)	2.1	.....	0.4	5.5	0.00	3.7	91.3	100	5.6	+0.4	7.6	24
near GASPE, GASPE E. CO.																								
5.1	Trace	.....	.....	0.00	.....	.....	1.6	.....	0.0	0.0	134	6.8	2.4	.....	.....	4.4	.....	5.0	115	.....	.....	.....	.....	25



TABLE II - (Concluded)  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(in parts per million)*

No.	Date of collection	Storage period (Days)	Stream discharge (Second-feet)		Water temperature (° F.)	Oxygen consumed by $KMnO_4$	Carbon dioxide (calculated) ( $CO_2$ )	pH	Colour (Hazen) (Units)	Turbidity (Units)	Suspended matter		Residue on evaporation dried at 105° C. (Dissolved solids)			Loss on ignition at 550° C.	Specific conductance $K \times 10^6$ at 25° C.	Calcium (Ca)
			On sampling date	Monthly mean							Dried at 105° C.	Ignited at 550° C.	P.P.M.	Tons per acre-foot	Tons per day			
STATION NO. 185--BONAVENTURE RIVER																		
1	July 9/55	17:158	.....	.....	66.5	.....	1	8.2 (8.0)	0	0	.....	.....	569	.....	.....	86.4	1,041	38.6
STATION NO. 186--LITTLE CASCAPEDIA RIVER																		
2	1956*	.....	.....	.....	.....	.....	2	7.9	.....	2	.....	.....	92.0	.....	.....	.....	.....	27.2
STATION NO. 187--CASCAPEDIA RIVER																		
3	July 9/55	18:52	.....	.....	65	.....	1	8.1 (8.0)	0	0.3	.....	.....	.....	.....	.....	.....	146	21.2
4	Aug. 4	7:84	.....	.....	60	11	1	8.1	7	0	44	.....	104	.....	.....	14.8	167	24.1
5	Sept. 27	6:42	.....	.....	47	.....	0.9	8.1	20	0	.....	.....	.....	.....	.....	.....	119	18.8
6	Oct. 21	4:32	.....	.....	48	.....	1	8.1	5	0	.....	.....	.....	.....	.....	.....	152	22.3
7	Nov. 22	3:136	.....	.....	35	8.5	2	7.9	5	0.2	.....	.....	98.4	.....	.....	0.0	155	23.5
8	Dec. 28	8:41	.....	.....	32	.....	0.9	8.2	0	0	.....	.....	.....	.....	.....	.....	167	26.2
9	Jan 18/56	8:29	.....	.....	35	.....	1	8.1	10	0	.....	.....	.....	.....	.....	.....	147	22.2
10	Feb. 17	18:89	.....	.....	34	3.3	1	8.2	0	0	.....	.....	110	.....	.....	7.2	209	26.9
11	Mar. 16	32:61	.....	.....	35	.....	2	8.0	0	0	.....	.....	.....	.....	.....	.....	176	27.9
12	Apr. 19	28:46	.....	.....	37	.....	2	7.9	5	5	.....	.....	.....	.....	.....	.....	156	24.5
13	May 17	12:28	.....	.....	40	5.1	1	7.9	20	20	21	14.3	78.0	.....	.....	11.2	113	18.1
14	July 19	8:32	.....	.....	56	.....	1	8.0	10	0	.....	.....	.....	.....	.....	.....	134	20.1

**TABLE II - (Concluded)**  
**Chemical Analyses of Surface Waters in the Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Magnesium (Mg)	Iron (Fe)		Manganese (Mn)	Aluminum (Al)	Copper (Cu)	Zinc (Zn)	Alkalis		Ammonia (NH <sub>3</sub> )	Carbonate (CO <sub>3</sub> )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Silica (colorimetric) (SiO <sub>2</sub> )	Boron (B)	Hardness as CaCO <sub>3</sub>		Sum of constituents	Per cent sodium	Saturation index	Stability index	No.	
	Total	Dissolved					Sodium (Na)	Potassium (K)										Non-carbonate	Total						
at BONAVENTURE, BONAVENTURE CO.																									
18.6	.....	0.01	0.00	0.10	0.01	.....	133	5.1	0.1	0.0 (0)	117 (122)	45.0	230	0.0	4.0	5.9	.....	76.8	173	538	62	+0.3	7.6	1	
at NEW RICHMOND, BONAVENTURE CO.																									
4.4	0.2	.....	.....	0.00	.....	.....	2.4	.....	0.1	0.0	95.1	2.7	3.6	.....	.....	4.9	.....	8.0	86.0	.....	.....	.....	.....	.....	2
at CASCAPEDIA, BONAVENTURE CO.																									
3.6	.....	.....	.....	.....	.....	.....	2.0	0.4	0.0	0.0 (0)	78.6 (82.9)	5.8	1.1	.....	0.6	6.0	0.01	3.2	67.7	79.5	6.0	-0.1	8.3	3	
4.3	.....	0.00	Trace	0.00	0.00	.....	2.2	0.5	0.0	0.0	89.4	7.8	1.7	0.0	0.4	7.1	.....	4.6	77.9	92.2	5.7	0.0	8.1	4	
2.1	.....	.....	.....	.....	.....	.....	1.6	0.3	0.0	0.0	62.7	4.8	0.3	.....	2.4	7.0	.....	4.1	55.5	68.2	5.9	-0.4	8.9	5	
3.8	.....	.....	.....	.....	.....	.....	2.2	0.4	0.0	0.0	79.8	6.8	1.6	.....	1.6	5.5	.....	5.8	71.3	83.6	6.3	-0.2	8.5	6	
3.8	.....	0.00	0.00	0.00	Trace	0.00	2.3	0.3	.....	0.0	83.7	8.8	1.5	0.0	0.6	7.5	.....	5.6	74.3	89.6	6.3	-0.3	8.5	7	
3.8	.....	.....	.....	.....	.....	.....	2.3	0.7	0.0	0.0	90.2	9.3	2.0	.....	1.6	6.5	.....	7.0	81.0	96.9	5.8	+0.1	8.0	8	
3.5	.....	.....	.....	.....	.....	.....	2.0	0.4	0.0	0.0	77.0	6.6	1.6	.....	0.6	5.8	.....	6.6	69.8	80.7	5.8	-0.1	8.3	9	
4.2	.....	0.02	0.00	0.00	.....	.....	2.4	0.4	.....	0.0	92.4	9.4	2.0	0.0	2.4	6.5	0.00	8.6	84.4	99.8	5.8	0.0	8.2	10	
3.7	.....	0.00	.....	0.00	.....	.....	2.3	0.4	.....	0.0	92.9	10.0	2.0	.....	3.2	2.0	0.00	8.6	84.8	101	5.5	-0.1	8.2	11	
3.6	.....	.....	.....	.....	.....	.....	2.1	0.4	0.0	0.0	81.7	8.5	2.1	.....	3.2	6.0	.....	8.9	75.9	90.7	5.6	-0.4	8.7	12	
2.7	.....	0.02	0.00	0.02	0.00	0.00	1.5	0.4	0.0	0.0	61.9	5.2	1.2	0.15	4.0	6.2	.....	5.5	56.3	69.9	5.4	-0.5	8.9	13	
3.3	.....	.....	0.00	.....	0.00	0.00	1.9	0.4	0.1	0.0	69.5	7.1	1.3	.....	0.8	5.8	.....	6.7	63.7	75.0	6.0	-0.3	8.6	14	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	ABBOTSFORD (Rouville Co.)	ACTON VALE (Bagot Co.)	
		1956	1958
Population served:			
In municipality .....		3,500 (3,547 <sup>d</sup> )	3,722 <sup>e</sup>
Outside municipality .....		0	0
Total .....		<u>3,500</u>	<u>3,722</u>
Date(s) of survey .....		August 10, 1956; October 26, 1958 .....	
Ownership .....		Municipally owned and operated .....	
Source of supply .....		Moose River .....	
Treatment .....	<i>See</i> St. Paul d'Abbotsford	River water is pumped to plant, pre-chlorinated (0.8 ppm), alum-coagulated (100-200 lb/day), settled and rapid-sand filtered (2). It is then post-chlorinated (0.4 ppm), lime-treated (50 lb/day) at clear well to pH 7.8 and then pumped to reservoir and system.*	
Storage capacity (thousand gallons) ..		Clear well ..... 20 Standpipe ..... 70 Underground reservoir (1958) ..... 500	
Consumption (average in mgd) .....		1965 (Max. - 0.50) 0.40 (Min. - 0.25)	
Industrial use .....		Major users are rubber footwear and shoe manufacturing plants, and several textile and rug plants; about 36 per cent of total pumping was used by these industries in 1956.	
Remarks .....		* Activated carbon is added to coagulating basin about one month each year. Fluoridation reported in 1961	
Municipality .....	ALMAVILLE (Champlain Co.)	ANJOU* (Ile de Montreal)	
Population served:		1958	
In municipality .....		3,321 (2,140 <sup>d</sup> ) (3,997 <sup>e</sup> )	
Outside municipality .....		0	
Total .....		<u>3,321</u>	
Date(s) of survey .....		November, 1958 .....	
Ownership .....		Distribution system municipally owned and operated	
Source of supply .....		Water (St. Lawrence River, treated) purchased from city of Montreal	
Treatment .....	<i>See</i> Shawinigan South	<i>See</i> Montreal .....	
Storage capacity (thousand gallons) ..		<i>See</i> Montreal .....	
Consumption (average in mgd) .....		1958 0.149	
Industrial use .....		An oil refinery, now under construction, will use this supply.	
Remarks .....		* Formerly the rural municipality of St. Leonard de Port Maurice	

<sup>d</sup>Population according to the Tenth Census of Canada, 1956.  
<sup>e</sup>Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ABSTOCK</b> (Frontenac Co.)	<b>ALBANEL</b> (Lac St. Jean W. Co.)		<b>ALMA</b> (Lac St. Jean E. Co.)	
	1955	1958	1955 - 56	1960
	-	-	10,822 <sup>d</sup>	12,075 (12,000 <sup>e</sup> )
	-	-	<u>4,338*</u> estd	<u>5,580*</u> estd
	<u>1,400*</u>	-	<u>15,160</u> estd	<u>17,655</u>
	July 19, 1955 .....		July 19, 1955; September 16, 1960	
	Municipally owned and operated .....		Distribution system municipally owned and operated	
	Springs, 1 mile distant and Lac Pare, 5 miles distant		Lake St. John (Grande Decharge) treated; purchased from Isle Maligne.	
<i>See</i> St. Methode de Frontenac	No treatment; spring and lake waters are pumped to standpipe and system where they mix.		<i>See</i> Isle Maligne	
	Standpipe ..... 112			
	Underground reservoir ..... 6.5			
	No data .....		No data .....	
	No major industrial user .....		A paper mill, soft-drink bottling plant and a dairy	
	* Includes also a part of Albanel Township		* Naudville, Riverbend, St. Joseph d'Alma and Syndicat d'Aqueduc du Range 18	
<b>ARMAGH</b> (Bellechasse Co.)			<b>ARTHABASKA</b> (Arthabaska Co.)	
	<u>1958</u>		<u>1956</u>	<u>1958</u>
	800 (839 <sup>d</sup> ) (880 <sup>e</sup> )		-	-
	<u>0</u>		-	-
	<u>800</u>		<u>2,670</u>	<u>3,000</u>
	January 26, 1958 .....		January 30, 1956; November 15, 1958 .....	
	Privately owned and operated by Cie d'Aqueduc d'Armagh		Municipally owned and operated .....	
	Springs .....		Artesian well and springs in nearby mountains .....	
	No treatment; spring water is pumped to system.		No treatment; well water is pumped to system; spring water, collected in reservoir, flows by gravity to system.*	
	Reservoir ..... 30		Three reservoirs ..... 150, 900 and 2,000	
			Two emergency reservoirs ..... 100 and 250	
	<u>1958</u>		<u>1956</u>	<u>1958</u>
	0.030		0.155	0.26
	Plant capacity - 0.06			
	No major industrial user .....		Major users are two furniture manufacturing plants, a clothing factory, printing shop, a cannery and a large agricultural cooperative. Industrial use in 1956 was about 25 per cent of the total pumpage.	
	.....		* Most of the supply is from the well. ....	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>ARVIDA (Chicoutimi Co.)</b>	
	<u>1955</u>	<u>1958</u>
Municipality .....		
Population served:		
In municipality .....	12,347 (12,919 <sup>d</sup> )	13,967 <sup>e</sup>
Outside municipality .....	<u>1,100*</u>	<u>1,193*</u>
Total .....	<u>13,447</u>	<u>15,160</u>
Date(s) of survey .....	July 20, 1955; May, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	Chicoutimi River; emergency supply purchased from Jonquiere.* .....	
Treatment .....	River water flows by gravity to coagulating basins (alum, lime), settled, rapid sand-filtered (2) to clear well and pumped with chlorination (7 lb/mg) to reservoir and system. About 225 lb/mg alum and about 9 lb/mg lime are used.	
Storage capacity (thousand gallons) ..	One stone reservoir ..... 3,375 Clear well ..... 170	
Consumption (average in mgd) .....	<u>1955</u>	<u>1958</u>
	4.0 (Max. - 5.4)**	3.7 (Max. - 4.2)
	Plant capacity (1955) - 3.33	
Industrial use .....	In 1958, about 80 per cent of pumpage is used by plants engaged in production of abrasives and aluminum. In 1955, industrial use was about 90 per cent of pumpage.	
Remarks .....	* St. Jean Eudes and rural district between Jonquiere and Arvida. St. Jean Eudes uses about 3 mg per month. ** About 0.6 mgd available from Jonquiere and, in summer of 1958, some 4 mg per week were purchased regularly.	

	<b>BABEL (Saguenay Co.) (An unorganized district)</b>	<b>BAGOTVILLE (Chicoutimi Co.)</b>	
		<u>1955</u>	<u>1958</u>
Municipality .....			
Population served:			
In municipality .....		4,500 (4,822 <sup>d</sup> )	5,000 (5,100 <sup>e</sup> )
Outside municipality .....		<u>200*</u>	<u>200*</u>
Total .....		<u>4,700</u>	<u>5,200</u>
Date(s) of survey .....		July 16, 1955; October 21, 1958 .....	
Ownership .....		Municipally owned and operated .....	
Source of supply .....		Creek (Lake Gravel), 5.5 miles distant ...	
Treatment .....	See Shelter Bay*	No treatment; water held behind dam flows by gravity to system.	
Storage capacity (thousand gallons) ..		None, except the dam on creek .....	
Consumption (average in mgd) .....		<u>1955</u>	<u>1958</u>
		0.05 (estd)	0.09 (estd)
Industrial use .....		No major industrial user .....	
Remarks .....	* Shelter Bay is in the unorganized district of Babel.	* Rang St. Anicet .....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ASBESTOS (Richmond Co.)</b>		<b>AYER'S CLIFF (Stanstead Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
8,969 <sup>d</sup>	10,415 <sup>e</sup>	290 (718 <sup>d</sup> )	763 (767 <sup>e</sup> )
<u>1,000</u>	<u>1,000</u>	<u>0</u>	<u>0</u>
<u>9,969</u>	<u>11,415</u>	<u>290</u>	<u>763</u>
August 2, 1956; October 20, 1958 .....		November 15, 1956; October 17, 1958 .....	
Municipally owned and operated .....		Privately owned and operated by the Ayer's Cliff Water Co. ....	
South-west Nicolet River and springs .....		Springs .....	
In 1956, river water is pumped to spring source, then to coagulation basin (alum 300 lb/mg), pre-chlorinated (50 lb/mg), rapid sand-filtered (3) to clear well and repumped to reservoirs and system. In 1958, a fourth filter was added.		No treatment; water flows by gravity to reservoir and is then pumped to system.	
One reservoir .....	1,000	One reservoir .....	50
<u>1956</u>	<u>1958</u>	Unknown	
0.7	0.85	System capacity - 36,500 gpd	
Plant capacity (1958) - 1.8 mgd		Only user is a creamery, .....	
Main users are dairies and the asbestos mines. Industrial use was about 15-20 per cent of total pumpage in 1956, 30 per cent in 1958.			

<b>BAIE COMEAU (Saguenay Co.)</b>	<b>BAIE DE SHAWINIGAN (St. Maurice Co.)</b>	<b>BAIE ST. PAUL (Charlevoix W. Co.)</b>
<u>1955</u>	<u>1956</u>	<u>1958</u>
4,300 (4,332 <sup>d</sup> ) (6,637 <sup>e</sup> )	1,137 <sup>d</sup>	1,150 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>
<u>4,300</u>	<u>1,137</u>	<u>1,150</u>
July 13, 1955 .....	November 6, 1958 .....	July 22, 1955 .....
Owned by Quebec North Shore Paper Co. up to mill; distribution system is municipally owned.	Municipally owned and operated .....	Municipally owned and operated .....
Lac La Chasse (Lake Comeau).....	Lac la Peche, Shawinigan River and Lac des Piles; purchased from city of Shawinigan.	Creek, 1.5 miles distant* .....
Water from Lac La Chasse, 1.5 miles distant, is pumped into Lake Comeau; water then flows by gravity with chlorination (22 lb/mg) to system.	See Shawinigan	No treatment; water flows by gravity to system.**
None, except Lake Comeau (1.8 square miles in area)	None .....	Two concrete reservoirs .....
<u>1955</u>	<u>1958 - 59</u>	<u>1955</u>
Public - 0.7 (Max.-0.79)	0.04	0.15
Industrial - 10.4		
Total - 11.1		
The Quebec North Shore Paper Co. uses about 94 per cent of total consumption .....	No data .....	Major users are two tanneries, C.N. Rys., a creamery and a cold storage plant.
		* Another creek, called Factory Creek, is available for fire protection.
		** It was expected to chlorinate the water supply in the future.

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>BATISCAN*</b> (Champlain Co.)		<b>BEACONSFIELD</b> (Ile de Montreal)
	<u>1955</u>	<u>1958</u>	<u>1959</u>
Population served: ...			
In municipality .....	600 (1,208 <sup>d</sup> )	600 (estd) (1,237 <sup>e</sup> )	5,000 (5,496 <sup>d</sup> ) (7,000 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>600</u>	<u>600 (estd)</u>	<u>5,000 approx.*</u>
Date(s) of survey .....	July 27, 1955; October 3, 1958 .....		January 20, 1959 .....
Ownership .....	Privately owned and operated by Cooperatif d'Aqueduc de Batiscan		Distribution system municipally owned and operated
Source of supply .....	Artesian wells, 2 miles distant .....		Lake St. Louis (St. Lawrence River), purchased from Pointe Claire
Treatment .....	No treatment; water flows by gravity and is pumped to reservoir and system.		<i>See</i> Pointe Claire
Storage capacity (thousand gallons) ..	In 1955, two wooden tanks .. 15 and 20 In 1958, one reservoir .. 25		<i>See</i> Pointe Claire .....
Consumption (average in mgd) .....	<u>1955</u>	<u>1958</u>	No data .....
	No data	0.08	
	Capacity of system - 0.15 - 0.20		
Industrial use .....	In 1958, about 25 per cent of the total consumption is used by shipping and minor industries.		No data .....
Remarks .....	* In 1957 the name was changed from Batiscan to St. Francois Xavier de Batiscan.		* Information obtained in August, 1960 stated that approximately 80 per cent of the town's population is served by the system.

Municipality .....	<b>BEAUHARNOIS</b> (Beauharnois Co.)	
	<u>1956</u>	<u>1958</u>
Population served:		
In municipality .....	- (6,774 <sup>d</sup> )	7,900 (8,209 <sup>e</sup> )
Outside municipality .....	<u>-</u>	<u>194</u>
Total .....	<u>7,000</u>	<u>8,094</u>
Date(s) of survey .....	August 21, 1956; August, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	St. Lawrence River via Beauharnois Canal .....	
Treatment .....	In 1956, river water from 1,400 ft out is pumped to two coagulating basins (alum 125 lb/mg), settled and rapid sand-filtered (2) to clear well. It is then pumped with chlorination (5 lb/mg) to standpipe and system. In 1958, additional filters (6) were available.	
Storage capacity (thousand gallons) ..	Standpipe .....	
		250
	Two clear wells (1958) .....	
		110 each
Consumption (average in mgd) .....	<u>1956</u>	<u>1958-59</u>
	1.0	1.2
	Plant capacity - 1.0 mgd	
		4.0 mgd
Industrial use .....	Industrial use is small, mainly used by electrometallurgical, furniture, and lumber firms.	
Remarks .....	.....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>BEAUCEVILLE (Beauce Co.)</b>		<b>BEAUCEVILLE EAST (Beauce Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
1,260 (1,459 <sup>d</sup> )	1,314 <sup>e</sup>	1,740 <sup>d</sup>	1,700 <sup>e</sup>
<u>1,740*</u>	<u>1,700*</u>	<u>0</u>	<u>0</u>
<u>3,000</u>	<u>3,014</u>	<u>1,740</u>	<u>1,700</u>
July 25, 1956; February 28, 1959 .....		July 25, 1956; February 28, 1959 .....	
Municipally owned and operated .....		Municipally owned and operated .....	
Lake Fortin .....		Lake Fortin, purchased from Beauceville	
No treatment; water flows by gravity to reservoir, 7 miles from town, thence by gravity to system.		<i>See</i> Beauceville	
One reservoir .....	150	One reservoir .....	200
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
0.14**	0.15** (estd)	0.19	Max. - 0.23
None .....		Major users are suppliers of building materials, printing forms, etc.	
* Beauceville East		.....	
** Excluding Beauceville East		.....	

<b>BEAULAC (Wolfe Co.)</b>		<b>BEAUPORT (Quebec Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
- (497 <sup>d</sup> )	462 <sup>e</sup>	6,700 (6,735 <sup>d</sup> )	8,300 <sup>e</sup>
-	<u>6*</u>	<u>500*</u>	<u>600*</u>
<u>550*</u>	<u>468</u>	<u>7,200</u>	<u>8,900</u>
August 23, 1956; October 31, 1958 .....		July 23, 1955; October 20, 1958 .....	
Municipally owned and operated .....		Municipally owned and operated .....	
Aylmer Lake .....		Springs, 4 miles distant and Montmorency River, 3 miles distant .....	
Water is pumped with chlorination from lake to reservoir, from which it flows by gravity to the system.		Spring water supplies part of the system by gravity. River water is pumped with chlorination (10 lb/mg) to the remainder of the system. There is no mixing of the two supplies.	
One reservoir .....	150	Two reservoirs .....	500 each
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
No data	0.025	0.32 from river	0.38 from river
		No data on spring water use	
The Garthby Manufacturing Co. ....		None .....	
* Includes two homes in Garthby Township		*Beauport West .....	



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>BEAUPORT WEST</b> (Quebec Co.)		<b>BEAUPRE</b> (Montmorency No. 1 Co.)	
	<u>1955</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	500 (1,054 <sup>d</sup> )	600 (1,112 <sup>e</sup> )	2,300 (2,381 <sup>d</sup> )	2,406 (2,419 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>500</u>	<u>600</u>	<u>2,300</u>	<u>2,406</u>
Date(s) of survey .....	July 23, 1955; October 20, 1958 .....		July 22, 1955; October 20, 1958 .....	
Ownership .....	.....		Municipally owned and operated .....	
Source of supply .....	Montmorency River from Beauport .....		Springs, 1.5 miles distant .....	
Treatment .....	See Beauport		No treatment; spring water flows by gravity to concrete reservoir and system.	
Storage capacity (thousand gallons) ..	.....		One open reservoir ..... 3,000 One underground reservoir (concrete) 200	
Consumption (average in mgd) .....	.....		<u>1955</u>	<u>1958</u>
	.....		0.60	0.65
Industrial use .....	.....		A distillery uses about 27 per cent of total consumption during its 7 month per year operation. A paper plant has its own supply from the Ste. Anne River.	
Remarks .....	.....		.....	
Municipality .....	<b>BELOEIL</b> (Vercheres Co.)			
	<u>1956</u>	<u>1958</u>	<u>1960</u>	
Population served:				
In municipality .....	3,966 <sup>d</sup>	4,250 <sup>e</sup>	5,550	
Outside municipality .....	<u>1,370*</u>	<u>1,360</u>	<u>500**</u>	
Total .....	<u>5,336</u>	<u>5,610</u>	<u>6,000</u>	
Date(s) of survey .....	August 11, 1956; August, 1958; August 1, 1960 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Artesian well, 80 feet deep***, and Lake Hertel .....			
Treatment .....	No treatment; lake water flows by gravity to reservoir, about 1 mile distant, then by gravity to system. Well is pumped direct to system.			
Storage capacity (thousand gallons) ..	One open concrete reservoir ..... 175			
Consumption (average in mgd) .....	<u>1956</u>	<u>1960</u>		
	0.64	0.60	Capacity of system - 1.0	
Industrial use .....	In 1956, 1958 about 12 - 13 per cent of total consumption used by dairies, slaughter houses, and furniture manufacturer. In 1960, no major industrial user.			
Remarks .....	* In Mt. St. Hilaire, McMasterville and St. Mathieu de Beloeil parish ** Mt. St. Hilaire and St. Mathieu de Beloeil parish only *** Well capacity - 0.16 mgd			

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>BEAUSEJOUR*</b> (Maskinonge Co.)	<b>BEDFORD</b> (Missisquoi Co.)	<b>BEEBE PLAIN</b> (Stanstead Co.)
	1956	1956
	2,300 (2,272 <sup>d</sup> ) (2,605 <sup>e</sup> )	1,350 (1,363 <sup>d</sup> ) (1,350 <sup>e</sup> )
	<u>0</u>	<u>0</u>
	2,300	1,350
	August 16, 1956 .....	August 7, 1956 .....
	Municipally owned and operated .....	Municipally owned and operated .....
	Pike River (Riviere aux Brochets) .....	Springs in nearby State of Vermont, U.S.A.
See Louiseville	River water is pumped from 15 feet depth with chlorination (21 lb/mg) to standpipe and system.	No treatment; spring water flows by gravity from dam reservoirs to system. A pumped emergency supply, from the Saint John River is chlorinated when used.
	Standpipe ..... 100	One concrete reservoir ..... 25 Two reservoirs (dams) ..... 500 each
	1956	Unknown
	0.36 (Max. - 0.72)	None
	Major industries use about 25 to 30 per cent of total pumpage, and include several machine parts and tool plants, and chemicals, foods, and hosiery manufacturers.	
* Not a municipality, but a part of Louiseville		
<b>BERGERVILLE</b> (Quebec Co.)	<b>BERTHIERVILLE</b> (Berthier Co.)	
	1955	1960
	- (3,504 <sup>d</sup> ) (3,316 <sup>e</sup> )	3,500
	<u>No data*</u>	<u>No data*</u>
	4,000 estd	<u>Not known</u>
	June 7, 1955; November 25, 1960 .....	
	Municipally owned and operated .....	
	St. Lawrence River, nearby** .....	
See Sillery	In 1955, river water is pumped to a settling tank, alum-coagulated (325 lb/mg), rapid sand-filtered (2) to clear well and then pumped with chlorination (14 lb/mg) to standpipe and system. In 1960, a new plant in operation with alum-coagulation (280 lb/mg), prechlorination, settling (2 basins) rapid sand-filtration, post-chlorination, fluoridation (17 lb/mg) and pH correction with lime (83 lb/day). Total chlorine usage (17 lb/mg).	
	In 1955 - clear well ..... 44	In 1960 - underground reservoir ..205
	standpipe ..... 95	
	1955	1960
	0.35 (Max. - 0.40)	0.30 (Max. - 0.40)
	Plant capacity - 0.30	1.0
	In 1960, a vegetable canning plant, two knitting mills, a lumber firm, and a plastic manufacturer and a candy manufacturer	
	* A part of parish of Ste. Genevieve de Berthier	
	** Apparently a mixture of river waters, namely Bayonne River - See Station 45, page 30.	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>BIC (Rimouski Co.)</b>		<b>BLACK LAKE (Megantic Co.)</b>	
	<u>1956</u>		<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	1,100 (1,142 <sup>d</sup> ) (1,180 <sup>e</sup> )		- (3,685 <sup>d</sup> )	4,600 (4,650 <sup>e</sup> )
Outside municipality .....	<u>0</u>		<u>- *</u>	<u>12*</u>
	<u>1,100</u>		<u>4,300</u>	<u>4,612</u>
Date(s) of survey .....	July 7, 1955 .....		July 27, 1956; October 27, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Springs, ½ mile distant .....		Caribou and Duck Lakes, the latter 1½ miles distant.	
Treatment .....	No treatment; water flows by gravity from reservoir to system. Water from the Bic River is pumped for fire protection only.		No treatment; Caribou Lake water is pumped 4¾ miles to Duck Lake from whence it flows by gravity to system.	
Storage capacity (thousand gallons) .	Open stone reservoir .....		None, except Duck Lake .....	
Consumption (average in mgd) .....	<u>1955 - 56</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
	No data	0.02 estd	0.25 estd	No data
Industrial use .....	None .....		Industrial use is small; major users are a creamery and an asbestos mining company.	
Remarks .....	.....		* Includes some services in surrounding rural area, in municipality of Ireland	

Municipality .....	<b>BOUCHERVILLE (Chambly Co.)</b>	
	<u>1956</u>	<u>1958</u>
Population served:		
In municipality .....	3,911 <sup>d</sup>	4,860 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>
Total .....	<u>3,911</u>	<u>4,860</u>
Date(s) of survey .....	August 14, 1956; October 21, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	In 1956, 90 per cent supplied from Jacques Cartier (Chambly Co.) and two artesian wells, 70 feet deep. In 1958, supplied entirely from Jacques Cartier system. (St. Lawrence River).	
Treatment .....	In 1956, no treatment; water is pumped from wells direct to standpipe and system, mixing with supply from Jacques Cartier. In 1958 supplied from Jacques Cartier with additional pumping available.	
Storage capacity (thousand gallons) .	1956, standpipe .....	
	1958, none	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>
	0.26	0.3
Industrial use .....	A canning factory which in 1956 used about 20 per cent of the total consumption during two months operation. In 1958, cannery was operating 6 months each year.	
Remarks .....	.....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>BOISCHATTEL</b> (Montmorency No. 1 Co.)	<b>BOLDUC</b> (Beauce Co.)	<b>BOUCARD</b> (Terrebonne Co.)
<u>1955</u> 1,316 (1,461 <sup>d</sup> ) (1,490 <sup>e</sup> ) 344** <u>1,660</u>	<u>1958</u> 1,800 (2,494 <sup>d</sup> ) (2,510 <sup>e</sup> ) 0 <u>1,800</u>	
July 23, 1955 .....	January 25, 1958 .....	
Municipally owned and operated .....	Privately owned and operated by eight cooperative water supply associations	
Laval River .....	Artesian wells .....	
Water from dam on river, ½ mile distant, is pumped to system with chlorination only for about one month each year.	No treatment; some waters supplied by gravity from reservoirs and some pumped.	An army installation. <i>See</i> Water Survey Report No. 12
One concrete reservoir .....500	Reservoirs ..... 35	
<u>1955</u> 0.4 estd	Unknown Total capacity available - 30,000 gpd	
None .....	No major industrial user .....	
* Also known as St. Jean de Boischatel	* Also known as St. Martin .....	
** In L'Ange Gardien		
<b>BROMPTONVILLE</b> (Richmond Co.)	<b>BURY</b> (Compton Co.)	
<u>1956</u> 2,316 <sup>d</sup> 0 <u>2,316</u>	<u>1958</u> 2,476 <sup>e</sup> 0 <u>2,476</u>	<u>1956</u> 700 (1,406 <sup>d</sup> ) 0 <u>700</u>
<u>1958</u> 0.375	<u>1958</u> 0.30 estd	<u>1958</u> 700 (1,400 <sup>e</sup> ) 0 <u>700</u>
August 3, 1956; October 21, 1958 .....	August 3, 1956; October 21, 1958 .....	
Municipally owned and operated .....	Municipally owned and operated .....	
Montjoie Lake, 9½ miles distant .....	Springs .....	
Water flows by gravity through four slow sand-filters to reservoir and then to system. Filters are cleaned by backwashing twice yearly.	No treatment; water is pumped to reservoir and system.	
Reservoir ..... 350	Concrete reservoir ..... 72	
	No data .....	
A pulp and paper plant, a light engineering plant and a knitting mill, using in 1956 and 1958, 50 and 20 per cent of total consumption, respectively.	Wood working and milling companies, none of which are major users of water.	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>CANDIAC* (Laprairie Co.)</b>		<b>CAP CHAT (Gaspé W. Co.)</b>	
	1959		1955	
Population served:				
In municipality .....	180 (400 <sup>e</sup> )		1,750 (1,954 <sup>d</sup> ) (1,950 <sup>e</sup> )	
Outside municipality .....	0		0*	
Total .....	180**		1,750	
Date(s) of survey .....	February 27, 1958 .....		July 12, 1955 .....	
Ownership .....	Owned and operated by Candiac Development Corporation.		Municipally owned and operated .....	
Source of supply .....	St. Lawrence River .....		Artesian well, one mile distant .....	
Treatment .....	River water is alum-coagulated, rapid sand-filtered and pumped with chlorination to system.		No treatment; water is pumped to reservoir and system.	
Storage capacity (thousand gallons) .	One reservoir .....	138	One concrete reservoir .....	250
Consumption (average in mgd) .....	1959		1955	
	0.84 ( Max. - 0.11)		0.125	
	Plant capacity - 1.66 mgd			
Industrial use .....	At time of survey, construction work in progress on industrial plants required about 50 per cent of the total pumpage.		A lumber company uses the Cap Chat River	
Remarks .....	* A new industrial town under construction. ** 45 served by piped system, 135 served by truck; total population estimated at 500.		* It is planned to supply the parish of St. Norbert du Cap Chat.	
<b>Municipality .....</b>	<b>CAP SANTE (Portneuf Co.)</b>		<b>CARLETON SUR MER (Bonaventure Co.)</b>	
	1955	1958	1955	1958
Population served:				
In municipality .....	800 (1,680 <sup>d</sup> )	800 (1,712 <sup>e</sup> )	1,110 (1,150 <sup>d</sup> )	1,000 (1,170 <sup>e</sup> )
Outside municipality .....	0	0	0	0
Total .....	800	800 estd	1,110	1,000
Date(s) of survey .....	July 27, 1955; November 4, 1958 .....		July 9, 1955; November 18, 1958 .....	
Ownership .....	Municipally owned and operated .....		In 1955, privately owned and operated by M.E. Allard. In 1958, owned and operated by L'Aqueduc de Carleton Enrg.	
Source of supply .....	Artesian wells (150 ft deep) 2 miles distant and springs, 1½ miles distant		Spring-fed creek, 1.5 miles distant .....	
Treatment .....	No treatment; waters are pumped to system.		No treatment; water flows by gravity from behind dam on creek to system.	
Storage capacity (thousand gallons)	One concrete reservoir .....		Dam on creek .....	
	150		1,500	
Consumption (average in mgd) .....	1955 - 58		1956 - 58	
	0.065		0.5 estd	
Industrial use .....	None .....		A canning plant and a cold storage plant. In 1958 a tannery was also operating.	
Remarks .....	.....		.....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>CAP DE LA MADELEINE</b> (Champlain Co.)	<b>CAP ROUGE*</b> (Quebec Co.)	<b>CAP ST. IGNACE</b> (Montmagny Co.)																
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">23,000 (22,943<sup>d</sup>)</td> <td align="center">23,700<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">23,000</td> <td align="center">23,700</td> </tr> </table>	<u>1955</u>	<u>1958</u>	23,000 (22,943 <sup>d</sup> )	23,700 <sup>e</sup>	<u>0</u>	<u>0</u>	23,000	23,700	<p align="center"><i>See</i> Ste. Foy</p>	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,200 (2,661<sup>d</sup>)</td> <td align="center">2,475<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">1,200*</td> <td align="center">2,475</td> </tr> </table>	<u>1955</u>	<u>1958</u>	1,200 (2,661 <sup>d</sup> )	2,475 <sup>e</sup>	<u>0</u>	<u>0</u>	1,200*	2,475
<u>1955</u>	<u>1958</u>																	
23,000 (22,943 <sup>d</sup> )	23,700 <sup>e</sup>																	
<u>0</u>	<u>0</u>																	
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<u>0</u>	<u>0</u>																	
1,200*	2,475																	
<p>June 9, 1955; November 12, 1958 ..... Municipally owned and operated .....</p>		<p>July 6, 1955; October 31, 1958 ..... Municipally owned and operated .....</p>																
<p>Wells and spring; in 1955, 6 wells (60 ft deep) and spring; in 1958, 8 wells (60 ft deep and spring.</p>		<p>Springs, 4 miles distant .....</p>																
<p>Well water is pumped to system; spring water from dam at spring is pumped with chlorination (60 lb/mg) to reservoirs and mixed with well water.</p>		<p>No treatment; water flows from springs (artificial lake) by gravity to system.</p>																
<p>In 1955, two concrete reservoirs ..... 500 &amp; 700 In 1958, three concrete reservoirs 180, 500 &amp; 1,000</p>		<p>Artificial lake ..... 1,250</p>																
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">2.5 (Max. - 3.5)</td> <td align="center">3.0 (Max. - 4.0)</td> </tr> </table>	<u>1955</u>	<u>1958</u>	2.5 (Max. - 3.5)	3.0 (Max. - 4.0)		<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">0.06 estd</td> <td align="center">No data</td> </tr> </table>	<u>1955</u>	<u>1958</u>	0.06 estd	No data								
<u>1955</u>	<u>1958</u>																	
2.5 (Max. - 3.5)	3.0 (Max. - 4.0)																	
<u>1955</u>	<u>1958</u>																	
0.06 estd	No data																	
<p>In 1955, 60 per cent spring water; in 1958, 50 per cent spring water.</p>																		
<p>Paper companies and refractories, abrasive and clothing manufacturers, using (in 1955) about 30 per cent of total pumpage.</p>		<p>A linen goods industry and a creamery ...</p>																
<p>.....</p>	<p>* Also known as St. Felix du Cap Rouge.</p>																	

<b>CAUGHNAWAGA (INDIAN RESERVE)</b> (Laprairie Co.)	<b>CHAMBLY BASSIN</b> (Chambly Co.)													
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> <td align="center"><u>1960</u></td> </tr> <tr> <td align="center">500 (3,873<sup>d</sup>)</td> <td align="center">500 (5,000)</td> <td align="center">1,000 (4,900)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">500</td> <td align="center">500</td> <td align="center">1,000</td> </tr> </table>	<u>1956</u>	<u>1958</u>	<u>1960</u>	500 (3,873 <sup>d</sup> )	500 (5,000)	1,000 (4,900)	<u>0</u>	<u>0</u>	<u>0</u>	500	500	1,000	<p align="center"><i>See</i> Chambly</p>	
<u>1956</u>	<u>1958</u>	<u>1960</u>												
500 (3,873 <sup>d</sup> )	500 (5,000)	1,000 (4,900)												
<u>0</u>	<u>0</u>	<u>0</u>												
500	500	1,000												
<p>August 17, 1956; November 5, 1958; June 14, 1960 ..... Owned and operated by Department of Citizenship and Immigration, Ottawa .....</p>														
<p>St. Lawrence River .....</p>														
<p>Water is pumped with chlorination (16 lb/day, 1956 and 1958; 8 lb/day in 1960) at pneumatic tank, to system.</p>														
<p>No reservoirs; capacity of a hydro-pneumatic tank ..... 3</p>														
<table border="0"> <tr> <td align="center"><u>1956 - 58</u></td> <td align="center"><u>1960</u></td> </tr> <tr> <td align="center">7,000 gpd</td> <td align="center">10,000 gpd</td> </tr> </table>	<u>1956 - 58</u>	<u>1960</u>	7,000 gpd	10,000 gpd	<p>Capacity of system - 0.100</p>									
<u>1956 - 58</u>	<u>1960</u>													
7,000 gpd	10,000 gpd													
<p>None .....</p>														
<p>In 1956 - 58 only the federal buildings were supplied with water by the system. In 1958, water mains had been extended and a sewage disposal system installed. By June 1960, nineteen houses were supplied with water from the system.</p>														

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	CHAMBLY* (Chambly Co.)		
	1956	1958	1960
Population served:			
In municipality .....	2,800 (2,817 <sup>d</sup> )	3,200 (3,451 <sup>e</sup> )	-
Outside municipality .....	1,972 (1,885 <sup>d</sup> )**	1,923 (2,322 <sup>e</sup> )**	- †
Total .....	4,772 (4,702 <sup>d</sup> )	5,123 (5,773 <sup>e</sup> )	No data
Date(s) of survey .....	August 15, 1956; April 14, 1959; December 3, 1960 .....		
Ownership .....	In 1956-58 privately owned and operated by Bennett Shoe Supply Co., in Fort Chambly who charged the municipalities for the water used. Since September 1960, municipally owned and operated by the town of Chambly.		
Source of supply .....	Richelieu River .....		
Treatment .....	Up to September, 1960, river water was pumped with chlorination to standpipe and system. Since September 1960, a new plant pre-chlorinates, alum-coagulates (300 lb/mg), rapid sand-filters, lime-treats (150 lb/mg) and post-chlorinates the river water prior to pumping to the system. Activated carbon is also added when required for taste control.		
Storage capacity (thousand gallons) ..	1956 - 1958, one standpipe (privately owned) .....		No data
	1960	one concrete reservoir .....	400
Consumption (average in mgd) .....	1956	1958	1960
	1.11†	1.2††	0.4 (Max. - 0.5)
	Capacity of system in 1960 - 1.5 mgd		
Industrial use .....	Up to 1960 about 80 per cent of pumpage was used by the owning company, clothing manufacturers and other smaller industries.		
Remarks .....	* Also known as Chambly Bassin ** Fort Chambly † Includes Fort Chambly †† Includes Fort Chambly, Marieville, Richelieu and St. Mathias		

Municipality .....	CHARLEMAGNE (L'Assomption Co.)		CHARLESBOURG (Quebec Co.)
	1958	1960	1955
Population served:			
In municipality .....	2,780 (2,428 <sup>d</sup> ) (2,675 <sup>e</sup> )	3,365	7,500 (8,202 <sup>d</sup> ) (10,500 <sup>e</sup> )
Outside municipality .....	0	0	2,079*
Total .....	2,780	3,365	9,579
Date(s) of survey .....	October 22, 1958; September 20, 1960 ..		July 25, 1955 .....
Ownership .....	Municipally owned distribution system		Municipally owned and operated .....
Source of supply .....	L'Assomption River supplied by St. Paul l'Ermite		Springs, 2 miles distant .....
Treatment .....	See St. Paul l'Ermite .....		No treatment; water flows by gravity from reservoirs to system.
Storage capacity (thousand gallons) ..	One tank .....		Two concrete reservoirs ... 200 and 300
Consumption (average in mgd) .....	1957 - 58	1960	1955 - 56
	0.123	0.125 (Max. - 0.143)	0.65
Industrial use .....	Major users are a tannery and a paint manufacturer.		Greenhouses .....
Remarks .....			* Supplied to Orsainville .....

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>CHAMBORD</b> (Lac St. Jean W. Co.)	<b>CHAMPLAIN</b> (Champlain Co.)	<b>CHANDIER</b> (Gaspé E. Co.)
<u>1955</u>	<u>1955</u>	<u>1955</u> <u>1960</u>
1,100 (1,091 <sup>d</sup> ) (1,130 <sup>e</sup> )	710 <sup>d</sup> (708 <sup>e</sup> )	3,000 (3,338 <sup>d</sup> )      3,500 (3,630 <sup>e</sup> )
<u>0</u>	<u>-</u>	<u>0</u> <u>0</u>
<u>1,100</u>	<u>900*</u>	<u>3,000</u> <u>3,500</u>
July 18, 1955 .....	July 27, 1955 .....	July 9, 1955; August 2, 1960 .....
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
Belly Lake, 3 miles distant .....	Springs, 1¼ miles distant .....	Valpy Lake, 3 miles distant.* .....
No treatment; water flows from dam in lake by gravity to reservoir and system.	No treatment; water from reservoir is pumped to standpipe and system.	No treatment; in 1958 water flows by gravity to system from an artificial lake (Elbow Flat Lake) 1 mile below and joined to Valpy Lake
One concrete underground reservoir ..... No data	One concrete reservoir ..... 250 One elevated tank ..... 25	None, except Elbow Flat Lake .....
Unknown .....	<u>1955</u>	<u>1956</u> <u>1958</u>
	0.1	0.58      0.7
C. N. Rys. ....	None .....	None; A pulp mill uses process water from the Grand Pabos River and town water for domestic purposes.
	* Presumably including some services in the parish of La Visitation de Champlain.	* In 1960, a pumped chlorinated emergency supply is available from the North River.
<b>CHARNY</b> (Levis Co.)	<b>CHATEAU D'EAU</b> (Quebec Co.)	<b>CHATEAUGUAY</b> (Chateauguy Co.)
<u>1956</u> <u>1958</u>	<u>1958</u>	<u>1959</u>
3,280 (3,639 <sup>d</sup> )      3,775 (3,788 <sup>e</sup> )	963 <sup>e</sup> (918 <sup>d</sup> )	3,800 (3,265 <sup>d</sup> ) (4,800 <sup>e</sup> )
<u>0</u> <u>0</u>	<u>0</u>	<u>0*</u>
<u>3,280</u> <u>3,775</u>	<u>963</u>	<u>3,800</u>
July 24, 1956; September 15, 1958 .....	December 7, 1958 .....	April 28, 1959 .....
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
Chaudiere River .....	Springs and creek, purchased from Loretteville	Lake St. Louis (St. Lawrence River) .....
Water is pumped with chlorination (7 lb/mg) to standpipe and system.	See Loretteville .....	Water from 1,835 ft out in lake is pumped with chlorination (25 lb/mg) to tank and system.
One standpipe (wood) ..... 90	.....	One elevated tank ..... 100
<u>1956</u> <u>1958</u>		<u>1958 - 59</u>
0.36 (Max. -0.43)      0.4 estd		0.14
		Plant capacity - 0.72
C.N. Rys., lumber mills, metal products, clothing and construction materials manufacturers .....	.....	None .....
	* System constructed in 1956 .....	* It is planned in the future to supply nearby towns, including Chateauguy Heights and possibly a filtration plant will be built.



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>CHATEAU RICHER</b> (Montmorency No. 1 Co.)		<b>CHAUDIERE BASSIN*</b> (Levis Co.)	
	1955	1958		
Population served:				
In municipality .....	1,800 (2,947 <sup>d</sup> )	2,200 (3,010 <sup>d</sup> )		
Outside municipality .....	0	0		
Total .....	<u>1,800</u>	<u>2,200</u>		
Date(s) of survey .....	July 23, 1955; October 31, 1958 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Springs, 2 miles from river and village and Verreault River, 2 miles from village			
Treatment .....	No treatment; river water from behind dam and spring water from reservoirs flow by gravity to system, mixing in the system.		<i>See</i> St. Romuald d'Etchemin	
Storage capacity (thousand gallons) ..	Dam ..... 300 Two underground concrete reservoirs ..... 35 & 100			
Consumption (average in mgd) .....	<u>1955</u>	<u>1958</u>		
	0.075	0.15		
Industrial use .....	None .....			
Remarks .....	* This is not a municipality but a part of St. Romuald d'Etchemin parish			
<b>Municipality .....</b>	<b>CHICOUTIMI NORTH</b> (Chicoutimi Co.)		<b>CLERMONT</b> (Charlevoix E. Co.)	
	<u>1955</u>		<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	5,800 (6,446 <sup>d</sup> ) (8,500 <sup>e</sup> )		2,400 (2,628 <sup>d</sup> )	2,800 <sup>e</sup>
Outside municipality .....	400*		0	0
Total .....	<u>6,200</u>		<u>2,400</u>	<u>2,800</u>
Date(s) of survey .....	July 15, 1955 .....		July 21, 1955; November 3, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Springs, 6 miles distant .....		Springs and creek; 70 per cent served by creek water	
Treatment .....	No treatment; springs, collected behind dam, flow by gravity to system.		No treatment; spring water flows to reservoir and by gravity to system; creek water flows from dam on creek, 1 mile distant, by gravity to system. Spring and creek waters are not mixed.	
Storage capacity (thousand gallons) ..	None .....		One concrete reservoir ..... 61	
Consumption (average in mgd) .....	No data .....		Unknown .....	
Industrial use .....	None .....		None; a small paper mill has its own supply.	
Remarks .....	* Tremblay township .....		.....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>CHESTERVILLE*</b> (Arthabaska Co.)		<b>CHICOUTIMI</b> (Chicoutimi Co.)	
<u>1956</u>		<u>1955</u>	<u>1958</u>
50 (270 <sup>d</sup> ) (271 <sup>e</sup> )		24,443 (24,878 <sup>d</sup> )	28,112 <sup>e</sup>
<u>0</u>		<u>1,600*</u>	<u>3,700*</u>
<u>50</u>		<u>26,043</u>	<u>31,812</u>
August 23, 1956 .....	Privately owned and operated by Georges Cantin	July 15, 1955; November 19, 1958 .....	Municipally owned and operated .....
Spring and well .....		Chicoutimi River, 3 miles distant .....	
No treatment; waters flow by gravity and are pumped to reservoir and system.		In 1955 and 1958 water is pumped, treated with alum (200-240 lb/mg) and lime (93-130 lb/mg), settled in basins (427,000 gal) and rapid sand-filtered (3) to clear well; it is then pumped with chlorination (5-6 lb/mg) to system.**	
One reservoir .....	No data	Clear well .....	230
No data .....		<u>1955</u>	<u>1958</u>
		2.7 (Max. - 3.9)	3.1 (Max. - 3.4)
		Plant capacity - 3 mgd	
None .....		C.N. Rys. and dairies, using about 33 per cent of total pumpage	
* Also known as St. Paul de Chester		* Riviere du Moulin - 1,200 in 1955 St. Ignace - 400 in 1955	
		** In 1958, plant extension to capacity of 3.8 mgd was being considered	

<b>COATICOOK</b> (Stanstead Co.)		<b>COLERAINE</b> (Megantic Co.)	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
6,492 <sup>d</sup>	6,853 <sup>e</sup>	1,000 (1,715 <sup>d</sup> )	1,200 (1,734 <sup>e</sup> )
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>6,492</u>	<u>6,853</u>	<u>1,000</u>	<u>1,200</u>
August 7, 1956; December 18, 1958 .....	Municipally owned and operated .....	October 15, 1956; November 14, 1958 ...	Municipally owned and operated .....
Artesian well and spring; the well is the main source .....		East Lake .....	
No treatment; well water is pumped to small reservoir and then to large reservoir which is also fed by the spring. Water then flows by gravity from this reservoir to system.		No treatment; water flows by gravity with supplementary pumping to reservoir and system.**	
Concrete covered reservoir .....	2.5	One reservoir .....	100
<u>1956</u>	<u>1958</u>	Unknown	
0.50	0.65	Capacity of system - 0.20	
Main users are artificial silk, linen fire hose and clothing manufacturers and a wood products plant, using in 1956 about 50 per cent of the total consumption.		None .....	
		* Also known as St. Joseph de Coleraine	
		** Distribution system was enlarged in 1957-1958	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>CONTRECOEUR (Vercheres Co.)</b>	
	<u>1956</u>	
Population served:		
In municipality .....	1,650	(1,662 <sup>d</sup> ) (1,779 <sup>e</sup> )
Outside municipality .....	<u>0</u>	
Total .....	<u>1,650</u>	
Date(s) of survey .....	August 13, 1956 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	St. Lawrence River .....	
Treatment .....	Water is pumped from 300 ft out in river with chlorination (59 lb/mg) to system. ...	
Storage capacity (thousand gallons) ..	None .....	
Consumption (average in mgd) .....	<u>1956</u>	
	0.10	
Industrial use .....	Shoe and furniture manufacturing plants .....	
Remarks .....	.....	
Municipality .....	<b>COTEAU STATION (Soulanges Co.)</b>	<b>COTE ST. LUC (Ile de Montreal)</b>
		<u>1958</u>
Population served:		
In municipality .....		8,000
Outside municipality .....		<u>0</u>
Total .....		<u>8,000</u>
Date(s) of survey .....		November 1958 .....
Ownership .....		Owned and operated by city of Montreal
Source of supply .....		St. Lawrence River, treated .....
Treatment .....	<i>See</i> La Station du Coteau and Coteau Landing	<i>See</i> Montreal
Storage capacity (thousand gallons) ..		<i>See</i> Montreal .....
Consumption (average in mgd) .....		<u>1958</u> 0.864
Industrial use .....		None .....
Remarks .....		.....

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>COOKSHIRE (Compton Co.)</b>		<b>COTEAU LANDING (Soulanges Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1958</u>	
- (1,315 <sup>d</sup> )	- (1,345 <sup>e</sup> )	563* (551 <sup>d</sup> )	
-	-	984**	
<u>1,490*</u>	<u>1,500*</u>	<u>1,547</u>	
August 3, 1956; November 6, 1958 .....		October 7, 1958 .....	
Municipally owned and operated .....		Municipally owned and operated .....	
Two wells and springs, an emergency supply was available in 1958 .....		Lake St. Francis (St. Lawrence River)	
Springs, collected in a reservoir, 6 miles distant, flow by gravity to the concrete reservoir and system. Two wells are pumped to same concrete reservoir and thence by gravity to system. Chlorination is carried out at time of low water.		Water is pumped with chlorination to system.	
Earth reservoir .....	5,000	None .....	
Concrete reservoir .....	300		
<u>1956</u>	<u>1958</u>	No data	
0.10	0.2 estd	Capacity of system - 0.43 mgd	
In 1956 main users are lumber and silverware manufacturing; in 1958 the manufacture of plastic uses about 0.1 mgd.		None .....	
* Presumably including some services in surrounding Eaton Township		* Increases to 1,500 in summer	
		** Coteau Station	

<b>COURCELLES (Frontenac Co.)</b>	<b>COURVILLE (Quebec Co.)</b>		<b>COWANSVILLE (Missisquoi Co.)</b>	
<u>1958</u>	<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
780 (1,390 <sup>d</sup> ) (1,468 <sup>e</sup> )	3,800 (3,772)	4,268 (4,055 <sup>e</sup> )	- (5,242 <sup>d</sup> )	5,650 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>	-	<u>1,400</u>
<u>780</u>	<u>3,800</u>	<u>4,268</u>	<u>6,000 estd</u>	<u>7,050</u>
January 22, 1958 .....	July 23, 1955; November, 1958 .....		August 8, 1956; November 4, 1958 ....	
Privately owned and operated by Alberic Begin	Municipally owned and operated .....		Municipally owned and operated .....	
Springs ....	Springs near Ste. Therese, 5 miles distant		Prome Pond (Lake Tetreault), 5½ miles distant	
No treatment; water flows by gravity to system	No treatment; springs feed artificial Lac Monette, reservoir and system by gravity. Montmorency River is pumped with chlorination in case of emergency.		Water flows by gravity to reservoir and system with chlorination (10 lb/mg)	
None .....	Lac Monette .....	30,000	Concrete covered reservoir ....	500
No data .....	Concrete reservoir .....	5,000		
None .....	<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
	0.40	0.45 estd	1.0	1.1
	In 1958 a small soft drink bottling plant		Rayon and felt mills, a furniture manufacturing plant and a manufacturer of school supplies, using in 1956 about 70 per cent of the total consumption.	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>CRABTREE*</b> (Joliette Co.)	<b>DANVILLE</b> (Richmond Co.)	
	1959	1956	1958
Population served:			
In municipality .....	1,200 (1,103 <sup>d</sup> ) (1,180 <sup>e</sup> )	- (2,296 <sup>d</sup> )	2,629 <sup>e</sup>
Outside municipality .....	0	-	250
Total .....	1,200	2,300	2,879
Date(s) of survey .....	January 22, 1959 .....	August 2, 1956; November 1, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Ouareau River .....	Artesian well and auxiliary supply from Danville River	
Treatment .....	Water is alum-and lime-treated (170 and 10 lb/mg respectively), filtered, chlorinated (24 lb/mg) and pumped to reservoir and system.	No treatment; well water is pumped to reservoir and system.	
Storage capacity (thousand gallons) ..	Reservoir .....	Reservoir .....	210
Consumption (average in mgd) .....	1958 0.08 (Max. - 0.09) Plant capacity - 0.24	1956	1958 0.10    0.2
Industrial use .....	None .....	None .....	
Remarks .....	* See also Water Survey Report No. 2: Crabtree Mills, Que. for 1949 data	.....	
<b>Municipality .....</b>	<b>DESCHAILLONS SUR ST.LAURENT</b> (Lotbiniere Co.)	<b>DESCHAMBAULT</b> (Portneuf Co.)	
	1956 - 58	1955	1958
Population served:			
In municipality .....	1,266 <sup>d</sup> (1,270 <sup>e</sup> )	- (1,002 <sup>d</sup> )	900 (1,005 <sup>e</sup> )
Outside municipality .....	0	- *	75*
Total .....	1,266	850**	975**
Date(s) of survey .....	July 28, 1956; October 31, 1958 .....	June 15, 1955; November 4, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Springs and artesian well .....	Creek, 3¼ miles distant .....	
Treatment .....	No treatment; pumped from spring reservoir (small lake) and well to system.	No treatment; water from behind dam on creek flows by gravity to concrete reservoir and then 2 miles to system.	
Storage capacity (thousand gallons) .	Small lake .....	Wood-covered concrete reservoir ....	125
Consumption (average in mgd) .....	1956 - 58 0.045	1955	1958 0.12
Industrial use .....	None .....	None .....	
Remarks .....	.....	* Includes residents along the No. 2 highway from Grondines to Portneuf. ** Total population said to be 1,400 and 1,490 in 1955 and 1958, respectively.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959.

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>DAVELUXVILLE</b> (Arthabaska Co.)	<b>DELISLE</b> * (Lac St. Jean E. Co.)	<b>DESBIENS*</b> (Lac St. Jean E. Co.)
<u>1958</u>	<u>1955</u>	
425 (591d) (649e)	1,280 (1,296e)	
<u>0</u>	<u>1,300**</u>	
<u>425</u>	<u>2,580</u>	
July 17, 1958 .....	July 19, 1955 .....	
Privately owned and operated by Roger Ouellet	Municipally owned and operated .....	
Three wells, 17 ft deep .....	Lac de l'Aqueduc, 5 miles distant .....	
No treatment; water is pumped to tank and system.	No treatment; water is pumped direct to system.	See St. Emilien*
Tank .....	None .....	
15	No data .....	
<u>1958</u>		
0.025 (Max. - 0.30)		
Capacity of system - 0.10		
Minor industrial use is about 28 per cent of total pumpage.	None .....	
.....	* Also known as St. Coeur de Marie	* At time of survey, known as village of St. Emilien, which became town of Desbiens in March, 1960.
	** In Delisle township	
<b>DEUX RIVIERES</b> (Champlain Co.)	<b>DISRAELI</b> (Wolfe Co.)	<b>DOLBEAU</b> (Lac St. Jean W. Co.)
<u>1958</u>	<u>1956</u> <u>1958</u>	<u>1955</u> <u>1958</u>
605 (628d) (635e)	2,473 <sup>d</sup> 2,500 <sup>e</sup>	5,079 <sup>d</sup> 5,400 <sup>e</sup>
<u>7*</u>	<u>0</u> <u>0</u>	<u>0</u> <u>0</u>
<u>612</u>	<u>2,473</u> <u>2,500</u>	<u>5,079</u> <u>5,400</u>
October 22, 1958 .....	July 30, 1956; October 30, 1958 .....	July 19, 1955; November 3, 1958 .....
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
Lake .....	Three artesian wells .....	Mistassini River, 3 miles distant .....
No treatment; water flows by gravity to tank and system.	No treatment; water is pumped to reservoirs and system.	Water is pumped with chlorination (8 lb/mg) direct to system.
One tank .....	Reservoirs (1958) .....	None .....
50	10, 42 & 250	
<u>1958</u>	<u>1956</u> <u>1958</u>	<u>1955</u> <u>1958</u>
Unknown	0.122 (Max. -.0.125) 0.175 (Max. - 0.225)	0.75      No data
Manufacturer of gloves and a creamery	Furniture and clothing manufacturers, building supplies, and wood products.	Major user is the C.N. Rys. A pulp and paper company uses water directly from the river.
* In St. Stanislas Station (See St. Stanislas de Champlain)	.....	.....

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>DONNACONA (Portneuf Co.)</b>	
	<u>1955</u>	<u>1958</u>
Population served:		
In municipality .....	3,700 <sup>d</sup>	4,850 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>
Total .....	<u>3,700</u>	<u>4,850</u>
Date(s) of Survey .....	July 26, 1955; November 18, 1958 .....	
Ownership .....	Distribution system municipally owned; filtration plant owned and operated by the Donnacona Paper Co. Ltd.	
Source of supply .....	Jacques Cartier River .....	
Treatment .....	In 1958, water is pumped with alum-coagulation (50 lb/mg), settled in 2 basins, rapid sand-filtered (4) to 2 clear wells and pumped with chlorination (135 lb/mg) to elevated tank and system.	
Storage capacity (thousand gallons) .	Elevated tank .....	
Consumption (average in mgd) .....	<u>1955</u>	<u>1958</u>
	Domestic 0.28	0.30
	Industrial 26.0	26.0
Industrial use .....	Major user is the pulp and paper mill using about 26 mgd, mostly untreated river water.	
Remarks .....	.....	
Municipality .....	<b>DRUMMONDVILLE (Drummond Co.)</b>	
	<u>1956</u>	<u>1959</u>
Population served:		
In municipality .....	26,284 <sup>d</sup>	29,000 (25,953 <sup>e</sup> )
Outside municipality .....	6,250*	10,000**
Total .....	<u>32,534</u>	<u>39,000</u>
Date(s) of survey .....	August 1, 1956; April 29, 1959 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	St. Francis River .....	
Treatment .....	In 1958 water from 250 ft out in river is pumped to plant, pre-chlorinated (12.3 lb/mg), alum-coagulated (985 lb/mg), settled, rapid sand-filtered (7), lime treated to pH 7.0 - 7.2 (125 lb/mg), post-chlorinated (8 lb/mg) and pumped to system from clear well. In November and December activated carbon (11 lb/mg) is added for taste control.	
Storage capacity (thousand gallons) .	Clear well .....	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>
	1.9 (Max. - 4.0)	2.1 (Max. -4.5)
	Plant capacity 1956 - 4.5 mgd	
Industrial use .....	Textile, hosiery, clothing, dyeing, synthetic fibre, paper and printing plants; foundries and 50 minor industrial firms using, in 1958-59, about 22 per cent of total pumpage.	
Remarks .....	* Drummondville West (pop 1,500) and St. Simon de Drummond (pop 4,750) ** Drummondville West, St. Simon de Drummond and St. Nicephore. The name St. Simon de Drummond changed to Drummondville South in May, 1959. † A 5 mg treated water reservoir is planned for 1960	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<p><b>DORVAL ISLAND</b> (Ile de Montreal)</p> <p align="center"><i>See</i> Ile Dorval</p>	<p align="center"><b>DORVAL</b> (Ile de Montreal)</p> <table border="0"> <tr> <td align="center"><u>1947*</u></td> <td align="center"><u>1959</u></td> </tr> <tr> <td align="center">3,000 (14,055<sup>d</sup>)</td> <td align="center">15,000 (15,232<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>3,000</u></td> <td align="center"><u>15,000</u></td> </tr> </table> <p>June 18, 1947; January 21, 1959 .....</p> <p>Municipally owned and operated .....</p> <p>Lake St. Louis .....</p> <p>Water is pumped with alum coagulation (355 lb/mg), lime-treated (114 lb/mg), rapid sand-filtered to clear well and repumped with chlorination (17 lb/mg) and fluoridation (22 lb NaF/mg) to reservoir and system.</p> <p>Underground reservoir ..... 400</p> <p align="center"><u>1958</u></p> <p align="center">1.775 (Max. - 2.50) Capacity of system - 4.0</p> <p>Dorval Airport, and manufacturers of drugs and fine chemicals. Industrial use is about 40 per cent of total pumpage.</p> <p>* <i>See also</i> Water Survey Report No. 2.</p>		<u>1947*</u>	<u>1959</u>	3,000 (14,055 <sup>d</sup> )	15,000 (15,232 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>3,000</u>	<u>15,000</u>				
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<u>3,000</u>	<u>15,000</u>													
<p><b>DRUMMONDVILLE SOUTH</b> (Drummond Co.)</p> <p align="center"><i>See</i> Drummondville and St. Simon de Drummond</p>	<p align="center"><b>DRUMMONDVILLE WEST</b> (Drummond Co.)</p> <table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1959</u></td> </tr> <tr> <td align="center">1,500 (1,606<sup>d</sup>)</td> <td align="center">1,700 (1,779<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>1,500</u></td> <td align="center"><u>1,700</u> estd</td> </tr> </table> <p>.....</p> <p>Municipally owned and operated .....</p> <p>St. Francis River, treated, from Drummondville</p> <p align="center"><i>See</i> Drummondville</p>	<u>1956</u>	<u>1959</u>	1,500 (1,606 <sup>d</sup> )	1,700 (1,779 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>1,500</u>	<u>1,700</u> estd	<p align="center"><b>DUCHESNAY*</b> (Pottneuf Co.)</p> <table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">200 (112<sup>d</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>200</u></td> </tr> </table> <p>October 6, 1958 .....</p> <p>Owned and operated by the Province of Quebec</p> <p>Lake St. Joseph .....</p> <p>No treatment; water is pumped to reservoir and system</p> <p>One reservoir ..... 200</p> <p align="center"><u>1958</u></p> <p align="center">0.040 Capacity of system . 0.40</p> <p>None .....</p> <p>* In Ste. Catherine parish; <i>see also</i> Ste. Catherine</p>	<u>1958</u>	200 (112 <sup>d</sup> )	<u>0</u>	<u>200</u>
<u>1956</u>	<u>1959</u>													
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<u>0</u>	<u>0</u>													
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<u>0</u>														
<u>200</u>														



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>EAST ANGUS (Compton Co.)</b>		<b>EAST BROUGHTON* (Beauce Co.)</b>	
	<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	4,239 <sup>d</sup>	4,247 <sup>e</sup>	- (919 <sup>d</sup> )	- (992 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>4,239</u>	<u>4,247</u>	<u>-</u>	<u>-</u>
Date(s) of survey .....	August 3, 1956; October 31, 1958 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Big Hollow Brook and Willard Brook; emergency supply from St. Francis River			
Treatment .....	No treatment; brook waters flow to reservoir by gravity and are then pumped to system. Chlorination is carried out on emergency supply only.		<i>See</i> East Broughton Station	
Storage capacity (thousand gallons) ..	Four reservoirs .....		500	
Consumption (average in mgd) .....	<u>1956 - 58</u> 0.225			
Industrial use .....	One paper and two paper products plants and a cotton glove manufacturing plant			
Remarks .....			*Rural municipality .....	

Municipality .....	<b>ESCOUMINS* (Saguenay Co.)</b>		<b>FARNHAM (Missisquoi Co.)</b>	
	<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	1,500 (1,928 <sup>d</sup> )	2,355 <sup>e</sup>	5,843 <sup>d</sup>	6,020 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0*</u>	<u>0*</u>
Total .....	<u>1,500</u>	<u>2,355</u>	<u>5,843*</u>	<u>6,020</u>
Date(s) of survey .....	July 14, 1955; November 1, 1958 .....		August 16, 1956; November 8, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Gardner Lake, 3 miles distant .....		Yamaska River .....	
Treatment .....	No treatment; water flows from 300 ft out in lake by gravity to system.		Water is pumped to coagulation and settling basin, (alum about 220 lb/mg) with pre-chlorination (11.5 lb/mg), rapid sand-filtered (2) to clear well and repumped to standpipe and system.	
Storage capacity (thousand gallons) ..	None, other than the lake .....		Clear well .....	
Consumption (average in mgd) .....	<u>1955</u> No data		<u>1955 - 56</u> 0.75 (Max. - 1.1) Plant capacity - 1.0 mgd	
Industrial use .....	None .....		The C.P. Ry. and major industries in hosiery, tobacco, rubber, use about 0.35 mgd. The industrial use of a number of smaller industries is not known.	
Remarks .....	* Les Escoumains .....		* Up to 3,000 in Army Camp in summer.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>EAST BROUGHTON STATION</b> (Beauce Co.)	<b>EASTMAN</b> (Brome Co.)	<b>EATON TOWNSHIP</b>																
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,060<sup>d</sup></td> <td align="center">1,088<sup>e</sup></td> </tr> <tr> <td align="center">- *</td> <td align="center">- *</td> </tr> <tr> <td align="center"><u>2,000 (approx.)</u></td> <td align="center"><u>2,050 estd</u></td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,060 <sup>d</sup>	1,088 <sup>e</sup>	- *	- *	<u>2,000 (approx.)</u>	<u>2,050 estd</u>	<table border="0"> <tr> <td align="center"><u>1956</u></td> </tr> <tr> <td align="center">500 (681<sup>d</sup>) (660<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>500</u></td> </tr> </table>	<u>1956</u>	500 (681 <sup>d</sup> ) (660 <sup>e</sup> )	<u>0</u>	<u>500</u>					
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<u>0</u>																		
<u>500</u>																		
<p>July 26, 1956; December 18, 1958 ..... Municipally owned and operated ..... Lake .....</p>	<p>August 8, 1956 ..... Municipally owned and operated ..... Orford Lake .....</p>																	
<p>No treatment; water flows by gravity to reservoir and then to system.</p>	<p>No treatment; water flows by gravity to system.</p>	<p align="center"><i>See</i> Cookshire</p>																
<p>One reservoir ..... 300 <u>1956</u> 0.15</p>	<p>No data ..... Unknown .....</p>																	
<p>In 1956, an asbestos mine in operation; in 1958 this was not operating.</p>	<p>None .....</p>																	
<p>* Includes East Broughton .....</p>	<p>.....</p>																	
<b>FITZPATRICK*</b> (Saguenay Co.)	<b>FORESTVILLE</b> (Saguenay Co.)	<b>FORT CHAMBLY</b> (Chambly Co.)																
	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,094 (1,117<sup>d</sup>)</td> <td align="center">1,325<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>2,000*</u></td> </tr> <tr> <td align="center"><u>1,094</u></td> <td align="center"><u>3,325</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	1,094 (1,117 <sup>d</sup> )	1,325 <sup>e</sup>	<u>0</u>	<u>2,000*</u>	<u>1,094</u>	<u>3,325</u>	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,885<sup>d</sup></td> <td align="center">1,923 (2,322<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>1,885</u></td> <td align="center"><u>1,923</u></td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,885 <sup>d</sup>	1,923 (2,322 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>1,885</u>	<u>1,923</u>
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<u>1,885</u>	<u>1,923</u>																	
	<p>July 14, 1955; November 20, 1958 ..... Privately owned and operated by the Anglo-Canadian Pulp and Paper Mills, Limited.</p>	<p>Municipally owned distribution system</p>																
	<p>Springs in town .....</p>	<p>Richelieu River chlorinated, from Chambly</p>																
<p align="center"><i>See</i> Riviere Pentecote</p>	<p>No treatment; pumped directly to standpipe and system</p>	<p align="center"><i>See</i> Chambly</p>																
	<p>Standpipe ..... 50</p>	<p><i>See</i> Chambly .....</p>																
	<p>Unknown Capacity of system - 0.80 mgd</p>																	
	<p>None .....</p>																	
<p>* An unorganized district</p>	<p>* Municipality of St. Luc de Laval since 1956</p>																	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>FORTIERVILLE</b> (Lotbiniere Co.)		<b>FRAMPTON</b> (Dorchester Co.)
	<u>1956</u>	<u>1958</u>	<u>1958</u>
Population served:			
In municipality .....	600 <sup>d</sup>	598 <sup>e</sup>	400 (1,793 <sup>d</sup> ) (1,837 <sup>e</sup> )
Outside municipality .....	<u>25</u>	<u>25</u>	<u>0</u>
Total .....	<u>625</u>	<u>623</u>	<u>400 estd</u>
Date(s) of survey .....	October 25, 1956; November 1, 1958 .....		January 20, 1958 .....
Ownership .....	Municipally owned and operated .....		Privately owned and operated by Arthur J. Allaire
Source of supply .....	Artesian well, 160 ft deep .....		Spring .....
Treatment .....	No treatment; water is pumped from reservoir to standpipe and system.		No treatment; water flows by gravity to reservoir and system.
Storage capacity(thousand gallons) ..	Concrete reservoir .....		One concrete reservoir .....
	Standpipe (wood) .....		No data
Consumption (average in mgd) .....	<u>1956</u>		No data .....
	0.02 (Max. - 0.025)		
Industrial use .....	Clothing manufacturer .....		None .....
Remarks .....	.....		* Also known as St. Edouard de Frampton
<b>Municipality .....</b>	<b>GASPE HARBOUR</b> (Gaspé E. Co.)		<b>GAYHURST*</b> (Frontenac Co.)
	<u>1955</u>		<u>1958</u>
Population served:			
In municipality .....	250 (276 <sup>d</sup> )		500 (1,446 <sup>d</sup> ) (1,286 <sup>e</sup> )
Outside municipality .....	<u>0</u>		<u>0</u>
Total .....	<u>250</u>		<u>500</u>
Date(s) of survey .....			January 24 and November 1, 1958 .....
Ownership .....			Municipally owned and operated .....
Source of supply .....			Three springs with an auxiliary supply of 2 springs
Treatment .....	See Gaspé		No treatment; water flows from reservoir by gravity to system.
Storage capacity (thousand gallons) ..			Reservoir .....
			20
Consumption (average in mgd) .....			Unknown .....
Industrial use .....			None .....
Remarks .....	* Not a municipality		* Also known as St. Samuel de Gayhurst

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>GARTBY* (Wolfe Co.)</b>		<b>GASPE (Gaspé E. Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>	
No data	6 (551 <sup>e</sup> )	3,000 (2,194 <sup>d</sup> ) (2,686 <sup>e</sup> )	
-	<u>0</u>	<u>250*</u>	
-	<u>6</u>	<u>3,250</u>	
<p align="center"><i>See</i> Beaulac (Wolfe Co.)</p>		<p>July 11, 1955 .....</p> <p>Municipally owned and operated .....</p> <p>St. John River, nearby .....</p> <p>Water is pumped from river, 1/8 mile from highway No. 6, bridge, with chlorination (15 lb/mg) to reservoir and system.</p> <p>Concrete reservoir ..... 300</p> <p align="center"><u>1955</u></p> <p align="center">0.48</p> <p>A fish processing plant, a cold storage plant and shipbuilding</p> <p>* Gaspe Harbour</p>	
* Township			

<b>GENTILLY (Nicolet Co.)</b>	<b>GIFFARD (Quebec Co.)</b>		<b>GODMANCHESTER* (Huntingdon Co.)</b>	
<u>1956</u>	<u>1955</u>	<u>1959</u>	<u>1956</u>	<u>1958</u>
672 <sup>d</sup> (656 <sup>e</sup> )	10,000 (9,964 <sup>d</sup> )	11,000 (11,300 <sup>e</sup> )	- (1,473 <sup>d</sup> )	- (1,450 <sup>e</sup> )
<u>0</u>	<u>0</u>	<u>100</u>	-	-
<u>672</u>	<u>10,000</u>	<u>11,100</u>	-	-
August 24, 1956 .....	July 23, 1955; February 3, 1959 .....			
Municipally owned and operated .....	Municipally owned and operated .....			
Springs .....	In 1955, Lac des Roches, 3 miles distant, and Ste. Therese springs 3 1/2 miles distant. In 1959, Lac des Roches with emergency supply from Quebec city.		<p align="center"><i>See</i> Huntingdon, Que.</p>	
No treatment .....	No treatment; in 1955, lake and spring water flows by gravity to reservoirs and system.* In 1959, lake water flows by gravity.			
No data .....	Two underground concrete reservoirs .. ..... 125 & 500			
No data .....	<u>1955</u>	<u>1959</u>		
	0.75	1.0		
	Capacity of system - 4 mgd			
No data .....	Food canning, bakery, wholesale grocer, paint, cement and one other manufacturing firm			
.....	* Mostly lake water used in summer		* Township	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>GRANBY (Shefford Co.)</b>	
	1956	1959
Population served:		
In municipality .....	27,095 <sup>d</sup>	27,762 <sup>e</sup>
Outside municipality .....	0	0
Total .....	<u>27,095</u>	<u>27,762</u>
Date(s) of survey .....	August 9, 1956; February 20, 1959 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	In 1956, Shefford Mountain Lake* and Yamaska River; in 1959 Yamaska River only, with Shefford Mountain Lake as emergency supply.	
Treatment .....	River water pumped, and lake water by gravity to 2 coagulation basins (62,500 gal each), where alum (500 lb/mg) and pre-chlorination (0.6) carried out. Soda ash (300 lb/mg) and act. carbon (4.3 lb/mg) added and settled water rapid sand-filtered (4) to clear well and pumped with chlorination (0.2-0.3 ppm) to system.	
Storage capacity (thousand gallons) .	One open concrete reservoir ..... 1,250 Clear well ..... 500	
Consumption (average in mgd) .....	1956	1959
	2.8* (Max. - 3.2)	2.9
	Plant capacity - 4 mgd	5 mgd
Industrial use .....	In 1959, industrial use about 25 per cent of total consumption, major users are rubber, tobacco, elastic, textile, electric and clothing plants, C.N. Rys. and C.P. Ry, and an agricultural cooperative.	
Remarks .....	* Average 0.5 mgd from Shefford Mountain Lake .....	
Municipality .....	<b>GRANDES BERGERONNES (Saguenay Co.)</b>	
	1955	1958
Population served:		
In municipality .....	- (810 <sup>d</sup> ) (850 <sup>e</sup> )	- (4,417 <sup>d</sup> ) (5,800 <sup>e</sup> )
Outside municipality .....	-	-
Total .....	<u>1,200*</u>	<u>3,650 estd*</u>
Date(s) of survey .....	July 14, 1955 .....	November, 1959; August, 1960 .....
Ownership .....	Municipally owned and operated .....	Distribution system municipally owned and operated. Water purchased up to 1959 from St. Lambert, since then from Jacques Cartier.
Source of supply .....	Lac de l'Aqueduc and Lac a Pit, both 2 miles distant	St. Lawrence River, treated .....
Treatment .....	No treatment; the lakes are joined together by a pipe and flow by gravity to the system.	See St. Lambert and Jacques Cartier ....
Storage capacity (thousand gallons) .	None (Lac de l'Aqueduc - 1 square mile area (Lac a Pit - 1.6 sq miles area	See St. Lambert and Jacques Cartier ....
Consumption (average in mgd) .....	Unknown .....	1956 0.3*
Industrial use .....	None .....	.....
Remarks .....	* Probably some services in township of Bergeronnes	* Included in St. Lambert .....

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>GRAND'MERE</b> (Champlain Co.)		<b>GRAND METIS*</b> (Matane Co.)	
<u>1955</u>	<u>1958</u>	<u>1955</u>	
13,500 (14,023 <sup>d</sup> )	14,500 (14,750 <sup>e</sup> )	- (439 <sup>d</sup> ) (448 <sup>e</sup> )	
<u>- †</u>	<u>- †</u>	<u>-</u>	
<u>-</u>	<u>-</u>	<u>-</u>	
June 10, 1955 October 31, 1958 .....			
Municipally owned and operated .....			
Lac des Piles, 5½ miles distant. Emergency supply of St. Maurice River water from paper mill system.*			
Water from lake flows by gravity to reservoir from which it is pumped with chlorination (3.6 lb/mg) to system.			See Price
Covered concrete reservoir .....		1,000	
<u>1955-56</u>			
2.5			
Plant capacity - 4.5 mgd			
Textile weaving and knitting industries use about 28 per cent of total pumpage.			
† System also supplies a small section of parish of Ste. Flore (St. Maurice Co.)			
* Farmers in the district are supplied with water from Lac Giguere.			* A rural municipality

<b>HAM NORTH</b> (Wolfe Co.)	<b>HAMPSTEAD*</b> (Ile de Montreal)		<b>HAUTERIVE</b> (Saguenay Co.)
<u>1956</u>	<u>1948*</u>	<u>1958</u>	<u>1959</u>
- (1,186 <sup>d</sup> ) (1,190 <sup>e</sup> )	2,900 (4,355 <sup>d</sup> )	4,387 (4,500 <sup>e</sup> )	4,350 (1,762 <sup>d</sup> ) (3,825 <sup>e</sup> )
<u>-</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>2,100*</u>	<u>2,900</u>	<u>4,387</u>	<u>4,350*</u>
August 23, 1956 .....	November, 1958 .....		March 2, 1959 .....
Privately owned and operated by F. Nolet	Distribution system municipally owned and operated; water purchased from city of Montreal.		Municipally owned and operated .....
Springs .....	St. Lawrence River, treated .....		Artesian wells, 35 ft deep .....
No treatment; water flows to reservoir and then to system by gravity.	See Montreal .....		No treatment; water is pumped to system.
One reservoir .....	See Montreal .....		One reservoir planned for 1959 ... 500
No data .....	<u>1956</u>	<u>1958</u>	<u>1958</u>
	0.38	0.419	0.216
No data .....	None .....		Capacity of system . 0.288
			Minor industrial use, such as manufacturer of artificial stone, ornamental iron work and soft drinks.
* Probably includes township of "Ham S.W. part", population 918 <sup>d</sup> and 905 <sup>e</sup> .	* See also Water Survey Report No. 2		* Total population in area said to be 4,848

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>HEBERTVILLE (Lac St. Jean E. Co.)</b>		<b>HEBERTVILLE STATION (Lac St. Jean E. Co.)</b>	
	<u>1955</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	- (1,627 <sup>d</sup> )	- (1,680 <sup>e</sup> )	- (1,214 <sup>d</sup> )	- (1,340 <sup>e</sup> )
Outside municipality .....	-	-	-	-
Total .....	-	-	<u>1,450*</u>	<u>1,450*</u>
Date(s) of survey .....			July 18, 1955; November 6, 1958 .....	
Ownership .....			Municipally owned and operated .....	
Source of supply .....			Lac de l'Aqueduc and an artificial lake, 5 miles distant**	
Treatment .....	See Hebertville Station and N.D. d'Hebertville		No treatment; water flows from behind dam on lakes by gravity to reservoir.	
Storage capacity (thousand gallons) ..			One concrete reservoir ..... 40	
Consumption (average in mgd) .....			Unknown .....	
Industrial use .....			A creamery, a quarry and C.N. Rys. ....	
Remarks .....			* Presumably includes some services in the rural municipality of Hebertville ** The artificial lake is about 2½ miles from Lac de l'Aqueduc	
<b>Municipality .....</b>	<b>HUNTINGDON (Huntingdon Co.)</b>		<b>HURON INDIAN RESERVE</b>	
	<u>1956</u>		<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	2,995 <sup>d</sup> (3,000 <sup>e</sup> )		- (746 <sup>d</sup> )	- (900*)
Outside municipality .....	<u>255*</u>		-	-
Total .....	<u>3,250</u>		-	-
Date(s) of survey .....	August 20, 1956 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Chateauguay River .....			
Treatment .....	River water is pumped to coagulating and settling basins with alum addition (250 lb/mg) and pre-chlorination (5.5 lb/mg); water is then rapid sand-filtered (4) to clear well and pumped to standpipe and system.		See Loretteville	
Storage capacity (thousand gallons) ..	Clear well ..... 150 Standpipe ..... 100			
Consumption (average in mgd) .....	<u>1952</u> 0.8 Plant capacity - 1,2			
Industrial use .....	Two textile plants, a woollen mill, two dyeing plants, a chocolate manufacturer and a dairy use about 45 per cent of the total pumpage.			
Remarks .....	* In Godmanchester and Hinchinbrook townships		* Estimate of Department of Citizenship and Immigration	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>HEMMINGFORD</b> (Huntingdon Co.)		<b>HINCHINBROOK*</b> (Huntingdon Co.)		<b>HOWICK</b> (Chateaugay Co.)	
<u>1958</u>		<u>1958</u>		<u>1956</u>	<u>1958</u>
500 (682 <sup>d</sup> ) (900 <sup>e</sup> )		-	(1,634 <sup>d</sup> ) (1,670 <sup>e</sup> )	560 <sup>d</sup>	600 <sup>e</sup>
<u>5</u>		<u>-</u>		<u>0</u>	<u>0</u>
<u>505</u>		<u>-</u>		<u>560</u>	<u>600</u>
December 4, 1958 .....				August 20, 1956; November 4, 1958 .....	
Municipally owned and operated .....				Municipally owned and operated .....	
Deep well .....				Well, 208 ft deep .....	
No treatment; well water is pumped to reservoir and system.		<i>See</i> Huntingdon		No treatment; water is pumped to reservoir and system.	
One reservoir, ..... 100				One covered concrete reservoir ... 500	
No data .....				<u>1956 - 58</u>	
				0.060	
None .....				None .....	
		* Township			

<b>IBERVILLE</b> (Iberville Co.)		<b>ILE D'ANTICOSTI</b> (Saguenay Co.)	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
6,270 <sup>d</sup>	6,800 <sup>e</sup>	-	(856 <sup>d</sup> )
<u>0</u>	<u>0</u>	<u>-</u>	<u>-</u>
<u>6,270</u>	<u>6,800</u>	<u>-</u>	<u>-</u>
August 16, 1956; September 26, 1958 .....			
Municipally owned and operated .....			
Richelieu River .....			
In 1956, river water pumped to two coagulation and settling basins with alum addition (300 lb/mg) and pre-chlorination (4.7 lb/mg), rapid sand-filtered (2) to clear well and pumped to standpipe and system with post-chlorination (4 lb/mg). In 1958, a complete new plant with alum-coagulation (150 lb/mg), pre-chlorination (17 lb/mg), settling in covered basins, rapid sand-filtration and post-chlorination (14 lb/mg).*		<i>See</i> Port Menier	
Reservoir capacity (1958) .....	170.4		
<u>1956</u>	<u>1958</u>		
0.85	0.65		
Major users are textile and hosiery plants and smaller industries. Industrial use of water is low.			
* In 1961, fluoridation of water was reported.			



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ILE DORVAL</b> (Ile de Montreal)	<b>IRELAND</b> (Megantic Co.)	
	1959	1956	1958
Population served:			
In municipality .....	200*	- (1,292 <sup>d</sup> )	- (1,312 <sup>e</sup> )
Outside municipality .....	0	-	-
Total .....	<u>200*</u>	<u>-</u>	<u>12</u>
Date(s) of survey .....	April 18, 1959 .....		
Ownership .....	Municipally owned and operated .....		
Source of supply .....	Lake St. Louis .....		
Treatment .....	River water is sand-filtered, chlorinated and pumped to elevated tank and system.		<i>See</i> Black Lake
Storage capacity (thousand gallons) ..	Elevated tank .....		
Consumption (average in mgd) .....	Unknown .....		
Industrial use .....	None .....		
Remarks .....	* A summer community only. Water system operates from May 1st to mid-October.		* A rural municipality .....

Municipality .....	<b>JOLIETTE*</b> (Joliette Co.)
	1958
Population served:	
In municipality .....	18,247 <sup>e</sup> (16,940 <sup>d</sup> )
Outside municipality .....	0
Total .....	<u>18,247</u>
Date(s) of survey .....	August 1, 1958; April 17, 1959 .....
Ownership .....	Municipally owned and operated .....
Source of supply .....	L'Assomption River, nearby .....
Treatment .....	Water is pumped to coagulation and sedimentation basins (alum, 215 lb/mg) with pre-chlorination (8 lb/mg), rapid sand-filtered (8) to clear well (2) and pumped with pH correction with lime, fluoridation and post-chlorination to system (1.5 lb/mg).
Storage capacity (thousand gallons) ..	Clear wells .....
Consumption (average in mgd) .....	<u>1958</u> 2.6 Plant capacity - 6.0 mgd
Industrial use .....	Main users are a steel works, a lime producer, biscuit manufacturer, C.P. Ry., C.N. Rys. and a dyeworks
Remarks .....	* See also Water Survey Report No. 2 .....

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ISLE MALIGNE (Lac St. Jean E. Co.)</b>		<b>JACQUES CARTIER (Chambly Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
1,769 <sup>d</sup>	1,793 <sup>e</sup>	33,132 <sup>d</sup>	39,500 <sup>e</sup>
<u>15,160 estd*</u>	<u>17,655 estd*</u>	<u>3,911*</u>	<u>4,860*</u>
<u>16,929</u>	<u>19,448</u>	<u>37,043</u>	<u>44,360</u>
July, 1955; September, 1960 .....	August 14, 1956; November 12, 1958 .....	Municipally owned and operated .....	
Municipally owned and operated. Water is sold to city of Alma who then sells to the other users.*	St. Lawrence River .....		
Lake St. John (Grande Decharge) .....	River water is pumped to coagulation and settling basins (2) (alum 150-360 lb/mg) with chlorination (5 lb/mg), rapid sand-filtered (6) to clear well and pumped with post-chlorination (4 lb/mg) to system.		
Water is pumped with chlorination to system.	Clear well ..... 1,500		
No data .....	<u>1955 - 56</u>	<u>1956</u>	<u>1958</u>
	1.7 <sup>†</sup>	2.4 (Max. - 2.6)	3.2 (Max. - 4.2)
		Plant capacity - 6 mgd	
None in Isle Maligne .....	Major users are two engineering plants, a biscuit manufacturer and a wood working plant using in 1956 about 30 per cent of the total pumpage.		
* Alma, St. Joseph d'Alma, Riverbend, Naudville and Syndicat d'Aqueduc du Range IX	* Boucherville: since 1959, LeMoynes, Mackayville (Lafleche) and Greenfield Park also served by this supply. These municipalities were previously supplied from St. Lambert.		
† Includes Alma			

<b>JONQUIERE (Chicoutimi Co.)</b>	<b>KENOGAMI (Chicoutimi Co.)</b>		<b>KINGSEY (Drummond Co.)</b>
<u>1955</u>	<u>1955</u>	<u>1958</u>	<u>1958</u>
25,550 <sup>d</sup> (28,300 <sup>e</sup> )	11,309 <sup>d</sup>	11,900 <sup>e</sup>	115 (1,361 <sup>d</sup> ) (1,383 <sup>e</sup> )
<u>0*</u>	<u>600*</u>	<u>600</u>	<u>0</u>
<u>25,550</u>	<u>11,909</u>	<u>12,500</u>	<u>115</u>
July 20, 1955 .....	July 16, 1955; November 3, 1958 .....		January 25, 1958 .....
Municipally owned and operated .....	Municipally owned and operated .....		Privately owned and operated by Antonio Caille
Riviere aux Sables in town .....	Long Lake, 7.5 miles distant .....		One well, 170 ft deep .....
Water is pumped with chlorination (9.5 lb/mg) to system.	No treatment; water flows by gravity from 1,800 ft out in lake direct to system with no treatment in 1955 and chlorination in 1958.		No treatment; well water is pumped to system
None .....	None, except Long Lake .....		One small tank ..... 240
<u>1955</u>	<u>1955</u>	<u>1958</u>	No data
2.13 (Max. - 2.67)	1.2	1.3	Plant capacity - 3,000 gpd
3.0 estd	None; the paper company uses the Riviere aux Sables		None ..
Creameries and a soft drink bottling plant use about 4 per cent of total pumpage.	* In Oree des Bois .....		* A township; St. Felix de Kingsey is the post office.
* Water is sold to Arvida in summer (4 mg per week)			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	KNOWLTON (Brome Co.)		LAC AUX SABLES (Portneuf Co.)
	1956	1958	
Population served:			
In municipality .....	1,328 <sup>d</sup>	1,315 <sup>e</sup>	
Outside municipality .....	0	9	
Total .....	<u>1,328</u>	<u>1,324</u>	
Date(s) of survey .....	August 8, 1956; November 25, 1958 .....		
Ownership .....	Municipally owned and operated .....		
Source of supply .....	Springs and wells, the latter being the main source		
Treatment .....	No treatment; springs flow by gravity to reservoir and wells are pumped to reservoir then pumped to system.		<i>See St. Remi</i>
Storage capacity (thousand gallons) .	Open concrete reservoir .....		100
Consumption (average in mgd) .....	1956	1958	
	0.173	0.173	
Industrial use .....	A producer of cosmetics, perfumes and dyes		
Remarks .....			

Municipality .....	LAC MEGANTIC* (Frontenac Co.)		LA DURANTAYE (Bellechasse Co.)
	1956	1958	1958
Population served:			
In municipality .....	6,800 (6,864 <sup>d</sup> )	7,304	230 (789 <sup>d</sup> ) (825 <sup>e</sup> )
Outside municipality .....	0	0	0
Total .....	<u>6,800</u>	<u>7,304</u>	<u>230</u>
Date(s) of survey .....	July 28, 1956; November 3, 1958 .....		January 18 and November 15, 1958 .....
Ownership .....	Municipally owned and operated .....		Privately owned and operated by Theo. Pelletier
Source of supply .....	Lake Megantic.....		Springs .....
Treatment .....	Water is pumped with chlorination (13 lb/mg) to reservoirs and system.		No treatment; water flows by gravity to system. Supplementary pumping facilities are available.
Storage capacity (thousand gallons) .	Three reservoirs .....		1,500
Consumption (average in mgd) .....	1956	1958	1958
	0.75	No data	7,000 gpd Capacity of system - 10,000 gpd
Industrial use .....	A lumber firm, an agricultural cooperative and the C.P. Ry.		None .....
Remarks .....	* Formerly known as Megantic .....		

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>LAC BOUCHETTE</b> (Lac St. Jean W. Co.)	<b>LAC ETCHEMIN</b> (Dorchester Co.)	<b>LACHINE *</b> (Ile de Montreal)
<u>1958</u>	<u>1958</u> <u>1959</u>	<u>1956</u> <u>1959</u>
813 <sup>e</sup> (781 <sup>d</sup> )	1,720 (3,936 <sup>d</sup> )      2,000 (4,125 <sup>e</sup> )	34,494              38,000 (37,911 <sup>e</sup> )
<u>220</u>	<u>0</u> <u>0</u>	<u>11,384**</u> <u>15,355**</u>
<u>1,033</u>	<u>1,720</u> <u>2,000</u>	<u>45,878</u> <u>53,355</u>
February 1, 1958 .....	February 7, 1958; July 15, 1959 .....	April 15, 1959 .....
Municipally owned and operated .....	Privately owned and operated by Lucien Gagnon	Municipally owned and operated .....
Riviere qui Mene du Train .....	Lac a la Roche** .....	Lake St. Louis .....
No treatment; river water flows by gravity to system	No treatment; water flows by gravity direct to system.	River water is pre-chlorinated, settled, rapid sand-filtered, lime-treated, post-chlorinated and pumped to reservoir and system.
None .....	None .....	Total .....
Unknown .....	<u>1958</u> <u>1959</u>	<u>1956</u> <u>1958 - 59</u>
	0.10      0.05 (Max. - 0.08)	9 estd              8.3 (Max. - 10.8)
	Capacity of system - 0.20	Plant capacity - 13.3
C.N. Rys. ....	None .....	About 50 per cent of the consumption used by a variety of industries, including adhesives, electrical manufacturing, heavy engineering and food products.
	* Village of same name separated from this parish in January 1959. Name changed from St. Germaine du Lac Etchemin in June, 1960.	** See also Water Survey Report No. 2
	** The local sanatorium uses filtered Lac Etchemin water. This is available as a supplementary supply to Lac Etchemin (Ste. Germaine du Lac Etchemin).	** 60 per cent of the city of LaSalle.
<b>LAFLECHE*</b> (Chambly Co.)	<b>LA GUADELOUPE</b> (Frontenac Co.)	<b>LA MALBAIE*</b> (Charlevoix E. Co)
	<u>1956</u> <u>1958</u>	<u>1955</u>
	1,450 (1,487 <sup>d</sup> )      1,600 (1,650 <sup>e</sup> )	2,500 (2,817 <sup>d</sup> ) (2,700 <sup>e</sup> )
	<u>0</u> <u>0</u>	<u>0</u>
	<u>1,450</u> <u>1,600</u>	<u>2,500</u>
	August 23, 1956; November 7, 1958 ....	July 21, 1955 .....
	Municipally owned and operated .....	Municipally owned and operated .....
	Springs .....	Tremblay springs; Joyeux, Desbiens and Little Creeks**
	No treatment; water flows by gravity to reservoir and system.	Waters flow by gravity from reservoirs and creeks with chlorination to system.
	One open reservoir .....	Three reservoirs:
	No data	Desbiens Creek .....
		Tremblay Springs .....
		Little Creek .....
	<u>1956</u> <u>1958</u>	<u>1955</u>
	No data              0.09 (Max. - 0.10)	0.3
	None .....	A bottling plant and the C.N. Rys.
* Previously known as Mackayville ...		* Also known as Murray Bay
		** Water also purchased at times from Pointe au Pic. Plans are to use Theodore Creek to produce 0.60 mgd.

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>LAMBTON (Frontenac Co.)</b>	<b>L'ANCIENNE LORETTE (Quebec Co.)</b>	
	1958	1955	1958
Population served:			
In municipality .....	655 (701 <sup>d</sup> ) (655 <sup>e</sup> )	3,100 (2,971 <sup>d</sup> )	3,334 (3,374 <sup>e</sup> )
Outside municipality .....	45*	5,700*	6,434*
Total .....	700	8,800	9,768
Date(s) of survey .....	February 11, 1958 .....	July 25, 1955; October 20, 1958 .....	
Ownership .....	Privately owned and operated by Societe d'Aqueduc Lambton	Municipally owned and operated .....	
Source of supply .....	Springs and one well .....	In 1955 a creek; in 1958, a creek and an artesian well	
Treatment .....	No treatment; water flows by gravity from springs and reservoir to system.	No treatment; creek water flows by gravity from behind dam and the well water is pumped to the system.	
Storage capacity (thousand gallons) ..	One concrete reservoir .....	Dam on creek .....	No data
Consumption (average in mgd) .....	1958	1956	1958
	0.015	0.73	1.28
Industrial use .....	One manufacturing firm uses this water	None; this is a tourist resort .....	
Remarks .....	* In Lambton Township .....	* Outlying areas, including parish of Notre Dame de Lorette and rural municipality of Ste. Monique des Saules	

Municipality .....	<b>LA PETITE RIVIERE (Quebec Co.)</b>	<b>LA PRAIRIE (Laprairie Co.)</b>
	1958	1956
Population served:		
In municipality .....	2,025 (1,353 <sup>d</sup> ) (1,706 <sup>e</sup> )	4,990 (5,372 <sup>d</sup> ) (6,570 <sup>e</sup> )
Outside municipality .....	0	0
Total .....	2,025	4,990
Date(s) of survey .....	March 12, 1959 .....	August 17, 1956 ..
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....
Source of supply .....	One well, 60 feet deep* .....	St. Lawrence River .....
Treatment .....	Water is pumped, after sedimentation, to the system	River water enters sump well (150,000 gal) by gravity and is pumped with chlorination (2.3 lb/mg) to standpipe and system.
Storage capacity (thousand gallons) ..	No data .....	Standpipe .....
Consumption (average in mgd) .....	1958 - 59	1956
	0.50 (Max.- 0.86) Capacity of system - 0.86	1.5
Industrial use .....	None .....	15 per cent of the pumpage is used in the manufacture of canned soup, frozen foods and bricks.
Remarks .....	* Emergency supply from the city of Quebec	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>L'ANGE GARDIEN</b> (Montmorency No. 1 Co.)	<b>LA PATRIE</b> (Compton Co.)	<b>LA PERADE</b> (Champlain Co.)																
<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>344 (1,941<sup>d</sup>)</td> <td>1,800 (1,920<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td><u>344</u></td> <td><u>1,800</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	344 (1,941 <sup>d</sup> )	1,800 (1,920 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>344</u>	<u>1,800</u>	<table border="0"> <tr> <td><u>1958</u></td> </tr> <tr> <td>493<sup>e</sup> (535<sup>d</sup>)</td> </tr> <tr> <td><u>132</u></td> </tr> <tr> <td><u>625</u></td> </tr> </table>	<u>1958</u>	493 <sup>e</sup> (535 <sup>d</sup> )	<u>132</u>	<u>625</u>	<table border="0"> <tr> <td><u>1955</u></td> </tr> <tr> <td>1,000 (1,282<sup>d</sup>) (1,330<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> </tr> <tr> <td><u>1,000</u></td> </tr> </table>	<u>1955</u>	1,000 (1,282 <sup>d</sup> ) (1,330 <sup>e</sup> )	<u>0</u>	<u>1,000</u>
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<u>1,000</u>																		
July 23, 1955; December 23, 1958 .....	February 18, 1958 .....	June, 1955 .....																
Municipally owned and operated distribution system; water purchased from St. Jean de Boischatel	Municipally owned and operated .....	Municipally owned and operated .....																
Laval River from St. Jean de Boischatel (Boischatel)	Springs .....	Spring .....																
See St. Jean de Boischatel .....	No treatment; spring water flows by gravity to reservoir and system.	No treatment; water flows by gravity to reservoir and system.																
None .....	One concrete reservoir ..... 100	One reservoir ..... No data																
<u>1955 - 56</u>	Unknown .....	Unknown .....																
0.05 estd	Capacity of system - 0.072																	
None .....	A creamery .....	None .....																
<b>LA PROVIDENCE</b> (St. Hyacinthe Co.)	<b>LAROCHELLE</b> (Nicolet Co.)	<b>LA SALLE*</b> (Ile de Montreal)																
<table border="0"> <tr> <td><u>1956</u></td> <td><u>1958</u></td> </tr> <tr> <td>3,826<sup>d</sup></td> <td>3,869<sup>e</sup></td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td><u>3,826</u></td> <td><u>3,869</u></td> </tr> </table>	<u>1956</u>	<u>1958</u>	3,826 <sup>d</sup>	3,869 <sup>e</sup>	<u>0</u>	<u>0</u>	<u>3,826</u>	<u>3,869</u>		<table border="0"> <tr> <td><u>1959</u></td> </tr> <tr> <td>25,591 (18,973<sup>d</sup>) (23,815<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> </tr> <tr> <td><u>25,591</u></td> </tr> </table>	<u>1959</u>	25,591 (18,973 <sup>d</sup> ) (23,815 <sup>e</sup> )	<u>0</u>	<u>25,591</u>				
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<u>0</u>																		
<u>25,591</u>																		
August 10, 1956; November 13, 1958 .....		April 24, 1959 .....																
Municipally owned and operated; water purchased from St. Hyacinthe		The distribution system is municipally owned and operated.																
Yamaska River, treated .....		St. Lawrence River treated, 60 per cent purchased from city of Lachine and 40 per cent purchased from city of Montreal.																
See St. Hyacinthe .....	See St. Gregoire le Grand	See Lachine and Montreal .....																
None .....		None at La-Salle .....																
<u>1956</u>		<u>1958</u>																
No data		2.5																
No data .....		Some 57.8 per cent of the total consumption is used by many and varied industries.																
		* See also Water Survey Report No. 2																

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>L'ASSOMPTION* (L'Assomption Co.)</b>		<b>L'ASSOMPTION PARISH (L'Assomption Co.)</b>	
	<u>1958</u>		<u>1960</u>	
Municipality .....				
Population served:				
In municipality .....	3,958 <sup>e</sup> (3,683 <sup>d</sup> )		150 (1,841 <sup>d</sup> ) (1,685 <sup>e</sup> )	
Outside municipality .....	<u>0</u>		<u>0</u>	
Total .....	<u>3,958</u>		<u>150</u>	
Date(s) of survey .....	September 23, 1958 .....		February 1, 1961 .....	
Ownership .....	Municipally owned and operated .....		Owned and operated by Canadian Arsenals Ltd. and St. Paul l'Ermite	
Source of supply .....	L'Assomption River .....		L'Assomption River from St. Paul l'Ermite	
Treatment .....	In 1958, river water is filtered, and post-chlorinated in a new plant and pumped to reservoir and system.**		See St. Paul l'Ermite .....	
Storage capacity (thousand gallons) ..	Reservoir .....		800	
Consumption (average in mgd) .....	<u>1958</u>			
	0.8**			
Industrial use .....	About 28 per cent of total consumption used in the manufacture of refrigerators, in food canning and in the processing of furs.			
Remarks .....	* See also Water Survey Report No. 2 ** Capacity fully used and an extension of the plant is planned.		* Not supplied until 1960 .....	

	<b>Laurier Station (Lotbiniere Co.)</b>		<b>Laurierville (Megantic Co.)</b>	
	<u>1956</u>	<u>1958</u>	<u>1957</u>	<u>1959</u>
Municipality .....				
Population served:				
In municipality .....	400 (592 <sup>d</sup> )	400 (608 <sup>e</sup> )	767 <sup>d</sup>	786 (801 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>6</u>	<u>8</u>
Total .....	<u>400</u>	<u>400</u>	<u>773</u>	<u>794</u>
Date(s) of survey .....	October 15, 1956; December 4, 1958 .....		January 3, 1957; March 24, 1959 .....	
Ownership .....	Privately owned and operated by Cie d'Aqueduc Laurier		Municipally owned and operated .....	
Source of supply .....	Springs .....		Springs and one 60 ft deep artesian well	
Treatment .....	No treatment; water is pumped from reservoir to system.		No treatment; water flows by gravity or is pumped to reservoir and system.	
Storage capacity (thousand gallons) ..	One concrete reservoir .....		Two standpipes .....	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>	<u>1957</u>	
	0.015	0.040	0.056 (Max. - 0.065)	
Industrial use .....	None .....		About 32 per cent of the consumption is by a laundry, a sawmill and a plant manufacturing clothing and furniture.	
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>LA STATION DU COTEAU</b> (Soulanges Co.)	<b>LA TUQUE</b> (Champlain Co.)	<b>LAURENTIDES*</b> (L'Assomption Co.)
<p align="center"><u>1958</u></p> <p align="center">984<sup>e</sup> (986<sup>d</sup>)</p> <p align="center"><u>0</u></p> <p align="center"><u>984</u></p>	<p align="center"><u>1955</u>                  <u>1958</u></p> <p align="center">10,500 (11,096<sup>d</sup>) 11,900 (11,900<sup>e</sup>)</p> <p align="center"><u>0</u>                          <u>0</u></p> <p align="center"><u>10,500</u>                      <u>11,900</u></p>	<p align="center"><u>1956</u>                  <u>1958</u></p> <p align="center">- (1,513<sup>d</sup>)                  - (1,533<sup>e</sup>)</p> <p align="center"><u>-</u>                                  <u>-</u></p> <p align="center"><u>-</u>                                  <u>-</u></p>
<p>October 4, 1958 .....</p>	<p>June 13, 1955; November 18, 1958 ....</p>	
<p>Distribution system municipally owned and operated: water purchased from Coteau Landing.</p>	<p>Owned and operated by a Public Utilities Commission*</p>	
<p>Lake St. Francis (St. Lawrence River)</p>	<p>Lake Wayagamack, 7 miles distant .....</p>	
<p>See Coteau Landing .....</p>	<p>No treatment; water flows by gravity to system. Excess water runs into the St. Maurice River.</p>	<p align="center">See St. Lin</p>
<p>None .....</p>	<p>None .....</p>	
<p>No data (included in figures for Coteau Landing)</p>	<p align="center"><u>1955 - 56</u>                  <u>1958</u></p> <p align="center">Unknown                      50 (Max. estd)</p>	
<p>None .....</p>	<p>A pulp and paper company, an aluminum producer, and manufacturers of plywood and knitted goods use this supply.</p>	
	<p>* 80 per cent of cost of operation is borne by the pulp and paper company</p>	<p>* A town</p>
<b>LAUZON</b> (Levis Co.)	<b>LA VISITATION DE CHAMPLAIN *</b> (Champlain Co.)	<b>LA VISITATION DE LA POINTE DU LAC*</b> (St. Maurice Co.)
<p align="center"><u>1955</u>                  <u>1958</u></p> <p align="center">10,500 (10,255<sup>d</sup>) 10,773<sup>e</sup></p> <p align="center"><u>0</u>                          <u>0</u></p> <p align="center"><u>10,500</u>                      <u>10,773</u></p>		<p align="center"><u>1956</u>                  <u>1958</u></p> <p align="center">- (1,062<sup>d</sup>)                  - (1,100<sup>e</sup>)</p> <p align="center"><u>-</u>                                  <u>-</u></p> <p align="center"><u>-</u>                                  <u>-</u></p>
<p>July 5, 1955; November 12, 1958 .....</p>		
<p>Municipally owned and operated .....</p>		
<p>St. Lawrence River, nearby .....</p>		<p>Spring from Pointe du Lac</p>
<p>River water from 1,600 ft out at 14 ft depth (low tide) is pumped with prechlorination (10 lb/mg) to 4 coagulation and settling basins, alum-treated (90 lb/mg)*, rapid sand-filtered (6), post-chlorinated (3 lb/mg) and pumped to standpipe and system.</p>	<p align="center">See Champlain</p>	<p align="center">See Pointe du Lac</p>
<p>Two standpipes ..... 125 and 500</p>		
<p align="center"><u>1955 - 58</u></p>		
<p align="center">1.5 (Max. - 1.8)</p>		
<p align="center">Plant capacity - 2.0</p>		
<p>About 40 per cent of total pumpage is used by a shipyard, a luggage manufacturer and smaller industries.</p>		
<p>* In spring alum use may rise to 270 lb/mg</p>	<p>* A parish .....</p>	<p>* A rural municipality</p>



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>LECLERCVILLE (Lotbiniere Co.)</b>		<b>LE MOYNE (Chambly Co.)</b>
	1956		1957 - 58
Municipality .....			
Population served:			
In municipality .....	517 <sup>d</sup> (518 <sup>e</sup> )		4,600 (5,662 <sup>d</sup> ) (6,200 <sup>e</sup> )
Outside municipality .....	0		0
Total	517		4,600 estd.
Date(s) of survey .....	August 23, 1956 .....		1957 - 58 .....
Ownership .....	Municipally owned and operated .....		Distribution system municipally owned and operated
Source of supply .....	Three springs .....		St. Lawrence River, treated; purchased up to 1959 from city of St. Lambert, since then from city of Jacques Cartier.
Treatment .....	No treatment; water flows by gravity to reservoirs and system.		See St. Lambert and Jacques Cartier
Storage capacity (thousand gallons) ...	One concrete reservoir ..... 300 Two reservoirs ..... 30 each		
Consumption (average in mgd) .....	No data .....		
Industrial use .....	None .....		
Remarks .....			
<hr/>			
	<b>LES ECUREUILS (Portneuf Co.)</b>		<b>LES ESCOUAINS (Saguenay Co.)</b>
	1955	1958	
Municipality .....			
Population served:			
In municipality .....	800 (1,262 <sup>d</sup> )	800 (1,090 <sup>e</sup> )	
Outside municipality .....	0	0	
Total	800	800	
Date(s) of survey .....	July 27, 1955; November 7, 1958 .....		
Ownership .....	Municipally owned and operated .....		
Source of supply .....	In 1955, four artesian wells; in 1958 additional wells, 16 ft deep*		
Treatment .....	No treatment; water is pumped to reservoir and system		See Escoumins
Storage capacity (thousand gallons) ...	One concrete, underground reservoir ..100		
Consumption (average in mgd) .....	1956 - 58 0.03		
Industrial use .....	None .....		
Remarks .....	* In 1955, insufficient water but the new wells now (1958) provide an ample supply of water.		

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>LENNOXVILLE</b> (Sherbrooke Co.)	<b>L'ÉPIPHANIE</b> (L'Assomption Co.)	<b>LES EBOULEMENTS*</b> (Charlevoix W. Co.)																				
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">3,149<sup>d</sup></td> <td align="center">3,424<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">3,149</td> <td align="center">3,424</td> </tr> </table>	<u>1956</u>	<u>1958</u>	3,149 <sup>d</sup>	3,424 <sup>e</sup>	<u>0</u>	<u>0</u>	3,149	3,424	<table border="0"> <tr> <td align="center"><u>1949*</u></td> <td align="center"><u>1959</u></td> </tr> <tr> <td align="center">2,500 (2,671<sup>d</sup>)</td> <td align="center">2,900 (2,792<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>125</u></td> <td align="center"><u>50</u></td> </tr> <tr> <td align="center">2,625</td> <td align="center">2,950</td> </tr> </table>	<u>1949*</u>	<u>1959</u>	2,500 (2,671 <sup>d</sup> )	2,900 (2,792 <sup>e</sup> )	<u>125</u>	<u>50</u>	2,625	2,950	<table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">650 (520<sup>d</sup>) (1,690<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">650</td> </tr> </table>	<u>1958</u>	650 (520 <sup>d</sup> ) (1,690 <sup>e</sup> )	<u>0</u>	650
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<p>August 6, 1956; October 31, 1958 ..... Municipally owned and operated .....</p>	<p>January 23, 1959 ..... Municipally owned and operated .....</p>	<p>February 1 and November 19, 1958 ..... Municipally owned and operated .....</p>																				
<p>Springs, 7 miles distant and one well ..</p>	<p>L'Achigan River and 108-ft deep well ..</p>	<p>Springs; an auxiliary system is available.</p>																				
<p>No treatment; well water is pumped to reservoir where it mixes with spring water and then flows by gravity to the system.</p>	<p>Waters are pumped to reservoir and system; only the river water is chlorinated.</p>	<p>No treatment; water flows by gravity to reservoir and system</p>																				
<p>One open, concrete reservoir .... 500*</p>	<p>One concrete reservoir ..... 40</p>	<p>One reservoir ..... 100</p>																				
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">0.35</td> <td align="center">0.37 approx</td> </tr> </table>	<u>1956</u>	<u>1958</u>	0.35	0.37 approx	<table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">0.20 (Max. - 0.25)</td> </tr> <tr> <td align="center">Capacity of system - 0.7</td> </tr> </table>	<u>1958</u>	0.20 (Max. - 0.25)	Capacity of system - 0.7	<p>No data Capacity of system - 0.05 to 0.06</p>													
<u>1956</u>	<u>1958</u>																					
0.35	0.37 approx																					
<u>1958</u>																						
0.20 (Max. - 0.25)																						
Capacity of system - 0.7																						
<p>Manufacture of asbestos shingles, screen plate and maple products, using about 15 per cent of 1956 pumpage.</p>	<p>A variety of industries, including a forge, woodworking and a dairy, use about 25 per cent of pumpage.</p>	<p>None .....</p>																				
<p>* Plans exist for an additional 1 mg reservoir</p>	<p>* See also Water Survey Report No. 2</p>	<p>* Formerly also known as L'Assomption de la St. Vierge</p>																				

<b>LEVIS</b> (Levis Co.)	<b>LINIÈRE</b> (Beauce Co.)	<b>L'ISLET STATION</b> (L'Islet Co.)																		
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">13,644<sup>d</sup></td> <td align="center">14,500<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0*</u></td> </tr> <tr> <td align="center">13,644</td> <td align="center">14,500</td> </tr> </table>	<u>1955</u>	<u>1958</u>	13,644 <sup>d</sup>	14,500 <sup>e</sup>	<u>0</u>	<u>0*</u>	13,644	14,500	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> </tr> <tr> <td align="center">(1,149<sup>d</sup>)</td> <td align="center">(1,214<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>-</u></td> <td align="center"><u>-</u></td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> </tr> </table>	<u>1956</u>	<u>1958</u>	-	-	(1,149 <sup>d</sup> )	(1,214 <sup>e</sup> )	<u>-</u>	<u>-</u>	-	-	
<u>1955</u>	<u>1958</u>																			
13,644 <sup>d</sup>	14,500 <sup>e</sup>																			
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-	-																			
<p>July 5, 1955; September 25, 1958 ..... Municipally owned and operated ..... St. Lawrence River .....</p>	<p align="center"><i>See</i> St. Come de Kemebec</p>	<p align="center"><i>See</i> L'Isletville</p>																		
<p>In 1957-58, water from 410-ft out in river and 33-ft depth (low tide) is pumped with pre-chlorination (12-13 lb/mg), coagulated (117-120 lb/mg), settled, (2 basins), rapid sand-filtered (4) to clear well and then repumped with post-chlorination (2 lb/mg) to standpipe and system. In 1957-58, more chlorine was required than in 1955.</p>																				
<p>Standpipe ..... 1,000</p>																				
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1.7</td> <td align="center">1.75</td> </tr> </table>	<u>1955</u>	<u>1958</u>	1.7	1.75																
<u>1955</u>	<u>1958</u>																			
1.7	1.75																			
<p>Plant capacity - 2.7</p>																				
<p>About 7 per cent of the pumpage is used in the manufacture of steel, aluminum and concrete products, luggage and by the C.N. Rys.</p>																				
<p>* Since December 1958, 1,300 persons in the parish of St. David de l'Aube Riviere are served with water (35,260 gpd in 1960).</p>																				

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>L'ISLETVILLE* (L'Islet Co.)</b>	<b>L'ISLE VERTE (Riviere du Loup Co.)</b>	
	1958	1955	1958
Population served:			
In municipality .....	1,140 (1,051 <sup>d</sup> ) ((1,150 <sup>e</sup> ))	1,275 (1,456 <sup>d</sup> )	1,500 <sup>e</sup>
Outside municipality .....	0	0	0
Total .....	1,140	1,275	1,500
Date(s) of survey .....	June 11, 1958 .....	July 7, 1955; December 3, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Savage River .....	Springs, 1 mile distant .....	
Treatment .....	No treatment; water flows by gravity to reservoir and system.	No treatment; water flows by gravity to reservoirs and system.	
Storage capacity (thousand gallons) ...	One reservoir .....	300	Two reservoirs .....
Consumption (average in mgd) .....	1957 - 58	Unknown .....	
	0.015		
	Capacity of system - 0.02 - 0.03		
Industrial use .....	One third of the consumption is used by minor industries, including a foundry and an engineering firm.	A textile manufacturer and a creamery use the water	
Remarks .....	* Including L'Islet Station .....	.....	
<b>Municipality .....</b>	<b>LOTBINIERE* (Lotbiniere Co.)</b>	<b>LOUISEVILLE (Maskinonge Co.)</b>	
	1958	1955	1958
Population served:			
In municipality .....	- (582 <sup>d</sup> ) (569 <sup>e</sup> )	4,392 <sup>d</sup>	4,644 <sup>e</sup>
Outside municipality .....	-	3,000*	3,000*
Total .....	800	7,392	7,644
Date(s) of survey .....	September 25, 1958 .....	June 8, 1955; October 20, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Springs .....	In 1955, 3 deep wells; in 1958, 4 deep wells, 9 miles distant.**	
Treatment .....	No treatment; water flows by gravity to reservoirs and system.	No treatment; water is pumped from wells to a collecting reservoir, and then to the system.**	
Storage capacity (thousand gallons) ...	Two reservoirs .....	50 each	Collecting reservoir .....
Consumption (average in mgd) .....	Unknown .....	No data	
		1955	1958
		0.65 (Max. - 0.79)	0.8
Industrial use .....	A clothing manufacturer .....	A woodworking industry and minor industries use about 10 per cent of pumpage. A textile firm has its own supply.**	
Remarks .....	* System constructed in 1956-57. See also St. Edouard de Lotbiniere and St. Louis de Lotbiniere	* In parish of Ste. Ursule, and in Beausejour, Petit Bois and Riviere du Loup en Haut ** An alternative or supplementary supply is available from the Associated Textile Co. Ltd. plant which uses water from the Riviere du Loup, alum-coagulated and rapid sand-filtered, with chlorination when supplied for municipal use.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>LONGUEUIL* (Chambly Co.)</b>		<b>LORETTEVILLE (Quebec Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
14,332 <sup>d</sup>	15,800 <sup>e</sup>	4,400 (4,957 <sup>d</sup> )	5,567 <sup>e</sup>
<u>5,319**</u>	<u>4,400**</u>	<u>0</u>	<u>1,828*</u>
<u>19,651</u>	<u>21,200</u>	<u>4,400</u>	<u>7,395</u>
August 14, 1956; November 6, 1958 .....		July 25, 1955; November 3, 1958 .....	
Municipally owned and operated .....		Municipally owned and operated .....	
St. Lawrence River; emergency supply from city of Jacques Cartier .....		Springs, located at Chateau d'Eau and a creek	
Water entering intake well from 1,700 ft out in river is pumped with pre-chlorination (4 lb/mg) to coagulation (2) and sedimentation (2) basins, (alum 200 lb/mg), rapid sand-filtered (4) to clear well and repumped with post-chlorination (12.5 lb/mg) to system. In 1958, activated carbon was also being used.		No treatment; water flows to system by gravity with supplementary pumping in 1958.	
Clear well ..... 450		An open artificial lake ..... No data	
		Two concrete reservoirs ..... No data	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
3.0 (Max. 4.0)	3.5 estd	0.45	0.75
Plant capacity - 3.2		A tannery .....	
A variety of industries including the manufacturer of clothing and light engineering and the Department of National Defence use about 11 per cent of the total pumpage.		* In municipalities of Chateau d'Eau and St. Ambroise (Quebec Co.) and in the Huron Indian Reserve	
* See also Water Survey Report No. 2			
** Montreal South			

<b>LUCEVILLE (Rimouski Co.)</b>		<b>LYSTER (Megantic Co.)</b>	<b>MACKAYVILLE * (Chambly Co.)</b>
<u>1955</u>	<u>1958</u>	<u>1958</u>	<u>1958</u>
700 (1,265 <sup>d</sup> )	1,288 <sup>e</sup>	600 (1,010 <sup>d</sup> ) (1,090 <sup>e</sup> )	9,500 (9,958 <sup>d</sup> ) (10,000 <sup>e</sup> )
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>700</u>	<u>1,288</u>	<u>600</u>	<u>9,500 estd</u>
July 7, 1955; November 18, 1958 .....		January 20, 1958 .....	1958 .....
Municipally owned and operated .....		Privately owned and operated by A. Bilodeau .....	Municipally owned and operated .....
Springs, 4,500 ft distant from Ste. Luce which uses the same springs.		One well, 250 ft deep .....	St. Lawrence River, treated; purchased up to 1958 from city of St. Lambert and since 1959 from city of Jacques Cartier.
No treatment; water flows by gravity to reservoir and system.		No treatment; water is pumped to reservoir and system.	See St. Lambert and Jacques Cartier
One reservoir ..... 70	One reservoir ..... 12	One reservoir ..... 12	
Unknown .....	Unknown	Unknown	
	Capacity of system ..... 10,000 gpd	Capacity of system ..... 10,000 gpd	
A saw mill, wood-working plants, a dairy co-operative and manufacturer of shoes		None .....	* In March, 1959, the town of Mackayville became the city of Lafleche

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>MAGOG (Stanstead Co.)</b>		<b>MANSEAU (Nicolet Co.)</b>	
	1956	1958	1958	
Municipality .....				
Population served:				
In municipality .....	12,720 <sup>d</sup>	12,486 <sup>e</sup>	789 <sup>e</sup> (855 <sup>d</sup> )	
Outside municipality .....	0	0	5	
Total .....	<u>12,720</u>	<u>12,486</u>	<u>794</u>	
Date(s) of survey .....	August 8, 1956; November 6, 1958 .....		February 1, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated* .....	
Source of supply .....	Lake Memphremagog .....		Two wells, 35 ft deep .....	
Treatment .....	Lake water is chlorinated and pumped to reservoirs and system.		No treatment; water is pumped to reservoir and system.*	
Storage capacity (thousand gallons) ..	Two covered, concrete reservoirs ..... 1,125 each One reservoir .....		One reservoir ..... 200	
Consumption (average in mgd) .....	<u>1956</u> 1.0	<u>1958</u> 1.0	No data* Capacity of system - 0.14	
Industrial use .....	30 per cent of the pumpage is used in the manufacture of textiles and industrial specialties.		One clothing manufacturer .....	
Remarks .....			* A new system in 1958 .....	
<hr/>				
Municipality .....	<b>MASKINONGE (Maskinonge Co.)</b>		<b>MATANE (Matane Co.)</b>	
	1958		1955                      1958	
Population served:				
In municipality .....	- (800 <sup>d</sup> ) (831 <sup>e</sup> )		- (8,069 <sup>d</sup> )              8,967 <sup>e</sup>	
Outside municipality .....	-*		-                          500	
Total .....	<u>1,700*</u>		<u>8,500</u> <u>9,467</u>	
Date(s) of survey .....	September 23, 1958 .....		July 12, 1955; November 5, 1958 .....	
Ownership .....	Privately owned and operated by Alcide Lemyre**		Municipally owned and operated .....	
Source of supply .....	Maskinonge River, situated above the town		Lake Bernier, 6.5 miles distant.....	
Treatment .....	River water is filtered and flows by gravity to the system**		No treatment; water flows, from behind dam on lake, by gravity to reservoir and the system.	
Storage capacity (thousand gallons) ..	None .....		One concrete reservoir ..... 360*	
Consumption (average in mgd) .....	Unknown .....		<u>1955</u> <u>1958</u> 0.57                          1.0	
Industrial use .....	Several small industries, including a creamery		A lumber company and a cold storage plant	
Remarks .....	* Presumably includes part of St. Joseph de Maskinonge ** System in-use since August, 1958		* Situated 1.5 miles from town	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>MARIEVILLE (Rouville Co.)</b>		<b>MARSOUI (Gaspé W. Co.)</b>	
<u>1956</u>		<u>1958</u>	
3,478 <sup>d</sup> (3,687 <sup>e</sup> )		350 (710 <sup>d</sup> ) (664 <sup>e</sup> )	
<u>0</u>		<u>0</u>	
<u>3,478</u>		<u>350</u>	
August 15, 1956; 1960 .....		June 26, 1958 .....	
Municipally owned and operated .....		Privately owned and operated by A. Couturier and Fils Ltd.	
In 1956, Lake Rougemont and six artesian wells; since September, 1960, Richelieu River		Spring .....	
In 1956, no treatment; water flows from lake by gravity and is pumped from the wells to reservoirs and system. In late 1960 a new filter plant* supplies Richelieu River water pre-chlorinated, alum-coagulated, rapid sand-filtered, lime-treated and post-chlorinated.		No treatment; water flows by gravity to reservoirs and system.	
In 1956 - one concrete, covered reservoir ..... 500 standpipe ..... 75 one auxiliary reservoir .. 35		One concrete reservoir ..... 18	
<u>1956</u>		<u>1958</u>	
0.18		2,000 gpd Capacity of system - 75,000 gpd	
In 1956, a tannery, a slaughter house and manufacturers of machines, nails, furniture, knitted goods and clothing		None .....	
* Owned and operated by the town of Chambly			
<b>MC MASTERVILLE (Vercheres Co.)</b>		<b>MEGANTIC (Frontenac Co.)</b>	
<u>1959</u>	<u>1960</u>		
1,719 <sup>e</sup> (1,738 <sup>d</sup> )	1,850		
<u>0</u>	<u>0</u>		
<u>1,719</u>	<u>1,850</u>		
January 8, 1959; September 2, 1960 .....			
In 1959 municipally owned and operated system with water purchased from Beloeil and Canadian Industries Ltd. In 1960, water supplied from Richelieu Valley Water Works Commission.*			
In 1959, Lac Hertel from Beloeil, Richelieu River from Canadian Industries Ltd. In 1960, Richelieu River from new plant with an auxiliary supply available			
In 1959, eastern part of municipality supplied with untreated Lac Hertel water by gravity from Beloeil system via St. Hilaire, the western part of municipality supplied with Richelieu River water chlorinated and pressure-filtered by Canadian Industries Ltd. In 1960, Richelieu River water is pre-chlorinated, alum-coagulated, rapid sand-filtered, lime treated for pH correction post-chlorinated, and supplied from the new plant of the Richelieu Valley Water Works Commission.		<i>See Lac Megantic</i>	
In 1959 - see Beloeil 1960 - no data			
<u>1959</u>	<u>1960</u>		
Unknown	0.20 (Max. - 0.30) Capacity of new plant - 1.0		
None .....			
* The Richelieu Valley Water Works Commission is a joint enterprise of McMasterville, Otterburn Park and St. Hilaire, which operates the new filter plant supplying these municipalities.			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>MELOCHEVILLE</b> (Beauharnois Co.)	<b>METABETCHOUAN</b> (Lac St. Jean E. Co.)
	<u>1958</u>	
Population served:		
In municipality .....	1,654 <sup>e</sup> (1,422 <sup>d</sup> )	
Outside municipality .....	<u>0</u>	
Total .....	<u>1,654</u>	
Date(s) of survey .....	September 26, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	One well, 125 ft deep .....	
Treatment .....	No treatment; water is pumped to reservoir and system.	<i>See</i> St. Jerome
Storage capacity (thousand gallons) ..	One reservoir .....	120
Consumption (average in mgd) .....	<u>1958</u>	
	0.15	
Industrial use .....	None .....	
Remarks .....		
Municipality .....	<b>MONTMAGNY</b> (Montmagny Co.)	<b>MONTMORENCY</b> (Quebec Co.)
	<u>1955</u> <u>1958</u>	<u>1955</u> <u>1958</u>
Population served:		
In municipality .....	6,300 (6,405 <sup>d</sup> )      6,500 <sup>e</sup>	6,300 (6,077 <sup>d</sup> )      6,296 <sup>e</sup>
Outside municipality .....	<u>1,000*</u> <u>1,000*</u>	<u>0</u> <u>14</u>
Total .....	<u>7,300</u> <u>7,500</u>	<u>6,300</u> <u>6,310</u>
Date(s) of survey .....	July 5, 1955; November 3, 1958 .....	July 23, 1955; September, 1958 .....
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....
Source of supply .....	Riviere des Perdis, 7 miles distant and springs**	Montmorency River, 1½ miles distant .....
Treatment .....	No treatment; river water flows by gravity to system. If springs are used they are pumped with chlorination to system.	No treatment; water flows from river by gravity direct to the system.
Storage capacity (thousand gallons) ..	Dam on river .....	None .....
	Two reservoirs .....	
	No data      45 & 15,000	
Consumption (average in mgd) .....	<u>1955</u> <u>1958</u>	Unknown .....
	0.53      2.0 estd	
Industrial use .....	Spinning of synthetic fibres, foundries and production of lumber, furniture and electrical equipment.	None .....
Remarks .....	* St. Thomas de la Pointe a la Caille municipality ** The springs, a standby supply (capacity 45,000 gpd), have not been used since March, 1956.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>METIS BEACH (Matane Co.)</b>		<b>MISTASSINI (Lac St. Jean W. Co.)</b>			<b>MONT JOLI (Rimouski Co.)</b>	
1955	1959	1955	1958	1960	1955	1958
302 <sup>d</sup>	257 <sup>e</sup>	2,800 (2,912 <sup>d</sup> )	3,200 <sup>e</sup>	3,300	- (6,179 <sup>d</sup> )	- (6,469 <sup>e</sup> )
0	0	0	0	0	- *	- *
302**	257**	2,800	3,200	3,300	6,500	6,560
July 7, 1955; January 20, 1959 .....		July 19, 1955; November 25, 1958; August 5, 1960			July 8, 1955; November 3, 1958 .....	
Municipally owned and operated .....		Municipally owned and operated .....			Municipally owned and operated .....	
McNider Creek, ½ mile distant; Lake Astle is a standby supply***		In 1955, an artesian well, 80 ft deep, ¼ mile distant and springs, a further 1,000 ft distant; in 1958, springs and Mistassibi River, in 1960, artesian well and Mistassibi River.			Metis River, 22 miles distant .....	
Water flows by gravity from the spring- fed creek, through sand filters (2) to clear well, and then by gravity to the system.		In 1955, no treatment; in 1958 and 1960 waters are pumped with chlorination (hypochlorite) and mixing to reservoirs and system.			Water flows by gravity with chlorination (30 lb/mg) to reservoir and system. A booster pump is situated 6 miles from town and 5 miles ahead of reservoir.	
Dam on creek ..... 100		One concrete underground reservoir ..... 50			One concrete reservoir ..... 934	
Clear well ..... 35		One wooden elevated tank ..... 50				
Unknown .....		1955                      1958                      1960			1955                      1958	
None .....		0.20                      0.225                      0.35			0.72 (Max. - 0.78)                      0.72	
		None .....			A soft drink plant, a creamery, a producer of protein products and the C.N. Rys.	
* Also known as Petit Metis and Metis Sur Mer		.....			* Air Force base, with a varying population	
** In summer population may increase to 1,900						
*** Normally overflow from the lake goes to the creek						

<b>MONTREAL (Ile de Montreal)</b>			
1947-48*	1957	1958	1959
1,122,295	- (1,109,439 <sup>d</sup> )	1,372,763 (1,145,000 <sup>e</sup> )	1,388,000
196,726	-	341,944**	342,648**
1,319,021	1,693,781	1,714,707	1,730,648
April, 1957; November, 1958; May, 1959 .....			
Municipally owned and operated by city of Montreal** .....			
St. Lawrence River, near La Salle .....			
Since 1951, water enters a canal at La Salle from intake 1,800 ft out in river. The water flows 5 miles in canal with slight sedimentation and is pumped with rapid sand-filtration (64 filters in 1957, 80 filters in 1958) to clear wells. Chlorination (5.9 lb/mg) is carried out in some clear well reservoirs and the treated water is then pumped to reservoirs and systems with booster pumping when necessary. An additional gallery of 16 filters is being constructed for operation in 1960.*** A subsidiary filtration plant is located at Ile St. Helene supplying about 4 mgd.			
Canal .....	300,000	8 reservoirs in area .....	88,280
Reservoirs at plant, treated water .....	20,000	1 reservoir under construction for 1960 .....	50,000
filtered water .....	53,000		
1957	1958		
203.7 (Max. - 230.6)	211.1† (Max. - 243.7) (Min. - 175.8)	† Doesn't include about 4 mgd from Ile St. Helene plant but includes about 34.5 mgd in 1958 to outside municipalities.	
Rated capacity - 200 mgd	250 mgd		
Practically all types of heavy and light industry are served by this system. Oil refineries and some other large industries along the Lachine Canal and river use river water, untreated, for cooling purposes.			
* See also Water Survey Report No. 2.			
** Includes 18 other municipalities and 2 institutions: seven municipal systems are owned and operated by city of Montreal, namely, Cote St. Luc, Montreal East, Outremont, Pointe aux Trembles, part of Saraguay, St. Pierre and Westmount; 11 municipalities own and operate their own system but purchase water from city of Montreal, namely, Anjou, Hampstead, part of La Salle, Montreal North, Montreal West, Mount Royal, Riviere des Prairies, St. Laurent, St. Leonard de Port Maurice, St. Michel and Verdun; two are privately-owned systems purchasing water from city of Montreal, namely the mental hospital at St. Jean de Dieu and the orphanage at Notre Dame de Liesse.			
In 1959, the city of Montreal covers 50.73 square miles of the 194 square miles in the Island of Montreal, the city water works system serves about ¾ of island area. Per capita consumption had risen from 116 gpd in 1928 to 122.8 gpd in 1958.			
*** This filter gallery incorporates an experimental micro-strainer.			



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>MONTREAL EAST*</b> (Ile de Montreal)	<b>MONTREAL NORTH*</b> (Ile de Montreal)	
	<u>1958</u>	<u>1948</u>	<u>1958</u>
Population served:			
In municipality .....	5,274 (4,607 <sup>d</sup> ) (5,481 <sup>e</sup> )	10,602	28,777 (25,407 <sup>d</sup> ) (33,833 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>5,274</u>	<u>10,602</u>	<u>28,777</u>
Date(s) of survey .....	November, 1958 .....	November, 1958 .....	
Ownership .....	Owned and operated by city of Montreal	Municipally owned and operated .....	
Source of supply .....	St. Lawrence River, treated .....	St. Lawrence River, treated; purchased from city of Montreal.	
Treatment .....	See Montreal .....	See Montreal .....	
Storage capacity (thousand gallons) ...	See Montreal .....	See Montreal .....	
Consumption (average in mgd) .....	<u>1958</u> 0.570	<u>1958</u> 3.212	
Industrial use .....	Some oil refineries may use the water for domestic purposes.	None .....	
Remarks .....	See also Water Survey Report No. 2	* See also Water Survey Report No. 2	
<b>Municipality .....</b>	<b>MONT ST. HILAIRE</b> (Rouville Co.)	<b>MOUNT ROYAL</b> (Ile de Montreal)	
Population served:		<u>1958</u>	
In municipality .....		18,651 (16,990 <sup>d</sup> ) (18,700 <sup>e</sup> )	
Outside municipality .....		<u>0</u>	
Total .....		<u>18,651</u>	
Date(s) of survey .....		November, 1958 .....	
Ownership .....		Municipally owned and operated .....	
Source of supply .....		St. Lawrence River, treated; purchased from city of Montreal	
Treatment .....	See Beloeil	See Montreal .....	
Storage capacity (thousand gallons) ...		See Montreal .....	
Consumption (average in mgd) .....		<u>1958</u> 2.997	
Industrial use .....		None .....	
Remarks .....		* See also Water Survey Report No. 2	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>MONTREAL SOUTH*</b> (Chambly Co.)	<b>MONTREAL WEST*</b> (Ile de Montreal)	<b>MONT ST. GREGOIRE</b> (Iberville Co.)
<p align="center"><u>1956</u>                      <u>1958</u></p> <p>5,319<sup>d</sup>                      5,400<sup>e</sup></p> <p align="center"><u>0</u></p> <p><u>5,319</u>                      <u>5,400</u></p>	<p align="center"><u>1958</u></p> <p>4,991 (4,370<sup>d</sup>) (5,070<sup>e</sup>)</p> <p align="center"><u>0</u></p> <p><u>4,991</u></p>	
<p>August 14, 1956; November 6, 1958 . . . .</p>	<p>November, 1958 . . . . .</p>	
<p>Municipally owned and operated . . . . .</p>	<p>Municipally owned and operated . . . . .</p>	
<p>St. Lawrence River, treated; purchased from city of Longueuil</p>	<p>St. Lawrence River, treated; purchased from city of Montreal</p>	
<p>See Longueuil . . . . .</p>	<p>See Montreal . . . . .</p>	<p align="center">See St. Gregoire le Grand</p>
<p>See Longueuil . . . . .</p>	<p>See Montreal . . . . .</p>	
	<p align="center"><u>1958</u></p>	
	<p align="center">0.398</p>	
	<p>None . . . . .</p>	
<p>* See also Water Survey Report No. 2</p>	<p>* See also Water Survey Report No. 2</p>	
<b>MURDOCHVILLE</b> (Gaspé W. Co.)	<b>MURRAY BAY</b> (Charlevoix E. Co.)	<b>NAUDVILLE</b> (Lac St. Jean E. Co.)
<p align="center"><u>1958</u></p> <p>2,550 (1,694<sup>d</sup>)</p> <p align="center"><u>0</u></p> <p><u>2,550</u></p>		<p align="center"><u>1955</u>                      <u>1958</u>                      <u>1961</u></p> <p>2,500 (2,894<sup>d</sup>)    3,250<sup>e</sup>                      4,600</p> <p align="center"><u>0</u>                                      <u>0</u>                                      <u>0</u></p> <p><u>2,550</u> estd                      <u>3,250</u>                      <u>4,600</u></p>
<p>March 1, 1958 . . . . .</p>		<p>July 19, 1955; September 16, 1960; February 22, 1961</p>
<p>Municipally owned and operated . . . . .</p>		<p>Municipally owned and operated . . . . .</p>
<p>Lake Porphyry . . . . .</p>		<p>Grande Decharge, (Lake St. John) chlorinated; purchased from city of Alma</p>
<p>Water is pumped to reservoir and system with chlorination (7 lb/mg).</p>	<p align="center">See La Malbaie</p>	<p>See Alma and Isle Maligne . . . . .</p>
<p>One concrete reservoir . . . . . 250</p>		<p>No data . . . . .</p>
<p align="center"><u>1958</u></p>		<p align="center"><u>1961</u></p>
<p align="center">0.43 (Max. - 0.45)</p>		<p align="center">0.3</p>
<p>Capacity of system - 0.045</p>		
<p>A copper mine uses 35 per cent of the total water consumed.</p>		
<p>* An auxiliary supply is available from Petite Decharge (Lake St. John) with chlorination.</p>		

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	NEUBOIS (Lotbiniere Co.)		NEUVILLE (Portneuf Co.)	
	1955	1958	1955	1958
Population served:				
In municipality .....	-	(727 <sup>d</sup> )		736 <sup>e</sup>
Outside municipality .....	No data		No data	
Total .....	800*		No data	
Date(s) of survey .....	July 26, 1955; November 20, 1958 .....			
Ownership .....	Privately owned and operated by Cie d'Aqueduc de Neuville			
Source of supply .....	Springs, 3 miles distant .....			
Treatment .....	No treatment; water flows by gravity to reservoirs and system.			
Storage capacity (thousand gallons) ...	One wooden reservoir at springs, capacity unknown One underground concrete reservoir ..100			
Consumption (average in mgd) .....	Unknown .....			
Industrial use .....	None .....			
Remarks .....	* Total population reported by municipality as 1,600			
Municipality .....	NORTH HATLEY (Stanstead Co.)		NOTRE DAME DE LIESSE (Jacques Cartier Co.)	
	1956	1958	1958	
Population served:				
In municipality .....	671 <sup>d</sup>	770 <sup>e</sup>	1,300 (931 <sup>d</sup> ) 930 <sup>e</sup>	
Outside municipality .....	0	0	0	
Total .....	671*	770*	1,300	
Date(s) of survey .....	August 6, 1956; November 4, 1958 .....		November, 1958 .....	
Ownership .....	Municipally owned and operated .....		Owned and operated by Notre Dame de Liesse Orphan's Institution	
Source of supply .....	Springs and Lake Massawippi** .....		St. Lawrence River, treated; purchased from city of Montreal	
Treatment .....	No treatment for spring supply which enters reservoirs by gravity and is then pumped to system. Lake water is pumped with screening and chlorination (sodium hypochlorite) to system.		See Montreal .....	
Storage capacity (thousand gallons) ...	Three reservoirs .... 33, 37 & 127***		See Montreal .....	
Consumption (average in mgd) .....	Unknown .....		1958 0.14	
Industrial use .....	None .....		None .....	
Remarks .....	* In summer population may rise to 2,000 ** In winter, supply is mainly from springs; in summer, from the lake. *** Plans exist for a 500,000 gal reservoir to be added.			

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>NEW LIVERPOOL * (Levis Co.)</b>	<b>NICOLET (Nicolet Co.)</b>		<b>NORMANDIN (Lac St. Jean W. Co.)</b>	
	1956	1958	1955	1958
	3,771 <sup>d</sup>	4,022 <sup>e</sup>	1,700 (1,918 <sup>d</sup> )	1,900 (2,300 <sup>e</sup> )
	<u>0</u>	<u>30</u>	<u>0</u>	<u>0</u>
	<u>3,771*</u>	<u>4,052</u>	<u>1,700</u>	<u>1,900</u>
	July 31, 1956; November 5, 1958 .....		July 19, 1955; 1958 .....	
	Municipally owned and operated .....		Privately owned and operated by Louis Dallaire	
	Nicolet River .....		Springs 4.5 miles distant .....	
<i>See</i> St. Romuald d'Etchemin	River water is pre-chlorinated (165 lb/mg), alum-treated (1,500 lb/mg) in coagulating basins (4), rapid sand-filtered (2), post-chlorinated and lime added (250 lb/mg) at clear well and the water then pumped to the system.		No treatment; water flows by gravity from containing reservoirs to system.	
	Clear well, reservoirs ..... 290 total		Two concrete dams ..... 468 & 62.4	
	<u>1956</u>		No data .....	
	0:20 (Max. - 0.35) (Min. - 0.15)		None .....	
	40 per cent of the total pumpage is used by two creameries, a bottling plant, woolen mills and by manufacturers of optical instruments, clothing, furniture, building supplies, plastics and a woodworking plant.			
* A part of the parish of St. Romuald d'Etchemin	* Reported to be 4,098 by municipality			

<b>NOTRE DAME DE LORETTE (Quebec Co.)</b>	<b>NOTRE DAME DE PIERREVILLE (Yamaska Co.)</b>		<b>NOTRE DAME DE PORTNEUF (Portneuf Co.)</b>
	1956	1958	
	-	-	
	(3,464 <sup>d</sup> )	(3,560 <sup>e</sup> )	
	<u>-</u>	<u>-</u>	
	<u>3,200</u>	<u>3,400</u>	
Municipally owned and operated .....	January 27, 1958 .....		
Creeks and well from L'Ancienne Lorette	Municipally owned and operated .....		
<i>See</i> L'Ancienne Lorette	Chenal Tardif River .....		<i>See</i> Portneuf
	Water is chlorinated and pumped to reservoir and system.		
	One covered reservoir ..... 1		
	No data .....		
	None .....		

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>NOTRE DAME DES NEIGES DES TROIS PISTOLES</b> (Riviere du Loup Co.)		<b>NOTRE DAME D'HEBERTVILLE*</b> (Lac St. Jean E. Co.)
	<u>1955</u>	<u>1958</u>	<u>1955</u>
Population served:			
In municipality .....	25 (1,641 <sup>d</sup> )	27 (1,656 <sup>e</sup> )	1,256 (1,542 <sup>d</sup> ) (1,630 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>250**</u>
Total .....	<u>25</u>	<u>27</u>	<u>1,506</u>
Date(s) of survey .....	July 7, 1955; November 8, 1958 .....		July 15, 1955 .....
Ownership .....	.....		Municipally owned and operated .....
Source of supply .....	Springs from town of Trois Pistoles .....		Gamelin River, 6 miles distant .....
Treatment .....	See Trois Pistoles .....		No treatment; water flows by gravity from dam direct to system.
Storage capacity (thousand gallons) ..	.....		None .....
Consumption (average in mgd) .....	.....		No data .....
Industrial use .....	.....		A creamery .....
Remarks .....	.....		* A village ** In Hebertville

Municipality .....	<b>ORMSTOWN</b> (Chateauguy Co.)		<b>ORSAINVILLE</b> (Quebec Co.)
	<u>1956</u>	<u>1958</u>	<u>1956</u>
Population served:			
In municipality .....	1,286 (1,347 <sup>d</sup> )	1,350 (1,380 <sup>e</sup> )	2,079 <sup>d</sup> (2,820 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>1,286</u>	<u>1,350</u> estd	<u>2,079</u>
Date(s) of survey .....	August 20, 1956 .....		
Ownership .....	Municipally owned and operated .....		
Source of supply .....	One well, 190 ft deep, 6 miles distant* ..		
Treatment .....	No treatment; water is pumped to underground reservoir and then flows by gravity to system.		
Storage capacity (thousand gallons) ...	Underground reservoir ..... 20 Standpipe in town .....125		
Consumption (average in mgd) .....	<u>1956</u> 0.13		
Industrial use .....	A textile firm uses a small amount of the pumpage, but a large creamery has its own well.		
Remarks .....	* A 225 ft deep well in town is available as an emergency supply.		

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

NOTRE DAME DU BON CONSEIL (Drummond Co.)	NOTRE DAME DU ROSAIRE (Montmagny Co.)	OREE DES BOIS (Chicoutimi Co.)	
<p align="center">1956                      1959</p> <p align="center">- (1,425d)*      - (565e)**</p> <hr/> <p align="center">500 estd                  650</p>	<p align="center">1958</p> <p align="center">400 (774d) (772e)</p> <hr/> <p align="center">0</p> <hr/> <p align="center">400</p>	<p align="center"><i>See</i> Kenogami</p>	
<p>November 7, 1956; January 16, 1959 ....</p> <p>Privately owned and operated by Leon Turgeon</p> <p>One well, 55 ft deep .....</p> <p>No treatment; water is pumped from well to pressure tank and system.</p> <p>Pressure tank ..... 0.5</p> <p align="center">1956                      1958</p> <p align="center">0.015                      0.024</p> <p>Capacity of system - 0.036</p> <p>None .....</p>	<p>December 10, 1958 .....</p> <p>Privately owned and operated by Cie d'Aqueduc Notre Dame du Rosaire</p> <p>Springs and 150 ft deep wells .....</p> <p>No treatment; water is pumped to reservoir, then flows by gravity to system.</p> <p>One reservoir ..... approx 6</p> <p>No data</p> <p>None .....</p>		
<p>* At time of census Notre Dame du Bon Conseil was a parish</p> <p>** In January, 1957 the village of Notre Dame du Bon Conseil was incorporated and the population estimate, 565, refers to this village and doesn't include the parish of the same name.</p>			
OTTERBURN PARK (Rouville Co.)	OUTREMONT (Île de Montreal)	PETIT BOIS (Maskinonge Co.)	PETIT METIS (Matane Co.)
<p align="center">1960</p> <p align="center">2,420 (1,544d) (1,735e)</p> <hr/> <p align="center">0</p> <hr/> <p align="center">2,420</p>	<p align="center">1958</p> <p align="center">30,938e (29,990d)</p> <hr/> <p align="center">0</p> <hr/> <p align="center">30,938</p>	<p align="center"><i>See</i> Louiseville</p>	<p align="center"><i>See</i> Metis Beach</p>
<p>September 5, 1960 .....</p> <p>Operated by the Richelieu Valley Water Commission and owned jointly by the municipalities of McMasterville and St. Hilaire.</p> <p>Richelieu River* .....</p> <p>River water is pumped with pre-chlorination, alum-coagulation (285 lb/mg) and rapid sand-filtration with pH correction with lime, to system.</p> <p>No data .....</p> <p align="center">1960</p> <p align="center">0.8 (Max. - 1.0)</p> <p>Capacity of system - 1.2</p> <p>None .....</p>	<p>November, 1958 .....</p> <p>Owned and operated by the city of Montreal</p> <p>St. Lawrence River, treated ..</p> <p align="center"><i>See</i> Montreal</p> <p><i>See</i> Montreal</p> <p align="center">1958</p> <p align="center">3,341</p> <p>None .....</p>		
<p>* An auxiliary supply is available. System started in 1960</p>			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>PHILIPSBURG</b> (Missisquoi Co.)	<b>PIERREVILLE</b> (Yamaska Co.)	
	1958	1956	
Population served:			
In municipality .....	411 (412d) (411e)	-	(1,589d) (1,675e)
Outside municipality .....	0	-*	
Total .....	411*	1,650*	
Date(s) of survey .....	February 20, 1958 .....	August 1, 1956 .....	
Ownership .....	Owned and operated by Missisquoi Marble and Stone Corp. Ltd.	Privately owned and operated by Julien Thibault and Pierre Thibault Co. Ltd.	
Source of supply .....	Lake Champlain* .....	St. Francis River .....	
Treatment .....	No treatment; water is pumped direct to system.	River water is pumped with chlorination to standpipe and system.	
Storage capacity (thousand gallons) ..	None .....	Standpipe .....	50
Consumption (average in mgd) .....	Unknown .....	Three fire reservoirs .....	195 total
Industrial use .....	Missisquoi Marble and Stone Corp. Ltd.	1956	
Remarks .....	* The water is not potable; nevertheless about 70 per cent of the population use it, especially during the winter.	0.15	
		A sawmill, a light engineering firm, and the manufacture of fire trucks and building supplies.	
		* Including some services in St. Francois du Lac	

Municipality .....	<b>POINTE CLAIRE</b> (Ile de Montreal)	<b>POINTE DU LAC</b> (St. Maurice Co.)	
	1959	1955	1958
Population served:			
In municipality .....	19,800 (15,208d) (18,750e)	-	(773d) - (692e)
Outside municipality .....	5,000*	-*	-*
Total ..	24,800	1,200**	1,200**
Date(s) of survey .....	January 20, 1959 .....	June 9, 1955; October 31, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Lake St. Louis .....	Springs .....	
Treatment .....	Lake water is pre-chlorinated (5 lb/mg), alum-coagulated (275 lb/mg), rapid sand-filtered and post-chlorinated (5 lb/mg) and pumped from clear well to elevated tanks and system.**	No treatment; water flows into the reservoir and is pumped to the system.	
Storage capacity (thousand gallons) ..	Clear well .....	One concrete, underground reservoir ..	150
Consumption (average in mgd) .....	Two elevated tanks .....	Unknown .....	
Industrial use .....	25 per cent of the consumption is used by a manufacturer of toilet preparations and detergents.	None .....	
Remarks .....	* 80 per cent of the population of Beaconsfield ** Fluoridation of water reported in 1961	* Includes some in La Visitation de la Pointe du Lac ** Winter population only, which in summer may rise to 3,500	

d Population according to the Tenth Census of Canada, 1956  
e Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>PLESSISVILLE</b> (Megantic Co.)	<b>POINTE AU PIC</b> (Charlevoix E. Co.)	<b>POINTE AUX TREMBLES*</b> (Ile de Montreal)
<u>1956</u> 5,829 <sup>d</sup> (6,097 <sup>e</sup> ) <u>0</u> 5,829	<u>1955</u> 1,180 (1,220 <sup>d</sup> ) (1,195 <sup>e</sup> ) <u>- *</u> -	<u>1958</u> 14,358 (11,981 <sup>d</sup> ) (16,004 <sup>e</sup> ) <u>0</u> 14,358
July 27, 1956 ..... Municipally owned and operated .....	July 21, 1955 ..... Municipally owned and operated .....	November, 1958 ..... Owned and operated by city of Montreal
Springs* .....	Joyeux Creek, Little Creek and Tremblay Creek, 3, 3½ and 1 mile distant respec- tively and Bellevue Springs in town	St. Lawrence River .....
No treatment; water is pumped to reser- voir and then flows by gravity to system.	Water is chlorinated and flows by gravity to system.	See Montreal .....
One reservoir ..... 800	Three concrete reservoirs ..... 150, 150 & 400	See Montreal .....
<u>1956</u> 0.35	<u>1956</u> 0.35 estd	<u>1958</u> 1.55
A foundry and a tannery	None .....	None .....
* Two wells are available for an emergency supply, capacity 0.5 mgd	* Some services in St. Etienne de la Malbaie and some water supplied to La Malbaie	See also Water Survey Report No. 3.
<b>PONTBRIAND</b> (Megantic Co.)	<b>PONT ROUGE</b> (Portneuf Co.)	<b>PORT ALFRED*</b> (Chicoutimi Co.)
See St. Antoine de Pontbriand	<u>1955</u> <u>1958</u> 2,700 (2,631 <sup>d</sup> )    2,750 <sup>e</sup> <u>0</u> <u>0</u> 2,700                                      2,750	<u>1955</u> <u>1958</u> 7,500 (7,968 <sup>d</sup> )    8,500 (8,246 <sup>e</sup> ) <u>0</u> <u>- **</u> 7,500*                                      8,500*
June 26, 1955; November 3, 1958 ..... Municipally owned and operated .....	Springs, 6 miles distant, at Ste. Catherine. A spring in town is an auxiliary supply.	July 16, 1955; August 11, 1958 ..... Municipally owned and operated .....
No treatment; water from the St. Cather- ine springs flows to system by gravity. The auxiliary spring in the village is pumped to system during dry seasons.	Water flows with chlorination by gravity to system.	
In 1955, two reservoirs ... 50 and 150 In 1958, one reservoir ..... 150	One reservoir ..... 300	
<u>1955</u> <u>1958</u> 0.183                      No data	<u>1955</u> <u>1958</u> 0.965                      1.2 Capacity of system - 1.8	
In 1955, a building company used 10 per cent of the total consumption.	Saguenay Terminal Ltd. used in 1958 about ¼ of the total consumption for shipping and docking requirements. * Includes St. Alexis de la Grande Baie ** Some 500 ships of varying tonnage supplied with water as required. *** A supplementary supply is avail- able by pumping from the Consolidated Paper Corporation plant on the river	



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>PORT MENIER, ILE D'ANTICOSTI</b> (Saguenay Co.)	<b>PORTNEUF</b> (Portneuf Co.)	
	1958	1955	1958
Population served:			
In municipality .....	520 (438 <sup>d</sup> )*	1,200 (1,251 <sup>d</sup> )	1,225 (1,285 <sup>e</sup> )
Outside municipality .....	0	0	0
Total .....	520	1,200	1,225
Date(s) of survey .....	June 27 and November 28, 1958 .....	June 15, 1955; November 12, 1958 .....	
Ownership .....	Owned and operated by the Consolidated Paper Corporation Ltd.	Municipally owned and operated .....	
Source of supply .....	Lake St. George and 3 wells (15 ft deep)	Three springs, ¼ mile distant .....	
Treatment .....	Waters are chlorinated and pumped to system	No treatment; water is pumped to reservoir on outskirts of village and to system.	
Storage capacity (thousand gallons) ..	One reservoir .....	One underground concrete reservoir .....	
	45		300
Consumption (average in mgd) .....	1958	1955	1958
	0.10 ( Max. - 0.15)	Unknown	0.05
	Capacity - 1.0 (both wells and lake)		
Industrial use .....	The Consolidated Paper Corporation Ltd.	A tannery .....	
Remarks .....	* See Ile d'Anticosti; Port Menier is only a part of that municipality.	* Also known as Notre Dame de Portneuf	

Municipality .....	<b>QUEBEC</b> (Quebec Co.)	
	1955	1958
Population served:		
In municipality .....	169,000 (170,703 <sup>d</sup> )	173,500 <sup>e</sup> )
Outside municipality .....	7,000 approx*	8,700*
Total .....	176,000	182,200
Date(s) of survey .....	July 25, 1955; September 24, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	St. Charles River, .....	
Treatment .....	Water is chlorinated (8 lb/mg) at dam on river, 7 miles upstream from Chateau d'Eau. Algae in reservoir are controlled with copper sulphate and calcium hypochlorite. The water flows by gravity from behind dam to reservoir and system.	
Storage capacity (thousand gallons) ...	Dam on river; in 1958 one underground reservoir .....	
		30,000
Consumption (average in mgd) .....	1955	1958
	36.0**	38.0**
Industrial use .....	In 1955, about 6.5 per cent and in 1958, about 13 per cent of the total consumption in Quebec and Quebec West was used by C.N. Rys., dock installations, a brewery, manufacturers of rubber tires, pulp and paper and glass and other minor industries. A government arsenal also uses this water.	
Remarks .....	* Quebec West; in 1955 some 0.23 mgd were also sold to Ste. Foy but by 1958 that city's supply was self-contained. An auxiliary supply is also provided for the town of La Petite Riviere. ** 1 mgd to Quebec West and about 0.07 mgd to the Citadel, D N D (Army); (See Water Survey Report No. 12).	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>PREVILLE (Chambly Co.)</b>	<b>PRICE (Matane Co.)</b>	<b>PRINCEVILLE (Arthabaska Co.)</b>
<u>1958</u>	<u>1955</u>	<u>1956</u> <u>1958</u>
500 (496 <sup>d</sup> ) (958 <sup>e</sup> )	3,000 (3,140 <sup>d</sup> ) (3,245 <sup>e</sup> )	2,841 <sup>d</sup> 2,932 <sup>e</sup>
<u>0</u>	<u>60*</u>	<u>0</u> <u>75</u>
<u>500</u>	<u>3,060</u>	<u>2,841</u> <u>3,007</u>
1958 ..... Municipally owned and operated .....	July 7, 1955 ..... Municipally owned and operated .....	July 27, 1956; November 28, 1958 ..... Municipally owned and operated .....
St. Lawrence River, treated; purchased from city of St. Lambert.	Lake Fortin, 2.5 miles distant .....	Bulstrode River .....
See St. Lambert .....	No treatment; lake water flows in creek to dam, 1.5 miles from village, then by gravity to system.	Water is pumped with chlorination (35 lb/ mg) to reservoirs and system.
See St. Lambert .....	None, other than dam on creek .....	Two reservoirs ..... 250 and 500
	No data .....	<u>1956 - 58</u> 0.375 (Max. - 0.40)
	None .....	70 per cent of the total consumption is used by various industries, including a slaughter house, woollen mill, two lumber firms, and manufacturers of furni- ture, clothing and building supplies.
	* In St. Octave de Metis parish and Grand Metis municipality	
<b>QUEBEC WEST (Quebec Co.)</b>	<b>RAWDON * (Montcalm Co.)</b>	<b>REPENTIGNY* (L'Assomption Co.)</b>
<u>1955</u> <u>1958</u>	<u>1958</u> <u>1960</u>	<u>1958</u> <u>1960</u>
7,000 approx (7,945 <sup>d</sup> )      8,700 <sup>e</sup>	2,195 <sup>e**</sup> (2,049 <sup>d</sup> )      2,300 <sup>**</sup>	5,764 (2,334 <sup>d</sup> ) (5,300 <sup>e</sup> )      10,500
<u>0</u>	<u>0</u>	<u>0</u> <u>0</u>
<u>7,000 approx</u>	<u>2,195</u> <u>2,300</u>	<u>5,764</u> <u>10,500</u>
July 25, 1955; September 24, 1958 .... Municipally owned and operated .....	February 26, 1958; July 29, 1960 ..... Municipally owned and operated .....	October 22, 1958; October 7, 1960 ..... Municipally owned and operated .....
St. Charles River; purchased from the city of Quebec	Vail Lake, an auxiliary supply is avail- able from two rivers.	In 1958 L'Assomption River, purchased from St. Paul l'Ermite. In 1960, L'Assomption River.
See Quebec .....	No treatment; water flows by gravity to system.	In 1958, see St. Paul l'Ermite. In 1959-60 river water enters a new plant with pre- chlorination, is then activated carbon- and alum-treated (alum 280 lb/mg), rapid sand-filtered, lime-treated to control pH, post-chlorinated and pumped to reservoir and system.
	None .....	Reservoir (1958) ..... 50 Underground reservoir (1960) ..... 300
	<u>1958</u> 0.35 (Max. - 0.45) Capacity of system - 1.5	<u>1958</u> <u>1960</u> 0.226                      0.55 (Max. - 1.0) Capacity of system - 1.0 in 1960
	40 per cent of the total consumption is used by a manufacturer of plastics, a poultry processing plant and two creameries.	None .....
	* See also Water Survey Report No. 2 ** Population may rise to 6,500 in summer	* Formerly known as parish of La Purifica- tion de la Bienheureux Vierge Marie; name changed to Repentigny in September 1956 and status changed to a town in January, 1957.

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>RICHELIEU (Rouville Co.)</b>			<b>RICHMOND (Richmond Co.)</b>	
	<u>1956</u>	<u>1958</u>	<u>1960</u>	<u>1956</u>	<u>1958</u>
Population served:					
In municipality .....	1,350 (1,398 <sup>d</sup> )	1,420 <sup>e</sup>	-	- (3,849 <sup>d</sup> )	- (3,935 <sup>e</sup> )
Outside municipality .....	<u>1,000*</u>	<u>1,004*</u>	<u>-*</u>	-	-
Total .....	<u>2,350</u>	<u>2,424</u>	<u>No data</u>	<u>4,150</u>	<u>4,225</u>
Date(s) of survey .....	August 15, 1956; February 26, 1958; December 3, 1960.			August 2, 1956; November 1, 1958 .....	
Ownership .....	Municipally owned and operated; in late 1960 plant owned and operated by Chambly			Municipally owned and operated .....	
Source of supply .....	Richelieu River .....			Brompton Lake .....	
Treatment .....	In 1956-58 river water is pumped with chlorination to reservoir and system. In late 1960 the new filter plant pre-chlorinates, alum-coagulates, rapid sand-filters, lime-treats and post-chlorinates the river water. See Chambly (Chambly Co.)			Lake water flows via creek to a natural filter basin (silica and crushed rock) and is then pumped with chlorination (8 lb/mg) to system. At times of high consumption the filter is by-passed.	
Storage capacity (thousand gallons) ...	One reservoir .....			Filter basin .....	
Consumption (average in mgd) .....	<u>1956-58</u>		<u>1960</u>	<u>1956-58</u>	
	No data		No data	0.685	
Industrial use .....	A hosiery mill and woollen mill .....			Manufacturers of plastics, hosiery and footwear	
Remarks .....	* In St. Mathias via Aqueduc St. Mathias Ltee.				
<b>Municipality .....</b>	<b>RIVIERE A PIERRE (Portneuf Co.)</b>			<b>RIVIERE DES PRAIRIES (Ile de Montreal)</b>	
	<u>1958</u>			<u>1958</u>	
Population served:					
In municipality .....	700 (860 <sup>d</sup> ) (765 <sup>e</sup> )			8,500 (6,806 <sup>d</sup> ) (10,000 <sup>e</sup> )	
Outside municipality .....	<u>0</u>			<u>0</u>	
Total .....	<u>700</u>			<u>8,500</u>	
Date(s) of survey .....	March 29, 1958 .....			November 8, 1958 .....	
Ownership .....	Municipally owned and operated .....			Municipally owned and operated .....	
Source of supply .....	Lac de la Montagne* and Voyer Spring			St. Lawrence River, treated; purchased from city of Montreal	
Treatment .....	No treatment; water flows from behind the dam on the lake by gravity direct to the system.			See Montreal .....	
Storage capacity (thousand gallons) ...	None, apart from lake which holds about 100 mg			See Montreal .....	
Consumption (average in mgd) .....	Unknown .....			<u>1958</u>	
				0.796	
Industrial use .....	Canadian National Railways .....			None .....	
Remarks .....	* Main source of supply .....			* See also Water Survey Report No. 2	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>RIMOUSKI (Rimouski Co.)</b>	<b>RIMOUSKI EAST (Rimouski Co.)</b>	<b>RIVERBEND (Lac St. Jean W. Co.)</b>																								
<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>- (14,630<sup>d</sup>)</td> <td>16,200<sup>e</sup></td> </tr> <tr> <td>-</td> <td><u>2,200*</u></td> </tr> <tr> <td><u>15,000</u></td> <td><u>18,400</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	- (14,630 <sup>d</sup> )	16,200 <sup>e</sup>	-	<u>2,200*</u>	<u>15,000</u>	<u>18,400</u>	<table border="0"> <tr> <td><u>1956</u></td> <td><u>1958</u></td> </tr> <tr> <td>- (1,209<sup>d</sup>)</td> <td>- (1,239<sup>e</sup>)</td> </tr> <tr> <td>-</td> <td>-</td> </tr> <tr> <td>-</td> <td>-</td> </tr> </table>	<u>1956</u>	<u>1958</u>	- (1,209 <sup>d</sup> )	- (1,239 <sup>e</sup> )	-	-	-	-	<table border="0"> <tr> <td><u>1955</u></td> <td><u>1960</u></td> </tr> <tr> <td>260<sup>d</sup></td> <td>263</td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td><u>260</u></td> <td><u>263</u></td> </tr> </table>	<u>1955</u>	<u>1960</u>	260 <sup>d</sup>	263	<u>0</u>	<u>0</u>	<u>260</u>	<u>263</u>
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July 8, 1955; November 3, 1958 .....		July 19, 1955; August 17, 1960 .....																								
Municipally owned and operated .....		Municipally owned and operated .....																								
Three lakes, joined together 7 miles distant		Lake St. John (Grande Decharge) , treated; purchased from city of Alma																								
No treatment; water flows by gravity to reservoir (2 miles from city), thence to system.	Included in Rimouski	See city of Alma .....																								
One reservoir ..... 1,000		No data																								
<table border="0"> <tr> <td><u>1955</u></td> </tr> <tr> <td>3.3 (Max. - 4.4)</td> </tr> </table>	<u>1955</u>	3.3 (Max. - 4.4)		<table border="0"> <tr> <td><u>1960</u></td> </tr> <tr> <td>0.15 estd</td> </tr> </table>	<u>1960</u>	0.15 estd																				
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3.3 (Max. - 4.4)																										
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0.15 estd																										
10 per cent of the total consumption is used by the railways, in soft drink manufacturer, by a cold storage plant and other industries.		.....																								
* Presumably in village of Rimouski East and surrounding parishes																										
<b>RIVIERE DU LOUP (Riviere du Loup Co.)</b>	<b>RIVIERE DU LOUP EN HAUT (Maskinonge Co.)</b>	<b>RIVIERE DU MOULIN (Chicoutimi Co.)</b>																								
<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>9,000 (9,964<sup>d</sup>)</td> <td>9,800 (10,720<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td><u>9,000</u></td> <td><u>9,800</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	9,000 (9,964 <sup>d</sup> )	9,800 (10,720 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>9,000</u>	<u>9,800</u>	<table border="0"> <tr> <td><u>1955-56</u></td> </tr> <tr> <td>1,300</td> </tr> <tr> <td><u>0</u></td> </tr> <tr> <td><u>1,300</u></td> </tr> </table>	<u>1955-56</u>	1,300	<u>0</u>	<u>1,300</u>	<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>1,200 (4,138<sup>d</sup>)</td> <td>3,300 (4,510<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td><u>1,200</u></td> <td><u>3,300</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	1,200 (4,138 <sup>d</sup> )	3,300 (4,510 <sup>e</sup> )	<u>0</u>	<u>0</u>	<u>1,200</u>	<u>3,300</u>				
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July 6, 1955; November 3, 1958 .....	January, 1957* .....	.....																								
Municipally owned and operated .....	.....	Municipally owned and operated .....																								
Lake Hickson (6.5 miles distant) which is fed by Riviere Verte	Wells, treated; from Louiseville.....	Chicoutimi River, treated; purchased from city of Chicoutimi																								
Water flows by gravity from lake to reservoir and is then chlorinated as it flows to the system.	See Louiseville .....	See Chicoutimi .....																								
One underground, concrete reservoir .. ..... 550	None .....	One reservoir ..... 300																								
<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>1.5</td> <td>1.6 estd</td> </tr> </table>	<u>1955</u>	<u>1958</u>	1.5	1.6 estd	<table border="0"> <tr> <td><u>1956</u></td> </tr> <tr> <td>0.60</td> </tr> </table>	<u>1956</u>	0.60	<table border="0"> <tr> <td><u>1958</u></td> </tr> <tr> <td>0.30</td> </tr> </table>	<u>1958</u>	0.30																
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The C.N. Rys., a foundry and manufacturers of furniture, pipework and slide fasteners	* From Municipal Utilities Magazine, January, 1957																									

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>RIVIERE DU SUD</b> (Montmagny Co.)	<b>RIVIERE PENTECOTE</b> (Saguenay Co.)
Population served:		1958
In municipality .....		500 (608 <sup>d</sup> )
Outside municipality .....		0
Total .....		500
Date(s) of survey .....		June 24 and November 20, 1958 .....
Ownership .....		Owned and operated by Canadian International Paper Co. Ltd.
Source of supply .....		Ruerin Springs .....
Treatment .....	<i>See</i> St. Pierre de la Riviere du Sud	Water is pumped with filtration to reservoir and system.
Storage capacity (thousand gallons) ..		Two reservoirs ..... 40 total
Consumption (average in mgd) .....		1958 10,000 gpd
Industrial use .....		None .....
Remarks .....		* This is a company townsite or settlement in the unorganized municipality of Fitzpatrick.
Municipality .....	<b>ROUGEMONT</b> (Rouville Co.)	<b>ST. AGAPITVILLE</b> (Lotbiniere Co.)
Population served:		
In municipality .....	1956      1958	1956      1958
Outside municipality .....	600 (676 <sup>d</sup> )    620 (676 <sup>e</sup> )	1,079 <sup>d</sup> 1,114 <sup>e</sup>
Total .....	200      215	0      0
Total .....	800 <sup>*</sup> 835	1,079      1,114
Date(s) of survey .....	October 18, 1956; November 3, 1958 ...	October 23, 1956; October 28, 1958 .....
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....
Source of supply .....	Springs in the mountains nearby and two wells, 150 ft deep.*	Well .....
Treatment .....	No treatment; 9 months of the year the supply is by gravity to reservoir and system; the other 3 months pumping is necessary.	No treatment; water is pumped to reservoir and system.
Storage capacity (thousand gallons) ..	One reservoir ..... 230	One reservoir ..... 130
Consumption (average in mgd) .....	1956      1958 0.052 (Max. - 0.6)    No data System capacity - 0.10	No data ..... Capacity of system - 0.050 to 0.060
Industrial use .....	In 1956 about 23 per cent of the total consumption was used by agricultural industries, cold storage plants and greenhouses. In 1958 canneries were operating and the industrial use was higher.	None .....
Remarks .....	* In 1956 some water was purchased from St. Cesaire, but none in 1958.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ROBERTSONVILLE (Megantic Co.)</b>	<b>ROBERVAL (Lac St. Jean W. Co.)</b>	<b>ROCK ISLAND (Stanstead Co.)</b>																								
<table border="0"> <tr> <td><u>1956</u></td> <td><u>1958</u></td> </tr> <tr> <td>1,030<sup>d</sup></td> <td>1,087<sup>e</sup></td> </tr> <tr> <td><u>0</u></td> <td><u>0</u></td> </tr> <tr> <td>1,030</td> <td>1,087</td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,030 <sup>d</sup>	1,087 <sup>e</sup>	<u>0</u>	<u>0</u>	1,030	1,087	<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>6,300 (6,648<sup>d</sup>)</td> <td>7,011<sup>e</sup></td> </tr> <tr> <td><u>200*</u></td> <td><u>220*</u></td> </tr> <tr> <td>6,500</td> <td>7,231</td> </tr> </table>	<u>1955</u>	<u>1958</u>	6,300 (6,648 <sup>d</sup> )	7,011 <sup>e</sup>	<u>200*</u>	<u>220*</u>	6,500	7,231	<table border="0"> <tr> <td><u>1956</u></td> <td><u>1958</u></td> </tr> <tr> <td>1,608<sup>d</sup></td> <td>1,800<sup>e</sup></td> </tr> <tr> <td><u>1,134*</u></td> <td><u>1,150*</u></td> </tr> <tr> <td>2,708</td> <td>2,950</td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,608 <sup>d</sup>	1,800 <sup>e</sup>	<u>1,134*</u>	<u>1,150*</u>	2,708	2,950
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October 16, 1956; November 5, 1958 . . . . . Municipally owned and operated . . . . .	July 18, 1955; November 3, 1958 . . . . . Municipally owned and operated . . . . .	August 7, 1956; November 18, 1958 . . . . . Owned and operated by the International Water Co., Derby Line, Vt., U.S.A.																								
Spring-fed creek and artesian wells (springs) No treatment; creek and spring waters from behind dam flow by gravity to reservoir and system.	Ouellet Creek, 9 miles distant . . . . . No treatment; water flows by gravity direct to system.	Holland Pond (spring-fed) at Holland, Vermont, U.S.A. Water flows by gravity to the reservoirs in Vermont, then by gravity via Derby Line to Stanstead and to reservoir and system in Rock Island. In 1956, there was no treatment but in 1958, chlorina- tion and fluoridation were carried out in Vermont.																								
Concrete reservoir . . . . . 55	None . . . . .	One reservoir (in Vermont) . . . . . 250 One reservoir (in Quebec) . . . . . 1,500																								
<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>0.03</td> <td>0.03</td> </tr> <tr> <td colspan="2">Capacity of system - 0.05 - 0.06</td> </tr> </table>	<u>1955</u>	<u>1958</u>	0.03	0.03	Capacity of system - 0.05 - 0.06		<table border="0"> <tr> <td><u>1955</u></td> <td><u>1958</u></td> </tr> <tr> <td>No data</td> <td>0.10</td> </tr> </table>	<u>1955</u>	<u>1958</u>	No data	0.10	<table border="0"> <tr> <td><u>1956</u></td> <td><u>1958</u></td> </tr> <tr> <td>0.50</td> <td>0.55</td> </tr> </table>	<u>1956</u>	<u>1958</u>	0.50	0.55										
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Capacity of system - 0.05 - 0.06																										
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<u>1956</u>	<u>1958</u>																									
0.50	0.55																									
None . . . . .	None . . . . . * In Roberval parish; in 1958, the possibility of supplying water (0.03 mgd) to the Indian Reserve at Pointe Bleue, some 5 miles distant, was under consideration.	One machine tool manufacturer . . . . . * In Stanstead, Quebec, the same supply serves about 1,000 in Derby Line, Vermont, U.S.A.																								
<b>ST. ALBAN (Portneuf Co.)</b>	<b>ST. ALEXIS DE LA GRANDE BAIE (Chicoutimi Co.)</b>	<b>ST. AMBROISE (Chicoutimi Co.)</b>																								
<table border="0"> <tr> <td><u>1958</u></td> </tr> <tr> <td>250 (815<sup>d</sup>) (796<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> </tr> <tr> <td>250</td> </tr> </table>	<u>1958</u>	250 (815 <sup>d</sup> ) (796 <sup>e</sup> )	<u>0</u>	250		<table border="0"> <tr> <td><u>1958</u></td> </tr> <tr> <td>1,380 (1,305<sup>d</sup>) (1,400<sup>e</sup>)</td> </tr> <tr> <td><u>0</u></td> </tr> <tr> <td>1,380</td> </tr> </table>	<u>1958</u>	1,380 (1,305 <sup>d</sup> ) (1,400 <sup>e</sup> )	<u>0</u>	1,380																
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1,380																										
February 4, 1958 . . . . . Privately owned and operated . . . . . Veilleux Lake . . . . .		October 20, 1958 . . . . . Municipally owned and operated . . . . . Springs . . . . .																								
No treatment; water flows by gravity direct to system.	See Port Alfred	No treatment; water flows by gravity to reservoir and system.																								
None . . . . . Unknown . . . . .		One reservoir . . . . . 800																								
None . . . . .		<u>1958</u> 0.025 estd A creamery only . . . . .																								

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. AMBROISE*</b> (Quebec Co.)			<b>ST. ANICET</b> (Chicoutimi Co.)
	<u>1956</u>			
Population served:				
In municipality .....	-	(2,321 <sup>d</sup> )		
Outside municipality .....	-			
Total .....	-			
Date(s) of survey .....				
Ownership .....				
Source of supply .....				
Treatment .....	<i>See</i> Loretteville			Included in Bagotville
Storage capacity (thousand gallons) ..				
Consumption (average in mgd) .....				
Industrial use .....				
Remarks .....	* Also known as St. Ambroise de la Jeune Lorette			
<hr/>				
Municipality .....	<b>STE. ANNE DE LA POCATIERE*</b> (Kamouraska Co.)			
	<u>1955</u>	<u>1958</u>	<u>1960</u>	
Population served:				
In municipality .....	2,500	(4,073 <sup>d</sup> )	2,500	(3,605 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>115</u> <sup>**</sup>	
Total .....	<u>2,500</u>	<u>2,500</u> <sup>*</sup>	<u>2,915</u>	
Date(s) of survey .....	July 6, 1955; October 21, 1958; August 19, 1960 .....			
Ownership .....	Privately owned and operated by the Corporation of the College de Ste. Anne de la Pocataire.*			
Source of supply .....	Lake Bourgelas and springs .....			
Treatment .....	No treatment; lake and spring waters flow by gravity into two reservoirs (8,500 and 9,000 ft from lake) and then 2 miles to the system.			
Storage capacity (thousand gallons) ..	Two concrete, underground reservoirs ..... 120 and 67.5			
Consumption (average in mgd) .....	Unknown <sup>***</sup> .....			
Industrial use .....	None .....			
Remarks .....	* A parish: on January 1, 1960 a village of same name was incorporated, consisting of part of the parish. In 1960 negotiations were still underway to take over the college-owned system. It is then planned to construct a new water supply and sewerage system. ** The total population in the village was 2,900 and in the surrounding parish was 1,700. *** Consumption increases when the college is operating.			

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>STE. ANNE DE BEAUPRE</b> (Montmorency No. 1 Co.)	<b>STE. ANNE DE LA PERADE* (Champlain Co.)</b>		
<u>1955</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
1,500 (1,865 <sup>d</sup> )	1,600 (1,865 <sup>e</sup> )	1,859 <sup>d</sup>	1,770 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>200**</u>	<u>225**</u>
<u>1,500</u>	<u>1,600</u>	<u>2,059</u>	<u>1,995</u>
July 22, 1955; 1958 .....	June 14, 1955; November 25, 1958 .....		
Municipally owned and operated .....	Municipally owned and operated .....		
Springs, ½ mile distant .....	Cossette Creek, 8 miles distant .....		
No treatment; water flows by gravity to reservoirs and system	No treatment; water flows by gravity from behind dam on creek to system.		
Four concrete reservoirs .....	None; a concrete dam on the creek holds about 3.5 mg		
75, 75, 175 and 500			
<u>1956</u>	<u>1958</u>	Unknown .....	
No data	0.3 estd		
C.N. Rys. (0.433 mgd) .....	The C.P. Ry., a foundry and manufacturers of knitwear, milk powder and evaporated milk		
* In summer population may rise to 9,500	* This is a parish; the village of La Perade has its own water supply (see page 109.		
	** In parish of St. Prosper (Champlain Co.)		
<b>STE. ANNE DES MONTS</b> (Gaspé W. Co.)	<b>STE. ANNE DE VARENNES</b> (Vercheres Co.)		<b>ST. ANTOINE DE PONTBRIAND*</b> (Megantic Co.)
<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
3,500 (4,675 <sup>d</sup> )	3,500 (4,675 <sup>e</sup> )	- (272 <sup>d</sup> )	450 (955 <sup>d</sup> ) (998 <sup>e</sup> )
<u>0</u>	<u>0</u>	<u>-</u>	<u>0</u>
<u>3,500</u>	<u>3,500</u>	<u>-</u>	<u>450</u>
July 11, 1955; December, 1958 .....	November 10, 1958 .....		
Municipally owned and operated .....	Privately owned and operated by Aime Gagne		
Little Ste. Anne River 4 miles distant	<i>See</i> Varenes		Six springs .....
Water behind dam on river flows by gravity with chlorination (3 lb/mg in winter, 7 lb/mg in summer) to reservoir and system.			No treatment; water flows by gravity to reservoir and system.
One concrete reservoir .....	100	One reservoir .....	
<u>1955 - 58</u>		<u>1958</u>	
0.35		2,500 gpd (Max. - 3,000 gpd) Capacity of system - 40,000 gpd	
Two lumber firms .....		None .....	
		* Also known as Pontbriand	



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. BASILE*</b> (Portneuf Co.)		<b>ST. BASILE SOUTH</b> (Portneuf Co.)	
	<u>1955</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	- (811d)	402 (820e)	- (1,635d)	1,598e
Outside municipality .....	-**	1,598**	-	0
Total .....	<u>1,950 (2,446d)</u>	<u>2,000 (2,518e)</u>	<u>-</u>	<u>1,598</u>
Date(s) of survey .....	June 15, 1955; November 15, 1958 ....		June 15, 1955; November 15, 1958 .....	
Ownership .....	Privately owned and operated by Albert Giroux			
Source of supply .....	Springs, 7.5 miles distant .....		Springs, from St. Basile .....	
Treatment .....	No treatment; water flows by gravity to reservoirs and system.		See St. Basile	
Storage capacity (thousand gallons) ...	In 1956, two elevated tanks .. 30 & 100 In 1958, four reservoirs .... 450 total			
Consumption (average in mgd) .....	<u>1955</u>	<u>1958</u>		
	Unknown	0.30 estd		
Industrial use .....	A plywood manufacturer, cement works and two saw mills			
Remarks .....	* A parish ** Village of St. Basile South			
<b>Municipality .....</b>	<b>ST. BRUNO DE MONTARVILLE</b> (Chambly Co.)		<b>ST. CASIMIR*</b> (Portneuf Co.)	
	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	- (2,734d)	3,500 (4,321e)	- (1,447d)*	- (1,507e)*
Outside municipality .....	-	0	-	-
Total .....	<u>No data</u>	<u>3,500</u>	<u>1,850**</u>	<u>3,200**</u>
Date(s) of survey .....	August 18, 1956; October, 1958 .....		June 14, 1955; November 15, 1958 .....	
Ownership .....	Municipally owned and operated .....		Privately owned and operated in 1955 by Albert Giroux, in 1958 by Corporation d'Aqueduc St. Casimir	
Source of supply .....	Factory Lake .....		Lake Chalifaux and Thibault Creek .....	
Treatment .....	Water flows by gravity with chlorination direct to system.		No treatment; water flows by gravity to system.	
Storage capacity (thousand gallons) ...	None, besides lake .....		No data .....	
Consumption (average in mgd) .....	Unknown .....		<u>1955</u>	<u>1958</u>
			0.20	0.25
Industrial use .....	None .....		In 1958, manufacturers of clothing, soft drinks and veneer	
Remarks .....			* Village ** Includes some services in St. Thuribe parish	

d Population according to the Tenth Census of Canada, 1956  
e Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. BASILE LE GRAND</b> (Chambly Co.)	<b>ST. BENOIT LABRE</b> (Beauce Co.)	<b>ST. BONIFACE DE SHAWINIGAN</b> (St. Maurice Co.)																				
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1960</u></td> </tr> <tr> <td align="center">900 (1,459<sup>d</sup>)</td> <td align="center">1,700 (1,540<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">900</td> <td align="center">1,700</td> </tr> </table>	<u>1956</u>	<u>1960</u>	900 (1,459 <sup>d</sup> )	1,700 (1,540 <sup>e</sup> )	<u>0</u>	<u>0</u>	900	1,700	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,439<sup>d</sup></td> <td align="center">1,502<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">1,439*</td> <td align="center">1,502*</td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,439 <sup>d</sup>	1,502 <sup>e</sup>	<u>0</u>	<u>0</u>	1,439*	1,502*	<table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">902 (880<sup>d</sup>) (952<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>250</u></td> </tr> <tr> <td align="center">1,152</td> </tr> </table>	<u>1958</u>	902 (880 <sup>d</sup> ) (952 <sup>e</sup> )	<u>250</u>	1,152
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1,152																						
August 18, 1956; July 30, 1960 ..... Municipally owned and operated .....	July 26, 1956; January 20, 1958 ..... One system municipally owned and operated, the other privately owned and operated by Cie d'Aqueduc St. Benoit Ltee.	November 19, 1958 ..... Municipally owned and operated .....																				
In 1956 springs; in 1960, two artesian wells, about 200 ft deep No treatment; water flows by gravity from reservoirs to system.	Lake Poulin ..... Municipal system supplied by water from St. Georges West. The private system is supplied from Lake Poulin by gravity with chlorination to the reservoir and system.	8 wells, 25 ft deep No treatment; water is pumped to reservoir and system,																				
In 1956, one reservoir ..... 30 In 1960, two reservoirs ..... 30 & 70	One reservoir ..... 18**	One concrete reservoir ..... 120																				
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1960</u></td> </tr> <tr> <td align="center">0.055</td> <td align="center">0.075 (Max. - 0.090)</td> </tr> <tr> <td align="center" colspan="2">Capacity of system - 0.090</td> </tr> </table>	<u>1956</u>	<u>1960</u>	0.055	0.075 (Max. - 0.090)	Capacity of system - 0.090		<table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">0.025**</td> </tr> </table>	<u>1958</u>	0.025**	No data .....												
<u>1956</u>	<u>1960</u>																					
0.055	0.075 (Max. - 0.090)																					
Capacity of system - 0.090																						
<u>1958</u>																						
0.025**																						
None .....	None ..... * 1,200 by St. Georges system in 1956; 500 by private system in 1958 ** Private system only	None .....																				
<b>STE. CATHERINE</b> (Portneuf Co.)	<b>STE. CATHERINE DE SIENNE</b> (St. Maurice Co.)	<b>ST. CELESTIN</b> (Nicolet Co.)																				
<table border="0"> <tr> <td align="center"><u>1954</u></td> </tr> <tr> <td align="center">600 (1,571<sup>d</sup>) (1,630<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">600</td> </tr> </table>	<u>1954</u>	600 (1,571 <sup>d</sup> ) (1,630 <sup>e</sup> )	<u>0</u>	600		<table border="0"> <tr> <td align="center"><u>1956</u></td> </tr> <tr> <td align="center">400 estd (1,024<sup>d</sup>) (1,028<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">400 estd</td> </tr> </table>	<u>1956</u>	400 estd (1,024 <sup>d</sup> ) (1,028 <sup>e</sup> )	<u>0</u>	400 estd												
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400 estd (1,024 <sup>d</sup> ) (1,028 <sup>e</sup> )																						
<u>0</u>																						
400 estd																						
July 25, 1955 ..... Municipally owned and operated .....		August 24, 1956 ..... Municipally owned and operated .....																				
Springs ..... No treatment; waters from springs are pumped to a collecting reservoir 1¼ miles distant, thence by gravity to system.	See Three Rivers parish	Springs ..... No treatment; spring water is pumped to the reservoir; then flows by gravity to the system.																				
Reservoir ..... No data No data .....		One reservoir ..... No data No data .....																				
None .....  Duchesnay (page 95) is a provincial establishment with a separate water system in this parish of Ste. Catherine (de Faussambault)		No data .....																				

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>ST. CESAIRE (Rouville Co.)</b>		<b>ST. CHRYSOSTOME (Chateauguay Co.)</b>		
	<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1959</u>	<u>1960</u>
Municipality .....					
Population served:					
In municipality .....	1,300 (1,739 <sup>d</sup> )	- (1,680 <sup>e</sup> )	795 (866 <sup>d</sup> )	- (880 <sup>e</sup> )	725 (812)
Outside municipality .....	700*	0	0	0	0
Total .....	<u>2,000</u>	<u>No data</u>	<u>795</u>	<u>No data</u>	<u>725</u>
Date(s) of survey .....	August 15, 1956 .....		August 20, 1956; March 21, 1959; August 5, 1960		
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....		
Source of supply .....	Springs .....		In 1956, English River; in 1959 and 1960, a well, 183 ft deep, with English River as an emergency supply.		
Treatment .....	No treatment; water is pumped from 50,000 gal reservoir to village. Overflow water is pumped to reservoirs near Rougemont and can be used (by gravity) in case of low pressure in village.		In 1956 river water pumped with chlorination to reservoir and system. In 1959-60, well water is pumped to system without treatment.		
Storage capacity (thousand gallons) ...	One covered, concrete reservoir .... 50 Two reservoirs, near Rougemont. 30 & 40		In 1956, one elevated reservoir ..... 54 In 1959-60 hydro-pneumatic tank only .. 2		
Consumption (average in mgd) .....	<u>1956 - 58</u> 0.15		<u>1956</u> <u>1959 - 60</u> 0.18                              0.18		
Industrial use .....	A cannery .....		None in 1959-60. In 1956 a textile firm and a creamery said to use the chlorinated river water.		
Remarks .....	* Part of Rougemont served in 1956; in 1958 this was no longer the case (See Rougemont).				
Municipality .....	<b>STE. CROIX (Lotbiniere Co.)</b>		<b>ST. CUTHBERT (Berthier Co.)</b>		
	<u>1956</u>	<u>1958</u>	<u>1955</u>		
Population served:					
In municipality .....	- (1,341 <sup>d</sup> )	- (1,215 <sup>e</sup> )	1,175 (1,740 <sup>d</sup> ) (1,748 <sup>e</sup> )		
Outside municipality .....	- **	- **	0		
Total .....	<u>2,000 estd</u>	<u>1,400†</u>	<u>1,175</u>		
Date(s) of survey .....	August 23, 1956; September 25, 1958 .....		June 7, 1955 .....		
Ownership .....	Privately owned and operated in 1956 by H. Lemay; in 1958, by Cie d'Aqueduc de Ste. Croix		Municipally owned and operated .....		
Source of supply .....	In 1956, wells and springs .....		Chicot River, 4.5 miles distant .....		
	In 1958, springs only				
Treatment .....	No treatment; water is pumped to reservoir and system.		No treatment; water flows by gravity to reservoir and system.		
Storage capacity (thousand gallons) ...	One reservoir .....		One concrete reservoir .....		
	58.5		No data		
Consumption (average in mgd) .....	No data .....		<u>1955</u> <u>1958</u> 0.11                              0.13		
Industrial use .....	A foundry and a furniture manufacturer		A chocolate manufacturer and a creamery		
Remarks .....	* Village ** Presumably includes some services in the parish of Ste. Croix, the population of which was given in the Tenth Census of Canada and the 1959 Quebec Municipal Guide as 1,152. † Total population said to be 2,800				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>STE. CLAIRE (Dorchester Co.)</b>	<b>ST. COEUR DE MARIE (Lac St. Jean E. Co.)</b>	<b>ST. COME DE KENNEBEC* (Beauce Co.)</b>
<p align="center"><u>1958</u> 1,000 (1,643<sup>d</sup>) (1,630<sup>e</sup>) <u>0*</u> <u>1,000</u></p>		<p align="center"><u>1956</u> 1,500 (1,646<sup>d</sup>) (1,672<sup>e</sup>) <u>0</u> <u>1,500</u></p>
April 18, 1958 .....		July 26, 1956 .....
Privately owned and operated by Louis Bilodeau		Four privately owned and operated systems. 1/3 of population served by Mr. Bouchards' system, 1/3 by Mr. Dumas' system, and 1/3 by other systems owned by Mr. Bouchard and Mr. Poulin
Four artesian wells, 50 ft, 62 ft, 82 ft and 200 ft deep		Springs .....
No treatment; water is pumped from reservoir to system.	See Delisle	No treatment .....
One reservoir ..... 10		No data .....
<p align="center"><u>1958</u> 0.020 Capacity of system - 0.045</p>		No data .....
None .....		None .....
		* Including Liniere .....
<b>ST. CYRILLE (Drummond Co.)</b>	<b>ST. DAMASE (St. Hyacinthe Co.)</b>	<b>ST. DAMIEN DE BUCKLAND (Bellechasse Co.)</b>
<p align="center"><u>1956</u> 775 estd (1,198<sup>d</sup>) (1,126<sup>e</sup>) <u>0</u> <u>775 estd</u></p>	<p align="center"><u>1958</u> 705 (737<sup>d</sup>) (753<sup>e</sup>) <u>190*</u> <u>895</u></p>	<p align="center"><u>1956</u>                      <u>1958</u> 1,000 (2,080<sup>d</sup>)              1,100 (2,145<sup>e</sup>) <u>0</u>                                      <u>0</u> <u>1,000</u>                                  <u>1,100</u></p>
October 18, 1956 .....	February 12, 1958 .....	August 9, 1956; January 26, 1958 .....
Municipally owned and operated .....	Municipally owned and operated .....	Privately owned and operated by Bruno Brochu
Six wells, four are 32 ft deep and two 28 ft deep	Lac de la Montagne de Rougemont** ...	Spring .....
No treatment; water is pumped to system.	No treatment; water flows by gravity from lake to reservoir and system.	No treatment; water flows by gravity to reservoir and system.
None .....	One reservoir ..... 120	One concrete reservoir ..... No data
<p align="center"><u>1956</u> 0.016 (Max. - 0.18) Capacity of system - 0.058</p>	<p align="center"><u>1958</u> 0.12 Capacity of system - 0.145</p>	<p align="center"><u>1958</u> 11,000 gpd Capacity of system 20,000 gpd</p>
None .....	Poultry processing and in the production of frozen and canned foods	Several small industries use about 27 per cent of the total consumption.
	* In parish of St. Damase	
	** A supplementary well (1) supply is pumped to the system when required.	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. DAVID DE L'AUBE RIVIERE</b> (Levis Co.)		<b>ST. DENIS</b> (St. Hyacinthe Co.)	
	<u>1956</u>	<u>1958</u>	<u>1956</u>	
Population served:				
In municipality .....	- (1,495 <sup>d</sup> )	1,300 (1,535 <sup>e</sup> )	905 (994 <sup>d</sup> ) (910 <sup>e</sup> )	
Outside municipality .....	-	0	0	
Total .....	-	<u>1,300*</u>	<u>905</u>	
Date(s) of survey .....	March 25, 1961 .....		August 11, 1956 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	St. Lawrence River, from Levis .....		Richelieu River .....	
Treatment .....	See Levis .....		River water is pumped with screening and chlorination, to standpipe and system.	
Storage capacity (thousand gallons) ..	.....		Standpipe ..... 10 Two reservoirs (fire protection only) .... ..... 30 each	
Consumption (average in mgd) .....	<u>1960</u>		<u>1956</u>	
	0.035		0.12	
Industrial use .....	.....		None .....	
Remarks .....	* Service commenced December 1, 1958 Total population in March, 1961 said to be 1,660.		None .....	
<b>Municipality .....</b>	<b>ST. ELZEAR</b> (Ile de Montreal)		<b>ST. EMILIEN*</b> (Lac St. Jean E. Co.)	
	<u>1959</u>		<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	2,300 estd (2,589 <sup>d</sup> ) (3,350 <sup>e</sup> )		1,950 (2,014 <sup>d</sup> )	2,030 <sup>e</sup>
Outside municipality .....	0		0	0
Total .....	<u>2,300 estd</u>		<u>1,950</u>	<u>2,030</u>
Date(s) of survey .....	January 22, 1959 .....		July 18, 1955; November 3, 1958 .....	
Ownership .....	Municipally owned and operated since April 18, 1958. Previously water was supplied by two private companies.		Municipally owned and operated .....	
Source of supply .....	Three wells .....		Red Creek, 2.5 miles distant .....	
Treatment .....	No treatment; water is pumped direct to system.		No treatment; water flows by gravity to system from behind dam on creek.	
Storage capacity (thousand gallons) ..	None .....		Dam on creek ..... 2,000	
Consumption (average in mgd) .....	<u>1958</u>		<u>1955</u>	<u>1958</u>
	0.25		No data	0.16
Industrial use ..	None .....		No major industrial user. The St. Raymond Paper Co. takes most of its water direct from the Metabetchouan River.	
Remarks .....			* In March, 1960, this village became the town of Desbiens.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. EDOUARD DE FRAMPTON*</b> (Dorchester Co.)	<b>ST. EDUARD DE LOTBINIERE</b> (Lotbiniere Co.)	<b>STE. ELISABETH</b> (Joliette Co.)	
<u>1958</u>  400 (1,793 <sup>d</sup> ) (1,837 <sup>e</sup> ) <u>0</u> 400 estd	<u>1956</u>  669 (1,873 <sup>d</sup> ) (1,909 <sup>e</sup> ) <u>0</u> 669	<u>1955</u>  1,500 (1,678 <sup>d</sup> ) <u>500</u> 2,000	<u>1958</u>  1,500 (1,670 <sup>e</sup> ) <u>500</u> 2,000
<i>See Frampton</i>	July 28, 1956 ..... Privately owned and operated by Emile Laquerre  Three wells, 18 ft deep ..... No treatment; water is pumped to reservoir and system.  One reservoir ..... 25  No data .....  None .....	June 7, 1955; November 25, 1958 ..... Privately owned and operated by the Syndicat Cooperatif d'Aqueduc de Ste. Elisabeth Spring* ..... No treatment; water flows by gravity to reservoir, 5 miles from village, and then to system. Some services, 22 miles distant in Berthier County, are also served by gravity. One underground, concrete reservoir .. 100 One reservoir (constructed in 1958) ... 75  <u>1955</u> <u>1958</u> 0.20                      0.20  None in 1956; in 1958 one manufacturer of cement pipe * Bayonne River is pumped for fire protection.	
<b>ST. EPHREM DE TRING</b> (Beauce Co.)	<b>ST. ESPRIT</b> (Montcalm Co.)	<b>ST. ETIENNE DE LA MALBAIE</b> (Charlevoix E. Co.)	
<u>1956</u>  831 <sup>d</sup> (760 <sup>e</sup> ) <u>-*</u> -	<u>1958</u>  1,000 estd (1,650 <sup>d</sup> ) (1,680 <sup>e</sup> ) <u>0</u> 1,000 estd	<u>1956</u>  - (1,177 <sup>d</sup> ) <u>-</u> -	<u>1958</u>  - (1,240 <sup>e</sup> ) <u>-</u> -
October 20, 1956 ..... Municipally owned and operated .....  Springs .....  Springs are collected in an infiltration well (10 ft deep) through sand, then pumped to reservoir and system.  One reservoir ..... 60 <u>1956</u> 0.07  None .....	April 12, 1958 ..... Privately owned and operated by L'Aqueduc Laurentien de Montcalm  St. Esprit River and one well, 65-70 ft deep  River and well waters are pumped to reservoir and system, the former only being chlorinated. A 50:50 mixture of river and well water is normally supplied.  One wooden reservoir ..... No data Unknown .....  None .....	<i>See Pointe au Pic</i>	
* A few families in the parish of St. Ephrem de Beauce, formerly St. Ephrem de Tring parish are also served.		* Formerly known as St. Etienne de Murray Bay	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. FELICIEN (Lac St. Jean W. Co.)</b>		<b>ST. FELIX DE KINGSEY (Drummond Co.)</b>	
	<u>1955</u>	<u>1958</u>		
Population served:				
In municipality .....	3,600 (4,152 <sup>d</sup> )	4,583		
Outside municipality .....	<u>1,400*</u>	<u>2,409*</u>		
Total .....	<u>5,000</u>	<u>6,992</u>		
Date(s) of survey .....	July 19, 1955; November 6, 1956 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Riviere a l'Ours, 6 miles distant .....			
Treatment .....	No treatment; water flows by gravity to system from behind dam on river.			<i>See Kingsey</i>
Storage capacity (thousand gallons) ..	One earth reservoir .....		1,000	
Consumption (average in mgd) .....	No data .....			
Industrial use .....	None .....			
Remarks .....	* In the rural municipality of St. Felicien, surrounding the town of this name			
<b>Municipality .....</b>	<b>ST. FLAVIEN (Lotbiniere Co.)</b>		<b>STE. FLORE (St. Maurice Co.)</b>	
	<u>1956</u>		<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	300 estd (634 <sup>d</sup> ) (578 <sup>e</sup> )		1,300 (1,329 <sup>d</sup> )	1,300 (1,390 <sup>e</sup> )
Outside municipality .....	<u>0</u>		<u>0</u>	<u>0</u>
Total .....	<u>300 estd</u>		<u>1,300</u>	<u>1,300</u>
Date(s) of survey .....	August 23, 1956 .....		June 11, 1955; November 21, 1958 .....	
Ownership .....	Privately owned and operated by Jos. Lemay		Municipally owned and operated .....	
Source of supply .....	Artesian wells .....		Chretien Lake* .....	
Treatment .....	No treatment .....		No treatment; in 1955, water flows by gravity direct to system. In 1957-58 the southwest part of the parish was supplied by pump.	
Storage capacity (thousand gallons) ..	No data .....		None, besides lake .....	
Consumption (average in mgd) .....	No data .....		Unknown .....	
Industrial use .....	None .....		None .....	
Remarks .....			* See also Grand'Mere, which supplies a small part of the parish of Ste. Flore	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. FELIX DE VALOIS*</b> (Joliette Co.)	<b>ST. FELIX DU CAP ROUGE*</b> (Quebec Co.)	<b>ST. FEREOL</b> (Montmorency No. 1 Co.)
<u>1958</u> 1,319 <sup>e</sup> (1,323 <sup>d</sup> ) <u>300</u> 1,619	<u>1960</u> 1,480 (1,402 <sup>d</sup> ) (1,480 <sup>e</sup> ) <u>0</u> 1,480	<u>1958</u> 100 estd (2,101 <sup>d</sup> ) (2,070 <sup>e</sup> ) <u>0</u> 100 estd
February 3, 1958 ..... Municipally owned and operated .....	September 1, 1960 .....	February 28, 1958 ..... Privately owned and operated by Albert Simard
Eight springs** ..... No treatment; spring water from back of gravel bed flows by gravity 2 miles to reservoir and then to the system. One reservoir ..... 300	Wells, from Ste. Foy ..... <i>See</i> Ste. Foy	Springs ..... No treatment; water flows by gravity to reservoir and system. One reservoir ..... 10 No data .....
<u>1958</u> 0.10 (Max. - 0.12) Total capacity of springs - 0.10 A bottling plant and a poultry slaughter house use about 20 per cent of the total consumption. * See also Water Survey Report No. 2 ** An auxiliary supply of 2 artesian wells yielding 4,000 gph is available	* Also known as Cap Rouge	None .....
<b>STE. FOY* (Quebec Co.)</b>		<b>ST. FRANCOIS DE SALES DE LA RIVIERE DU SUD</b> (Montmagny Co.)
<u>1955</u> 13,000 (14,615 <sup>d</sup> ) <u>0</u> 13,000*	<u>1958</u> 20,000 <sup>e</sup> <u>0</u> 20,000*	<u>1960</u> 30,000 <u>1,480<sup>†</sup></u> 31,480*
July 26, 1955; November 6, 1958; September 1, 1960 ..... Municipally owned and operated .....		January 29, 1958; November 5, 1958 ... Municipally owned and operated .....
In 1955, and 1958, two artesian wells, 50 ft deep, 1.5 miles distant** In 1960, three additional wells, 130 ft deep, at Cap Rouge No treatment <sup>††</sup> ; water is pumped to standpipe and system .....		Springs ..... No treatment; water flows by gravity and with supplementary pumping to reservoir and system.
Standpipe ..... 100		One reservoir ..... 100 No data Capacity of system - 0.075
<u>1955</u> 0.8**	<u>1958</u> 1.8	<u>1960</u> 2.2 (Max. - 3.2) Capacity of system in 1960 - 3.6
A food packing firm, a creamery and a lumber firm used about 1 per cent of total consumption in 1955. In 1960 only the creamery used the water		None at time of survey
* See also Water Survey Report No. 12. About 1,100 additional served by this system in PMQ area of the Department of National Defence (Army) establishment. ** In 1955, 0.23 mgd purchased from city of Quebec † In St. Felix du Cap Rouge, also known as Cap Rouge †† A treatment plant for softening, and iron and manganese removal was under study in 1959 and 1960.		* System still under construction in January, 1958



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>ST. FRANCOIS DU LAC</b> (Yamaska Co.)		<b>ST. FRANCOIS XAVIER DE BATISCAN</b> (Champlain Co.)
	<u>1956</u>	<u>1958</u>	
Municipality .....			
Population served:			
In municipality .....	- (826 <sup>d</sup> )	- (856 <sup>e</sup> )	
Outside municipality .....	-	-	
Total .....	-	-	
Date(s) of survey .....			
Ownership .....			
Source of supply .....			
Treatment .....	<i>See Pierreville</i>		<i>See Batiscan</i>
Storage capacity (thousand gallons) ..			
Consumption (average in mgd) .....			
Industrial use .....			
Remarks .....			
<hr/>			
Municipality .....	<b>ST. GEDEON</b> (Frontenac Co.)		<b>ST. GENEVIEVE DE BATISCAN</b> (Champlain Co.)
	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:			
In municipality .....	- (857 <sup>d</sup> ) (867 <sup>e</sup> )	650 estd (1,372 <sup>d</sup> )	625 (1,303 <sup>e</sup> )
Outside municipality .....	-*	<u>0</u>	<u>0</u>
Total .....	<u>1,200</u>	<u>650</u>	<u>625</u>
Date(s) of survey .....	February 26, 1958 .....	June 14, 1955; November 21, 1958 .....	
Ownership .....	Municipally owned and operated .....	Owned and operated by L'Aqueduc des Laurentides Ltee.	
Source of supply .....	Three wells .....	Spring-fed creek .....	
Treatment .....	No treatment; water flows by gravity from reservoirs to system.	No treatment; water from behind dam on creek flows by gravity to system.*	
Storage capacity (thousand gallons) ..	Three wooden reservoirs ..... No data	Dam reservoir on creek ..... 16.5	
Consumption (average in mgd) .....	<u>1958</u> 0.07 estd	Unknown .....	
Industrial use .....	None .....	Two canneries and an agricultural co- operative	
Remarks .....	* Presumably some services in St. Gedeon parish	* Plans exist for construction of a reservoir	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. FREDERIC (Beauce Co.)</b>	<b>ST. FULGENCE (Chicoutimi Co.)</b>	<b>ST. GABRIEL DE BRANDON (Berthier Co.)</b>																				
<table border="0"> <tr><td><u>1956</u></td><td><u>1958</u></td></tr> <tr><td>300 (1,003<sup>d</sup>)</td><td>250 (1,054<sup>e</sup>)</td></tr> <tr><td><u>0</u></td><td><u>0</u></td></tr> <tr><td>300</td><td>250</td></tr> </table>	<u>1956</u>	<u>1958</u>	300 (1,003 <sup>d</sup> )	250 (1,054 <sup>e</sup> )	<u>0</u>	<u>0</u>	300	250	<table border="0"> <tr><td><u>1958</u></td></tr> <tr><td>1,025<sup>e</sup> (1,054<sup>d</sup>)</td></tr> <tr><td><u>0</u></td></tr> <tr><td>1,025</td></tr> </table>	<u>1958</u>	1,025 <sup>e</sup> (1,054 <sup>d</sup> )	<u>0</u>	1,025	<table border="0"> <tr><td><u>1955</u></td><td><u>1958</u></td></tr> <tr><td>3,265<sup>d</sup></td><td>3,200<sup>e</sup></td></tr> <tr><td><u>0</u></td><td><u>50*</u></td></tr> <tr><td>3,265</td><td>3,250**</td></tr> </table>	<u>1955</u>	<u>1958</u>	3,265 <sup>d</sup>	3,200 <sup>e</sup>	<u>0</u>	<u>50*</u>	3,265	3,250**
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3,265	3,250**																					
<p>August 23, 1956; January 15, 1959 .... In 1956 privately owned and operated by T. Vachon and E. Ovillon; in 1959 owned and operated by Societe d'Aqueduc de St. Frederic</p>	<p>February 4, 1958 ..... Privately owned and operated by Leo Turcotte</p>	<p>June 7, 1955; November 6, 1958 ..... Municipally owned and operated .....</p>																				
<p>Springs ..... No treatment; water flows by gravity to reservoir and system,</p>	<p>Jeannes Creek ..... No treatment; water flows by gravity to reservoir and system.</p>	<p>30 artesian wells ..... In 1955, no treatment; water flows to underground reservoirs and is pumped to system. In 1958, chlorination is carried out.</p>																				
<p>One reservoir ..... 6.5</p>	<p>One reservoir ..... 250</p>	<p>In 1955, three reservoirs ..... 30, 30 &amp; 77 In 1958, two underground reservoirs ... 35 &amp; 77 In 1958, one elevated reservoir .. 250</p>																				
<table border="0"> <tr><td><u>1957</u></td></tr> <tr><td>8,000 gpd</td></tr> </table>	<u>1957</u>	8,000 gpd	<p>Unknown .....</p>	<table border="0"> <tr><td><u>1955</u></td><td><u>1958</u></td></tr> <tr><td>0.47 (Max. - 0.56)</td><td>0.45 estd</td></tr> </table>	<u>1955</u>	<u>1958</u>	0.47 (Max. - 0.56)	0.45 estd														
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<p>None .....</p>	<p>None .....</p>	<p>A tourist area A tannery and a creamery use between 40 and 60 per cent of the total consumption during the winter period. * In St. Gabriel de Brandon parish ** Summer population may rise as high as 10,000, at times 4,800 in winter.</p>																				
<b>STE. GENEVIEVE DE BERTHIER* (Berthier Co.)</b>	<b>ST. GEORGES (Champlain Co.)</b>	<b>ST. GEORGES (Beauce Co.)</b>																				
<table border="0"> <tr><td><u>1955</u></td><td><u>1960</u></td></tr> <tr><td>- (1,944<sup>d</sup>)</td><td>- (1,938<sup>e</sup>)</td></tr> <tr><td>-</td><td>-</td></tr> <tr><td>-</td><td>-</td></tr> </table>	<u>1955</u>	<u>1960</u>	- (1,944 <sup>d</sup> )	- (1,938 <sup>e</sup> )	-	-	-	-	<table border="0"> <tr><td><u>1955</u></td></tr> <tr><td>1,050 (1,454<sup>d</sup>) (1,658<sup>e</sup>)</td></tr> <tr><td><u>0</u></td></tr> <tr><td>1,050*</td></tr> </table>	<u>1955</u>	1,050 (1,454 <sup>d</sup> ) (1,658 <sup>e</sup> )	<u>0</u>	1,050*	<table border="0"> <tr><td><u>1956</u></td><td></td></tr> <tr><td>- (3,197<sup>d</sup>)</td><td>3,240 (3,245<sup>e</sup>)</td></tr> <tr><td>-</td><td><u>0</u></td></tr> <tr><td>3,200*</td><td>3,240*</td></tr> </table>	<u>1956</u>		- (3,197 <sup>d</sup> )	3,240 (3,245 <sup>e</sup> )	-	<u>0</u>	3,200*	3,240*
<u>1955</u>	<u>1960</u>																					
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-	<u>0</u>																					
3,200*	3,240*																					
<p><i>See</i> Berthierville</p>	<p>June 10, 1955 ..... Municipally owned and operated .....</p>	<p>July 26, 1956; September, 1960 ..... Municipally owned and operated .....</p>																				
<p>Spring .....</p>	<p>Spring .....</p>	<p>Lake Poulin (des Cygnes); purchased from St. Georges West</p>																				
<p><i>See</i> Berthierville</p>	<p>No treatment; water is pumped to reser- voir and system. One steel reservoir ..... 33</p>	<p><i>See</i> St. Georges West. Supplementary pumping to supply a high lying district. In 1956, one reservoir ..... 400 In 1969, ..... No data</p>																				
<p>Unknown .....</p>	<p>Unknown .....</p>	<table border="0"> <tr><td><u>1956</u></td><td><u>1960</u></td></tr> <tr><td>0.24</td><td>0.41</td></tr> </table>	<u>1956</u>	<u>1960</u>	0.24	0.41																
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<p>None .....</p>	<p>None .....</p>	<p>None .....</p>																				
<p>* A parish .....</p>	<p>* Total population said to be 1,375 ...</p>	<p>* Total population quoted by town officers 4,500 in 1956 and 3,765 in 1960</p>																				

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. GEORGES WEST (Beauce Co.)</b>		<b>ST. GERARD (Wolfe Co.)</b>	
	<u>1956</u>		<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	3,250 (3,643 <sup>d</sup> )	- (3,681 <sup>e</sup> )	469 (665 <sup>d</sup> )	488 (643 <sup>e</sup> )
Outside municipality .....	*	-*	0	0
Total .....	-	<u>5,000</u>	<u>469</u>	<u>488</u>
Date(s) of survey .....	July 26, 1956; September 15, 1960 ....		October 15, 1956; November 1, 1958 ....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Lake Poulin (des Cygnes), 7 miles distant		Springs .....	
Treatment .....	Water flows by gravity to reservoir and system with chlorination when required, especially during summer.		Usually no treatment when flow by gravity from reservoir to system. Chlorination is carried out when pumping is required.	
Storage capacity (thousand gallons) ..	In 1960, reservoirs .....		One reservoir .....	
Consumption (average in mgd) .....	<u>1956</u>	<u>1960</u>	<u>1956 - 58</u>	
	0.50	No data	19,000 gpd	
		Capacity of system - 1.0	Capacity of system - 30,000 gpd	
Industrial use .....	A spinning mill, a shoe factory and a manufacturer of wood products		A quarry .....	
Remarks .....	* In 1956 includes town of St. Georges, part of the parish of St. Benoit Labre (1,200 persons) and surrounding rural district (800 persons)			
<b>Municipality .....</b>	<b>ST. GREGOIRE (Iberville Co.)</b>		<b>ST. GREGOIRE LE GRAND (Nicolet Co.)</b>	
	<u>1956</u>	<u>1961</u>	<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	615 <sup>d</sup>	650 (635 <sup>e</sup> )	- (625 <sup>d</sup> )	- (594 <sup>e</sup> )
Outside municipality .....	0	0	-	-
Total .....	<u>515</u>	<u>650</u>	<u>800**</u>	<u>900**</u>
Date(s) of survey .....	August 10, 1956; February 7, 1961 ....		October 15, 1956; November 17, 1958 ..	
Ownership .....	Privately owned and operated .....		Owned and operated by Armand Lemay	
Source of supply .....	Springs on Mt. St. Gregoire and a 60 ft well		Artesian well .....	
Treatment .....	No treatment; water flows by gravity and is pumped to system,		No treatment; water flows by gravity to reservoir and is then pumped to system.	
Storage capacity (thousand gallons) ..	No data .....		One reservoir .....	
Consumption (average in mgd) .....		<u>1960</u>	<u>1956</u>	<u>1958</u>
		1,500 gpd	20,000 gpd	25,000 gpd
		Capacity of system - 2,500 gpd		
Industrial use .....	None .....		A creamery and a sawmill .....	
Remarks .....	* A village: there is also a parish of St. Gregoire le Grand (Iberville Co.), population 1,048 <sup>d</sup> and 914 <sup>e</sup> .		* Now called Larochelle ** Presumably including some services in St. Gregoire le Grand parish, population 1,312 <sup>d</sup> and 1,229 <sup>e</sup> .	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>STE. GERMAINE DU LAC ETCHEMIN*</b> (Dorchester Co.)	<b>STE. GERTRUDE</b> (Nicolet Co.)	<b>ST. GERVAIS ET PROTAIS</b> (Bellechasse Co.)
	<u>1958</u>	<u>1958</u>
	438 (1,265 <sup>d</sup> , <sup>e</sup> )	300 estd (1,813 <sup>d</sup> ) (1,824 <sup>e</sup> )
	<u>98*</u>	<u>0</u>
	<u>536</u>	<u>300 estd</u>
	November 22, 1958 .....	January 21, 1958 .....
	Privately owned and operated by J.M. Demers, J.D. Ouellet and E. St. Cyr	Privately owned and operated by Le Syndicat Cooperatif
	Two springs .....	Springs .....
	No treatment; water is pumped to reservoir and system.	No treatment; water flows by gravity to reservoir and system.
	Two reservoirs (total) ..... 25	One reservoir ..... 60
	<u>1958</u>	No data
	10,000 gpd	Capacity of system - 28,800 gpd
	Capacity of system - 18,000 gpd	
	A sawmill .....	No data .....
	* St. Leonard and Villers .....	
<i>See Lac Etchemin</i>		
<b>ST. GUILLAUME</b> (Yamaska Co.)	<b>ST. HENRI</b> (Levis Co.)	
<u>1956</u>	<u>1956</u>	<u>1958</u>
- (802 <sup>d</sup> ) (811 <sup>e</sup> )	595 (661 <sup>d</sup> )	635 (682 <sup>e</sup> )
<u>-</u>	<u>15</u>	<u>15</u>
<u>1,000*</u>	<u>610</u>	<u>650</u>
Privately owned and operated .....	October 15, 1956; November 4, 1958 .....	
Municipally owned and operated .....	Municipally owned and operated .....	
Springs and David River** .....	Two wells, 106 ft deep* .....	
No treatment; spring water flows by gravity to reservoir; river water is pumped to reservoir as required. System is supplied by gravity from the reservoir.	No treatment; water is pumped to reservoir and system .....	
One reservoir ..... 100	One underground reservoir ..... 200	
<u>1956</u>	<u>1956</u>	
0.025	0.053 (Max. - 0.065)	
	Capacity of system - 0.078	
None .....	One small manufacturing plant and a creamery use this water, in 1956, about 6 per cent of total pumpage.	
* Presumably including some services in St. Guillaume parish	* In case of fire, emergency supply from the Etchemin River	
** Springs are the main source used.		

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. HILAIRE</b> (Rouville Co.)	
	<u>1958</u>	<u>1960</u>
Population served:		
In municipality .....	2,363 <sup>e</sup> (2,000 <sup>d</sup> )	2,771
Outside municipality .....	<u>0</u>	<u>0</u>
Total .....	<u>2,363*</u>	<u>2,771</u>
Date(s) of survey .....	November 4, 1958; August 15, 1960 .....	
Ownership .....	In 1958 municipally owned and operated, but in 1960 a new filtration plant, operated by the Richelieu Valley Water Works Commission, and presently owned by St. Hilaire Village, McMasterville and Otterburn Park Municipalities.	
Source of supply .....	In 1958, springs and wells; in 1960 Richelieu River .....	
Treatment .....	In 1958 no treatment; water was partly supplied by gravity and partly by pumping to system. In 1960, Richelieu River water treated in the new plant was supplied. See McMasterville	
Storage capacity (thousand gallons) ...	In 1958 reservoir capacity ..... 250 In 1960, ..... No data	
Consumption (average in mgd) .....	<u>1958</u>	<u>1960</u>
	0.025	1.2*
	Capacity of system - 0.030	Capacity of system - 2.0
Industrial use .....	None ..	
Remarks .....	* Some served by Beloeil in 1956 and 1958 ** For all three municipalities St. Hilaire, Otterburn Park and McMasterville	
<hr/>		
Municipality .....	<b>ST. HYACINTHE</b> (St. Hyacinthe Co.)	
	<u>1956</u>	<u>1958</u>
Population served:		
In municipality .....	20,439 <sup>d</sup>	22,007 <sup>e</sup>
Outside municipality .....	<u>6,534*</u>	<u>6,705*</u>
Total .....	<u>26,973</u>	<u>28,712</u>
Date(s) of survey .....	August 10, 1956; November 3, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	Yamaska River .....	
Treatment .....	River water is pumped to mixing basins (8 mg) where it is pre-chlorinated (20 lb/mg) and alum-coagulated (435 and 370 lb/mg)** with the addition of activated carbon (13 and 6 lb/mg)**. After settling in basins (1 mg capacity) it is rapid sand-filtered (8) to clear well, post-chlorinated (14 and 15 lb/mg)** and the pH adjusted with lime (140 and 130 lb/mg)**. It is then pumped to system.	
Storage capacity (thousand gallons) ...	Clear well ..... 600	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>
	3.8 (Max. - 4.0)	4.0 (Max. - 4.6)
	Filter capacity of system - 8 mgd	
Industrial use .....	About 40 per cent of total pumpage is used by a foundry, a steel fabricator, a tannery and in the manufacture of textiles, hosiery and clothing.	
Remarks .....	* Villages of St. Joseph and La Providence ** 1956 and 1960 figures, respectively	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. HONORE (Beauce Co.)</b>	<b>ST. HUGUES (Bagot Co.)</b>	
<u>1957</u>	<u>1956</u>	<u>1958</u>
720 (1,366 <sup>d</sup> ) (1,390 <sup>e</sup> )	487 <sup>d</sup>	468 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>
<u>720</u>	<u>487</u>	<u>468</u>
July 26, 1957 .....	October 13, 1956; November 15, 1958 .....	
Municipally owned and operated by the Township of Shenley	Municipally owned and operated .....	
Springs and one well, 320 ft deep** ...	Five wells, three 75 ft deep, and two 300 ft deep .....	
No treatment; spring water flows by gravity to reservoir and then to system; well water is pumped to the reservoir.	No treatment; water is pumped to reservoir and system. ....	
One reservoir ..... 100	One wooden reservoir ..... 14	
Unknown .....	<u>1956 - 58</u>	
	0.025 (Max. - 0.030)	
None .....	None .....	
* Population of St. Honore parish		
** Auxiliary supply available from Lake Rond		
<b>ST. JACQUES (Montcalm Co.)</b>	<b>ST. JEAN BAPTISTE (Rouville Co.)</b>	<b>ST. JEAN DE BOISCHATEL (Montmorency No. 1 Co.)</b>
<u>1958</u>	<u>1956</u>	
2,021 <sup>e</sup> (1,979 <sup>d</sup> )	550 (1,308 <sup>d</sup> ) (1,366 <sup>e</sup> )	
<u>645 approx.</u>	<u>0</u>	
<u>2,666</u>	<u>550</u>	
February 20, 1958 .....	August 15, 1956 .....	
Municipally owned and operated .....	Municipally owned and operated .....	
Three springs .....	Springs .....	
No treatment; water flows by gravity to system	No treatment; spring water feeding the reservoirs flows by gravity from the smaller reservoir to the system and is pumped from the larger reservoir.	See Boischatel
One reservoir, 1956 ..... 80	Concrete covered reservoir at spring .. 60	
One reservoir, 1958 ..... 300	Concrete covered reservoir ..... 100	
<u>1957 - 58</u>	<u>1956</u>	
0.30	0.05 approx.	
Capacity of system - 0.50		
A tobacco cooperative, a sportswear manufacturer and two other firms use this water	A cannery .....	
* In parish of St. Jacques (1,475 <sup>e</sup> ) and Ste. Julienne de Rawdon, about 16 only in latter		

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. JEAN DE DIEU</b> (Ile de Montreal)		<b>ST. JEAN EUDES (Chicoutimi Co.)</b>	
	<u>1958</u>		<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	7,002		- (2,560 <sup>d</sup> )	- (2,697 <sup>e</sup> )
Outside municipality .....	<u>0</u>		<u>-</u>	<u>-</u>
Total .....	<u>7,002</u>		<u>-</u>	<u>-</u>
Date(s) of survey .....	November, 1958 .....			
Ownership .....	Owned and operated by Hospital St. Jean de Dieu			
Source of supply .....	St. Lawrence River, treated; purchased from city of Montreal			
Treatment .....	See Montreal		See Arvida	
Storage capacity (thousand gallons) ..	See Montreal			
Consumption (average in mgd) .....	<u>1958</u>			
	0.627			
Industrial use .....	None .....			
Remarks .....				
<b>Municipality .....</b>	<b>ST. JOSEPH (St. Hyacinthe Co.)</b>		<b>ST. JOSEPH D'ALMA</b> (Lac St. Jean E. Co.)	
	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1960</u>
Population served:				
In municipality .....	2,708 <sup>d</sup>	2,836 <sup>e</sup>	1,000 (1,766 <sup>d</sup> )	1,900 (1,880 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>2,708</u>	<u>2,836</u>	<u>1,000</u>	<u>1,900</u>
Date(s) of survey .....	August 10, 1956; November 3, 1958 .....		July 19, 1955; September 16, 1960 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Yamaska River treated; purchased from city of St. Hyacinthe*		Lake St. John (Grande Decharge), treated, purchased from Alma, and two wells 200 ft deep	
Treatment .....	See St. Hyacinthe		See Alma and Isle Maligne	
Storage capacity (thousand gallons) ..	See St. Hyacinthe .....		.....	
Consumption (average in mgd) .....	See St. Hyacinthe .....		.....	
Industrial use .....	.....		.....	
Remarks .....	* Water reported to be fluoridated in 1961		* A rural municipality .....	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

ST. JEROME* (Lac St. Jean E. Co.)	ST. JOHN (St. Jean Co.)	ST. JOSEPH (Beauce Co.)																				
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1959</u></td> </tr> <tr> <td align="center">1,505 (1,505<sup>d</sup>)</td> <td align="center">- (1,783<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>300</u></td> <td align="center"><u>-</u></td> </tr> <tr> <td align="center"><u>1,805</u></td> <td align="center"><u>1,900**</u></td> </tr> </table>	<u>1955</u>	<u>1959</u>	1,505 (1,505 <sup>d</sup> )	- (1,783 <sup>e</sup> )	<u>300</u>	<u>-</u>	<u>1,805</u>	<u>1,900**</u>	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">24,367<sup>d</sup></td> <td align="center">27,200<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>24,367</u></td> <td align="center"><u>27,200</u></td> </tr> </table>	<u>1956</u>	<u>1958</u>	24,367 <sup>d</sup>	27,200 <sup>e</sup>	<u>0</u>	<u>0</u>	<u>24,367</u>	<u>27,200</u>	<table border="0"> <tr> <td align="center"><u>1956</u></td> </tr> <tr> <td align="center">2,484<sup>d</sup> (2,485<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>35*</u></td> </tr> <tr> <td align="center"><u>2,519</u></td> </tr> </table>	<u>1956</u>	2,484 <sup>d</sup> (2,485 <sup>e</sup> )	<u>35*</u>	<u>2,519</u>
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July 18, 1955; February, 1959 ..... Municipally owned and operated .....	August 17, 1956; November 6, 1958 ..... Municipally owned and operated .....	October 15, 1956 ..... Municipally owned and operated .....																				
Lac aux Sables .....	Richelieu River .....	Springs and artificial lake .....																				
In 1955, no treatment; water flows by gravity, from dam at outlet of lake, 2½ miles distant, to system. In 1958 chlorination of supply was being carried out.	River water is pumped to underground coagulation and settling basins with pre-chlorination (7 lb/mg) and alum addition (215 lb/mg); it is then rapid sand-filtered (4) to clear well and then pumped to standpipe and system.	No treatment; water flows to reservoir and system by gravity.																				
None*** .....	Clear well ..... 183 Standpipe ..... 233	One concrete reservoir ..... 330 Artificial lake ..... 25,000																				
<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1959</u></td> </tr> <tr> <td align="center">0.12</td> <td align="center">0.09 (estd)</td> </tr> </table>	<u>1955</u>	<u>1959</u>	0.12	0.09 (estd)	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">2.1</td> <td align="center">2.8</td> </tr> <tr> <td align="center" colspan="2">Capacity of system - 3.3</td> </tr> </table>	<u>1956</u>	<u>1958</u>	2.1	2.8	Capacity of system - 3.3		<table border="0"> <tr> <td align="center"><u>1956</u></td> </tr> <tr> <td align="center">0.115 (Max. - 0.13)</td> </tr> <tr> <td align="center" colspan="2">Capacity of system - 0.225</td> </tr> </table>	<u>1956</u>	0.115 (Max. - 0.13)	Capacity of system - 0.225							
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Capacity of system - 0.225																						
None .....	In 1956 about 19 per cent and in 1958 about 35 per cent of total pumpage is used in the manufacture of dyes, cables and conduit, valves and fittings and by the Royal Canadian Air Force, a military college and the railways.	None .....																				
* Metabetchouan (Post Office designation) ** Presumably includes some services in St. Jerome parish *** Plans exist for a 200,000 gal reservoir		* In St. Joseph de Beauce parish																				
<b>ST. JOSEPH DE COLERAINE</b> (Megantic Co.)  <p align="center"><i>See Coleraine</i></p>	<b>ST. JOSEPH DE SOREL</b> (Richelieu Co.)  <table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">3,571<sup>d</sup></td> <td align="center">3,550<sup>e</sup></td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>3,571</u></td> <td align="center"><u>3,550</u></td> </tr> </table> August 13, 1956; December 31, 1958 ... Privately owned and operated ..... Richelieu River, treated, from Tracy  <p align="center"><i>See Tracy</i></p> See Tracy ..... See Tracy ..... .....	<u>1956</u>	<u>1958</u>	3,571 <sup>d</sup>	3,550 <sup>e</sup>	<u>0</u>	<u>0</u>	<u>3,571</u>	<u>3,550</u>	<b>STE. JULIE</b> (Vercheres Co.)  <table border="0"> <tr> <td align="center"><u>1956</u></td> </tr> <tr> <td align="center">685 (1,117<sup>d</sup>) (1,157<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center"><u>685</u></td> </tr> </table> August 18, 1956 ..... Municipally owned and operated ..... Well .....  No treatment; water is pumped to system.  No data ..... No data ..... None .....	<u>1956</u>	685 (1,117 <sup>d</sup> ) (1,157 <sup>e</sup> )	<u>0</u>	<u>685</u>								
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**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. JULIENNE DE RAWDON*</b> (Montcalm Co.)	
	<u>1958</u>	
Population served:		
In municipality .....	16	(1,837 <sup>d</sup> ) (1,800 <sup>e</sup> )
Outside municipality .....	<u>0</u>	
Total .....	<u>16</u>	estd
Date(s) of survey .....	February 20, 1958 .....	
Ownership .....	Springs from St. Jacques, (Montcalm Co.) .....	
Source of supply .....		
Treatment .....		
Storage capacity (thousand gallons) ..	See St. Jacques .....	
Consumption (average in mgd) .....		
Industrial use .....		
Remarks .....	* A parish .....	
Municipality .....	<b>ST. LAZARE</b> (Bellechasse Co.)	<b>ST. LEONARD</b> (Nicolet Co.)
	<u>1958</u>	<u>1958</u>
Population served:		
In municipality .....	-	-
Outside municipality .....	-	-
Total .....	<u>-*</u>	<u>-</u>
Date(s) of survey .....	December 1, 1958 .....	
Ownership .....	Privately owned and operated by two co-operative waterworks associations *	
Source of supply .....	Springs .....	Springs from St. Gertrude
Treatment .....	No treatment; water flows by gravity to reservoir and system.	See Ste. Gertrude
Storage capacity (thousand gallons) ..	2.0*	
Consumption (average in mgd) .....	Unknown .....	
Industrial use .....	None .....	
Remarks .....	* Data available for only one of these associations, serving some 125 people in the parish of St. Lazare.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. LAMBERT* (Chambly Co.)</b>			<b>ST. LAURENT* (Ile de Montreal)</b>
<u>1949</u>	<u>1955</u>	<u>1958</u>	<u>1958</u>
7,800	13,000 (12,224 <sup>d</sup> )	14,356 <sup>e</sup>	40,328 (38,291 <sup>d</sup> ) (41,000 <sup>e</sup> )
<u>8,000*</u>	<u>11,900**</u>	<u>18,244**</u>	<u>0</u>
<u>15,800</u>	<u>24,900</u>	<u>32,600</u>	<u>40,328</u>
March 17, 1949; July 21, 1955; October, 1958 .....			November, 1958 .....
Municipally owned and operated .....			Municipally owned and operated .....
St. Lawrence River .....			St. Lawrence River treated; purchased from city of Montreal
In 1955 and 1958 river water from 2,000 ft out enters sump well and is low-lift-pumped to a baffled mixing chamber where it is pre-chlorinated (14 lb/mg) and alum-treated (70 to 170 lb/mg). After settling (2 basins, 220,000 gal capacity), it is rapid sand-filtered (3) to clear well, post-chlorinated (3 to 6 lb/mg) and pumped to reservoirs, elevated tanks and system. Future plans include one additional settling basin and 3 additional filters.			See Montreal
1955, clear well .....	1,100	1958, clear wells (reservoirs) ..	See Montreal
elevated tanks .....	85 and 125	54 and 40	
<u>1955</u>		<u>1958</u>	<u>1958</u>
1.75 (Max. - 2.0)		2.4 (Max. - 3.1)	5.665
Less than 1 per cent of the total consumption is used by manufacturers of furniture, asbestos products, electrical products, fountain pens and other light industries.			None .....
* See also Water Survey Report No. 2.			* See also Ville St. Laurent, Water Survey Report No. 2
** Preville, Greenfield Park, Le Moyne and Mackayville (since March, 1959, Mackayville known as Lafleche). Since 1959 only Preville is served by this system, the other three municipalities purchasing water from Jacques Cartier.			

<b>ST. LEONARD D'ASTON</b> (Nicolet Co.)	<b>ST. LEONARD DE PORT MAURICE</b> (Ile de Montreal)	<b>ST. LIN* (L'Assomption Co.)</b>
<u>1956</u>	<u>1958</u>	<u>1958</u>
751 <sup>d</sup> (780 <sup>e</sup> )	1,226 (925 <sup>d</sup> ) (1,854 <sup>e</sup> )	1,340 <sup>e</sup> (1,301 <sup>d</sup> )
<u>0</u>	<u>0</u>	<u>0</u>
<u>751</u>	<u>1,226</u>	<u>1,340</u>
July 3, 1956 .....	November, 1958 .....	1958** .....
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
Four artesian wells, 105 ft deep .....	St. Lawrence River, treated; purchased from city of Montreal	L'Achigan River and a deep well .....
No treatment; water is pumped to standpipe and system.	See Montreal	Pumped with chlorination to system .....
One wooden standpipe .....	See Montreal .....	One reservoir .....
No data .....	<u>1958</u>	No data .....
No data .....	0.125	No data .....
No data .....	None .....	No data .....
* Construction of a new standpipe is planned.	* See also Water Survey Report No. 2	* A parish with Laurentides as its Post Office
		** Data from Canadian Municipal Directory, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. LOUIS DE LOTBINIERE</b> (Lotbiniere Co.)	<b>STE. LOUISE (L'Islet Co.)</b>	
	<u>1958</u>	<u>1958</u>	
Population served:			
In municipality .....	570 (1,049 <sup>d</sup> ) (1,004 <sup>e</sup> )	325 (994 <sup>d</sup> ) (925 <sup>e</sup> )	
Outside municipality .....	<u>250</u>	<u>15</u>	
Total .....	<u>820</u>	<u>340</u>	
Date(s) of survey .....	February 3, 1958 .....	January 21, 1958 .....	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Springs .....	Springs* .....	
Treatment .....	No treatment; water flows by gravity to reservoirs and system	No treatment; water flows by gravity to reservoirs and system.	
Storage capacity (thousand gallons) ...	Two concrete reservoirs .... 50 each	One reservoir .....75	
Consumption (average in mgd) .....	<u>1957</u> 2,500 gpd (Max. - 3,000 gpd) Capacity of system - 0.10	<u>1957</u> 0.025 Capacity of system - 0.060	
Industrial use .....	A clothing manufacturer is supplied with water.	A convent, a textile plant and a creamery use about 20 per cent of the total consumption.	
Remarks .....		* An auxiliary supply is available	

Municipality .....	<b>ST. MALACHIE</b> (Dorchester Co.)	<b>ST. MARC (Vercheres Co.)</b>	
	<u>1958</u>	<u>1958</u>	<u>System A</u>
Population served:			
In municipality .....	448 (1,416 <sup>d</sup> ) (1,490 <sup>e</sup> )	923 approx (952 <sup>d</sup> ) (970 <sup>e</sup> )	620 approx
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>448</u>	<u>923</u>	<u>620</u>
Date(s) of survey .....	November 18, 1958 .....	October, 1958 .....	October 20, 1958 .....
Ownership .....	Privately owned and operated by J.A. Drouin	Five separate privately-owned systems, A, B, C, D and E, as follows:	Owned and operated by Cie d'Aqueduc St. Marc
Source of supply .....	Three springs .....	.....	Richelieu River .....
Treatment .....	Water is pumped to reservoir and to system with lime treatment for pH control.	.....	Water is pumped with chlorination direct to system.
Storage capacity (thousand gallons) ...	One reservoir ..... 4	.....	None .....
Consumption (average in mgd) .....	Unknown Capacity of system - 6,000 gpd	.....	Unknown .....
Industrial use .....	None .....	None .....	.....
Remarks .....			

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. LUC DE LAVAL (Saguenay Co.)</b>		<b>STE. LUCE (Rimouski Co.)</b>	<b>STE. MADELEINE (St. Hyacinthe Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1956</u>	<u>1958</u>
900 (1,329 <sup>d</sup> )	2,000 <sup>e</sup>	620 (1,096 <sup>d</sup> ) (1,227 <sup>e</sup> )	825 <sup>d</sup>	891 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>	<u>235*</u>	<u>235*</u>
<u>900</u>	<u>2,000</u>	<u>620</u>	<u>1,060</u>	<u>1,126</u>
Springs, supplied from Forestville		July 7, 1955 .....	October 22, 1956; November 1, 1958 .....	
See Forestville		Municipally owned and operated .....	Municipally owned and operated .....	
		Springs, 3½ miles distant; the same springs are used by Luceville.	Spring and artesian well, 216 ft deep**	
		No treatment; water flows by gravity to reservoir and system.	No treatment; water flows by gravity from the spring to the reservoir and is pumped from the well to the reservoir and system.	
		One concrete, underground reservoir . 100	One reservoir .....	
		<u>1955</u>	<u>1956 - 58</u>	
		Summer: 0.055	0.030 (Max. - 0.035)	
		Winter: 0.007	Capacity of system - 0.040	
		None but tourists .....	None .....	
			* In Ste. Marie Madeleine	
			** An emergency supply is available from a 180 ft deep well owned by A. Guertin.	

<b>ST. MARC (Vercheres Co.)</b>			
<u>System B</u>	<u>System C</u>	<u>System D</u>	<u>System E</u>
50	80	72	96*
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>50</u>	<u>80</u>	<u>72</u>	<u>96</u>
October 16, 1958 .....	October 19, 1958 .....	October 27, 1958 .....	October 21, 1958 .....
Privately owned and operated by Societe Cooperatif d'Aqueduc des Soixantes	Owned and operated by Cie d'Aqueduc Paroisse de Beloeil	Privately owned and operated by Cie Claire Fontaine	Privately owned and operated by L'Aqueduc Vary, Inc.
Springs .....	Spring .....	Spring .....	Richelieu River .....
No treatment; water flows by gravity to reservoir and system.	No treatment; water flows by gravity to reservoir and system.	No treatment; water flows by gravity to reservoir and system.	Water is pumped from river to the pressure tank. It is then subjected to sterilization by silver ions, alum-dosed and pressure sand-filtered to system.
One reservoir .....	One reservoir .....	Wooden reservoir .. No data	Pressure tank (raw water) 1.5
Unknown	Unknown .....	Unknown	6,000 gpd
Capacity of system .....		Capacity of system - 2,000 gpd	Capacity of system - 36,000 gpd
3,000 to 6,000 gpd			
			* In district known as Coin Ronde

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. MARC DES CARRIERES</b> (Portneuf Co.)	<b>STE. MARIE (Beauce Co.)</b>		
	1955	1956	1958	1960
Population served:				
In municipality .....	2,350 (2,457 <sup>d</sup> ) (2,369 <sup>e</sup> )	1,500 approx (3,094 <sup>d</sup> )	- (3,142 <sup>e</sup> )	3,240
Outside municipality .....	0	0	No data	0
Total .....	<u>2,350</u>	1,500 approx	-	<u>3,240</u>
Date(s) of survey .....	June 15, 1955 .....	July 25, 1956; November, 1958, August 31, 1960		
Ownership .....	Municipally owned and operated .....	In 1956 privately owned and operated by H. Drouin: since 1958, municipally owned and operated		
Source of supply .....	Four wells* .....	In 1956-58 Carter River; in 1960, Belair River		
Treatment .....	No treatment; water is pumped to elevated tanks and system	In 1956-58, river water, filtered through a natural sand filter., flows by gravity with chlorination to the system. In 1960 Belair River water is chlorinated with sodium hypochlorite and flows to system by gravity.		
Storage capacity (thousand gallons) ..	Two wooden elevated tanks ... 20 each	In 1956, none: in 1960 one reservoir .....		
Consumption (average in mgd) .....	1956 0.11	1956 - 58 Unknown	1960 0.25 (Max. - 0.26) Capacity of system - 0.40	1,000
Industrial use .....	Light industries use about 5 per cent of total consumption	A paperboard plant, a furniture manufacturer, a college, a bakery and some smaller firms		
Remarks .....	* A fifth well, some 3,500 ft distant from the other four, is available as a reserve supply, with pumping to reservoir.			
<b>Municipality .....</b>	<b>ST. MATHIAS (Rouville Co.)</b>	<b>ST. MATHIEU DE BELOEIL (Vercheres Co.)</b>		
	1958	1956	1958	
Population served:				
In municipality .....	1,004 (1,012 <sup>d</sup> ) (1,004 <sup>e</sup> )	- (170 <sup>d</sup> )	- (1,010 <sup>e</sup> )	
Outside municipality .....	0	-	-	
Total .....	<u>1,004</u>	-	-	
Date(s) of survey .....	January 26, 1958 .....	.....		
Ownership .....	Privately owned and operated by Aqueduc St. Mathias Ltee	.....		
Source of supply .....	Richelieu River, treated; purchased from village of Richelieu	Hertel Lake from Beloeil.....		
Treatment .....	See Richelieu	See Beloeil		
Storage capacity (thousand gallons) ..	See Richelieu			
Consumption (average in mgd) .....				
Industrial use .....				
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>STE. MARIE MADELEINE</b> (St. Hyacinthe Co.)	<b>ST. MARTIN*</b> (Beauce Co.)	<b>STE. MARTINE</b> (Chateauguay Co.)	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
235 (631 <sup>d</sup> )	235 (650 <sup>e</sup> )	1,436 <sup>d</sup>	1,502 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>15* estd</u>	<u>15* estd</u>
<u>235</u>	<u>235</u>	<u>1,451</u>	<u>1,517</u>
October 11, 1956; November 1, 1958 ....		October 13, 1956; December 1, 1958 .....	
.....		Privately owned and operated by Arcade Duprat	
Spring and artesian well from Ste. Madeleine		Two wells, 180 ft and 131 ft deep	
See Ste. Madeleine	See Bolduc	No treatment; water is pumped to reservoirs and system.	
See Ste. Madeleine		Two reservoirs ..... 20 and 50	
See Ste. Madeleine		Two res <u>1956 - 58</u> 0.045 (Max. - 0.050) Capacity of system - 0.20	
None .....		A cannery .....	
		* Presumably in St. Paul de Chateauguay	
<b>ST. METHODE DE FRONTENAC*</b> (Frontenac Co.)		<b>ST. MICHEL</b> (Bellechasse Co.)	
	<u>1958</u>		<u>1958</u>
	500 (1,856 <sup>d</sup> ) (1,875 <sup>e</sup> )		900 (1,594 <sup>d</sup> ) (1,563 <sup>e</sup> )
	<u>0</u>		<u>0</u>
	<u>500</u>		<u>900</u>
June 18, 1958 .....		January 18, 1958 .....	
Privately owned and operated by Syndicat d'Aqueduc St. Methode de Frontenac		Privately owned and operated by Cie d'Aqueduc St. Michel	
One spring and one well, 310 ft deep .....		Springs .....	
No treatment; water is pumped to reservoir and system. ....		No treatment; water flows by gravity to reservoir and system.	
One reservoir ..... 29		One concrete reservoir ..... 45	
	<u>1958</u>		<u>1957 - 58</u>
	0.030 Capacity of system - 0.040		0.030 (Max. - 0.045) Capacity of system - 0.060
None .....		None .....	
* Also known as Adstock			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. MICHEL*</b> (Ile de Montreal)		<b>STE. MONIQUE DES SAULES</b> (Quebec Co.)	
	1958		1956	1958
Population served:				
In municipality .....	30,867	(24,706 <sup>d</sup> ) (32,000 <sup>e</sup> )	-	(3,105 <sup>d</sup> ) - (3,240 <sup>e</sup> )
Outside municipality .....	0		-	-
Total .....	<u>30,867</u>		<u>-</u>	<u>-</u>
Date(s) of survey .....	November, 1958 .....		.....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	St. Lawrence River, treated; purchased from the city of Montreal		In 1955 a creek, in 1958 creek and artesian well from L' Ancienne Lorette	
Treatment .....	See Montreal		See L' Ancienne Lorette	
Storage capacity (thousand gallons) ...	See Montreal			
Consumption (average in mgd) .....	1958			
	2.477			
Industrial use .....	None .....		.....	
Remarks .....	* See also Water Survey Report No. 2			

Municipality .....	<b>ST. NICEPHORE</b> (Drummond Co.)		<b>ST. OCTAVE DE METIS</b> (Matane Co.)	
	1956	1958	1956	1958
Population served:				
In municipality .....	0	(2,727 <sup>d</sup> )	-	(1,520 <sup>e</sup> )
Outside municipality .....	0	-	-	-
Total .....	<u>0</u>	<u>1,382</u> estd	<u>-</u>	<u>-</u>
Date(s) of survey .....				
Ownership .....				
Source of supply .....				
Treatment .....	See Drummondville		See Price	
Storage capacity (thousand gallons) ...				
Consumption (average in mgd) .....				
Industrial use .....				
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. NARCISSE (Champlain Co.)</b>		<b>ST. NARCISSE DE BEAURIVAGE* (Lotbiniere Co.)</b>	
<u>1955</u>	<u>1958</u>	<u>1956 - 58</u>	
800 (2,079d)	1,000 (2,051e)	300 approx (948d) (932e)	
<u>0</u>	<u>0</u>	<u>0</u>	
800*	1,000*	300 approx	
June 11, 1955; November 8, 1958 .....		November, 1956; December 10, 1958 .....	
Spring supply privately owned and operated by Aqueduc Cossette and Freres Eng.; well supply privately owned and operated by the Societe d'Aqueduc de St. Narcisse.		Privately owned and operated by Aureus Moore	
Spring and 75 ft artesian well, 1/2 mile apart .....		One well, 14 ft deep and one artesian well 130 ft deep	
No treatment on either supply; both pumped to reservoirs and system .....		No treatment; water is pumped to reservoir and system.	
Spring supply - In 1955, one wooden reservoir .....	1.5	One reservoir .....	7
In 1958, only one concrete reservoir .....	32.75		
Well supply - In 1955, one concrete reservoir .....	12		
<u>1955</u>	<u>1958</u>	<u>1956 - 58</u>	
Unknown	Spring supply - 0.025 approx	10,000 gpd	
	Well supply - No data	Capacity of system - 10,000 gpd	
None .....		None .....	
* % of population served by spring system; remainder by well system .....		* Also known as Neubois	

<b>ST. ODILON DE CRANBOURNE (Dorchester Co.)</b>	<b>ST. OURS (Richelieu Co.)</b>		<b>ST. PACOME (Kamouraska Co.)</b>
<u>1958</u>	<u>1956</u>	<u>1958</u>	<u>1958</u>
600 (1,773d) (1,785e)	691d	700e	1,252e (1,283d)
<u>0</u>	<u>100*</u>	<u>100*</u>	<u>0</u>
600	791	800	1,252
February 3, 1958 .....	November 13, 1956; November 12, 1958		February 1, 1958 .....
Privately owned and operated by the Societe d'Aqueduc de St. Odilon	Municipally owned and operated .....		Privately owned and operated by B. Dube
Springs* .....	Springs, in parish of St. Roch de Richelieu		One spring and one well, 105 ft deep
No treatment; water from several springs is collected in the reservoir and then pumped to system.	No treatment; water flows by gravity from reservoir to system.		No treatment; mixed waters flow to the system by gravity with subsidiary pumping.
One concrete reservoir .....	One concrete reservoir .....	60	One concrete reservoir .....
	One elevated tank .....	22	30
<u>1957</u>	<u>1956 - 58</u>		<u>1957 - 58</u>
9,000 gpd	0.035 (Max. - 0.040)		0.024
Capacity of system - about 15,000 gpd	Capacity of system - 0.050		Capacity of system - 0.060
None .....	A foundry, and three other minor users		A foundry
* An auxiliary supply is available from wells.	* In the parish of St. Ours, formerly called L'Immaculee Conception de St. Ours		



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. PASCAL (Kamouraska Co.)</b>		<b>ST. PAUL d'ABBOTSFORD* (Rouville Co.)</b>	
	<u>1958</u>	<u>1960</u>	<u>1956</u>	<u>1959</u>
Population served:				
In municipality .....	1,700* (1,962d) (1,973e)	1,800	1,600 (1,703d)	1,775 (1,763e)
Outside municipality .....	<u>10</u>	<u>48*</u>	<u>0</u>	<u>0</u>
Total .....	<u>1,710</u>	<u>1,848</u>	<u>1,600</u>	<u>1,775</u>
Date(s) of survey .....	February 1, and December 3, 1958; November 30, 1960		August 15, 1956; August, 1959; September 27, 1960	
Ownership .....	Up to November 1958 privately owned ** and operated, then sold to municipality.		Municipally owned and operated .....	
Source of supply .....	Springs in 1958; well, 123 ft deep, in 1960		In 1956, springs and one artesian well; in 1960 two artesian wells and springs	
Treatment .....	No treatment; spring water flows to reservoirs and system by gravity; well water is pumped.		No treatment; water flows by gravity to system.	
Storage capacity (thousand gallons) ...	Four concrete reservoirs ... 200 total		In 1956 ..... No data In 1959-60, two reservoirs... 50 & 100	
Consumption (average in mgd) .....	<u>1958</u>	<u>1960</u>	Unknown** .....	
	Unknown	0.085		
Industrial use .....	None .....		None .....	
Remarks .....	* In St. Pascal parish ** Municipality initiated reconstruction of the system in December, 1959		* Abbotsford - a parish ** Total yield of wells, 100 gpm	

Municipality .....	<b>ST. PAULIN (Maskinonge Co.)</b>		<b>ST. PHILEMON (Bellechasse Co.)</b>	
	<u>1958</u>		<u>1958</u>	
Population served:				
In municipality .....	880e (943d)		400 approx (1,446d) (1,426e)	
Outside municipality .....	<u>807*</u>		<u>0</u>	
Total .....	<u>1,687</u>		<u>400 approx</u>	
Date(s) of survey .....	February 6, 1958 .....		November 15, 1958 .....	
Ownership .....	Privately owned and operated by J.E. Milot		Privately owned and operated by Gerard Theberge	
Source of supply .....	Springs .....		Spring .....	
Treatment .....	No treatment; water flows by gravity to reservoir and system.		No treatment; water flows by gravity to reservoir and system.	
Storage capacity (thousand gallons) ...	One reservoir ..... 20		One reservoir .....	
Consumption (average in mgd) .....	<u>1958</u>		Unknown .....	
	0.060 (Max. - 0.070) Capacity of system - 0.15			
Industrial use .....	A creamery uses about 8 per cent of the water consumed.		None .....	
Remarks .....	* In parish of St. Paulin		No system in 1956	

d Population according to the Tenth Census of Canada, 1956  
e Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. PAUL DE CHESTER</b> (Arthabaska Co.)	<b>ST. PAUL L'ERMITE (L'Assomption Co.)</b>		
	<u>1958</u>	<u>1959</u>	<u>1960</u>
	2,705 <sup>e</sup> (1,367 <sup>d</sup> )	2,961	3,500
	-*	No data	4,550**
	-	-	<u>7,900</u>
	October 27, 1958; November 24, 1959; August 4, 1960 .....		
	Municipally owned and operated distribution system; filtration plant owned and operated by Canadian Arsenals Ltd., a Crown Corporation		
	In 1958, L'Assomption and Ouareau Rivers; in 1959 and 1960 L'Assomption River only		
<i>See Chesterville</i>	In 1959 and 1960 river water is pumped to 2 reservoirs at plant, is pre-chlorinated, alum-coagulated (250-500 lb/mg), settled and rapid sand-filtered to clear well, post-chlorinated and pumped to system. Activated carbon is added at coagulation basin when required for taste and odour control. In 1958 when both rivers used, lime was also added (110 to 143 lb/mg).		
	One surge tank ..... 50		
	Two concrete reservoirs ..... 1,000 each		
	Clear well ..... No data		
	<u>1958</u>	<u>1959</u>	<u>1960</u>
	0.123	0.110 (Max. - 0.130)	-
	0.349	No data	-
	0.472		0.400 (Max. - 0.70)
	Plant capacity in 1960 - 1.5 mgd		
	Canadian Arsenals Ltd. (St. Paul l'Ermite); a tannery and paint manufacturer (Charlemagne)		
	* In 1958 Charlemagne - 2,780; Repentigny - 5,300; A new filtration plant was then being constructed at Repentigny ( <i>See</i> Repentigny)		
	** In 1960 Charlemagne - 3,500; Canadian Arsenals Ltd. plant and townsite 900; L'Assomption Parish, 150		
<b>ST. PHILIPPE DE NERI</b> (Kamouraska Co.)	<b>ST. PIE (Bagot Co.)</b>	<b>ST. PIERRE (Ile de Montreal)</b>	
<u>1958</u>	<u>1956</u>	<u>1958</u>	
1,136 <sup>e</sup> (1,119 <sup>d</sup> )	- (1,228 <sup>d</sup> ) (1,215 <sup>e</sup> )	6,571 (5,276 <sup>d</sup> ) (6,797 <sup>e</sup> )	
<u>0</u>	-	<u>0</u>	
<u>1,136</u>	<u>1,700*</u>	<u>6,571</u>	
January 20, 1958 .....	August 10, 1956 .....	November, 1958 .....	
Privately owned and operated by J. Thibault and Fils, Enrg.	Municipally owned and operated .....	Owned and operated by the city of Montreal	
Springs .....	Lake Mt. Yamaska (spring-fed) .....	St. Lawrence River, treated .....	
No treatment; water flows by gravity to reservoirs and system.	No treatment; water flows by gravity from lake to covered reservoir at the foot of the mountain, 5 miles distant, then to standpipe and system.	<i>See</i> Montreal	
Two reservoirs ..... No data	One covered concrete reservoir .... 300	<i>See</i> Montreal	
Unknown .....	One standpipe ..... 60		
	<u>1956</u>	<u>1958</u>	
	0.157	0.710	
None .....	A textile mill and manufacturers of footwear and of building supplies	None .....	
	* Presumably includes some services in St. Pie parish		

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. PIERRE DE LA RIVIERE DU SUD*</b> (Montmagny Co.)		<b>ST. PRIME</b> (Lac St. Jean W. Co.)	
	1958		1955	
Population served:				
In municipality .....	671	(1,190 <sup>d</sup> ) (1,191 <sup>e</sup> )	-	(629 <sup>d</sup> ) (645 <sup>e</sup> )
Outside municipality .....	79		-	
Total .....	750		1,300*	
Date(s) of survey .....	February 4, 1958 .....		July 19, 1955 .....	
Ownership .....	Owned by La Cie d'Aqueduc de St. Pierre and operated by Z. Cloutier and Fils, Ltee.		Owned and operated by Le Syndicat Cooperatif d'Aqueduc des Cultivateurs de St. Prime	
Source of supply .....	La Blague and Moregeau Rivers .....		Two springs, 2 miles apart, 3.5 and 4.5 miles distant	
Treatment .....	No treatment; water flows by gravity to reservoirs and system.		No treatment; water flows by gravity direct to system.	
Storage capacity (thousand gallons) ..	Two reservoirs ..... 2 each		None .....	
Consumption (average in mgd) .....	Unknown Capacity of system - 50,000 gpd		Unknown .....	
Industrial use .....	A creamery uses this water .....		Two cheese factories .....	
Remarks .....	* Sometimes known as Riviere du Sud		* Including some services in the parish of St. Prime	
<hr/>				
Municipality .....	<b>ST. REDEMPTEUR</b> (Levis Co.)			
	1956		1958	
Population served:				
In municipality .....	700	(872 <sup>d</sup> )	715	(920 <sup>e</sup> )
Outside municipality .....	0		0	
Total .....	700		715	
Date(s) of survey .....	October 16, 1956; November 6, 1958 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	One artesian well, 175 ft deep .....			
Treatment .....	No treatment; water is pumped to reservoir and system. ....			
Storage capacity (thousand gallons) ..	One reservoir ..... 40			
Consumption (average in mgd) .....	1956 - 58 0.025 Capacity of system - 0.040			
Industrial use .....	None .....			
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. PROSPER* (Champlain Co.)</b>		<b>ST. PROSPER (Dorchester Co.)</b>		<b>ST. RAYMOND (Portneuf Co.)</b>	
<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
200 (1,230 <sup>d</sup> )	225 (1,250 <sup>e</sup> )	1,500 (3,016 <sup>d</sup> )	1,500 (3,095 <sup>e</sup> )	3,300 (3,502 <sup>d</sup> )	3,503 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>200</u>	<u>225</u>	<u>1,500</u>	<u>1,500</u>	<u>3,300</u>	<u>3,503</u>
June 14, 1955; November 25, 1958 .....		July 20, 1956; April 3, 1958 .....		July 26, 1955; December 5, 1958 .....	
		Municipally owned and operated .....		Municipally owned and operated .....	
Cossette Creek from Ste. Anne de la Perade		Springs* .....		Springs, 3 miles distant, and springs in town	
<i>See</i> Ste. Anne de la Perade		No treatment; water is pumped to reservoir and system.		No treatment; water from distant springs flows by gravity, but is pumped from those in town. The waters are mixed in reservoirs and system.	
		Reservoirs (1956) ..... 100 total		Two concrete reservoirs - 135 and 160	
		Reservoirs (1958) ..... 200 total			
		<u>1956</u>	<u>1958</u>	<u>1958</u>	
		Unknown	0.040	0.125	
		Capacity of system - 0.040			
		None .....		Several lumber firms and the C.N. Rys.	
* A parish		* In 1956 the Abemaqui (Abenakis) River is an emergency or auxiliary supply.			
<b>ST. REMI (Napierville Co.)</b>		<b>ST. REMI* (Portneuf Co.)</b>		<b>ST. ROMAIN DE WINSLOW (Frontenac Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>			
2,000 (2,303 <sup>d</sup> )	- (2,301 <sup>e</sup> )	800 (1,676 <sup>d</sup> ) (1,680 <sup>e</sup> )			
<u>200*</u>	<u>-</u>	<u>0</u>			
<u>2,200</u>	<u>2,800*</u>	<u>800</u>			
July 30, 1956; December 1, 1958 .....		June 11, 1955 .....			
Privately owned and operated by Maurice Gagne		Municipally owned and operated .....			
Two artesian wells, 425 ft and 565 ft deep		One artesian well, 30 ft deep .....			
No treatment; water is pumped to pressure tank and system.		No treatment; water is pumped to reservoir and system.		<i>See</i> Winslow North	
Pressure tank ..... 8		One covered, concrete reservoir .. 150			
<u>1956</u>	<u>1958</u>	<u>1955</u>			
0.060	No data	0.040 (Max. - 0.045)			
Capacity of system - 0.60		Capacity of system . 0.10			
A cannery .....		None .....			
* Including some services in St. Remi parish		* A parish, also known as Lac aux Sables			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>ST. ROMUALD D'ETCHEMIN (Levis Co.)</b>	
	<u>1955</u>	<u>1958</u>
Municipality .....		
Population served:		
In municipality .....	5,130 (5,278 <sup>d</sup> )	5,293 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>
Total .....	<u>5,130</u>	<u>5,293</u>
Date(s) of survey .....	July 5, 1955; January 23 and November 10, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	In 1955, St. Lawrence River and springs, ½ mile distant In 1957, St. Lawrence River only	
Treatment .....	In 1955, river water piped from 700 ft out in river with alum addition prior to collecting basin (10,000 gal), rapid sand-filtered (2) to clear well, post-chlorinated and pumped to system. Spring water flows by gravity to system without treatment and is mixed with river water in the system, (only river water used during July and August). In 1957, a new filtration plant operating, with river water pre-chlorinated in suction well, alum-coagulated (200 lb/mg), settled, rapid sand-filtered (3) to clear well, post-chlorinated and pumped to standpipe and system (total chlorination 145 lb/mg).	
Storage capacity (thousand gallons) ..	In 1955, clear well (river water) .....1,000 two reservoirs (spring water) 50 & 150	In 1957 - 58, clear well ... 150 standpipe ..1,000
Consumption (average in mgd) .....	<u>1955</u> 0.30	<u>1958</u> 0.60 Plant capacity (1958) - 1.0 mgd, but this may be expanded to 4.0 mgd
Industrial use .....	In 1955 a shirt manufacturer; no major user reported in 1958	
Remarks .....	* A parish which includes New Liverpool and Chaudiere Bassin areas; in July 1956 these being supplied with spring water.	

	<b>ST. SIMEON (Charlevoix E. Co.)</b>		<b>ST. SIMON DE DRUMMOND* (Drummond Co.)</b>	
	<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
Municipality .....				
Population served:				
In municipality .....	1,114 <sup>d</sup>	1,138 <sup>e</sup>	4,750 (5,473 <sup>d</sup> )	6,918 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>1,114</u>	<u>1,138</u>	<u>4,750</u>	<u>6,918</u>
Date(s) of survey .....	July 14, 1955; November 3, 1958 .....			
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Lac de la Riviere Noir (Black Lake), 2 miles distant		St. Francis River treated, from Drummondville	
Treatment .....	No treatment; water flows by gravity to reservoir (½ mile distant) and system.		See Drummondville	
Storage capacity (thousand gallons) .	One concrete reservoir ..... 50			
Consumption (average in mgd) .....	No data .....			
Industrial use .....	None .....			
Remarks .....			* In May 1959, name changed to Drummondville South	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<p><b>STE. ROSE DE WATFORD*</b> (Dorchester Co.)</p> <p><u>1958</u></p> <p>310 (1,345<sup>d</sup>) (1,290<sup>e</sup>)</p> <p><u>0</u></p> <p><u>310</u></p> <p>January 20 and May 1, 1958 .....</p> <p>Owned and operated by Le Syndicat Co- operatif d'Aqueduc Ste. Rose Station</p> <p>Two springs .....</p> <p>No treatment; water flows by gravity to reservoir and system.</p> <p>One reservoir ..... 15</p> <p><u>1958</u></p> <p>8,000 gpd*</p> <p>Capacity of system - 30,000 gpd</p> <p>None .....</p> <p>* Includes Ste. Rose Station</p>	<p><b>STE. ROSE STATION</b> (Dorchester Co.)</p> <p align="center">Included in Ste. Rose de Watford</p>	<p><b>ST. SAMUEL DE GAYHURST</b> (Frontenac Co.)</p> <p align="center"><i>See</i> Gayhurst</p>								
<p><b>STE. SOPHIE DE LEVRARD*</b> (Nicolet Co.)</p> <p><u>1958</u></p> <p>400 approx (1,172<sup>d</sup>) (1,253<sup>e</sup>)</p> <p><u>0</u></p> <p><u>400 approx</u></p> <p>January 23, 1958 .....</p> <p>Privately owned and operated by Clovis, Therese and Yvette Milette</p> <p>Springs, 1 mile distant .....</p> <p>No treatment; water flows by gravity to reservoirs and system, under a head of 17 ft.</p> <p>Two reservoirs ..... 1.8 and 3.0</p> <p>Unknown .....</p> <p>None .....</p> <p>* A parish</p>	<p><b>ST. STANISLAS DE CHAMPLAIN*</b> (Champlain Co.)</p> <p align="center"><i>See</i> Deux Rivieres</p> <p>* Sometimes referred to as St. Stanislas Station</p>	<p><b>STE. THECLE*</b> (Champlain Co.)</p> <table border="0"> <thead> <tr> <th><u>1955</u></th> <th><u>1961</u></th> </tr> </thead> <tbody> <tr> <td>- (1,499<sup>d</sup>) (2,150<sup>e</sup>)</td> <td>2,150</td> </tr> <tr> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td><u>3,200**</u></td> <td><u>-</u></td> </tr> </tbody> </table> <p>June 11, 1955; 1961 .....</p> <p>Municipally owned and operated .....</p> <p>Three springs, 1½ miles distant .....</p> <p>No treatment; water is pumped to reservoir and system.</p> <p>One concrete reservoir ..... 140 In 1961, reservoirs ..... 300 total</p> <p>Unknown .....</p> <p>Two minor industries .....</p> <p>* A village ** Presumably includes much of the parish of St. Thecle, population 1,961<sup>d</sup> and 1,620<sup>e</sup></p>	<u>1955</u>	<u>1961</u>	- (1,499 <sup>d</sup> ) (2,150 <sup>e</sup> )	2,150	<u>-</u>	<u>-</u>	<u>3,200**</u>	<u>-</u>
<u>1955</u>	<u>1961</u>									
- (1,499 <sup>d</sup> ) (2,150 <sup>e</sup> )	2,150									
<u>-</u>	<u>-</u>									
<u>3,200**</u>	<u>-</u>									

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. THEOPHILE (Beauce Co.)</b>		<b>ST. THOMAS DE LA POINTE A LA CAILLE (Montmagny Co.)</b>	
	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	400 estd (448 <sup>d</sup> )	444 <sup>e</sup>	1,000 (4,254 <sup>d</sup> )	1,000 (4,502 <sup>e</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total .....	<u>400 estd</u>	<u>444</u>	<u>1,000</u>	<u>1,000</u>
Date(s) of survey .....	July 26, 1956; November 10, 1958 .....			
Ownership .....	Municipally owned and operated .....		Riviere la Perdrix from Montmagny .....	
Source of supply .....	Springs and one artesian well .....			
Treatment .....	No treatment; water flows by gravity from springs to reservoir and is pumped to reservoir from the well, Flow from reservoir to system is by gravity, a mixture of 80 per cent spring water being used.		See Montmagny	
Storage capacity (thousand gallons) ..	One reservoir .....		50	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>		
	No data	15,000 gpd		
Industrial use .....	None .....			
Remarks .....				
<b>Municipality .....</b>	<b>ST. ULRIC (Matane Co.)</b>		<b>ST. URBAIN (Charlevoix W. Co.)</b>	
	<u>1955</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	- (980 <sup>d</sup> )	994 <sup>e</sup>	900 (1,742 <sup>d</sup> )	900 (1,768 <sup>e</sup> )
Outside municipality .....	<u>-</u>	<u>21</u>	<u>0</u>	<u>0</u>
Total .....	<u>997</u>	<u>1,015</u>	<u>900</u>	<u>900</u>
Date(s) of survey .....	July 12, 1955; November 7, 1958 .....		July 21, 1955; October 3, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Blanche River, 1,000 ft distant .....		Two springs, 1,000 ft apart, ¼ and ½ miles distant	
Treatment .....	In 1956 water from behind dam flows by gravity to reservoir and system with chlorination (5 lb/mg); in 1958 water is pumped to system from reservoir with chlorination.		No treatment; spring water collected in wooden reservoirs flow by gravity to system where they mix.	
Storage capacity (thousand gallons) ..	One reservoir ... 6¼ (1956); 47 (1958)		Two wooden reservoirs ... 35 and 22 One concrete, underground reservoir (fire protection only) .....	
Consumption (average in mgd) .....	<u>1955 - 58</u>		Unknown .....	
	0.10			
Industrial use .....	None .....		No data .....	
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>ST. THURIBE*</b> (Portneuf Co.)		<b>STE. TITE</b> (Champlain Co.)		<b>STE. TITE DES CAPS</b> (Montmorency No. 1 Co.)	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>	<u>1955</u>	
- (705 <sup>d</sup> )	- (721 <sup>e</sup> )	3,183 <sup>d</sup>	3,300 <sup>e</sup>	500 (2,036 <sup>d</sup> )	(1,962 <sup>e</sup> )
-	-	<u>500*</u>	<u>500*</u>	<u>0</u>	
-	-	<u>3,683</u>	<u>3,800</u>	<u>500</u>	
Lake Chalifaux and Thibault Creek from St. Casimir		June 11, 1955; November 3, 1958 ..... Municipally owned and operated ..... Lake Eric, 4½ miles distant .....		July 22, 1955 ..... Municipally owned and operated ..... Springs, ¾ mile distant .....	
<i>See</i> St. Casimir		No treatment; water flows by gravity to reservoir (1¼ miles from lake) and thence to system in town.		No treatment; water is pumped to reser- voirs and system.	
		One concrete underground reservoir - 300		Two concrete underground reservoirs .... 50 each	
		<u>1958 - 59</u> 0.27 estd		<u>1955</u> 15,000 gpd	
		Manufacturers of shoes, slippers and gloves, and a sawmill use a small percentage of the total consumption.		None .....	
* A parish		* Presumably some services in parish of Ste. Tite (Champlain Co.)			
<b>STE. URSULE</b> (Maskinonge Co.)		<b>ST. VICTOR</b> (Beauce Co.)		<b>ST. ZENON</b> (Berthier Co.)	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
- (1,574 <sup>d</sup> )	- (1,580 <sup>e</sup> )	684 <sup>d</sup>	691 <sup>e</sup>	600 (1,169 <sup>d</sup> )	600 (1,138 <sup>e</sup> )
-	-	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
-	-	<u>684</u>	<u>691</u>	<u>600</u>	<u>600</u>
See Louiseville		August 23, 1956; February, 1959 ..... Municipally owned and operated in 1956; privately operated in 1959 by Cie d'Aqueduc St. Victor and Seminaire du Sacre-Coeur		June 8, 1955; November 29, 1958 ..... Owned and operated by La Cie d'Aqueduc de St. Zenon	
		Wells and springs .....		Lake St. Louis .....	
		No treatment; in 1959 water flows by gravity, with supplementary pumping, to system.		No treatment; water is pumped to reser- voir and system.	
		One reservoir (1959) ..... 20		One concrete reservoir ..... 15	
		<u>1958</u> 0.03 (Max. - 0.035)		<u>1955 - 58</u> 15,000 gpd (Max. - 20,000 gpd)	
		None .....		None .....	



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>ST. ZEPHIRIN DE COURVAL</b> (Yamaska Co.)	<b>ST. ZOTIQUE</b> (Soulanges Co.)
	<u>1958</u>	<u>1958</u>
Population served:		
In municipality .....	300 (1,168 <sup>d</sup> ) (1,098 <sup>e</sup> )	340 <sup>e</sup> (307 <sup>d</sup> )
Outside municipality .....	<u>0</u>	<u>200*</u>
Total .....	<u>300</u>	<u>540</u>
Date(s) of survey .....	February 27, 1958 .....	November 25, 1958 .....
Ownership .....	Privately owned and operated by E. Gamache and S. Beauchesne	Municipally owned and operated .....
Source of supply .....	Two wells, 95 ft deep .....	Lake St. Francis (St. Lawrence River) ..
Treatment .....	No treatment; water is pumped to tank and system.	Water is pumped to system with chlorination.
Storage capacity (thousand gallons) ..	One tank .....	One reservoir .....
Consumption (average in mgd) .....	<u>1958</u> 20,000 gpd (estd) Capacity of system - 48,000 gpd	<u>1958</u> 12,500 gpd Capacity of system - 15,000 gpd
Industrial use .....	None .....	None .....
Remarks .....		* Parish of St. Zotique
<b>Municipality .....</b>	<b>SCOTSTOWN</b> (Compton Co.)	<b>SEPT ILES</b> (Saguenay Co.)
	<u>1956</u>	<u>1958</u>
Population served:		
In municipality .....	1,347 <sup>d</sup> (1,300 <sup>e</sup> )	8,500 <sup>e</sup> (5,592 <sup>d</sup> )
Outside municipality .....	<u>0</u>	<u>0</u>
Total .....	<u>1,347</u>	<u>8,500</u>
Date(s) of survey .....	August 3, 1956 .....	February 1, 1958 .....
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....
Source of supply .....	Mountain Brook .....	Six wells, 70 ft deep; an auxiliary supply is available.
Treatment .....	No treatment; water flows by gravity from behind dam on brook to system.	No treatment; water is pumped to reservoir and system.
Storage capacity (thousand gallons) ..	Dam reservoir .....	One reservoir .....
Consumption (average in mgd) .....	Unknown .....	<u>1957 - 58</u> 1.0 Capacity of system - 1.25
Industrial use .....	Manufacture of plywood and of furniture	An iron ore producing company, a creamery and producer of oxygen gas
Remarks .....		

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>SALABERRY DE VALLEYFIELD</b> (Beauharnois Co.)	<b>SARAGUAY*</b> (Jacques Cartier Co.)	<b>SAULT AU MOUTON</b> (Saguenay Co.)																
<i>See Valleyfield</i>	<p align="center"><u>1958</u></p> <p align="center">62 (317<sup>d</sup>) (327<sup>e</sup>)</p> <p align="center"><u>0</u></p> <p align="center"><u>62*</u></p>	<p align="center"><u>1955</u></p> <p align="center">875 (873<sup>d</sup>) (1,068<sup>e</sup>)</p> <p align="center"><u>0</u></p> <p align="center"><u>875</u></p>																
	<p>November, 1958 .....</p> <p>Owned and operated by city of Montreal</p> <p>St. Lawrence River, treated .....</p> <p><i>See Montreal</i></p> <p><i>See Montreal</i></p>	<p>July 14, 1955 .....</p> <p>Municipally owned and operated .....</p> <p>Red Creek, ¾ mile distant .....</p> <p>No treatment; water flows by gravity from behind dam on creek to reservoir and system.</p> <p>Reservoir (artificial basin) ..... 675</p> <p>No data</p>																
	<p align="center"><u>1958</u></p> <p align="center">700 gpd</p>	<p>A soft drink bottling plant .....</p>																
	<p>None .....</p> <p>* Only a part of the village is supplied with piped water; <i>see also Water Survey Report No. 2.</i></p>																	
	<b>SHAWINIGAN*</b> (St. Maurice Co.)	<b>SHAWINIGAN SOUTH*</b> (Champlain Co.)																
	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">28,000 (28,597<sup>d</sup>)</td> <td align="center">32,500<sup>e</sup></td> </tr> <tr> <td align="center"><u>2,100**</u></td> <td align="center"><u>1,150**</u></td> </tr> <tr> <td align="center"><u>30,000</u></td> <td align="center"><u>33,650</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	28,000 (28,597 <sup>d</sup> )	32,500 <sup>e</sup>	<u>2,100**</u>	<u>1,150**</u>	<u>30,000</u>	<u>33,650</u>	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">- (10,947<sup>d</sup>)</td> <td align="center">11,726<sup>e</sup></td> </tr> <tr> <td align="center">-</td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">No data**</td> <td align="center"><u>11,726</u></td> </tr> </table>	<u>1955</u>	<u>1958</u>	- (10,947 <sup>d</sup> )	11,726 <sup>e</sup>	-	<u>0</u>	No data**	<u>11,726</u>
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No data**	<u>11,726</u>																	
	<p>June 10, 1955; November 6, 1958 .....</p> <p>Municipally owned and operated .....</p> <p>Lac le Peche (Lac des Piles) and Shawinigan River*** .....</p>	<p>June 10, 1955; January 22, 1958 .....</p> <p>Municipally owned and operated .....</p> <p>Springs*** .....</p>																
	<p>Lake water flows by gravity, 10 miles to plant near river; lake and river waters, are alum-coagulated (130 lb/mg), settled rapid sand-filtered (4), to clear well where water is lime-treated (3.5 lb/mg) to pH 8, chlorinated (6.6 lb/mg) and pumped to system. When demand exceeds filter capacity additional lake water is passed directly to the clear wells, lime-treated and chlorinated and pumped to system.</p>	<p>Spring water is pumped with chlorination when necessary to two collecting reservoirs and then to elevated tanks and system.</p>																
	<p>Two clear wells ..... 125 each</p> <p>In 1958, one reservoir ..... 400</p>	<p>Three reservoirs ..... 400, 400 &amp; 500</p> <p>Two elevated tanks ..... 50 each</p>																
	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">3.75 (Max. - 5.9)</td> <td align="center">3.4 (Max. - 5.9)***</td> </tr> <tr> <td></td> <td align="center">Filter capacity - 3.6</td> </tr> </table>	<u>1955</u>	<u>1958</u>	3.75 (Max. - 5.9)	3.4 (Max. - 5.9)***		Filter capacity - 3.6	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">No data</td> <td align="center">0.45 (Max. - 0.50)</td> </tr> <tr> <td></td> <td align="center">Capacity of system - 0.50</td> </tr> </table>	<u>1955</u>	<u>1958</u>	No data	0.45 (Max. - 0.50)		Capacity of system - 0.50				
<u>1955</u>	<u>1958</u>																	
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<u>1955</u>	<u>1958</u>																	
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	Capacity of system - 0.50																	
	<p>In 1955, 40 per cent, in 1958, 35 per cent of pumpage used in the manufacture of chemical, resins, cotton goods, aluminum and abrasives. In 1955 chemical firms and the aluminum producers used an additional 6.78 mgd and 2 mgd respectively of untreated river water.</p>	<p>Soft drink plants .....</p>																
	<p>* Known as Shawinigan Falls until February 6, 1958</p> <p>** In 1958 Baie de Shawinigan (1,300) and part of Shawinigan South; in 1958 Baie de Shawinigan only</p> <p>*** Main supply is Lac la Peche, 1.5 gpd Shawinigan River water used in summer, 0.5 mgd in winter.</p>	<p>* Includes Almaville</p> <p>** About 1,000 served by city of Shawinigan</p> <p>*** An auxiliary supply is available from city of Shawinigan.</p>																

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>SHEFFORD</b> (Shefford Co.)	<b>SHELTER BAY*</b> (Saguenay Co.)
Population served:		<u>1958</u>
In municipality .....		1,300 (1,171 <sup>d</sup> )
Outside municipality .....		<u>0</u>
Total .....		<u>1,300</u>
Date(s) of survey .....		February 10, 1958 .....
Ownership .....		Privately owned and operated by the Quebec North Shore Paper Co. Ltd.
Source of supply .....		Rock River .....
Treatment .....	<i>See</i> West Shefford	River water is pumped with chlorination to the system.
Storage capacity (thousand gallons) ..		None .....
Consumption (average in mgd) .....		<u>1957 - 58</u> 0.16 (Max. - 0.20) Capacity of system - 0.36
Industrial use .....		None .....
Remarks .....		* Part of the unorganized district of Babel
<hr/>		
Municipality .....	<b>SOREL</b> (Richelieu Co.)	
Population served:	<u>1956</u>	<u>1958</u>
In municipality .....	- (16,476 <sup>d</sup> )	16,965 <sup>e</sup>
Outside municipality .....	<u>-</u>	<u>1,500</u>
Total .....	<u>17,200</u>	<u>18,465</u>
Date(s) of survey .....	August 13, 1956; November 3, 1958 .....	
Ownership .....	Municipally owned and operated .....	
Source of supply .....	Richelieu River .....	
Treatment .....	Water is pumped from 175 ft out in river to coagulation basin, pre-chlorinated (19 lb/mg), alum-coagulated (430 lb/mg), settled, sand-filtered (3) to clear well, post-chlorinated (5 lb/mg) and pumped to standpipe and system.	
Storage capacity (thousand gallons) ..	Two clear wells .....	
Consumption (average in mgd) .....	<u>1956</u>	<u>1958</u>
Industrial use .....	2.3 (Max. - 2.8)	2.0 (Max. - 2.9)
Remarks .....	Plant capacity - 3 mgd Producers of rayon fibre, steel and steel products, knitwear and a bottling plant use about 10 per cent of total pumpage.	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>SHENLEY (Beauce Co.)</b>	<b>SHERBROOKE (Sherbrooke Co.)</b>	<b>SILLERY (Quebec Co.)</b>																										
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> </tr> <tr> <td align="center">(812<sup>d</sup>)</td> <td align="center">(820<sup>e</sup>)</td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> </tr> </table>	<u>1956</u>	<u>1958</u>	-	-	(812 <sup>d</sup> )	(820 <sup>e</sup> )	-	-	-	-	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">57,700 (58,668<sup>d</sup>)</td> <td align="center">60,759 (61,027<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>137</u></td> </tr> <tr> <td align="center">57,700</td> <td align="center">60,698</td> </tr> </table>	<u>1956</u>	<u>1958</u>	57,700 (58,668 <sup>d</sup> )	60,759 (61,027 <sup>e</sup> )	<u>0</u>	<u>137</u>	57,700	60,698	<table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1960</u></td> </tr> <tr> <td align="center">12,800 (13,154<sup>d</sup>)</td> <td align="center">15,000 (14,000<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">12,800</td> <td align="center">15,000</td> </tr> </table>	<u>1955</u>	<u>1960</u>	12,800 (13,154 <sup>d</sup> )	15,000 (14,000 <sup>e</sup> )	<u>0</u>	<u>0</u>	12,800	15,000
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<p align="center"><i>See</i> St. Honore (Beauce Co.)</p>	<p>August 6, 1956; December 12, 1958 . . . . . Municipally owned and operated . . . . .</p> <p>Magog River, 3 miles distant . . . . .</p> <p>River water from behind dam on river is screened and pumped with chlorination (10 lb/mg) to reservoirs and system.</p> <p>Two open, and two covered reservoirs . . . . . 24,000 total</p> <table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">7.5 (Max. - 9.0)</td> <td align="center">8.0</td> </tr> </table> <p>About 25 per cent of the total pumpage is used in the manufacture of paper and paper products, for light engineering, the production of dairy products, including canned milk, and by the C.P. Ry.</p>	<u>1956</u>	<u>1958</u>	7.5 (Max. - 9.0)	8.0	<p>July 26, 1955; December 2, 1960 . . . . . Municipally owned and operated . . . . .</p> <p>St. Lawrence River . . . . .</p> <p>Water is pumped from 550 ft out in river to two collecting basins (pre-chlorinated, alum-coagulated (185 - 210 lb/mg), settled (6 basins), rapid sand-filtered (6) to clear well, post-chlorinated* and pumped to standpipe and system.</p> <p>Three plant reservoirs . . . . . 900 One standpipe . . . . . 300</p> <table border="0"> <tr> <td align="center"><u>1955</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1.7 (Max. - 2.9)</td> <td align="center">1.8 (Max. - 2.4)</td> </tr> </table> <p>Capacity of system - 2.4</p> <p>A manufacturer of fertilizers.</p>	<u>1955</u>	<u>1958</u>	1.7 (Max. - 2.9)	1.8 (Max. - 2.4)																		
<u>1956</u>	<u>1958</u>																											
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<b>STANSTEAD (Stanstead Co.)</b>	<b>STRATFORD* (Wolfe Co.)</b>	<b>SUTTON (Brome Co.)</b>																										
<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,134</td> <td align="center">1,150</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">1,134</td> <td align="center">1,150</td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,134	1,150	<u>0</u>	<u>0</u>	1,134	1,150	<table border="0"> <tr> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">500 (699<sup>d</sup>) (1,160<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">500</td> </tr> </table>	<u>1958</u>	500 (699 <sup>d</sup> ) (1,160 <sup>e</sup> )	<u>0</u>	500	<table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">1,400 approx. (1,407<sup>d</sup>)</td> <td align="center">1,450 (1,665<sup>e</sup>)</td> </tr> <tr> <td align="center"><u>0</u></td> <td align="center"><u>0</u></td> </tr> <tr> <td align="center">1,400</td> <td align="center">1,450</td> </tr> </table>	<u>1956</u>	<u>1958</u>	1,400 approx. (1,407 <sup>d</sup> )	1,450 (1,665 <sup>e</sup> )	<u>0</u>	<u>0</u>	1,400	1,450						
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1,400	1,450																											
<p>August 7, 1956; November 8, 1958 . . . . .</p> <p>Spring-fed lake, treated, from Rock Island</p> <p align="center"><i>See</i> Rock Island (Stanstead Co.)</p>	<p>June 6, 1958 . . . . . Privately owned and operated by J.J. Cote</p> <p>Springs . . . . .</p> <p>No treatment; water flows by gravity to reservoir and system.</p> <p>One reservoir . . . . . 7,200 gal</p> <p>No data Capacity of system - 0.043</p> <p>None . . . . .</p> <p>* Also called Stratford Centre</p>	<p>August 9, 1956; November 18, 1958 . . . . . Municipally owned and operated . . . . .</p> <p>Springs . . . . .</p> <p>Water flows by gravity with sand-filtration to reservoir and system.</p> <p>Dam and two open, concrete reservoirs . . . . . 320 total</p> <table border="0"> <tr> <td align="center"><u>1956</u></td> <td align="center"><u>1958</u></td> </tr> <tr> <td align="center">0.187</td> <td align="center">0.250</td> </tr> </table> <p>A creamery, the C.P. Ry. and in 1958 also a manufacturer of wood products</p>	<u>1956</u>	<u>1958</u>	0.187	0.250																						
<u>1956</u>	<u>1958</u>																											
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**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>SWEETSBURG</b> (Missisquoi Co.)		<b>TADOUSSAC</b> (Saguenay Co.)	
	<u>1956</u>		<u>1955</u>	<u>1958</u>
Population served:				
In municipality .....	804 (849 <sup>d</sup> ) (865 <sup>e</sup> )		1,000 approx (1,066 <sup>d</sup> )	1,100 <sup>e</sup>
Outside municipality .....	<u>0</u>		<u>0</u>	<u>0</u>
Total .....	<u>804</u>		<u>1,000 approx*</u>	<u>1,100*</u>
Date(s) of survey .....	August 9, 1956 .....		July 14, 1955; November 19, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Crystal Lake (Bull Pond), 2 miles distant		Lac de l'Aqueduc (spring-fed), ½ mile distant	
Treatment .....	Lake water is naturally sand-filtered at lake (renewed every 2 years) and then flows by gravity to system.		No treatment; water flows by gravity to system.	
Storage capacity (thousand gallons) ..	None .....		None .....	
Consumption (average in mgd) .....	Unknown .....		<u>1955</u> 0.40 est	<u>1958</u> 0.50
Industrial use .....	None .....		A fish hatchery and a soft drink bottling plant	
Remarks .....			* Population served may rise to 2,000 during the summer	
<b>Municipality .....</b>	<b>THREE RIVERS PARISH*</b> (St. Maurice Co.)		<b>TRACY</b> (Richelieu Co.)	
	<u>1955</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
Population served:				
In municipality .....	1,500 (2,655 <sup>d</sup> )	1,650 (2,805 <sup>e</sup> )	6,542 <sup>d</sup>	7,100 <sup>e</sup>
Outside municipality .....	<u>0</u>	<u>0</u>	<u>3,571*</u>	<u>3,550*</u>
Total .....	<u>1,500</u>	<u>1,650</u>	<u>10,113</u>	<u>10,650</u>
Date(s) of survey .....	June 9, 1955; November 28, 1958 .....		August 13, 1956; December 31, 1958 .....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Artesian well .....		Richelieu River .....	
Treatment .....	No treatment; water collected in an underground reservoir, is pumped to the system.		Water from 500 ft out in river is screened pumped to coagulation basins with alum addition (15 lb/mg), pre-chlorinated (12 lb/mg), settled, rapid sand-filtered (2) to clear well with post-chlorination (5.9 lb/mg) and then pumped to standpipe and system, lime (72 lb/mg) is added at coagulating basin in the spring only.	
Storage capacity (thousand gallons) ...	One reservoir .....	350	Clear well .....	175
Consumption (average in mgd) .....	<u>1955</u> 0.200 estd	<u>1958</u> 0.125	One standpipe .....	250
			<u>1956 - 58</u> 1.1 (Max. - 1.38) Plant capacity - 3.2 mgd	
Industrial use .....	None .....		Iron and titanium producers and marine industries	
Remarks .....	* Includes Ste. Marguerite and Ste. Catherine de Sienne		* In St. Joseph de Sorel	

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>THETFORD MINES (Megantic Co.)</b>		<b>THREE RIVERS (St. Maurice Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1960</u>
18,500 (19,511 <sup>d</sup> )	- (19,903 <sup>e</sup> )	50,000 approx (50,483 <sup>d</sup> )	60,000 (53,000 <sup>e</sup> )
<u>1,000*</u>	<u>-</u>	<u>0</u>	<u>0</u>
<u>19,500</u>	<u>20,000 approx</u>	<u>50,000 approx</u>	<u>60,000 approx</u>
July 27, 1956; November 3, 1958 .....		June 9, 1955; August 5, 1960 .....	
Municipally owned and operated .....		Municipally owned and operated .....	
Creeks, 3 to 4½ miles distant, and Trout Lake, 5¼ miles distant		In 1955 St. Maurice River, ½ mile distant and 7 wells, in 1960 St. Maurice River and 10 wells*	
Water flows by gravity to reservoirs from lake and creeks and is then pumped to system with chlorination (45 lb/mg)		Well water is pumped to system with no treatment except for well No. 7 which is dosed with sodium silicate to hold iron in solution. Water from 100 ft out in river is pre-chlorinated (8 lb/mg)**, alum-coagulated (104 lb/mg)** rapid sand-filtered (6) to clear well where it is lime-treated (47 lb/mg) to pH 8.0; post-chlorinated (16 lb/mg)** and pumped to system where it mixes with the well waters.	
Creeks, lake and five reservoirs ....		Underground reservoir (clear well) .....	1,000
..... 127,050			
<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1960</u>
1.8 (Max. - 2.0)	2.0 (Max. - 2.2)	6.6 (Max. - 8.3)	6.0 (Max. - 8.0)
		Plant capacity - filtered river water, 6 mgd; wells, 7 mgd	
Asbestos mining and two foundries use about 8 per cent of total pumpage.		In 1955 and iron foundry, a cotton mill and a power company, in 1960 also the National Harbours Board, and a school for papermaking. Paper companies use city water only for drinking.	
* Hospital and cottages		* In 1955 the city used about 53 per cent well water	
		** Total consumption of chlorine in 1960 reported at about 20 lb/mg	

<b>TREMBLAY (Chicoutimi Co.)</b>		<b>TRING JUNCTION (Beauce Co.)</b>		<b>TROIS PISTOLES (Riviere du Loup Co.)</b>	
<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
- (2,016 <sup>d</sup> )	- (1,340 <sup>e</sup> )	900 (1,083 <sup>d</sup> )	950 (1,110 <sup>e</sup> )	3,607 (4,039 <sup>d</sup> )	3,809 (4,175 <sup>e</sup> )
<u>-</u>	<u>-</u>	<u>0</u>	<u>0</u>	<u>25*</u>	<u>27*</u>
<u>-</u>	<u>-</u>	<u>900</u>	<u>950</u>	<u>3,632</u>	<u>3,836</u>
		October 23, 1956; November 5, 1958 ....		July 7, 1955; November 8, 1958 .....	
		Municipally owned and operated .....		Municipally owned and operated .....	
		Springs on nearby mountain .....		Springs, 2 miles distant .....	
		No treatment; water flows by gravity to reservoir and system.		No treatment; water flows by gravity to reservoir, and then by gravity assisted by a booster pump, to system.	
		One concrete reservoir .....	200	Two underground, concrete reservoirs .....	350 and 500
		<u>1956</u>	<u>1958</u>	<u>1955</u>	<u>1958</u>
		0.030 (Max. - 0.035)	0.045	No data	1.5
		Capacity of system - 0.040			
		Minor industrial use, includes a slaughter house and the Quebec Central Railway		One soft drink bottling plant and the C.N. Rys.	
				* Parish of N.D. des Neiges des Trois Pistoles	

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	UPTON (Bagot Co.)		VALCARTIER (Quebec Co.)	
	1956			
Population served:				
In municipality .....	754 <sup>d</sup> (801 <sup>e</sup> )			
Outside municipality .....	0			
Total .....	754			
Date(s) of survey .....	October 13, 1956 .....			
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Two wells, 260 ft deep .....			
Treatment .....	No treatment; water is pumped to reservoir and system.		An army installation <i>See</i> Water Survey Report No. 12	
Storage capacity (thousand gallons) ...	One reservoir .....		40	
Consumption (average in mgd) .....	1956			
	0.045 (Max. - 0.060)			
Industrial use .....	An ice cream plant and a cannery .....			
Remarks .....				
<hr/>				
Municipality .....	VARENNES (Vercheres Co.)			
	1956	1960		
Population served:				
In municipality .....	1,300 (2,047 <sup>d</sup> ) (2,150 <sup>e</sup> )		2,100	
Outside municipality .....	0		400*	
Total .....	1,300		2,500	
Date(s) of survey .....	August 14, 1956; February 13, 1961 .....			
Ownership .....	In 1956 privately owned and operated by Edgar Brunet, in 1961 municipally owned and operated			
Source of supply .....	St. Lawrence River .....			
Treatment .....	In 1956-58 water from 900 ft out in river is screened and pumped with chlorination (9.4 lb/mg). Excess pumpage overflows to the reservoir. In 1960-61 water is alum-and activated silica-treated in a sludge blanket clarifier, chlorinated and pumped to the system.			
Storage capacity (thousand gallons) ...	One reservoir .....		44	
Consumption (average in mgd) .....	1956	1958	1960	
	0.13	0.15	0.25	
	Capacity of plant - 1 mgd			
Industrial use .....	In 1956 the C.P. Ry. uses about 6 per cent of the total pumpage			
Remarks .....	* In St. Anne de Varennes parish			

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>VALCOURT</b> (Shefford Co.)	<b>VALLEE JUNCTION</b> (Beauce Co.)	<b>VALLEYFIELD*</b> (Beauharnois Co.)
<u>1958</u>	<u>1956</u> <u>1958</u>	<u>1951</u> <u>1956</u> <u>1958</u>
742 <sup>e</sup> (753 <sup>d</sup> )	1,340 <sup>d</sup> 1,463 <sup>e</sup>	22,000 <sup>c</sup> 23,584      26,217 <sup>e</sup>
<u>45</u>	<u>0</u> <u>0</u>	<u>0</u> <u>0</u> <u>0</u>
<u>787</u>	<u>1,340</u> <u>1,463</u>	<u>22,000</u> <u>23,584</u> <u>26,217</u>
January 23, 1958 .....	July 25, 1956; November 13, 1958 .....	June 13, 1951; August 21, 1956; November 17, 1958
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
Five springs .....	Morency River .....	St. Lawrence River .....
No treatment; water is pumped to reservoir and system.	Water is gravity-fed from dam on river to large, slow-sand filter. It is then pumped to system with chlorination (15 lb/mg).	In 1956 - 58, water is pumped with screening and chlorination (6 lb/mg) direct to system.
One concrete reservoir ..... 450	Dam on river ..... 1,000	None .....
<u>1957 - 58</u>	<u>1956</u> <u>1958</u>	<u>1951</u> <u>1956 - 58</u>
0.045	0.040 estd      0.050	6.0      6.0 (Max. - 7.0)
Capacity of system - 0.075	A manufacturer of footwear .....	In 1956 about 25 per cent and in 1958 about 30 per cent of the total consumption used in the manufacture of pharmaceuticals, chemicals, liquor, textiles, asbestos goods, in dyeing and by N.Y. Central Railway, and by other smaller industries. One large textile plant, the distillery and a chemical plant have own supply from river for most process water.
A print company, a hosiery mill and two machinery manufacturers		* See also Water Survey Report No. 3,
<b>VERCHERES</b> (Vercheres Co.)	<b>VERDUN*</b> (Ile de Montreal)	<b>VICTORIAVILLE</b> (Arthabaska Co.)
<u>1956</u>	<u>1958</u>	<u>1956</u> <u>1958</u>
1,300 (1,412 <sup>d</sup> ) (1,476 <sup>e</sup> )	83,659 <sup>e</sup> (78,262 <sup>d</sup> )	16,031 <sup>d</sup> 16,800 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u> <u>0</u>
<u>1,300</u>	<u>83,659</u>	<u>16,031</u> <u>16,800</u>
August 13, 1956 .....	November, 1958 .....	July 30, 1956; November 19, 1958 .....
Municipally owned and operated .....	Municipally owned and operated .....	Municipally owned and operated .....
St. Lawrence River .....	St. Lawrence River, treated; water purchased from city of Montreal	Beaudet (Bulstrode) River .....
Water from 650 ft out in river is pumped with chlorination (10 lb/mg) to standpipe and system.	See Montreal	River water is alum-coagulated (about 360 lb/mg) in 4 basins (0.6 mg capacity), rapid sand-filtered (6) to clear well, where soda ash (180 lb/mg) and chlorination (6 lb/mg) are added. The water is then pumped to standpipe and system.
One standpipe ..... 75	See Montreal	One clear well ..... 1,000 One standpipe ..... 100
<u>1956</u>	<u>1958</u>	<u>1956</u> <u>1958</u>
0.50	5.7	1.2 (Max. - 1.4)      1.4 (Max. - 1.5)
A canning factory and a creamery use about 30 per cent of the total consumption	Major and minor industrial users include manufacturers of pharmaceuticals, toilet preparations, printing inks, polishes, washing and clearing compounds, heavy electrical machinery, aluminum products and a soft drink bottling plant.	Capacity of plant - 1.62 mgd Manufacturers of furniture and clothing, the C.P. Ry and the C.N. Rys.
	* See also Water Survey Report No. 2	



**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

	<b>VILLENEUVE (Quebec Co.)</b>		<b>VILLERS (Nicolet Co.)</b>	
	1955		1956	1958
Municipality .....				
Population served:				
In municipality .....	1,100 (1,417 <sup>d</sup> ) (1,600 <sup>e</sup> )		- (376 <sup>d</sup> )	- (388 <sup>e</sup> )
Outside municipality .....	0		-	-
Total .....	1,100		-	-
Date(s) of survey .....	July 23, 1955 .....		November 22, 1958 .....	
Ownership .....	Municipally owned and operated .....			
Source of supply .....	Montmorency River .....		Two springs from Ste. Gertrude .....	
Treatment .....	Water is pumped directly to the system with chlorination (15 lb/mg)		<i>See</i> Ste. Gertrude	
Storage capacity (thousand gallons) ..	None .....			
Consumption (average in mgd) .....	1955 0.458			
Industrial use .....	76 per cent of the total pumpage is used by a cement plant			
Remarks .....				
<hr/>				
	<b>WATERVILLE (Sherbrooke Co.)</b>		<b>WEEDON CENTRE (Wolfe Co.)</b>	
	1958		1956	1958
Municipality .....				
Population served:				
In municipality .....	1,200 (1,373 <sup>d</sup> ) (1,450 <sup>e</sup> )		1,287 <sup>d</sup>	1,326 <sup>e</sup>
Outside municipality .....	0		0	0
Total .....	1,200		1,287	1,326
Date(s) of survey .....	January 23, 1958 .....		October 16, 1958; November 12, 1958 ....	
Ownership .....	Municipally owned and operated .....		Municipally owned and operated .....	
Source of supply .....	Three springs and three wells, 300 ft deep		Four springs with Lake Vaseaux as an auxiliary supply	
Treatment .....	No treatment; water flows by gravity from reservoir to system.		No treatment; springs joined together flow by gravity (1956) to reservoir and system. In 1958 lake water also pumped to the reservoir and system.	
Storage capacity (thousand gallons) ..	Three concrete reservoirs ..50, 50 & 125		One concrete reservoir .....	200
Consumption (average in mgd) .....	1957 - 58 0.050 Capacity of system - 0.075		1956	1958
			1959	
			0.13 (Max. - 0.14)	0.30
				0.475
Industrial use .....	A creamery and a manufacturer of plastic and rubber products use about 50 per cent of the water.		In 1956 and 1958 about 42 and 50 per cent respectively of the water was used by a creamery, a soft drink bottling plant and two other companies.	
Remarks .....				

<sup>d</sup> Population according to the Tenth Census of Canada, 1956  
<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>WARWICK (Arthabaska Co.)</b>		<b>WATERLOO (Shefford Co.)</b>	
<u>1956</u>		<u>1956</u>	<u>1958</u>
2,248 <sup>d</sup> (2,294 <sup>e</sup> )		4,175 approx (4,266 <sup>d</sup> )	4,109 <sup>e</sup>
<u>0</u>		<u>0</u>	<u>130</u>
<u>2,248</u>		<u>4,175 approx</u>	<u>4,239</u>
July 31, 1956 .....	August 8, 1956; November 10, 1958 .....		
Municipally owned and operated .....	Municipally owned and operated .....		
Artesian well and springs, the former being the main source	Springs, 1/2 mile distant and two wells, the latter supply about 80 per cent of the water.		
No treatment; the well water is pumped to the system, any overflow going to the reservoir, from which it is fed to system by gravity; spring water enters the reservoir.	No treatment in 1956; but in 1958 chlorination of the mixed supply. Spring water flows by gravity and well waters are pumped to reservoirs. The mixed supply is then pumped to the system.		
One reservoir .....	In 1956, total reservoir capacity .....	560	560 and 150
	In 1958, two reservoirs .....		
<u>1956</u>	<u>1956</u>	<u>1958</u>	
0.165	0.70	0.75	
Manufacturers of woollen goods, combs and building supplies use 5 to 10 per cent of the water.	A number of companies including lumber and plywood firms, milk canners, a plastic firm and a mushroom grower use about 25 per cent of the total pumpage.		

<b>WESTMOUNT* (Ile de Montreal)</b>	<b>WEST SHEFFORD* (Shefford Co.)</b>		<b>WINDSOR (Richmond Co.)</b>	
<u>1958</u>	<u>1956</u>	<u>1958</u>	<u>1956</u>	<u>1958</u>
29,795 (24,800 <sup>d</sup> ) (26,000 <sup>e</sup> )	373 <sup>d</sup>	376 <sup>e</sup>	5,886 <sup>d</sup>	5,933 <sup>e</sup>
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>29,795</u>	<u>373</u>	<u>376</u>	<u>5,886</u>	<u>5,933</u>
November, 1958 .....	August 8, 1956; November 21, 1958 .....		August 2, 1956; October 31, 1958 .....	
Owned and operated by city of Montreal	Municipally owned and operated .....		Municipally owned and operated .....	
St. Lawrence River, treated .....	Four springs on Mt. Bruce and Yamaska River**		Watopeka River .....	
<i>See Montreal</i>	Spring water flows by gravity to reservoir and then by gravity to system without treatment. River water is pumped with chlorination to reservoir to mix with spring water.		Water is pumped to reservoirs and system with chlorination (34 lb/mg) in 1958.	
<i>See Montreal</i>	One reservoir .....	100	Two reservoirs .....	500 each
<u>1958</u>	<u>1956 - 58</u>		<u>1955 - 56</u>	<u>1958</u>
3.218	25,000 gpd (estd)		0.5	0.8
None .....	A manufacturer of brooms and mops		A paper manufacturer, a textile firm and a foundry	
* <i>See also Water Survey Report No. 2</i>	* Also called Shefford			
	** River water only used about one month each year			

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

Municipality .....	<b>WINSLOW NORTH*</b> (Frontenac Co.)	<b>WOTTONVILLE</b> (Wolfe Co.)	
	<u>1958</u>	<u>1956</u>	<u>1958</u>
Population served:			
In municipality .....	726 <sup>e</sup> (373 <sup>d</sup> )	- (751 <sup>d</sup> )	591 (692 <sup>e</sup> )
Outside municipality .....	<u>0</u>	-	<u>0</u>
Total .....	<u>726</u>	<u>706</u>	<u>591</u>
Date(s) of survey .....	November 6, 1958 .....	October 15, 1956; February 28, 1958 ...	
Ownership .....	Municipally owned and operated .....	Municipally owned and operated .....	
Source of supply .....	Springs .....	In 1956, a spring and two wells, about 300 ft deep; in 1958, three wells about 300 ft deep	
Treatment .....	No treatment; water flows by gravity to reservoirs and system.	No treatment; water is pumped to reservoir and system.	
Storage capacity (thousand gallons) ..	Three reservoirs ..... 1.8, 2.7 and 39	Reservoir ..... 100	
Consumption (average in mgd) .....	Unknown .....	<u>1956</u>	<u>1958</u>
		0.29 (Max. - 0.35)	0.08
		Capacity - 0.04	- 0.10
Industrial use .....	None .....	No major industrial user .....	
Remarks .....	* Also known as St. Romain de Winslow		

<sup>d</sup> Population according to the Tenth Census of Canada, 1956

<sup>e</sup> Population in 1958, according to the Quebec Municipal Guide, 1959

**DESCRIPTION OF MUNICIPAL WATER SYSTEMS IN THE  
LOWER ST. LAWRENCE RIVER DRAINAGE BASIN**

<b>YAMACHICHE (St. Maurice Co.)</b>		<b>YAMASKA EAST (Yamaska Co.)</b>	
<u>1958</u>		<u>1956</u>	<u>1958</u>
1,050 (900 <sup>d</sup> ) (1,042 <sup>e</sup> )		125 (301 <sup>d</sup> )	125 (276 <sup>e</sup> )
<u>135</u>		<u>0</u>	<u>0</u>
<u>1,185</u>		<u>125</u>	<u>125</u>
December 22, 1958 .....		August 13, 1956; November 19, 1958 .....	
Municipally owned and operated .....		Privately owned and operated by Mr. Villiard .....	
Two wells, 60 ft deep* .....		Yamaska River .....	
No treatment; water flows by gravity to reservoir and system.		Water is pumped to pressure tanks and system with chlorination. ....	
One reservoir .....	250	Three pressure tanks .....	
	<u>1958</u>	<u>1956</u>	<u>1958</u>
	0.12 approx	Unknown	6,000 gpd (estd)
None .....		No data .....	
* An auxiliary supply is available.			

**TABLE III**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Municipality .....	ABBOTSFORD (Rouville Co.)	ACTON VALE (Bagot Co.)		ADSTOCK (Frontenac Co.)
	Source(s) .....	Spring and well	Moose River		Spring and well
			Raw water	Finished water	
	Sampling point .....		At pumps	At plant tap	
1	Date of sampling .....		<b>Aug. 10/56</b>	<b>Aug. 10/56</b>	
2	Storage period (days) .....		195:275	195:275	
3	Sampling temperature, °C. ....		23.3	23.3	
4	Test temperature, °C. ....		22.7	22.8	
5	Oxygen consumed by KMnO <sub>4</sub> .....		14	10	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		2.8	1.6	
7	pH .....		7.6 (7.4)	7.8	
8	Colour .....		30 (50)	10	
9	Turbidity .....		2	0	
10	Suspended matter, dried at 105° C. ....		.....	.....	
11	Suspended matter, ignited at 550° C. ....		.....	.....	
12	Residue on evaporation, dried at 105° C. ....		108	116	
13	Ignition loss at 550° C. ....		22.4	21.2	
14	Specific conductance, micromhos at 25° C. ....		139.5	186.6	
15	Calcium (Ca) .....		22.2	28.7	
16	Magnesium (Mg) .....		2.2	2.8	
17	Iron (Fe) Total .....	<i>See St. Paul d'Abbotsford</i>	.....	.....	<i>See St. Methode de Frontenac</i>
18	Dissolved .....		0.0	0.0	
19	Manganese (Mn) .....		0.0	0.0	
20	Aluminum (Al) .....		0.1	0.1	
21	Copper (Cu) .....		0.0	0.0	
22	Zinc (Zn) .....		0.0	0.0	
23	Sodium (Na) .....		2.8	2.9	
24	Potassium (K) .....		1.0	1.0	
25	Ammonia (NH <sub>3</sub> ) .....		0.0	0.1	
26	Carbonate (CO <sub>3</sub> ) .....		0.0	0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....	66.7	60.2		
28	Sulphate (SO <sub>4</sub> ) .....	12.1	33.5		
29	Chloride (Cl) .....	2.3	4.0		
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	2.4	4.0		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	5.2	2.8		
33	Carbonate hardness as CaCO <sub>3</sub> .....	54.7	49.4		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	9.7	33.7		
35	Total hardness as CaCO <sub>3</sub> .....	64.4	83.1		
36	Sum of constituents .....	83.1	110		
37	Per cent sodium .....	8.4	6.9		
38	Saturation index at test temperature .....	-0.8	-0.5		
39	Stability index at test temperature .....	9.2	8.8		
Remarks:					

TABLE III  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ALBANEL (Lac St Jean W. Co.)	ALMA (Lac St Jean E. Co.)	ALMAVILLE (Champlain Co.)	ANJOU (Ile de Montreal)	ARMAGH (Bellechasse Co.)	ARTHABASKA (Arthabaska Co.)	No.
Springs and Lac Pare	Lake St. John	Springs	St. Lawrence River	Springs	Artesian well	
Raw and finished water				Raw and finished water	Raw and finished water	
At town tap				At town tap	At town tap	
July 19/55 43:198 14.7 24.0				Apr. 2/58 12:20	July 30/56 188:253	1
				.....	13.9	2
				26.5	21.1	3
				9.2	.....	4
1				5.0	1.7	5
8.2 (7.8)				7.2	8.1 (7.8)	6
5				70	4	7
0				1	.....	8
				.....	5.1	9
				.....	1.0	10
140				85.2	155	11
18.8				28.8	19.2	12
230.8				105.4	235.7	13
25.2				14.4	41.0	14
9.4				2.4	3.2	15
				.....	0.43	16
0.0	See	See	See	0.15	0.03	17
Trace	St. Joseph d'Alma	Shawinigan South	Montreal	0.01	0.0	18
0.06				0.0	0.05	19
Trace				0.0	.....	20
				0.66	.....	21
6.4				2.6	2.8	22
2.9				0.5	0.8	23
				0.0	0.05	24
				0.0	0.0 (0)	25
0.0				0.0	123 (130)	26
120				51.4	17.0	27
10.4				7.7	3.1	28
3.0				0.6	0.0	29
0.05				0.0	1.4	30
8.0				0.3	12.5	31
13				9.0	101 (107)	32
98.8				42.2	14.9	33
2.7				3.6	116	34
101.5				45.8	142	35
139				63.7	4.9	36
12				11	+0.2	37
+0.2				-1.4	7.7	38
7.8				10		39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Municipality .....	ARVIDA (Chicoutimi Co.)		ASBESTOS (Richmond Co.)	
	Source(s) .....	Chicoutimi River		South west Nicolet River	Springs
		Raw water*	Finished water	Raw water*	Raw water
	Sampling point .....	At plant intake	At plant tap	At intake pump	At spring
1	Date of sampling .....	July 20/55	July 20/55	Aug. 2/56	Aug. 2/56
2	Storage period (days) .....	49:55	49:55	193:254	193:254
3	Sampling temperature, °C. ....	20.0	20.0	20.6	10.6
4	Test temperature, °C. ....	23.2 (22.5)	23.2 (22)	25.3 (21.5)	25.4 (18)
5	Oxygen consumed by KMnO <sub>4</sub> .....			14	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.5	0.8	3.2	1.2
7	pH .....	6.8 (7.2)	7.6 (8.4)	7.3 (7.5)	8.1 (7.6)
8	Colour .....	35 (50)	5	25 (30)	5
9	Turbidity .....	0.8	0.3	0.9	2
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....		50.4	78.0	118
13	Ignition loss at 550° C. ....		9.2	26.0	11.6
14	Specific conductance, micromhos at 25° C. ....	34.1	73.99	91.09	155.7
15	Calcium (Ca) .....	5.1	11.5	11.7	24.5
16	Magnesium (Mg) .....	0.1	0.2	2.8	3.1
17	Iron (Fe) Total .....				
18	Dissolved .....		0.02	0.01	0.0
19	Manganese (Mn) .....		0.0	0.0	0.0
20	Aluminum (Al) .....		0.13	0.05	0.07
21	Copper (Cu) .....	Slight trace	Trace	0.0	0.0
22	Zinc (Zn) .....	0.0	0.02	0.05	0.05
23	Sodium (Na) .....	0.9	0.9	1.7	2.7
24	Potassium (K) .....	0.5	0.5	0.6	0.4
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.0	0.2	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	12.4	16.6	42.5	86.6
28	Sulphate (SO <sub>4</sub> ) .....	2.4	16.1	7.1	9.1
29	Chloride (Cl) .....	1.2	1.5	1.2	0.6
30	Fluoride (F) .....		0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.8	1.6	1.6	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.0	4.1	5.0	15
33	Carbonate hardness as CaCO <sub>3</sub> .....	10.2	13.7	34.9	71.0 (74.1)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	2.9	15.8	5.8	2.9
35	Total hardness as CaCO <sub>3</sub> .....	13.1 (11.3)	29.5 (26.5)	40.7	73.9
36	Sum of constituents .....	21.1	44.8	52.9	98.8
37	Per cent sodium .....	12	5.9	8.0	7.3
38	Saturation index at test temperature .....	-2.8	-1.8	-1.5	-0.1
39	Stability index at test temperature .....	12	11	10	8.3
Remarks:		* See also Table II, Station No. 156		* See also Table II, Station No. 85	

TABLE III(Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

ASBESTOS (Concl'd) (Richmond Co.)	AYER'S CLIFF (Stanstead Co.)	BABEL (Saguenay Co.)	BAGOTVILLE (Chicoutimi Co.)	BAIE COMEAU (Saguenay Co.)	BAIE de SHAWINIGAN (St. Maurice Co.)	No.
South-west Nicolet River and Springs	Springs	Rock River	Creek (Lake Gravel)	Lake Comeau (Lac la Chasse)	Lac la Peche and Lac des Piles	
Finished water	Raw and finished water		Raw and finished water	Raw and finished water		
At plant tap	At village tap		At town tap	At town tap		
Aug. 2/56 193:254 18.3 25.4 (21)	Aug. 7/56 192:262 15.0 21.8 (25)		July 16/55 41:193 13.3 25.2 (19)	July 13/56 36:132 18.3 28.2 (22)		1
..... 2.0 7.3 (6.7) 5 0	..... 7.8 2.0 7.9 (7.4) 5 0		..... 1.9 8.1 (7.9) 0 0	..... 5.1 6.0 (6.1) 45 2		2 3 4 5 6 7 8 9
..... 85.6 19.6 119.5 15.0 3.0	..... 130 28.4 182.4 27.6 5.1		..... 150 14.4 247.7 44.8 2.4	..... 33.2 16.4 28.51 2.4 0.4		10 11 12 13 14 15 16
..... 0.0 0.04 0.14 Slight trace 0.05 1.7 0.4 0.1 0.0 26.0 30.3 1.3 0.0 0.6 4.9 21.3 (24.7) 28.5 49.8 70.3 6.7 -1.6 11	..... Trace 0.0 0.06 0.0 0.3 1.4 0.5 0.0 0.0 93.3 8.3 2.0 0.0 6.0 13 76.5 (78.2) 13.3 89.8 110 3.2 -0.3 8.5	See Shelter Bay	..... 0.0 0.0 0.13 0.0 ..... 1.7 1.4 0.0 0.0 149 5.5 0.7 0.0 2.4 10 122 0.0 122 (114) 143 2.9 +0.5 7.1	..... 0.09 0.0 0.06 0.01 ..... 1.1 0.5 0.1 0.0 3.3 2.9 2.4 0.0 0.8 2.6 2.7 (4.0) 4.9 7.6 14.9 21 -4.4 15	See Shawinigan	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39



TABLE III (C ontinued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		BAIE ST. PAUL (Charlevoix W. Co.)	BATISCAN (Champlain Co.)	BEACONSFIELD (Ile de Montreal)	BEAUCEVILLE (Beauce Co.)
Source(s) .....		Creek	Artesian wells	Lake St. Louis	Lake Fortin
No.	Raw and finished water				Raw and finished water
	Sampling point .....		At town tap		At town tap
1	Date of sampling .....	July 22/56			July 25/56
2	Storage period (days) .....	49:209			190:251
3	Sampling temperature, °C. ....	15.0			17.2
4	Test temperature, °C. ....	22.3 (19)			25.0 (22)
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....			13
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	0.9			1.8
7	pH .....	8.1 (8.2)			7.2 (7.1)
8	Colour .....	10			20
9	Turbidity .....	0			2
10	Suspended matter, dried at 105° C. ....	.....			.....
11	Suspended matter, ignited at 550° C. ....	.....			.....
12	Residue on evaporation, dried at 105° C. ....	84.8			44.8
13	Ignition loss at 550° C. ....	12.4			20.8
14	Specific conductance, micromhos at 25° C. ....	122			49.86
15	Calcium (Ca) .....	18.9			5.7
16	Magnesium (Mg) .....	2.1			1.5
17	Iron (Fe) Total .....	.....			.....
18	Dissolved .....	Trace			0.11
19	Manganese (Mn) .....	0.0	See St. Francois Xavier de Batiscan	See Pointe Claire	.....
20	Aluminum (Al) .....	0.0			0.08
21	Copper (Cu) .....	0.0			Slight trace
22	Zinc (Zn) .....	Trace			0.05
23	Sodium (Na) .....	2.0			1.2
24	Potassium (K) .....	0.6			0.6
25	Ammonia (NH <sub>3</sub> ) .....	0.0			0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0			0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	66.3			18.4
28	Sulphate (SO <sub>4</sub> ) .....	3.5			5.6
29	Chloride (Cl) .....	0.3	1.3		
30	Fluoride (F) .....	0.1	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.4		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	12	1.8		
33	Carbonate hardness as CaCO <sub>3</sub> .....	54.4	15.1 (18.6)		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	1.4	5.3		
35	Total hardness as CaCO <sub>3</sub> .....	55.8 (52.8)	20.4		
36	Sum of constituents .....	72.8	27.4		
37	Per cent sodium .....	7.1	10.5		
38	Saturation index at test temperature .....	-0.3	-2.2		
39	Stability index at test temperature .....	8.7	12		
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

BEAUCEVILLE EAST (Beauce Co.)	BEAUHARNOIS (Beauharnois Co.)		BEAULAC (Wolfe Co.)	BEAUPORT (Quebec Co.)		BEAUPORT WEST (Quebec Co.)	No.
	Lake Fortin	St. Lawrence River (via Beauharnois Canal)		Lake Aylmer	Springs and Montmorency River		
Raw and finished water	Raw water	Finished water	Raw and finished water	Springs	Montmorency River		
				Raw and finished water			
At town tap	At pumps	At plant tap	At town tap	At town tap			
Mar. 24/59	Aug. 21/56	Aug. 21/56	Aug. 23/56	July 23/55			1
13:23	230:359	230:359	228:357	48:113			2
5.6	23.3	21.7	17.2	10.0			3
24.6	25.2	25.2 (23)	25.0	22.3 (22)			4
6.8	3.6	3.6	9.2	.....			5
2.0	3.1	1.2	2.3	3.0			6
7.2	7.8	8.2 (7.8)	7.3	7.6 (7.3)			7
25	5	0	40	20			8
0.6	35	8	0	0.9			9
.....	34.3	4.7	.....	.....			10
.....	26.7	0.0	.....	.....			11
48.4	198	177	57.2	82.0			12
20.0	44.0	49.6	38.4	11.6			13
59.20	320.8	303.2	72.12	132.9			14
7.3	37.9	36.7	7.5	20.5			15
1.8	9.1	8.5	2.9	2.0			16
.....	.....	.....	.....	.....			17
0.04	0.04	0.02	0.06	0.11	See Montmorency	See Beauport and Montmorency	18
Trace	0.0	0.0	0.0	Trace			19
0.0	0.17	0.41	0.0	0.12			20
0.08	.....	.....	.....	0.23			21
0.05	0.05	0.0	0.3	0.5			22
1.0	12.2	10.6	1.5	2.0			23
0.8	1.6	1.3	0.7	0.6			24
0.05	0.05	0.0	0.05	0.0			25
0.0	0.0	0.0	0.0	0.0			26
20.0	123	117	28.3	69.5			27
10.0	28.7	28.7	8.7	4.1	28		
2.3	22.5	21.1	1.5	1.8	29		
0.0	0.0	0.0	0.0	0.05	30		
0.6	0.6	1.0	0.6	2.4	31		
3.0	3.0	1.7	4.6	9.0	32		
16.4	101	95.6	23.2	57.0	33		
9.2	31.2	30.9	7.1	2.4	34		
25.6	132	126.5	30.3	59.4 (58.6)	35		
36.6	177	167	42.4	77.2	36		
7.4	16	15	9.3	6.6	37		
-2.1	0.0	+0.3	-1.8	-0.8	38		
11	7.8	7.6	11	9.2	39		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		<b>BEAUPRE</b> (Moosemeny) (No. 1 Co.)	BEAUSEJOUR (Maskinonge Co.)	<b>BEDFORD</b> (Missisquoi Co.)	BEEBE PLAIN (Stanstead Co.)	
No.	Source(s) .....	Springs	Wells	Pike River (Riviere Aux Brochets)	Springs	
		Raw and finished water		Raw and finished water	Raw and finished water	
	Sampling point .....	<b>At town tap</b>		At town tap	At village tap	
1	Date of sampling .....	July 7/55		Aug. 16/56	Aug. 7/56	
2	Storage period (days) .....	49:209		232:355	192:262	
3	Sampling temperature, °C. ....	13.3		21.7	15.6	
4	Test temperature, °C. ....	22.3 (18)		27.5	23.6 (25)	
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....		3.5	8.4	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.3		8.8	1.3	
7	pH .....	7.4 (7.2)		7.1 (7.7)	8.1 (7.8)	
8	Colour .....	10		10	0	
9	Turbidity .....	0.2		0.9	0	
10	Suspended matter, dried at 105° C. ....	.....		.....	.....	
11	Suspended matter, ignited at 550° C. ....	.....		.....	.....	
12	Residue on evaporation, dried at 105° C. ....	42.4		114	152	
13	Ignition loss at 550° C. ....	7.2		29.6	52.0	
14	Specific conductance, micromhos at 25° C. ....	48.63		159.4	207.6	
15	Calcium (Ca) .....	5.9		22.9	26.2	
16	Magnesium (Mg) .....	0.6		3.4	8.6	
17	Iron (Fe) Total .....	.....	<b>See Louiseville</b>	.....	.....	
18	Dissolved .....	0.09			0.0	Trace
19	Manganese (Mn) .....	0.0			0.0	0.0
20	Aluminum (Al) .....	0.0			0.0	0.09
21	Copper (Cu) .....	0.27			.....	0.0
22	Zinc (Zn) .....	0.0			0.05	0.05
23	Sodium (Na) .....	2.0			2.3	2.4
24	Potassium (K) .....	0.6			1.4	2.1
25	Ammonia (NH <sub>3</sub> ) .....	0.0			0.05	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)			0.0	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	18.9 (19.5)		70.6	96.5 (100)	
28	Sulphate (SO <sub>4</sub> ) .....	3.8		11.5	12.6	
29	Chloride (Cl) .....	0.4		3.5	8.2	
30	Fluoride (F) .....	0.0		0.0	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	1.6		5.0	4.8	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	11		3.2	11	
33	Carbonate hardness as CaCO <sub>3</sub> .....	15.5		57.9	79.2	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	1.7		13.2	21.5	
35	Total hardness as CaCO <sub>3</sub> .....	17.2		71.1	101	
36	Sum of constituents .....	36.9		88.1	124	
37	Per cent sodium .....	19		6.4	4.8	
38	Saturation index at test temperature .....	-2.0		-1.2	0	
39	Stability index at test temperature .....	11		9.5	8.1	
Remarks:						

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

BELOEIL (Vercheres Co.)		BERGERVILLE (Quebec Co.)	BERTHIERVILLE (Berthier Co.)		BIC (Rimouski Co.)	No.	
Lake Hertel	Artesian well	St. Lawrence River	St. Lawrence River* (North channel)		Springs		
Raw and finished water			Raw water	Finished water	Raw and finished water		
At lake	At well pump		At intake pump	At filter plant tap	At town tap		
Aug. 11/56	Aug. 11/56		June 7/55	June 7/55	July 7/55	1	
194:279	191:217		6:85	6:85	42:171	2	
20.0	10.0		10.0	10.0	15.0	3	
22.8	24.6		23.4 (23)	23.4 (22)	28.2 (26)	4	
8.6	.....		.....	.....	.....	5	
0.9	4.0		2.3	7.2	2.4	6	
7.8	8.1 (8.2)		7.7 (7.6)	7.0 (6.7)	7.5 (7.4)	7	
5	30		25	5	5	8	
0	0		20	3	2	9	
.....	.....		19.9	.....	.....	10	
.....	.....		16.2	.....	.....	11	
49.2	626		128	140	88.8	12	
8.4	46.0		37.6	39.2	29.2	13	
92.5	1,080		185.1	201.9	153.2	14	
12.5	14.9		23.1	23.1	17.9	15	
1.1	12.0		4.4	5.0	2.4	16	
.....	0.22	<i>See Sillery</i>	.....	.....	.....	17	
0.0	0.02		0.02	0.0	0.0	0.0	18
Trace	0.01		0.0	0.02	0.04	0.04	19
0.01	0.40		0.03	0.13	0.05	0.05	20
0.0	0.0		0.0	0.0	0.0	0.0	21
0.0	0.1		.....	.....	.....	.....	22
2.7	195		5.2	5.2	7.2	7.2	23
0.8	8.4		1.0	1.0	1.0	1.0	24
0.1	0.1		0.0	0.0	0.0	0.0	25
0.0	0.0 (0)		0.0	0.0	0.0	0.0	26
33.3	324 (339)	68.2	42.8	47.5	47.5	27	
13.6	40.2	16.2	38.6	18.0	18.0	28	
0.7	156	10.8	11.0	5.6	5.6	29	
0.2	0.4	0.0	0.0	0.0	0.0	30	
0.8	4.0	Trace	0.2	8.0	8.0	31	
4.3	20	4.6	2.1	4.9	4.9	32	
27.3 (30.9)	86.5	55.9	35.1	39.0	39.0	33	
8.4	0.0	19.8	43.0	15.5	15.5	34	
35.7	86.5	75.7 (73.0)	78.1 (75.1)	54.5	54.5	35	
53.2	612	98.0	108	88.5	88.5	36	
14	81	12.8	12.3	21.8	21.8	37	
-1.1	+0.2	-0.6	-1.5	-1.0	-1.0	38	
10	7.7	8.9	10	9.5	9.5	39	
			*See also previous analyses Water Survey Report No. 2; apparently a mixture of St. Lawrence and Bayonne Rivers				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		BLACK LAKE (Megantic Co.)	BOISCHATEL (Montmorency (No. 1, Co. )	BOLDUC (Beauce Co.)	BOUCHARD (Terrebonne Co.)
Source(s) .....		Caribou and Duck Lakes	Laval River	Artesian wells	Wells
No.	Raw and finished water		Raw and finished water	Raw and finished water	
	Sampling point .....		At village tap	At village tap	At tap
1	Date of sampling .....	July 27/56	July 23/55	Feb. 14/58	
2	Storage period (days) .....	188:224	51:216	17:26	
3	Sampling temperature, °C. ....	16.1	17.8	10.0	
4	Test temperature, °C. ....	25.7 (21)	22.0 (21)	24.6	
5	Oxygen consumed by KMnO <sub>4</sub> .....	19.5	.....	1.0	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.8	1.8	3.4	
7	pH .....	7.3 (7.2)	7.4 (7.3)	7.8	
8	Colour .....	80 (100)	30	5	
9	Turbidity .....	2	0	0	
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	
12	Residue on evaporation, dried at 105° C. ....	97.2	46.8	144	
13	Ignition loss at 550° C. ....	42.4	9.2	22.8	
14	Specific conductance, micromhos at 25° C. ....	90.03	59.6	240.8	
15	Calcium (Ca) .....	1.8	9.3	35.3	
16	Magnesium (Mg) .....	10.3	0.4	6.0	
17	Iron (Fe) Total .....	.....	.....	.....	An army installation.
18	Dissolved .....	0.08	0.09	Trace	
19	Manganese (Mn) .....	0.0	0.0	0.0	
20	Aluminum (Al) .....	0.0	0.08	0.07	
21	Copper (Cu) .....	0.0	0.05	Trace	
22	Zinc (Zn) .....	0.1	0.01	0.0	
23	Sodium (Na) .....	0.5	1.3	6.1	
24	Potassium (K) .....	0.3	0.4	0.8	
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.0	0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)	0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....	48.4	27.1 (31.7)	144	
28	Sulphate (SO <sub>4</sub> ) .....	5.6	4.1	9.2	
29	Chloride (Cl) .....	1.2	0.3	1.0	
30	Fluoride (F) .....	0.0	.....	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	1.4	1.6	0.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	8.8	9.0	13	
33	Carbonate hardness as CaCO <sub>3</sub> .....	39.7	22.3	113	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	7.1	2.6	0.0	
35	Total hardness as CaCO <sub>3</sub> .....	46.8	24.9 (25.1)	113	
36	Sum of constituents .....	54.1	40.1	142	
37	Per cent sodium .....	2.2	9.8	10.4	
38	Saturation index at test temperature .....	-2.2	-1.7	0.0	
39	Stability index at test temperature .....	12	11	7.8	
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

BOUCHERVILLE (Chambly Co.)		BROMPTONVILLE (Richmond Co.)	BURY (Compton Co.)	CANDIAC (Laprairie Co.)	CAP CHAT (Gaspé W. Co.)	No.
Wells*	St. Lawrence River	Montjoie Lake	Springs	St. Lawrence River	Artesian well	
Raw and finished water		Finished water	Raw and finished water	Finished water	Raw and finished water	
At well		At town tap	At village tap	At plant tap	At town tap	
Aug. 14/56		Aug. 3/56	Aug. 3/56	Mar. 26/59	July 12/55	1
188:213		192:253	193:259	11:28	22:170	2
8.9		16.9	12.8	4.4	13.3	3
24.3 (21)		25.1 (23)	24.9 (21)	24.9	28.8 (19)	4
.....		13	10	2.2	.....	5
4.0		1.6	1.6	2	3.4	6
8.5 (8.4)		7.2 (7.0)	8.0 (7.5)	7.9	8.1 (7.7)	7
20		20	5	5	5	8
0		0	0	0	0.3	9
.....		.....	.....	.....	.....	10
.....		.....	.....	.....	.....	11
• 1,485		48.8	123	191	236	12
44.0		17.6	12.4	23	24.0	13
2,548		48.62	172.7	307	466.5	14
7.7		3.1	27.0	38.0	75.7	15
5.5		3.2	4.3	9.3	8.2	16
0.36		.....	.....	.....	.....	17
0.02		0.0	0.0	0.04	0.0	18
0.01		0.0	0.0	0.00	Trace	19
0.66		0.24	0.16	0.06	0.11	20
0.0		Trace	0.0	0.0	0.03	21
0.0		0.1	0.05	0.0	.....	22
578		0.6	1.5	9.1	7.5	23
8.2		0.2	0.3	1.7	3.7	24
.....		0.1	0.1	0.0	0.1	25
22.2		0.0	0.0 (0)	0.0	0.0 (0)	26
887		16.9	96.1 (108)	101	267 (268)	27
3.1		8.1	8.6	36.2	11.0	28
388		0.7	0.9	22.0	7.2	29
1.2		0.0	0.0	0.0	0.0	30
0		Trace	0.8	0.1	8.0	31
12.5		1.3	11	2	7.5	32
41.8		13.9	78.8	82.9	219	33
0.0		7.0	6.3	50.1	3.6	34
41.8		20.9	85.1	133	223	35
1,464		25.9	102	168	261	36
95.7		5.4	3.6	12.7	6.7	37
+0.7		-2.5	-0.1	0.0	+1.0	38
7.1		12	8.2	7.9	6.1	39
	See Jacques Cartier					
* Not in use in 1958				Phosphate (PO <sub>4</sub> )- 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Municipality .....	CAP De La MADELEINE (Champlain Co.)		CAP ST. IGNACE (Montmagny Co.)	CAP SANTE (Portneuf Co.)
	Source(s) .....	Wells	Spring	Springs	Artesian wells and springs
		Raw and finished water		Raw and finished water	Raw and finished water
	Sampling point .....	At well No. 3	At spring	At village tap	At village tap
1	Date of sampling .....	June 9/55	June 9/55	July 6/55	July 27/55
2	Storage period (days) .....	13:96	13:96	8:142	54:58
3	Sampling temperature, °C. ....	7.2	12.8	14.4	15.6
4	Test temperature, °C. ....	24.6 (21)	24.6 (21)	27.4 (24)	23.8 (18.5)
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	4.8	3.4	1.9	1.4
7	pH .....	6.8 (6.4)	6.8 (6.8)	7.3 (7.4)	8.0 (7.5)
8	Colour .....	0	10	5	0
9	Turbidity .....	0	0	0	0
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	44.0	31.6	45.6	111
13	Ignition loss at 550° C. ....	1.2	3.6	10.4	36.8
14	Specific conductance, micromhos at 25° C. ....	52.3	36.1	56.63	171.0
15	Calcium (Ca) .....	4.5	3.8	6.0	19.7
16	Magnesium (Mg) .....	1.5	0.5	1.1	5.0
17	Iron (Fe) Total .....				
18	Dissolved .....	0.0	0.03	0.02	0.10
19	Manganese (Mn) .....	0.0	0.0	0.0	0.0
20	Aluminum (Al) .....	0.04	0.0	0.05	0.05
21	Copper (Cu) .....	0.03	0.0	0.08	0.0
22	Zinc (Zn) .....				0.01
23	Sodium (Na) .....	2.6	1.7	1.7	4.4
24	Potassium (K) .....	0.7	0.5	0.4	1.4
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	18.0	13.4	23.6 (26.8)	80.5 (83)
28	Sulphate (SO <sub>4</sub> ) .....	2.9	3.0	4.1	11.8
29	Chloride (Cl) .....	2.0	0.9	0.2	2.0
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	3.2	1.2	1.2	2.4
32	Silica (SiO <sub>2</sub> ), colorimetric .....	14	11	7.2	13
33	Carbonate hardness as CaCO <sub>3</sub> .....	14.8	11.0	19.4	66.0
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	2.6	0.5	0.1	3.7
35	Total hardness as CaCO <sub>3</sub> .....	17.4	11.5	19.5	69.7
36	Sum of constituents .....	40.6	29.0	33.8	99.6
37	Per cent sodium .....	23.3	23.2	15.3	11.7
38	Saturation index at test temperature .....	-2.7	-2.9	-1.9	-0.3
39	Stability index at test temperature .....	13	13	11	8.6
	Remarks:	Lithium-0.0 ppm	Lithium-0.0 ppm	Lithium-0.0 ppm	Lithium-0.0 ppm

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

CARLETON SUR MER (Bonaventure Co.)	CAUGHNAWAGA (Indian Reserve)	CHAMBLY* (Chambly Co.)		CHAMBORD (Lac St. Jean W. Co.)	CHAMPLAIN (Champlain Co.)	No.
Spring-fed creek	St. Lawrence River	Richelieu River		Belly Lake	Springs	
Raw and finished water	Raw and finished water	Raw and finished water		Raw and finished water	Raw and finished water	
At village tap	At tap in Laprairie	At town tap		At village tap	At reservoir	
July 9/55	Aug. 17/56	Sept. 26/58	Aug. 15/56	July 18/55	Oct. 1/52	1
18:158	231:354	52:87	266:349	41:199	47:256	2
13.0	23.3	16.7	22.5	16.7	.....	3
27.1 (25)	25.0 (27)	23.4	24.1 (24)	24.8	22.0	4
.....	2.9	4.2	.....	.....	.....	5
.....	2.9	1.7	1.0	1.4	0.8	6
8.3 (8.0)	7.7 (8.6)	7.7	7.9 (7.9)	8.2 (8.0)	7.6	7
0.0	5	10	10	25	0	8
2	0.9	0.8	0	0	0	9
.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	11
134	189.2	80.0	87.6	144.8	.....	12
54.0	42.8	24.8	35.3	16.4	.....	13
229.7	312.0	130.6	118.5	223.6	49.6	14
35.0	25.5	15.6	15.1	40.7	4.5	15
5.6	8.8	4.2	2.9	2.7	1.2	16
.....	.....	.....	.....	.....	.....	17
0.01	0.0	0.05	0.02	0.0	.....	18
0.0	0.0	0.01	0.0	0.0	.....	19
0.09	0.04	0.01	0.0	0.0	.....	20
0.0	0.0	Trace	.....	0.0	.....	21
.....	0.0	0.05	0.05	.....	.....	22
3.6	21.6	2.7	2.2	1.8	5.7	23
0.5	1.4	1.1	0.8	0.6	1.1	24
0.0	.....	0.0	.....	0.0	.....	25
0.0 (0)	0.0	0.0	0.0	0.0 (0)	0.0	26
134 (139)	92.2	50.8	47.7	133 (132)	19.3	27
4.8	42.2	13.9	12.8	3.8	5.2	28
3.1	20.7	4.8	2.4	2.8	1.0	29
0.0	0.0	0.0	0.0	0.0	.....	30
1.6	0.8	0.4	3.6	2.4	0.4	31
7.0	3.5	3.5	3.6	8.0	14	32
109.8 (110)	75.6	41.7	39.2	109 (108)	15.8	33
0.6 (0.0)	24.2	14.5	10.4	3.5	0.2	34
110.4 (110)	99.8	56.2	49.6	113	16.0	35
127	170	71.3	63.4	128	42.4	36
6.6	10.0	9.2	8.6	3.3	41.4	37
+0.5	-0.4	-0.9	-0.7	+0.4	-2.0	38
7.3	8.5	9.5	9.3	7.4	12	39
		* Also referred to as Chambly Bassin.				



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		CHAMPLAIN (concl'd) (Champlain Co.)	CHANDLER (Gaspé E. Co.)	CHARLEMAGNE (L'Assomption Co.)	CHARLESBOURG (Quebec Co.)
No.	Source(s) .....	Springs	Valpy Lake	L'Assomption River	Springs
	Sampling point .....	Raw and finished water	Raw and finished water		Raw and finished water
Municipality .....		At village tap	At village tap		At town tap
1	Date of sampling .....	July 27/55	July 9/55		July 25/55
2	Storage period (days) .....	47:198	19:159		51:200
3	Sampling temperature, °C. ....	13.3	14.4		11.1
4	Test temperature, °C. ....	22.0 (18)	25.5 (27)		23.0 (22)
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.7	3.0		1.8
7	pH .....	7.2 (6.7)	7.3 (7.2)		7.1 (6.5)
8	Colour .....	5	0		0
9	Turbidity .....	0	9		0
10	Suspended matter, dried at 105° C. ....		4.1		
11	Suspended matter, ignited at 550° C. ....		2.4		
12	Residue on evaporation, dried at 105° C. ....	40.0	45.6		34.4
13	Ignition loss at 550° C. ....	5.6	13.6		5.2
14	Specific conductance, micromhos at 25° C. ....	44.0	79.72		37.28
15	Calcium (Ca) .....	4.3	8.8		4.4
16	Magnesium (Mg) .....	0.8	2.5		0.1
17	Iron (Fe) Total .....		0.80		
18	Dissolved .....	0.07	0.02		0.02
19	Manganese (Mn) .....	0.02	0.00		Trace
20	Aluminum (Al) .....	0.05	0.17	<i>See</i> St. Paul L'Ermité	0.13
21	Copper (Cu) .....	0.01	0.03		0.24
22	Zinc (Zn) .....	0.05			0.01
23	Sodium (Na) .....	2.2	1.5		1.4
24	Potassium (K) .....	0.6	0.3		0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0		0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0		0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	16.7	35.8		14.2
28	Sulphate (SO <sub>4</sub> ) .....	3.3	3.0		2.6
29	Chloride (Cl) .....	1.1	1.6		0.7
30	Fluoride (F) .....	0.0	0.0	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	1.6	1.2	2.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	12.5	1.5	12	
33	Carbonate hardness as CaCO <sub>3</sub> .....	13.7	29.4	11.4	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.3	2.8	0.0	
35	Total hardness as CaCO <sub>3</sub> .....	14.0	32.2 (34.0)	11.4	
36	Sum of constituents .....	34.8	38.9	31.6	
37	Per cent sodium .....	23.9	8.8	18.8	
38	Saturation index at test temperature .....	-2.4	-1.6	-2.6	
39	Stability index at test temperature .....	12	11	12	
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

CHARNY (Levis Co.)	CHATEAU d'EAU (Quebec Co.)	CHATEAUGUAY (Chateauguy Co.)	CHATEAU RICHER (Montmorency) (No. 1 Co. )	CHAUDIERE BASSIN (Levis Co.)	CHESTERVILLE (Arthabaska Co.)	No.
Chaudiere River	Springs and creek	Lake St. Louis (St. Lawrence River)	Springs and Verreault River	St. Lawrence River	Spring and well (mixed)	
Raw and finished water			Raw and finished water		Raw and finished water	
At penstock of Quebec Power Co.			At village tap		At village tap	
July 24/56 129:234 21.1 20.7 (25)			July 23/55 51:216 16.1 22.0 (22)		Aug. 23/56 228:357 16.7 25.1	1 2 3 4
..... 1.8 7.5 (7.4) 40 2			..... 2.8 7.3 (7.3) 30 (40) 0		..... 2.7 1.6 7.5 5 7 9.0	5 6 7 8 9 10
..... 62.4 27.2 76.84 10.4 1.8			..... 59.2 13.2 79.50 12.3 0.8		..... 0.0 64.4 29.6 93.77 11.2 1.8	11 12 13 14 15 16
..... 0.06 0.0 0.05			..... 0.06 0.0 0.12 0.0 0.05		..... 0.01 Trace 0.0 0.0 0.7	17 18 19 20 21
..... 1.9 0.7 0.1 0.0 35.0 7.3 1.5 0.0 1.0 3.6 28.7 4.7 33.4 45.6 10.6 -1.5 11	See Loretteville	See Caughnawaga also Station No. 4 - St. Lawrence River Beauharnois - Table II	..... 1.3 0.4 0.0 0.0 31.5 8.9 0.6 ..... 1.6 8.6 25.9 8.1 34.0 50.4 7.4 -1.6 11	See St. Romauld d'Etchemin	..... 2.0 0.8 0.0 0.0 31.7 11.7 1.7 0.0 3.0 9.2 26.0 9.3 35.3 57.7 10.4 -1.4 10	22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	CHICOUTIMI (Chicoutimi Co.)		CHICOUTIMI NORTH (Chicoutimi Co.)	CLERMONT (Charlevoix E Co.)
	Source(s) .....	Chicoutimi River		Springs	Springs and creek
	Sampling point .....	Raw water	Finished water	Raw and finished water	Springs Raw and finished water
		At plant intake	At plant tap	At town tap	At village tap
1	Date of sampling .....	July 15/55	July 15/55	July 15/55	July 21/55
2	Storage period (days) .....	39:66	35:66	40:60	49:210
3	Sampling temperature, °C. ....	20.6	21.7	8.3	14.4
4	Test temperature, °C. ....	22.0 (23)	22.0 (23)	25.2 (19)	22.6 (21)
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.4	0.9	1.6	1.6
7	pH .....	7.2 (7.2)	7.5 (8.3)	7.6 (7.3)	7.7 (7.5)
8	Colour .....	40 (55)	0	0	5
9	Turbidity .....	0.8	0	0	3
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	40.4	58.8	56.0	66.4
13	Ignition loss at 550° C. ....	20.8	15.6	11.6	7.6
14	Specific conductance, micromhos at 25° C. ....	35.86	77.51	69.17	90.4
15	Calcium (Ca) .....	5.1	11.2	11.0	12.8
16	Magnesium (Mg) .....	0.3	0.6	0.3	1.7
17	Iron (Fe) Total .....				
18	Dissolved .....	0.10	Trace	0.03	0.02
19	Manganese (Mn) .....	Trace	Trace	Trace	0.0
20	Aluminum (Al) .....	0.0	0.48	0.12	0.0
21	Copper (Cu) .....	Trace	0.0	0.05	0.0
22	Zinc (Zn) .....				0.04
23	Sodium (Na) .....	1.1	1.0	1.3	2.0
24	Potassium (K) .....	0.5	0.5	0.5	0.6
25	Ammonia (NH <sub>3</sub> ) .....	0.2	0.0	0.0	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	13.5	17.7	37.2 (36.6)	47.8
28	Sulphate (SO <sub>4</sub> ) .....	1.3	15.5	0.8	4.5
29	Chloride (Cl) .....	1.2	1.6	0.2	0.2
30	Fluoride (F) .....	0.0	0.0	0.0	0.05
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.6	1.2	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.7	3.9	9.5	13
33	Carbonate hardness as CaCO <sub>3</sub> .....	11.1	14.5	28.7	38.9
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	2.9	15.9	0.0	0.0
35	Total hardness as CaCO <sub>3</sub> .....	14.0	30.4 (28.4)	28.7	38.9
36	Sum of constituents .....	21.0	43.6	43.4	59.1
37	Per cent sodium .....	13.9	6.1	8.6	9.9
38	Saturation index at test temperature .....	-2.4	-1.6	-1.2	-1.0
39	Stability index at test temperature .....	12	11	10	9.7
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

COATICOOK (Stanstead Co.)	COLERAINE (Megantic Co.)	CONTRECOEUR (Vercheres Co.)	COOKSHIRE (Compton Co.)		COTEAU LANDING (Soulanges Co.)	No.	
			Wells	Springs			
Well and spring (mixed) supply	East Lake	St. Lawrence River	Raw and finished water		Lake St. Francis (St. Lawrence River)		
Raw and finished water		Raw and finished water	Raw and finished water		Raw and finished water		
At large reservoir		At village tap	At reservoir inlet	At reservoir outlet	At village tap		
Aug. 7/56		Aug. 13/56	Aug. 3/56	Aug. 3/56	Sept. 26/58	1	
192:262		195:346	193:224	193:259	52:87	2	
8.3		21	13.0	15.6	21.0	3	
21.7 (22)		23.9	24.8 (20)	24.9 (21)	23.0	4	
.....		9.9	.....	.....	3.5	5	
1.6		2.1	2.1	2.3	2.2	6	
8.2 (7.7)		7.9 (8.2)	8.3 (7.6)	8.1 (7.6)	7.9	7	
0		10	5	5	3	8	
0		80	0	0	2	9	
.....		153	.....	.....	.....	10	
.....		148	.....	.....	.....	11	
222		198	268	200	179	12	
39.6		41.6	35.6	26.0	54.8	13	
334.0		301	449	314	299	14	
48.3		37.6	60.8	50.5	36.0	15	
11.2		7.5	20.4	8.6	8.4	16	
.....		.....	0.0	.....	.....	17	
Trace	See St. Joseph de Coleraine	0.01	0.0	0.0	0.04	18	
0.0		0.0	0.01	0.0	0.0	0.0	19
0.11		0.0	0.24	0.11	0.02	0.02	20
0.0		.....	0.0	0.0	Trace	Trace	21
0.0		0.0	0.5	0.05	0.40	0.40	22
5.9		9.3	3.1	2.1	9.7	9.7	23
0.6		1.3	1.7	1.1	1.2	1.2	24
0.05		.....	0.1	0.1	0.05	0.05	25
0.0 (0)		0.0	0.0 (0)	0.0 (0)	0.0	0.0	26
199 (180)		108	256 (261)	181 (181)	107	107	27
28.5		26.3	26.5	15.6	26.6	26.6	28
3.2		21.8	3.5	1.8	23.8	23.8	29
0.0		0.10	0.0	0.0	0.0	0.0	30
0.2		1.3	2.8	4.0	0.4	0.4	31
14		3.5	10	8.4	3.5	3.5	32
147 (148)		88.7	210	148 (148)	87.4	87.4	33
19.5		36.0	25.7	13.3	37.0	37.0	34
167		125	236	161	124	124	35
201		162	256	181	163	163	36
7.1	13.8	2.7	2.7	14.3	14.3	37	
+0.5	0.0	+0.9	+0.5	-0.1	-0.1	38	
7.2	7.9	6.5	7.1	8.1	8.1	39	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		COTEAU STATION* (Soulanges Co.)	COTE ST. LUC (Ile de Montreal)	COURCELLES (Frontenac Co.)	COURVILLE (Quebec Co.)
Source(s) .....		Lake St. Francis	St. Lawrence River	Springs	Springs
No.				Raw water	Raw and finished water
Sampling point .....					At town tap
1	Date of sampling .....			Aug. 15/58	Aug. 11/55
2	Storage period (days) .....			7:18	6:67
3	Sampling temperature, °C. ....			12.8	18.0
4	Test temperature, °C. ....			23.6	27.2
5	Oxygen consumed by KMnO <sub>4</sub> .....			1.6	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....			7.2	5.1
7	pH .....			7.6	6.6
8	Colour .....			5	35
9	Turbidity .....			0	1
10	Suspended matter, dried at 105° C. ....			.....	.....
11	Suspended matter, ignited at 550° C. ....			.....	.....
12	Residue on evaporation, dried at 105° C. ....			184	36.0
13	Ignition loss at 550° C. ....			36.4	15.2
14	Specific conductance, micromhos at 25° C. ....			314	34.5
15	Calcium (Ca) .....			48.7	3.8
16	Magnesium (Mg) .....			9.8	0.2
17	Iron (Fe) Total .....			.....	.....
18	Dissolved .....			0.03	0.26
19	Manganese (Mn) .....	<i>See</i>	<i>See</i>	0.0	Trace
20	Aluminum (Al) .....	Coteau Landing	Montreal	0.1	.....
21	Copper (Cu) .....			0.0	1.9
22	Zinc (Zn) .....			0.1	.....
23	Sodium (Na) .....			1.4	1.0
24	Potassium (K) .....			1.4	0.3
25	Ammonia (NH <sub>3</sub> ) .....			0.2	0.0
26	Carbonate (CO <sub>3</sub> ) .....			0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....			182	13.2
28	Sulphate (SO <sub>4</sub> ) .....			11.2	3.0
29	Chloride (Cl) .....			1.7	0.2
30	Fluoride (F) .....			0.0	0.2
31	Nitrate (NO <sub>3</sub> ) .....			4.0	0.4
32	Silica (SiO <sub>2</sub> ), colorimetric .....			8.0	7.1
33	Carbonate hardness as CaCO <sub>3</sub> .....			150	10.3
34	Non-carbonate hardness as CaCO <sub>3</sub> .....			12.3	0.0
35	Total hardness as CaCO <sub>3</sub> .....			162	10.3
36	Sum of constituents .....			176	24.9
37	Per cent sodium .....			1.8	13.3
38	Saturation index at test temperature .....			0.0	-3.1
39	Stability index at test temperature .....			7.6	13
Remarks:		* La Station du Coteau			

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

COWANSVILLE (Missisquoi Co.)		CRABTREE* (Joliette Co.)		DANVILLE (Richmond Co.)	No.
Prome Pond (Lake Tetreault)		Ouareau River		Artesian well	
Raw and finished water		Raw water**	Finished water**	Raw and finished water	
At town tap	At town tap		At village tap	At town tap	
Jan. 29/50*	Aug. 9/56	Apr. 23/54***	Feb. 6/59	Aug. 2/56	1
12	194:276	.....	5:12	193:254	2
.....	20.6	.....	1.1	16.1	3
.....	20.3 (26)	.....	22.6	23.0 (21)	4
3.4	10.2	.....	2.0	10	5
3	0.9	4.4	2	2.2	6
7.0	7.8 (7.2)	6.4	6.9	8.1 (7.6)	7
20	10	Slight	5	5	8
5	0	10	0	0	9
.....	.....	.....	.....	.....	10
.....	58.4	38	42.4	194	11
.....	15.6	.....	11.2	21	12
.....	80.0	.....	65.5	306.7	13
7.2	10.3	4.0	7.2	53.5	14
1.0	1.7	0	1.6	4.8	15
0.1	.....	1.4	.....	.....	16
.....	Trace	.....	0.01	0.0	17
0.0	0.01	.....	0.0	0.04	18
.....	0.14	0.15	0.03	0.02	19
.....	Trace	.....	0.0	0.0	20
.....	0.1	.....	0.07	0.5	21
1.8	2.2	.....	1.6	3.6	22
.....	0.8	.....	0.4	0.5	23
.....	0.05	0.0	0.0	0.2	24
0	0.0 (0)	0	0.0	0.0 (0)	25
18.3	35.0 (35.1)	7.3	9.3	178 (178)	26
8.6	8.5	4.1	15.0	15.1	27
0.7	1.1	2.4	1.8	3.0	28
.....	0.1	.....	0.0	0.0	29
.....	0.8	.....	0.4	0.6	30
.....	5.7	5.0	7.0	11	31
15	28.7 (28.8)	6	7.6	145.6 (146)	32
7	4.0	4	16.9	7.6	33
22	32.7	10	24.5	153	34
.....	48.7	.....	39.9	180	35
.....	12.1	.....	12.1	4.8	36
.....	-1.2	.....	-2.7	+0.5	37
.....	10	.....	12	7.1	38
.....	.....	.....	.....	.....	39
* Analysis supplied by the Permutit Co. of Canada Ltd.		* Sometimes called Crabtree Mills ** See also Water Survey Report No. 2 *** Analysis is supplied by Alchem Ltd., Burlington, Ont.			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	DAVELUYVILLE (Arthabaska Co.)	DELISLE (Lac St. Jean E. Co.)	DESBIENS (Lac St. Jean E. Co.)	DESCHAILLONS SUR ST. LAURENT (Lotbiniere Co.)
	Source(s) .....	Wells	Lac d'l'Aqueduc	Red Creek	Springs and artesian well
		Raw and finished water			Raw and finished water
	Sampling point .....	At village tap			At village tap
1	Date of sampling .....	Aug. 1/58			July 28/56
2	Storage period (days) .....	11:18			190:255
3	Sampling temperature, °C. ....	.....			13.9
4	Test temperature, °C. ....	25.8			21.2 (16)
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....			8.7
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	7.5			1.8
7	pH .....	7.7			8.0 (7.1)
8	Colour .....	0			5
9	Turbidity .....	7			0
10	Suspended matter, dried at 105° C. ....	5.5			.....
11	Suspended matter, ignited at 550° C. ....	3.3			.....
12	Residue on evaporation, dried at 105° C. ....	422			144
13	Ignition loss at 550° C. ....	66.0			21.6
14	Specific conductance, micromhos at 25° C. ....	631.5			216.2
15	Calcium (Ca) .....	83.2			36.1
16	Magnesium (Mg) .....	14.8			2.9
17	Iron (Fe) Total .....	1.9			.....
18	Dissolved .....	0.20			0.0
19	Manganese (Mn) .....	0.01	See	See	Trace
20	Aluminum (Al) .....	0.02	St. Coeur	St. Emilien	0.0
21	Copper (Cu) .....	Trace	de Marie		0.00
22	Zinc (Zn) .....	0.05			0.50
23	Sodium (Na) .....	23.3			3.7
24	Potassium (K) .....	4.5			0.9
25	Ammonia (NH <sub>3</sub> ) .....	0.05			0.10
26	Carbonate (CO <sub>3</sub> ) .....	0.0			0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	234			107 (110)
28	Sulphate (SO <sub>4</sub> ) .....	33.1			20.0
29	Chloride (Cl) .....	68.1			0.7
30	Fluoride (F) .....	0.0			0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.3			0.8
32	Silica (SiO <sub>2</sub> ), colorimetric .....	15			11
33	Carbonate hardness as CaCO <sub>3</sub> .....	192			87.9
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	76.1			14.1
35	Total hardness as CaCO <sub>3</sub> .....	268			102
36	Sum of constituents .....	358			130
37	Per cent sodium .....	15.6			7.2
38	Saturation index at test temperature .....	+0.5			0.0
39	Stability index at test temperature .....	6.7			8.0
	Remarks:				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

DESCHAMBAULT (Portneuf Co.)	DEUX RIVIERES (Champlain Co.)	DISRAELI (Wolfe Co.)		No.
Creek	Lake	Three artesian wells		
Raw and finished water	Raw and finished water	Raw and finished water		
At village tap	At village tap	At village tap		
June 15/55	Nov. 4/58	June 9/56	July 30/56	1
16:145	9:23	13:17	188:253	2
11.1	4.4	7.2	13.9	3
27.7 (22)	22.5	24.2	21.2 (18)	4
.....	13.6	10.3	10.6	5
0.6	2.4	2.5	1.3	6
7.9 (7.1)	6.0	7.9	8.2 (8.0)	7
30	80	20	5	8
0.3	0	0.3	0	9
.....	.....	.....	.....	10
59.2	42.0	138	135	11
14.4	20.0	45.2	32.0	12
60.83	26.5	212.2	212.2	13
8.0	1.7	12.5	14.2	14
1.0	1.0	19.0	17.8	15
.....	.....	.....	.....	16
0.15	0.14	0.05	0.18	17
Trace	0.00	0.01	0.02	18
0.20	0.00	0.10	0.01	19
0.02	0.0	Trace	0.11	20
.....	.....	.....	.....	21
1.9	0.0	0.05	.....	22
0.6	0.9	1.3	1.9	23
0.10	0.3	0.5	0.4	24
0.0 (0)	0.15	0.1	0.1	25
31.0 (25.9)	0.0	0.0	0.0 (0)	26
5.1	1.7	125	118 (128)	27
0.0	6.3	8.6	11.8	28
0.0	0.8	3.3	2.8	29
0.0	0.0	0.0	0.0	30
1.2	0.1	2.0	0.6	31
11	4.5	20	19	32
24.1	1.4	102	96.9	33
0.0	7.0	7.0	11.7	34
24.1	8.4	109	109	35
44.3	16.6	129	128	36
13.6	17.9	2.5	3.6	37
-1.1	-5.0	-0.4	-0.1	38
10	16	8.7	8.4	39



TABLE III ( Continued )  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	DOLBEAU (Lac St. Jean W. Co.)		DONNACONA (Portneuf Co.)	
	Source(s) .....	Mistassini River		Jacques Cartier River	
	Sampling point .....	From river	At town tap	At plant intake	At plant tap
		Raw water	Finished water	Raw water	Finished water
1	Date of sampling .....	Aug. 26/55	July 19/55	July 26/55	July 26/55
2	Storage period (days) .....	4:110	43:203	52:59	52:59
3	Sampling temperature, °C. ....	20.0	21.1	22.2	22.2
4	Test temperature, °C. ....	24.5	24.1 (22)	22.7 (25)	22.6 (26)
5	Oxygen consumed by KMnO <sub>4</sub> .....	14.3			
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.1	2.2	2.9	4.2
7	pH .....	7.4	7.1 (7.2)	6.7 (6.8)	6.4 (6.3)
8	Colour .....	35	30 (40)	40	40
9	Turbidity .....	0.2	0.8	3	0.3
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	40.4	36.8	38.0	40.4
13	Ignition loss at 550° C. ....	11.2	12.8	21.2	22.8
14	Specific conductance, micromhos at 25° C. ....	37.29	41.34	28.5	32.6
15	Calcium (Ca) .....	4.6	4.9	3.5	3.4
16	Magnesium (Mg) .....	0.6	0.7	0.4	0.5
17	Iron (Fe) Total .....				
18	Dissolved .....	0.08	0.18	0.14	0.26
19	Manganese (Mn) .....	0.00	0.00	0.00	0.00
20	Aluminum (Al) .....	Trace	0.55	0.01	Trace
21	Copper (Cu) .....	Trace	Trace	0.0	0.01
22	Zinc (Zn) .....			0.0	0.01
23	Sodium (Na) .....	1.3	1.0	0.8	0.9
24	Potassium (K) .....	0.6	0.5	0.4	0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.1	0.1	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	16.2	16.5 (22.0)	8.9	6.3
28	Sulphate (SO <sub>4</sub> ) .....	1.2	2.3	1.9	1.5
29	Chloride (Cl) .....	0.7	1.7	0.6	3.6
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.6	2.4	1.2	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	5.4	5.3	4.9	4.8
33	Carbonate hardness as CaCO <sub>3</sub> .....	13.3	13.5	7.3	5.2
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.6	1.6	3.1	5.3
35	Total hardness as CaCO <sub>3</sub> .....	13.9	15.1	10.4	10.5
36	Sum of constituents .....	24.1	27.7	18.2	19.2
37	Per cent sodium .....	16.0	10.2	13.5	14.4
38	Saturation index at test temperature .....	-2.1	-2.4	-3.3	-3.7
39	Stability index at test temperature .....	12	12	13	13
Remarks:				Lithium - 0.0 ppm	Lithium - 0.0 ppm

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

DORVAL (Ile de Montreal)	DORVAL ISLAND (Ile de Montreal)	DRUMMONDVILLE (Drummond Co.)			No.
Lake St. Louis (St. Lawrence River)	Lake St. Louis	St. Francis River			
Finished water		Raw water*		Finished water	
At city tap		At intake well	At plant intake	At filter plant tap	
Feb. 6/59		Feb. 23/49**	Aug. 1/56	Feb. 23/49**	1
5:12		.....	194:255	.....	2
2.8		.....	20.0	.....	3
22.6		.....	23.0 (22)	.....	4
5.3		1.6	11.3	2.3	5
2.8		9	2.0	9	6
7.2		7.5	7.7 (6.9)	7.5	7
10		3	10 (7)	3	8
0		3	10	3	9
.....		.....	21.7	.....	10
.....		.....	13.2	.....	11
84.4		.....	118	.....	12
16.8		.....	56.8	.....	13
133.5		.....	175.4	.....	14
15.3		25.2	23.6	24.4	15
3.2		11.4	3.5	10.9	16
.....		0.1	.....	0.1	17
Trace	See	.....	0.0	.....	18
0.01	Ile Dorval	.....	0.01	.....	19
0.03		.....	0.19	.....	20
0.0		.....	0.0	.....	21
0.05		.....	0.0	.....	22
3.3		.....	5.1	.....	23
0.7		.....	0.8	.....	24
0.1		.....	0.2	.....	25
0.0		0.0	0.0	0.0	26
27.8		18.1	61.8	161	27
25.1		23.0	27.0	24.0	28
3.5		6.4	4.7	5.0	29
1.0		.....	0.0	.....	30
0.8		.....	0.8	.....	31
4.5		.....	2.6	.....	32
22.8		110	50.7	106	33
28.5		0	22.6	0	34
51.3		110	73.3	106	35
71.2		.....	98.9	.....	36
12.0		.....	12.7	.....	37
-1.7		.....	-1.1	.....	38
11		.....	9.9	.....	39
		** Analysis supplied by Permutit Co. of Canada Ltd.	*See also Station No. 68 page 36		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		DRUMMONDVILLE (concl'd) Drummond Co.	DRUMMONDVILLE WEST (Drummond Co.)	DUCHESNAY (Portneuf Co.)
Source(s) .....		St. Francis River	St. Francis River	Lake St. Joseph
No. Finished water				Raw and finished water
Sampling point .....		At filter plant tap		At tap
1	Date of sampling .....	Aug. 1/56		Oct. 27/58
2	Storage period (days) .....	194:255		8:34
3	Sampling temperature, °C. ....	20.6		10.0
4	Test temperature, °C. ....	23.3 (22)		22.9
5	Oxygen consumed by KMnO <sub>4</sub> .....	10.9		.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.9		0.0
7	pH .....	7.5 (6.8)		9.2
8	Colour .....	10		30
9	Turbidity .....	0		0
10	Suspended matter, dried at 105° C. ....	.....		.....
11	Suspended matter, ignited at 550° C. ....	.....		.....
12	Residue on evaporation, dried at 105° C. ....	112		38.0
13	Ignition loss at 550° C. ....	16.8		12.8
14	Specific conductance, micromhos at 25° C. ....	180.8		40.9
15	Calcium (Ca) .....	24.1		4.9
16	Magnesium (Mg) .....	3.2		0.6
17	Iron (Fe) Total .....	.....		.....
18	Dissolved .....	0.0	See Drummondville	0.06
19	Manganese (Mn) .....	0.01		0.0
20	Aluminum (Al) .....	0.16		0.04
21	Copper (Cu) .....	0.0		0.0
22	Zinc (Zn) .....	0.1		0.05
23	Sodium (Na) .....	5.0		1.1
24	Potassium (K) .....	0.8		1.0
25	Ammonia (NH <sub>3</sub> ) .....	0.2		0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0		2.3
27	Bicarbonate (HCO <sub>3</sub> ) .....	57.5		9.6
28	Sulphate (SO <sub>4</sub> ) .....	31.0		4.8
29	Chloride (Cl) .....	4.9		0.3
30	Fluoride (F) .....	0.0		0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.8		0.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.4		4.9
33	Carbonate hardness as CaCO <sub>3</sub> .....	47.2		11.7
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	26.1		5.7
35	Total hardness as CaCO <sub>3</sub> .....	73.3		17.4
36	Sum of constituents .....	102		25.0
37	Per cent sodium .....	12.5		12.7
38	Saturation index at test temperature .....	-0.9		-0.4
39	Stability index at test temperature .....	9.3		10
Remarks:				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drain age Basin  
*(In parts per million)*

EAST ANGUS (Compton Co.)	EAST BROUGHTON STATION* (Beauce Co.)	EASTMAN (Brome Co.)	ESCOUMINS (Saguenay Co.)	No.
Big Hollow Brook and Willard Brook	Lake	Orford Lake	Gardner Lake	
Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water	
At town tap	At village tap	At village tap	At tap	
Aug. 31/56	July 26/56	Aug. 8/56	July 14/55	1
192:253	189:250	191:261	40:195	2
16.1	15.6	19.8	16.9	3
25.0 (22)	24.9 (18.5)	21.8 (27)	21	4
11.3	12.8	9.8	.....	5
1.2	.....	2.5	1.5	6
7.4 (7.0)	7.1 (7.1)	7.2 (7.0)	7.1 (7.3)	7
15	20	10	20	8
0	0.9	4	0	9
.....	.....	7.2	.....	10
.....	.....	3.7	.....	11
45.6	32.8	56.8	27.6	12
22.0	16.8	19.6	12.8	13
51.42	33.21	64.15	39.48	14
6.3	4.8	5.9	2.2	15
1.2	0.4	2.8	0.5	16
.....	.....	.....	.....	17
0.06	0.04	0.01	0.05	18
0.0	.....	0.01	Trace	19
0.25	.....	0.07	1.0	20
Trace	Trace	0.00	0.23	21
0.10	0.05	0.10	.....	22
1.0	0.5	1.6	1.8	23
0.3	0.2	0.3	0.4	24
0.1	0.1	0.1	0.0	25
0.0	0.0	0.0	0.0	26
17.6	11.2	23.8	11.0	27
8.1	5.1	5.6	3.2	28
0.2	0.5	2.3	1.8	29
0.0	0.0	0.0	0.0	30
2.8	0.0	1.2	1.2	31
5.7	1.4	2.4	1.4	32
14.5	9.2	19.5	7.6	33
6.2	4.4	6.7	0.0	34
20.7	13.6	26.2	7.6	35
34.9	18.8	34.1	19.2	36
9.2	6.8	11.2	21.8	37
-2.0	-2.6	-2.1	-2.9	38
11	12	11	13	39
	* Also serves East Broughton			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	FARNHAM (Missisquoi Co.)		FITZPATRICK (Saguenay Co.)	FORESTVILLE (Saguenay Co.)
	Source(s) .....	Yamaska River		Ruerin Springs	Springs
		Raw water*	Finished water		Raw and finished water
	Sampling point .....	At plant intake	At plant tap		At town tap
1	Date of sampling .....	Aug. 16/56	Aug. 16/56		July 14/55
2	Storage period (days) .....	232:355	232:355		36:188
3	Sampling temperature, °C. ....	23.2	23.6		17.8
4	Test temperature, °C. ....	25.0 (26)	25.0		28.4 (21)
5	Oxygen consumed by KMnO <sub>4</sub> .....	5.7	4.2		.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.2	2.3		.....
7	pH .....	7.6	7.5 (7.2)		7.4 (7.2)
8	Colour .....	20	10		5
9	Turbidity .....	2	0		0
10	Suspended matter, dried at 105° C. ....	.....	.....		.....
11	Suspended matter, ignited at 550° C. ....	.....	.....		.....
12	Residue on evaporation, dried at 105° C. ....	132	127		56.4
13	Ignition loss at 550° C. ....	30.0	20.4		10.0
14	Specific conductance, micromhos at 25° C. ....	193.4	187.5		65.94
15	Calcium (Ca) .....	15.5	14.1		6.4
16	Magnesium (Mg) .....	3.6	3.5		1.5
17	Iron (Fe) Total .....	.....	.....		.....
18	Dissolved .....	0.01	0.2	See Riviere Pentecote	0.0
19	Manganese (Mn) .....	0.00	0.0		0.0
20	Aluminum (Al) .....	0.02	0.23		0.28
21	Copper (Cu) .....	0.0	.....		0.0
22	Zinc (Zn) .....	0.0	0.05		.....
23	Sodium (Na) .....	16.0	15.6		3.3
24	Potassium (K) .....	1.1	1.0		0.9
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0		0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0		0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	56.2	48.0		28.4
28	Sulphate (SO <sub>4</sub> ) .....	12.5	20.0	2.2	
29	Chloride (Cl) .....	18.1	18.3	2.7	
30	Fluoride (F) .....	0.0	0.0	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	6.0	1.6	2.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.0	1.6	14	
33	Carbonate hardness as CaCO <sub>3</sub> .....	46.1	39.4	22.1	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	7.4	10.2	0.0	
35	Total hardness as CaCO <sub>3</sub> .....	53.5	49.6	22.1	
36	Sum of constituents .....	105	98.9	47.9	
37	Per cent sodium .....	38.7	39.4	22.4	
38	Saturation index at test temperature .....	-1.6	-1.1	-1.7	
39	Stability index at test temperature .....	9.6	9.7	5.7	
	Remarks:	* See also Station No. 51 page 31			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

FORT CHAMBLY (Chambly Co.)	FORTIERVILLE (Lotbiniere Co.)	FRAMPTON (Dorchester Co.)	GARTHBY (Wolfe Co.)	GASPE (Gaspé E Co.)	GASPE HARBOUR (Gaspé E Co.)	No.
Richelieu River	Artesian well	Spring	Aylmer Lake	St. John River	St. John River	
	Raw and finished water			Raw and finished water		
	At tap			Direct from river		
See Chambly	Aug. 23/56	See St. Edouard de Frampton	See Beaulac	July 11/55	See Gaspé	1
	233:369			17:60		2
	16.7			16.6		3
	24.0			25.5 (22)		4
	4.1			.....		5
	6.5			8.5 (8.0)		6
	7.7			0		7
	10			0		8
	6			.....		9
	1.7			.....		10
	1.7			.....		11
	224			136		12
	70.4			16.0		13
	364.9			224.7		14
	22.5			38.9		15
	8.5			2.3		16
	0.95			.....		17
	Trace			Trace		18
	Trace			Trace		19
	0.09			0.04		20
	.....			Trace		21
0.03	.....	22				
45.3	2.2	23				
3.0	0.4	24				
0.05	0.0	25				
0.0	2.4 (0)	26				
214	130 (134)	27				
4.6	2.6	28				
10.8	2.3	29				
0.0	0.0	30				
3.0	0.4	31				
16	5.3	32				
91.1	111 (106)	33				
0.0	0.0 (0)	34				
91.1	111 (106)	35				
219	122	36				
50.7	4.1	37				
-0.2	+0.8	38				
8.1	6.9	39				

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Municipality .....	GAYHURST (Frontenac Co.)	GENTILLY (Nicolet Co.)		GIFFARD (Quebec Co.)
	Source(s) .....	Springs	Springs		Lac des Roches (Rock Lake) and springs
		Raw and finished water	Raw and finished water		Raw and finished water
	Sampling point .....	At town tap	At spring	At village tap	At town tap
1	Date of sampling .....	Feb. 14/58	July 25/50	Aug. 24/56	July 23/55
2	Storage period (days) .....	13:17		232:368	48:113
3	Sampling temperature, °C. ....	12.9		12.9	18.9
4	Test temperature, °C. ....	25.6		23.8	22.2 (23)
5	Oxygen consumed by KMnO <sub>4</sub> .....	1.3		2.4	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	4.7		1.0	1.8
7	pH .....	7.3		7.5	7.0 (6.6)
8	Colour .....	5		0	40 (50)
9	Turbidity .....	0		0	0
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	82.0	54.0	45.6	34.4
13	Ignition loss at 550° C. ....	18.0		5.2	14.8
14	Specific conductance, micromhos at 25° C. ....	108.8		47.50	33.49
15	Calcium (Ca) .....	11.4	5.0	4.0	4.4
16	Magnesium (Mg) .....	4.7	5.5	1.4	0.2
17	Iron (Fe) Total .....				
18	Dissolved .....	Trace		0.0	0.12
19	Manganese (Mn) .....	0.0		0.0	0.01
20	Aluminum (Al) .....	0.07		0.0	0.17
21	Copper (Cu) .....	0.0			0.24
22	Zinc (Zn) .....	0.0			0.05
23	Sodium (Na) .....	2.7	2.8	2.5	1.0
24	Potassium (K) .....	0.6	0.5	0.5	0.4
25	Ammonia (NH <sub>3</sub> ) .....	0.0			0:15
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	59.6	29.3	21.0	10.7
28	Sulphate (SO <sub>4</sub> ) .....	4.6	6.2	5.2	4.3
29	Chloride (Cl) .....	0.8	0.0	0.5	0.4
30	Fluoride (F) .....	0.0		0.0	0.25
31	Nitrate (NO <sub>3</sub> ) .....	0.5	0.2	0.4	1.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	16	14.8	18	5.0
33	Carbonate hardness as CaCO <sub>3</sub> .....	47.8	24.0	15.7	8.8
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.0	11.1	0.0	3.0
35	Total hardness as CaCO <sub>3</sub> .....	47.8	35.1	15.7	11.8
36	Sum of constituents .....	70.2		42.5	23.1
37	Per cent sodium .....	10.7	14.6	24.9	13.6
38	Saturation index at test temperature .....	-1.3		-2.0	-2.9
39	Stability index at test temperature .....	9.9		11	13
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

GIFFARD (concl'd) (Quebec Co.)	GODMANCHESTER (Huntingdon Co.)	GRANBY (Shefford Co.)			No.			
		Yamaska River	Shefford Mt. Lake	Yamaska River and Shefford Mt. Lake				
Lac des Roches (Rock Lake) and springs	Chateauguay River	Yamaska River	Shefford Mt. Lake	Yamaska River and Shefford Mt. Lake				
Raw and finished water		Raw water	Raw water	Finished water				
At town tap			At filter plant	At city tap				
Feb. 23/59 14:23			Aug. 9/56 194:278	Nov. 18/53† 9	June 29/56† 6	1		
.....			13.3	.....	.....	2		
22.5			20.2 (23)	.....	.....	3		
7.1			8.2	.....	.....	4		
2			2.2	1.4	6.2	5		
6.7			6.9 (6.7)	7.4	7.0	6		
3.0			10	.....	15	7		
1			2	.....	2	8		
.....			.....	Some	Trace	9		
.....			.....	.....	.....	10		
23.6			46.0	90	110	11		
10.0			17.6	.....	.....	12		
27.8			49.31	.....	.....	13		
2.6			5.7	14	10.4	14		
0.7			1.0	3.7	2.4	15		
0.43			.....	0.6	Trace	16		
0.36			0.03	.....	.....	17		
0.0	See Huntingdon	See Station No. 49 page 30	0.14	.....	.....	18		
0.0			0.07	0.1	0.1	0.1	19	
0.0			Trace	.....	.....	.....	20	
0.05			0.1	.....	.....	.....	21	
0.8			1.2	.....	.....	.....	22	
0.4			0.4	.....	.....	.....	23	
0.2			0.05	.....	.....	0.2	24	
0.0			0.0	.....	.....	0.0	25	
5.4			10.7	.....	.....	48.8	0.0	26
4.7			9.8	.....	.....	7.1	53.7	27
0.3			0.8	.....	.....	9.1	28.4	28
0.0			0.10	.....	.....	.....	8.5	29
0.3			3.2	.....	.....	.....	.....	30
5.0			4.6	.....	.....	1.7	1.2	31
4.4			8.8	.....	.....	40	36	32
5.0			9.5	.....	.....	10	0	33
9.4			18.3	.....	.....	50	36	34
17.6			32.5	.....	.....	.....	.....	35
14.1			11.6	.....	.....	.....	.....	36
-3.6	-2.8	.....	.....	.....	.....	37		
14	13	.....	.....	.....	.....	38		
						39		
				† Analysis supplied by Alchem Ltd., Burlington, Ont.				



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Municipality .....		GRANBY (concl'd) (Shefford Co.)	GRAND'MERE (Champlain Co.)	GRAND METIS (Matane Co.)	GRANDES BERGERONNES (Saguenay Co.)
No.	Source(s) .....	Yamaska River and Shefford Mt. Lake	Lac Des Piles	Lake Fortin	Lac de L'Aqueduc and Lac a Pit
	Sampling point .....	At filter plant tap	At town tap		At village tap
1	Date of sampling .....	Aug. 9/56	June 10/55		July 14/55
2	Storage period (days) .....	114:276	17:96		40:195
3	Sampling temperature, °C. ....	21.1	8.9		18.9
4	Test temperature, °C. ....	20.4 (26)	21.9 (17)		22.2 (21)
5	Oxygen consumed by KMnO <sub>4</sub> .....	9.8			
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.8			
7	pH .....	7.7 (7.0)	6.7 (6.5)		7.2 (7.0)
8	Colour .....	10	5		40
9	Turbidity .....	0	0		0
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	107	27.6		42.8
13	Ignition loss at 550° C. ....	20.0	11.2		16.0
14	Specific conductance, micromhos at 25° C. ....	163.2	28.44		40.39
15	Calcium (Ca) .....	12.8	3.4		4.7
16	Magnesium (Mg) .....	2.1	0.3		0.2
17	Iron (Fe) Total .....				
18	Dissolved .....	Trace	0.04	See Price	0.26
19	Manganese (Mn) .....	0.01	Trace		Trace
20	Aluminum (Al) .....	0.06	Trace		1.1
21	Copper (Cu) .....	0.0	0.01		0.0
22	Zinc (Zn) .....	0.1			
23	Sodium (Na) .....	16.8	0.7		2.1
24	Potassium (K) .....	1.2	0.3		0.4
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.0	0.2	
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0 (0)	
27	Bicarbonate (HCO <sub>3</sub> ) .....	53.8 (60.3)	5.5 (7.3)	17.6 (19.5)	
28	Sulphate (SO <sub>4</sub> ) .....	25.5	5.3	2.8	
29	Chloride (Cl) .....	5.1	0.6	2.6	
30	Fluoride (F) .....	0.0	0.0	0.10	
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.2	1.6	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.6	1.7	2.0	
33	Carbonate hardness as CaCO <sub>3</sub> .....	40.6	4.5	12.6	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.0	5.2	0.0	
35	Total hardness as CaCO <sub>3</sub> .....	40.6	9.7	12.6	
36	Sum of constituents .....	94.7	15.3	26.6	
37	Per cent sodium .....	45.0	13.0	18.7	
38	Saturation index at test temperature .....	-1.0	-3.5	-2.3	
39	Stability index at test temperature .....	9.7	14	12	
Remarks:					

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

GREENFIELD PARK (Chambly Co.)	HAM NORTH (Wolfe Co.)	HAMPSTEAD (Ile de Montreal)	HAUTERIVE (Saguenay Co.)	HEBERTVILLE STATION * (Lac St Jean E Co.)	HEMMINGFORD (Huntingdon Co.)	No.
St. Lawrence River	Springs	St. Lawrence River	Artesian wells	Lakes	Deep well	
	Raw and finished water		Raw water	Raw and finished water	Raw and finished water	
	At village tap		At town tap	At town tap	At village tap	
	Aug. 23/56 228:357 15.0 25.1 2.4 1.7 7.8 3 0		Mar. 25/59 12:29 6.7 24.4 1.2 12 6.2 5 0	July 18/55 40:197 9.7 25.4 (23) ..... 8.0 6.1 (6.4) 40 (60) 0	Apr. 16/58 15:20 4.4 24.8 1.9 2.1 8.3 5 0.4	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
	76.8 22.8 128.2 19.4 3.1		64.0 12.2 74.50 5.6 2.0	30.0 14.0 23.97 3.1 0.3	420 85.6 669.2 53.5 45.2	
for 1955 and 1958 see St. Lambert; since 1959 supplied from Jacques Cartier, see Jacques Cartier.	0.02 Trace 0.0 0.4 1.3 0.3 0.0 0.0 67.5 7.0 0.6 0.0 1.6 6.9 55.4 4.9 60.3 73.9 4.4 +0.5 8.8	See Montreal	0.02 0.08 0.06 0.0 0.1 3.8 0.6 0.0 0.0 15.4 2.3 8.5 0.0 3.6 13 12.6 9.6 22.2 46.7 25.9 -3.2 13	0.06 0.0 0.03 Trace ..... 0.6 0.2 0.1 0.0 6.0 4.6 0.3 0.0 0.4 1.4 4.9 4.1 9.0 14.0 12.1 -4.0 14	0.02 0.02 0.09 0.15 0.2 21.3 2.7 ..... 0.0 298 101 18.1 0.0 0.8 12 244 75.2 319 402 12.5 +0.9 6.5	
				* Also serves Hebertville		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Municipality .....		HINCHINBROOK (Huntingdon Co.)	HOWICK (Chateauguay Co.)	HUNTINGDON (Huntingdon Co.)	
No.	Source(s) .....	Chateauguay River	Deep well	Chateauguay River	
			Raw and finished water	Raw water	
	Sampling point .....		At village tap	At pump	
1	Date of sampling .....		Aug. 20/56	May 28/53	Aug. 20/56
2	Storage period (days) .....		231:360	6:15	231:360
3	Sampling temperature, °C. ....		14.4	15.6	21.1
4	Test temperature, °C. ....		24.6 (23)	19.8 (17)	25.2
5	Oxygen consumed by KMnO <sub>4</sub> .....		3.6	.....	3.5
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		2.4	2.5	1.5
7	pH .....		8.3 (7.8)	7.8 (8.1)	7.9 (8.0)
8	Colour .....		5	20 (25)	10
9	Turbidity .....		6	0	2
10	Suspended matter, dried at 105° C. ....		4.0	.....	.....
11	Suspended matter, ignited at 550° C. ....		0.7	.....	.....
12	Residue on evaporation, dried at 105° C. ....		669	104	100
13	Ignition loss at 550° C. ....		57.2	18.8	21.6
14	Specific conductance, micromhos at 25° C. ....		1,144	162.9 (166)	159.4
15	Calcium (Ca) .....		52.2	22.9	19.6
16	Magnesium (Mg) .....		28.7	5.5	5.8
17	Iron (Fe) Total .....		0.52	.....	.....
18	Dissolved .....		0.03	0.07	Trace
19	Manganese (Mn) .....	See	0.07	.....	0.0
20	Aluminium (Al) .....	Huntingdon	0.17	.....	0.0
21	Copper (Cu) .....		0.0	.....	.....
22	Zinc (Zn) .....		0.05	.....	.....
23	Sodium (Na) .....		143	3.2	2.9
24	Potassium (K) .....		7.4	1.6	1.0
25	Ammonia (NH <sub>3</sub> ) .....		0.0	.....	0.05
26	Carbonate (CO <sub>3</sub> ) .....		0.0 (0)	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....		331 (327)	87.8 (85.4)	76.7
28	Sulphate (SO <sub>4</sub> ) .....		123	15.2	11.9
29	Chloride (Cl) .....		130	1.5	1.8
30	Fluoride (F) .....		0.10	0.05	0.0
31	Nitrate (NO <sub>3</sub> ) .....		1.5	0.4	1.5
32	Silica (SiO <sub>2</sub> ), colorimetric .....		14	1.8	6.9
33	Carbonate hardness as CaCO <sub>3</sub> .....		248	72.0 (70)	62.9 (61.8)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		0.0	8.0 (7.7)	9.9
35	Total hardness as CaCO <sub>3</sub> .....		248	80.0 (77.7)	72.8
36	Sum of constituents .....		663	95.5	89.3
37	Per cent sodium .....		54.6	7.8	7.8
38	Saturation index at test temperature .....		+1.0	-0.5	-0.4
39	Stability index at test temperature .....		6.3	8.8	8.7
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

HUNTINGDON (concl'd) (Huntingdon Co.)		HURON INDIAN RESERVE	IBERVILLE (Iberville Co.)		ILE d'ANTICOSTI (Saguenay Co.)	No.
Chateauguay River		Springs and creek	Richelieu River		Lake St. George and wells	
Finished water			Finished water			
At filter plant			At plant tap			
May 28/53	Aug. 20/56		Aug. 16/56	Sept. 26/58		1
6:15	230:359		225:355	52:87		2
15.6	21.9		22.8	15.0		3
19.8 (18)	25.0 (24)		24.2 (26)	23.5		4
.....	2.8		2.5	4.1		5
5.1	1.6		1.3	2.2		6
7.3 (7.0)	7.7 (6.9)		7.6 (6.9)	7.6		7
5 (5)	5		0	10		8
0	0		0	0		9
.....	.....		.....	.....		10
108	102		102	85.2		11
19.0	24.0		26.4	27.2		12
171.2	166.0		125.7	136.8		13
21.8	18.8		14.2	16.9		14
6.3	5.3		3.8	4.4		15
.....	.....		.....	.....		16
0.05	0.0	<i>See Loretteville</i>	0.01	0.06	<i>See Port Menier</i>	17
.....	0.0		0.0	0.0		18
.....	0.02		0.0	0.04		19
.....	.....		0.0	0.0		20
.....	0.0		0.1	0.2		21
2.5	2.9		2.4	2.4		22
1.4	1.0		0.9	1.2		23
.....	0.0		0.0	0.1		24
0.0 (0)	0.0		0.0	0.0		25
58.6 (58.6)	48.6		31.2	53.9		26
32.8	32.6	26.9	16.1	27		
1.9	2.1	3.2	4.0	28		
0.05	0.0	0.0	0.0	29		
0.4	0.8	0.3	0.1	30		
3.3	6.1	3.7	2.0	31		
48.0	39.9	25.6	44.2	32		
32.4	28.8	25.5	16.1	33		
80.4	68.7	51.1	60.3	34		
99.4	93.6	70.9	73.9	35		
6.2	8.3	9.1	9.4	36		
-1.2	-0.8	-1.2	-0.9	37		
9.7	9.3	10	9.4	38		
				39		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ILE DORVAL (Ile de Montreal)	ISLE MALIGNE (Lac St. Jean E. Co.)	JACQUES CARTIER (Chambly Co.)	
	Source(s) .....	Lake St. Louis	Lake St. John (Grande Decharge)	St. Lawrence River	
		Raw and finished water		Raw water	Finished water
	Sampling point .....	At town tap			At filter plant
1	Date of sampling .....	June 16/59			Aug. 14/56
2	Storage period (days) .....	3:16			227
3	Sampling temperature, °C. ....	12.8			21.9
4	Test temperature, °C. ....	25.1			24.0
5	Oxygen consumed by KMnO <sub>4</sub> .....	4.5			2.5
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.5			1.2
7	pH .....	7.8			8.2
8	Colour .....	15			5
9	Turbidity .....	0.7			0
10	Suspended matter, dried at 105° C. ....	.....			.....
11	Suspended matter, ignited at 550° C. ....	.....			.....
12	Residue on evaporation, dried at 105° C. ....	162			192
13	Ignition loss at 550° C. ....	37.6			32.8
14	Specific conductance, micromhos at 25° C. ....	250.2			313.3
15	Calcium (Ca) .....	31.9			39.0
16	Magnesium (Mg) .....	6.4			7.5
17	Iron (Fe) Total .....	0.18			.....
18	Dissolved .....	0.18			0.0
19	Manganese (Mn) .....	0.0	<i>See</i> St. Joseph d'Alma	<i>See</i> Station No. 10, page 18	0.0
20	Aluminium (Al) .....	0.01			0.12
21	Copper (Cu) .....	0.0			Trace
22	Zinc (Zn) .....	0.2			0.0
23	Sodium (Na) .....	7.9			10.0
24	Potassium (K) .....	1.0			1.4
25	Ammonia (NH <sub>3</sub> ) .....	0.0			0.05
26	Carbonate (CO <sub>3</sub> ) .....	0.0			0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	92.2			104
28	Sulphate (SO <sub>4</sub> ) .....	20.6			35.5
29	Chloride (Cl) .....	17.1	21.9		
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	0.2	0.2		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	0.8	2.2		
33	Carbonate hardness as CaCO <sub>3</sub> .....	75.6	85.4		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	30.3	42.7		
35	Total hardness as CaCO <sub>3</sub> .....	105.9	128		
36	Sum of constituents .....	132	169		
37	Per cent sodium .....	13.7	14.3		
38	Saturation index at test temperature .....	-0.3	+0.3		
39	Stability index at test temperature .....	8.4	7.6		
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

JOLIETTE* (Joliette Co.)		JONQUIERE (Chicoutimi Co.)		KENOGAMI (Chicoutimi Co.)	No.
L'Assomption River		Riviere aux Sables		Long Lake	
Finished water		Raw and finished water		Raw and finished water	
At city tap		At city tap		At city tap	
Aug. 17/53†	May 4/59	July 20/55	July 16/56*	July 16/55	1
25	3:17	49:203	.....	42:199	2
.....	7.8	18.9	.....	18.9	3
.....	23.8	23.3 (25.5)	Room temp.	25.4 (20)	4
2.0	3.3	.....	.....	.....	5
7	0.7	4.6	146	2.7	6
6.8	7.4	6.5 (6.5)	6.6	7.0 (6.8)	7
3	15	30 (55)	60	20 (35)	8
2	0.7	3	2	0	9
.....	.....	.....	Trace	.....	10
.....	.....	.....	.....	.....	11
.....	50.4	32.8	54	41.2	12
.....	18.8	13.6	.....	11.2	13
.....	63.5	31.70	.....	42.62	14
12.0	7.6	4.1	3.2	6.3	15
1.4	1.0	0.2	0	0.4	16
0.4	.....	.....	0.4	.....	17
.....	0.03	0.06	.....	0.06	18
.....	0.01	Trace	.....	Trace	19
.....	0.34	0.20	0.0	0.0	20
.....	Trace	0.08	.....	0.14	21
.....	0.0	0.4	.....	.....	22
.....	1.5	0.9	.....	0.9	23
) 3.7 as Na	0.5	0.4	.....	0.3	24
.....	0.0	0.1	0.3	0.0	25
0.0	0.0	0.0 (0)	0	0.0 (0)	26
25.6	10.6	8.8 (14.6)	14.6	16.6 (19.5)	27
15.4	15.3	3.4	1.4	4.6	28
3.5	0.6	1.6	7.3	0.5	29
.....	0.65	0.0	.....	0.0	30
.....	0.4	1.6	.....	1.2	31
5.8	5.0	4.1	4.9	3.0	32
21.0	8.7	7.2	8	13.6	33
15.0	14.4	3.9	0	3.8	34
36.0	23.1	11.1	8	17.4 (17.6)	35
.....	38.3	21.0	.....	25.6	36
18.4	11.3	13.2	.....	9.8	37
-2.2	-2.1	-3.4	.....	-2.4	38
11	12	13	.....	12	39
† Analysis supplied by Permutit Co. of Canada Ltd.	* See also Water Survey Report No. 2		* Analysis supplied by Alchem Ltd., Burlington, Ont.		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		KINGSEY (Drummond Co.)	KNOWLTON (Brome Co.)	LAC AUX SABLES (Portneuf Co.)	LAC BOUCHETTE (Lac St. Jean W Co.)
No.	Source(s) .....	Well	Springs and wells	Artesian wells	Riviere qui Mene du train
		Raw and finished water	Raw and finished water		Raw and finished water
	Sampling point .....	At village tap	At village tap		At village tap
1	Date of sampling .....	Apr. 16/58	Aug. 8/56		Apr. 14/58
2	Storage period (days) .....	13:20	195:261		8:17
3	Sampling temperature, °C. ....	.....	13.3		.....
4	Test temperature, °C. ....	25.4	20.2		23.3
5	Oxygen consumed by KMnO <sub>4</sub> .....	1.7	8.6		9.3
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	4.3	0.8		3.3
7	pH .....	7.8	8.2 (7.0)		7.1
8	Colour .....	0	0		60
9	Turbidity .....	0	0		0.4
10	Suspended matter, dried at 105° C. ....	.....	.....		.....
11	Suspended matter, ignited at 550° C. ....	.....	.....		.....
12	Residue on evaporation, dried at 105° C. ....	261	131		59.6
13	Ignition loss at 550° C. ....	79.2	26.8		27.2
14	Specific conductance, micromhos at 25° C. ....	403.9	171.2		57.2
15	Calcium (Ca) .....	66.7	24.8		9.1
16	Magnesium (Mg) .....	7.0	4.2		0.8
17	Iron (Fe) Total .....	.....	.....		.....
18	Dissolved .....	0.0	0.01	See St. Remi, Portneuf Co.	0.20
19	Manganese (Mn) .....	0.0	0.0		0.0
20	Aluminum (Al) .....	0.03	0.14		0.0
21	Copper (Cu) .....	0.0	Trace		Slight trace
22	Zinc (Zn) .....	0.0	0.1		0.25
23	Sodium (Na) .....	4.6	2.4		0.9
24	Potassium (K) .....	4.2	1.0		0.4
25	Ammonia (NH <sub>3</sub> ) .....	0.05	0.1		0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)		0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	173	82.3 (82.8)		25.8
28	Sulphate (SO <sub>4</sub> ) .....	47.4	11.6	3.9	
29	Chloride (Cl) .....	6.9	1.5	0.7	
30	Fluoride (F) .....	0.0	0.0	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	16	6.0	0.8	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	7.8	11	5.9	
33	Carbonate hardness as CaCO <sub>3</sub> .....	142	67.5	21.2	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	53.6	11.6	4.8	
35	Total hardness as CaCO <sub>3</sub> .....	195	79.1	26.0	
36	Sum of constituents .....	247	103	35.7	
37	Per cent sodium .....	4.7	6.0	6.7	
38	Saturation index at test temperature .....	+0.3	-0.1	-2.0	
39	Stability index at test temperature .....	7.2	8.4	11	
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

LAC ETCHEMIN (Dorchester Co.)	LACHINE (Ile de Montreal)	LAC MEGANTIC (Frontenac Co.)	LA DURANTAYE (Bellechasse Co.)	LAFLECHE* (Chambly Co.)	LA GUADELOUPE (Frontenac Co.)		No.
Rock Lake	Lake St. Louis (St. Lawrence River)	Lake Megantic	Springs	St. Lawrence River	Springs		
	Finished water	Finished water	Raw and finished water		Raw water		
	At plant tap	At town tap	At village tap		At village tap		
	June 25/59	July 28/56	Apr. 16/58		Aug. 23/56	Nov. 19/58	1
	4:18	189:254	13:20		328:364	12:15	2
	18.9	14.4	.....		16.1	1.1	3
	27.4	21.4 (16)	25.4		24.9	21.1	4
	2.0	13.3	1.1		2.5	1.3	5
	7	1.8	8.9		2.2	3	6
	7.1	7.1 (7.3)	6.3		8.2	8.0	7
	5	30	0		5	5	8
	5	0.9	0.3		3	0.9	9
	2.9	.....	.....		7.6	.....	10
	1.8	.....	.....		5.6	.....	11
	166	44.8	41.2		229	228	12
	44.0	14.8	11.6		50.0	16.4	13
	242.8	45.57	53.5		364.0	375.9	14
	30.6	5.1	3.9		61.8	63.2	15
	5.6	1.2	1.4		9.0	10.1	16
	0.22	.....	.....		.....	.....	17
	0.01	0.03	0.05		0.02	Trace	18
	0.01	.....	0.01		0.0	0.01	19
	0.12	0.11	0.0		0.0	0.01	20
	0.0	0.0	0.09		0.0	0.0	21
	0.05	0.4	0.05		0.1	0.06	22
	6.0	1.0	3.1		2.0	1.9	23
	0.9	0.5	0.7		1.5	1.3	24
	0.0	0.1	0.05		0.0	0.05	25
	0.0	0.0	0.0		0.0	0.0	26
	59.5	14.6	11.0		220	219	27
	40.9	4.9	6.9		14.4	14.5	28
	13.9	2.1	1.8		2.9	3.5	29
	0.0	0.0	0.0		0.0	0.0	30
	2.0	0.8	4.0		4.0	3.0	31
	1.8	3.9	4.8		7.7	6.6	32
	48.8	12.0 (14.4)	9.0		180	180	33
	50.6	5.7	6.5		10.9	19.2	34
	99.4	17.7	15.5		191	199	35
	131	27.3	32.3		212	213	36
	11.4	9.9	28.6		2.2	2.0	37
	-1.1	-2.5	-3.5		+0.8	+0.5	38
	9.3	12	13		6.6	7.0	39
				* Mackayville			



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	LA MALBAIE (Charlevoix-E Co.)	LAMBTON (Frontenac Co.)	L'ANCIENNE LORETTE (Quebec Co.)	
	Source(s) .....	Creeks and springs	Springs and well	Creek	Creek and artesian well
		Raw and finished water	Raw and finished water	Raw and finished water	
	Sampling point .....	At town tap	At village tap	At town tap	From creek
1	Date of sampling .....	July 21/55	Mar. 22/58	July 25/55	Oct. 30/58
2	Storage period (days) .....	49:210	3:9	51:214	5:28
3	Sampling temperature, °C. ....	14.4	.....	18.9	.....
4	Test temperature, °C. ....	22.6 (21)	25.5	23.0 (24)	23.3
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	0.8	.....	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.0	5.2	1.7	0.9
7	pH .....	7.9 (7.4)	7.5	7.8 (7.2)	7.0
8	Colour .....	15	0	20	10
9	Turbidity .....	0	0.4	2	0
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....	69.6	120	86.4	29.6
13	Ignition loss at 550° C. ....	13.6	16.0	12.0	4.0
14	Specific conductance, micromhos at 25° C. ....	86.77	196.4	135.9	27.8
15	Calcium (Ca) .....	13.0	30.9	18.9	2.3
16	Magnesium (Mg) .....	1.0	5.6	2.3	0.6
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.01	Trace	0.1	0.03
19	Manganese (Mn) .....	0.0	Trace	0.02	0.0
20	Aluminum (Al) .....	0.0	0.07	0.43	0.09
21	Copper (Cu) .....	0.0	0.0	0.01	0.0
22	Zinc (Zn) .....	0.1	0.05	0.6	0.6
23	Sodium (Na) .....	2.4	1.0	3.5	1.1
24	Potassium (K) .....	0.6	0.2	0.8	0.2
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0	0.0	0.05
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	46.3 (51.2)	110	61.2 (68.3)	5.2
28	Sulphate (SO <sub>4</sub> ) .....	2.8	9.1	10.5	5.6
29	Chloride (Cl) .....	0.5	1.1	1.6	0.5
30	Fluoride (F) .....	0.1	0.0	.....	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.6	1.3	8.0	0.1
32	Silica (SiO <sub>2</sub> ), colorimetric .....	13	6.6	11	6.6
33	Carbonate hardness as CaCO <sub>3</sub> .....	38.0 (42)	89.9	50.2 (54.8)	4.3
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.0	10.2	6.4 (0)	3.9
35	Total hardness as CaCO <sub>3</sub> .....	36.5	100	56.6 (54.8)	8.2
36	Sum of constituents .....	56.6	110	88.2	20.3
37	Per cent sodium .....	12.3	2.1	11.1	19.4
38	Saturation index at test temperature .....	-0.8	-0.5	-0.6	-3.3
39	Stability index at test temperature .....	9.5	8.5	9.0	14
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

L'ANCIENNE LORETTE (concl'd) (Quebec Co.)	L'ANGE GARDIEN (Montmorency No. 1 Co.)	LA PATRIE (Compton Co.)	LA PERADE (Champlain Co.)	LA PETITE RIVIERE (Quebec Co.)		No.	
Creek and artesian well	Laval River	Springs	Spring	Well			
Artesian well		Raw and finished water	Raw and finished water	Raw water	Finished water		
Raw and finished water							
At well		At village tap	At village tap	At pump	At village tap		
Oct. 30/58 5:28		Apr. 11/58 11:20	July 2/59 6:15	Apr. 23/59 8:19	Apr. 23/59 8:19	1	
.....		.....	10	.....	.....	2	
23.1		23.3	25.0	26.9	26.8	3	
.....		1.8	1.6	2.4	2.1	4	
2.7		11	6	7	3	5	
8.2		6.8	7.7	7.5	7.9	6	
25		0	5	25	20	7	
2		0.4	7	8	5	8	
.....		.....	9.6	7.0	7.0	9	
.....		.....	2.2	4.0	3.7	10	
285		90.0	196	216	212	11	
18.0		27.6	16.8	20.0	21.0	12	
460.3		121.7	312.3	349.1	346.9	13	
80.3		13.9	60.1	57.3	56.2	14	
7.0		4.2	3.6	6.9	6.6	15	
.....		.....	0.78	2.8	1.0	16	
0.04	See St. Jean de Boischatel	Trace	0.0	0.82	0.34	17	
0.54		Trace	0.0	0.07	0.21	18	
0.06		0.06	0.0	0.03	0.03	19	
0.0		0.0	Trace	0.02	0.07	20	
0.1		0.0	0.05	0.05	0.5	21	
10.5		2.1	3.1	5.8	5.8	22	
1.1		1.1	0.8	1.0	1.0	23	
0.05		0.05	0.1	0.0	0.1	24	
0.0		0.0	0.0	0.0	0.0	25	
272		44.6	189	165	164	0.0	26
21.9		6.9	11.2	35.1	34.7	164	27
5.6		3.1	0.8	6.4	6.5	34.7	28
0.0		0.0	0.0	0.0	0.0	6.5	29
0.3		12	0.4	0.8	0.3	0.0	30
13		7.3	11	8.1	7.0	0.3	31
223		36.6	155	136	135	7.0	32
5.8		15.4	10	35.6	32.7	135	33
229	52.0	165	171	167	32.7	34	
274	71.6	184	204	200	167	35	
9.0	7.8	3.9	6.7	6.9	200	36	
+1.0	-1.9	+0.2	0.0	+0.3	6.9	37	
6.2	11	7.3	7.5	7.3	+0.3	38	
					7.3	39	
			Phosphate - 0.07 ppm	Phosphate - 0.05 ppm	Phosphate-trace		

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Municipality .....		LA PRAIRIE (Laprairie Co.)	LA PROVIDENCE (St. Hyacinthe Co.)	LAROCHELLE (Nicolet Co.)	LA SALLE (Ile de Montreal)
No.	Source(s) .....	St. Lawrence River	Yamaska River	Artesian well	St. Lawrence River River
		Raw and finished water			
	Sampling point .....	At town tap			
1	Date of sampling .....	Aug. 17/56			
2	Storage period (days) .....	231:354			
3	Sampling temperature, °C. ....	23.3			
4	Test temperature, °C. ....	25.0 (27)			
5	Oxygen consumed by KMnO <sub>4</sub> .....	2.9			
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.1			
7	pH .....	7.7 (8.6)			
8	Colour .....	5			
9	Turbidity .....	0.9			
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	189			
13	Ignition loss at 550° C. ....	42.8			
14	Specific conductance, micromhos at 25° C. ....	312.0			
15	Calcium (Ca) .....	25.5			
16	Magnesium (Mg) .....	8.8			
17	Iron (Fe) Total .....				
18	Dissolved .....	0.0			
19	Manganese (Mn) .....	0.0			
20	Aluminum (Al) .....	0.04			
21	Copper (Cu) .....	0.0			
22	Zinc (Zn) .....	0.0			
23	Sodium (Na) .....	21.6			
24	Potassium (K) .....	1.4			
25	Ammonia (NH <sub>3</sub> ) .....				
26	Carbonate (CO <sub>3</sub> ) .....	0.0			
27	Bicarbonate (HCO <sub>3</sub> ) .....	92.2			
28	Sulphate (SO <sub>4</sub> ) .....	42.2			
29	Chloride (Cl) .....	20.7			
30	Fluoride (F) .....	0.0			
31	Nitrate (NO <sub>3</sub> ) .....	0.8			
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.5			
33	Carbonate hardness as CaCO <sub>3</sub> .....	75.6 (82.4)			
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	24.2			
35	Total hardness as CaCO <sub>3</sub> .....	99.8			
36	Sum of constituents .....	170			
37	Per cent sodium .....	10.0			
38	Saturation index at test temperature .....	-0.4			
39	Stability index at test temperature .....	8.5			
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

L'ASSOMPTION† (L'Assomption Co.)	LA TUQUE (Champlain Co.)	LAURENTIDES (L'Assomption Co.)	LAURIER STATION (Lotbiniere Co.)	LAURIERVILLE (Megantic Co.)	LAUZON (Levis Co.)	
L'Assomption River	Wayagamack Lake	L'Achigan River and well	Springs	Springs and well	St. Lawrence River	No.
Finished water	Raw and finished water	L'Achigan River Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water	
At town tap	At town tap		At village tap	At village tap	At plant tap	
Sept. 23/58	June 13/55		Aug. 23/56	Aug. 23/56	July 5/55	1
52:83	17:146	.....	230:364	233:369	8:143	2
17.8	10.0	.....	13.9	12.8	22.7	3
26.0	26.6	.....	24.0	23.8	26.0 (26)	4
2.5		7.1	3.4	2.3		5
1.4	2.1	2.4	2.9	3.3	1.8	6
7.1	6.7 (6.5)	6.7	8.1	7.8	7.9 (7.4)	7
15	20	60	5	0	10	8
0	0	.....	0	0	0.3	9
		.....				10
		.....				11
79.2	29.6	38.8	376	204	153	12
24.8	10.0	.....	43.2	69.2	26.4	13
123.7	26.05	.....	581.8	327.4	251.9	14
13.0	2.9	.....	78.9	49.1	30.8	15
3.1	0.2	.....	7.6	6.0	6.0	16
		.....	Trace	0.09		17
0.01	0.01	.....		0.0	0.02	18
0.02	0.01	.....	0.0	Trace	0.0	19
0.05	0.07	.....	0.0	0.15	0.23	20
0.03	0.1	.....			Trace	21
0.2		.....	0.5	0.0		22
2.6	1.1	.....	19.5	6.5	7.3	23
1.4	0.5	.....	20.1	1.5	1.1	24
0.1	0.0	.....		0.0	0.0	25
0.0	0.0 (0)	.....	0.0	0.0	0.0 (0)	26
11.7	6.3 (8.1)	.....	242	125	85.6 (92.7)	27
37.1	3.1	.....	55.2	44.5	24.7	28
3.0	0.5	.....	14.9	8.8	16.4	29
0.0	0.05	.....	0.0	0.0	0.05	30
0.2	1.6	.....	32	5.0	1.6	31
6.2	3.8	.....	13	11	13	32
9.6	5.2 (6.6)	.....	198	103	70.2 (76.0)	33
35.6	2.9	.....	29.9	44.3	31.3 (20.1)	34
45.2	8.1	.....	228	147	101.5 (96.1)	35
72.7	17.1	.....	361	194	132	36
10.6	20.5	.....	14.0	8.6	13.2	37
-2.1	-3.4	.....	+0.8	+0.1	-0.2	38
11	14	.....	6.5	7.6	8.2	39
† See also Water Survey Report No. 2		* No data on well water			Lithium - 0.0 ppm See Station No. 20 page 22	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		LAUZON (concl'd) (Levis Co.)	LA VISITATION DE LA POINTE DU LAC (St. Maurice Co.)	LECLERCVILLE (Lotbiniere Co.)	LE MOYNE (Chambly Co.)
Source(s) .....		St. Lawrence River	Springs	Springs	St. Lawrence River
No. ....		Finished water		Raw and finished water	
Sampling point .....		At town tap		At village tap	
1	Date of sampling .....	May 1/59		Aug. 23/56	
2	Storage period (days) .....	12:20		230:369	
3	Sampling temperature, °C. ....	.....		16.7	
4	Test temperature, °C. ....	21.9		24.0	
5	Oxygen consumed by KMnO <sub>4</sub> .....	5.4		5.5	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3		1.1	
7	pH .....	7.5		7.8	
8	Colour .....	25		40	
9	Turbidity .....	3		2	
10	Suspended matter, dried at 105° C. ....	.....		.....	
11	Suspended matter, ignited at 550° C. ....	.....		.....	
12	Residue on evaporation, dried at 105° C. ....	138		66.8	
13	Ignition loss at 550° C. ....	39.6		30.0	
14	Specific conductance, micromhos at 25° C. ....	190.2		83.7	
15	Calcium (Ca) .....	23.2		11.1	
16	Magnesium (Mg) .....	5.0		1.9	
17	Iron (Fe) Total .....	.....		.....	
18	Dissolved .....	0.11		1.0	
19	Manganese (Mn) .....	0.0	See Pointe du Lac	0.0	for 1955 and 1958 analyses see St. Lambert; since 1959 supplied from Jacques Cartier, see Jacques Cartier.
20	Aluminum (Al) .....	0.27		0.09	
21	Copper (Cu) .....	Trace		.....	
22	Zinc (Zn) .....	0.0		0.3	
23	Sodium (Na) .....	4.8		2.0	
24	Potassium (K) .....	0.8		0.6	
25	Ammonia (NH <sub>3</sub> ) .....	0.05		0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0		0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....	60.0		40.7	
28	Sulphate (SO <sub>4</sub> ) .....	22.3		7.6	
29	Chloride (Cl) .....	12.2	1.1		
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	0.6	0.4		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	2.3	12		
33	Carbonate hardness as CaCO <sub>3</sub> .....	49.2	33.4		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	29.2	2.1		
35	Total hardness as CaCO <sub>3</sub> .....	78.4	35.5		
36	Sum of constituents .....	101	58.2		
37	Per cent sodium .....	11.4	10.3		
38	Saturation index at test temperature .....	-0.9	-1.0		
39	Stability index at test temperature .....	9.3	9.8		
Remarks:		Phosphate - 0.0 ppm			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

LENNOXVILLE (Sherbrooke Co.)		L'EPIPHANIE (L'Assomption Co.)	LES EBOULEMENTS (Charlevoix W Co.)	LES ECUREUILS (Portneuf Co.)		No.
Spring and well		Wells and L'Achigan River	Springs	Artesian wells		
Well	Spring					
Raw and finished water			Raw and finished water	Raw and finished water		
At town taps			At village tap	At village tap		
Aug. 6/56	Aug. 6/56	Feb. 2/59	Mar. 14/58	July 27/55	Aug. 25/60	1
192:263	192:263	3:9	4:17	54:224	27:32	2
12.5	6.7	3.9	.....	18.3	.....	3
24.9 (24)	24.2 (23)	23.5	21.7	23.8 (19)	23.1	4
.....	.....	6.3	0.9	.....	3.0	5
0.9	1.0	3.0	3.1	4.9	2.5	6
8.5 (7.5)	8.3 (7.2)	8.3	7.2	7.7 (7.3)	8.0	7
5	5	40	0	0	20	8
0	0	0	0	0	60*	9
.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	11
189	128	580	57.6	167	.....	12
15.2	12.4	90	19.6	25.2	.....	13
305.9	209.2	980.5	64.6	281.7	382.3	14
46.2	35.7	24.1	7.7	23.3	68.1	15
11.0	4.0	23.9	1.3	6.0	5.8	16
.....	.....	.....	.....	.....	11.7	17
0.01	0.03	0.03	Trace	0.0	2.0	18
0.04	0.01	0.0	Trace	0.02	0.3	19
0.10	0.06	0.0	0.0	0.48	0.0	20
0.0	0.0	Trace	Trace	0.1	Trace	21
0.05	0.0	0.0	0.0	0.4	0.0	22
2.8	1.6	154	2.5	26.6	4.8	23
0.6	0.6	7.9	0.3	2.0	1.6	24
0.1	0.1	0.3	0.0	0.0	0.3	25
3.7 (0)	0.0	0.0	0.0	0.0 (0)	0.0	26
173 (183)	123 (130)	389	29.0	146 (146)	168	27
18.5	8.6	14.3	2.9	15.7	58.6	28
1.9	0.5	121	2.4	6.7	2.3	29
0.0	0.0	0.6	0.0	0.1	0.0	30
0.4	0.6	3.5	0.9	1.2	0.2	31
14	13	15	16	9.7	9.9	32
148 (150)	101	158	23.8	82.8 (78.2)	137	33
12.7	4.6	0.0	0.8	0.0 (0.0)	54.6	34
161	106	158	24.6	82.8 (78.2)	192	35
185	125	555	48.4	164	235	36
3.6	3.2	66.5	17.9	39.6	4.9	37
+0.9	+0.4	+0.6	-1.9	-0.3	+0.5	38
6.7	7.5	7.1	11	8.3	7.0	39
Phosphate 0.0 ppm * Iron precipitate						

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	LEVIS (Levis Co.)			
	Source(s) .....	St. Lawrence River			
		Raw water		Finished water	
	Sampling point .....	At intake pump		At filter plant tap	
1	Date of sampling .....	July 5/55	Apr. 29/59	July 5/55	Apr. 29/59
2	Storage period (days) .....	8:143	8:143	8:143	14:22
3	Sampling temperature, °C. ....	23.8	.....	22.7	.....
4	Test temperature, °C. ....	26.0	24.0	26.0 (26)	21.9
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	4.9	.....	5.2
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.7	0.9	2.3	5
7	pH .....	7.9	8.1	7.8 (7.4)	7.3
8	Colour .....	25	25	10	20
9	Turbidity .....	40	5	0.3	10*
10	Suspended matter, dried at 105° C. ....	99	23	.....	.....
11	Suspended matter, ignited at 550° C. ....	79	19	.....	.....
12	Residue on evaporation, dried at 105° C. ....	158	144	164	145
13	Ignition loss at 550° C. ....	35.2	41	40.4	51.2
14	Specific conductance, micromhos at 25° C. ....	251.6	186.4	250.8	192.5
15	Calcium (Ca) .....	31.0	23.6	30.8	23.1
16	Magnesium (Mg) .....	5.9	4.9	6.1	5.3
17	Iron (Fe) Total .....	.....	0.09	.....	0.20
18	Dissolved .....	0.02	0.05	0.02	0.09
19	Manganese (Mn) .....	0.0	0.0	0.0	0.0
20	Aluminum (Al) .....	0.21	0.0	0.33	0.36
21	Copper (Cu) .....	0.01	0.0	Trace	0.0
22	Zinc (Zn) .....	.....	0.0	.....	0.1
23	Sodium (Na) .....	6.7	5.1	6.6	5.0
24	Potassium (K) .....	1.2	0.9	1.1	0.9
25	Ammonia (NH <sub>3</sub> ) .....	0.15	0.0	0.1	0.05
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	84.0	68.6	86.5 (87.8)	54.2
28	Sulphate (SO <sub>4</sub> ) .....	24.7	18.0	24.2	21.5
29	Chloride (Cl) .....	17.5	10.6	17.3	12.3
30	Fluoride (F) .....	0.0	0.0	0.1	0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.6	0.5	1.2	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	0.7	2.4	1.0	2.6
33	Carbonate hardness as CaCO <sub>3</sub> .....	68.9	57.3	71.0 (72.0)	44.5
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	32.7	21.7	30.9	34.9
35	Total hardness as CaCO <sub>3</sub> .....	102	79.0	102	79.4
36	Sum of constituents .....	131	101	131	98.2
37	Per cent sodium .....	12.2	12.1	12.0	11.8
38	Saturation index at test temperature .....	-0.2	-0.2	-0.2	-1.2
39	Stability index at test temperature .....	8.2	8.5	8.2	9.7
	Remarks: \	Lithium - 0.0 ppm See also Station No. 20, page 22		Lithium - 0.0 ppm	Phosphate - 0.0 ppm * Precipitated alum

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

LINIÈRE (Beauce Co.)	L'ISLETVILLE* (L'Islet Co.)	L'ISLE VERTE (Rivière du Loup Co.)	LONGUEUIL (Chambly Co.)			No.
Springs	Savage River	Springs	St. Lawrence River			
	Raw and finished water	Raw and finished water	Raw water*		Finished water	
	At reservoir	At village tap	At intake well	At plant intake	At plant tap	
	July 10/58	July 7/58	Feb. 6/48	Aug. 14/56	June 19/47	1
	14:26	41:171	29:829	205:350	4:274	2
	13.9	14.0	0.9	22.8	16.5	3
	26.2	27.3 (26)	24.4	25.0	.....	4
	5.6	.....	.....	2.0	.....	5
	2.6	6.3	0.0	2.3	14.0 (18.5)	6
	7.4	6.8 (6.5)	8.4	7.9	6.9 (6.7)	7
	55	5	14	5	10 (4)	8
	0.8	0	0.8	35	0	9
	.....	.....	.....	.....	.....	10
	.....	.....	.....	.....	.....	11
	80.4	60.4	.....	177	174	12
	22.4	20.4	.....	26.8	64.2	13
	97.9	102.2	302.6	298.9	.....	14
	15.5	10.7	40.5	37.7	32.8	15
	1.5	1.9	9.6	7.6	7.4	16
	.....	.....	.....	.....	.....	17
	0.05	0.0	.....	Trace	0.07	18
	0.0	0.02	.....	0.0	.....	19
	0.0	0.03	.....	0.04	.....	20
	Trace	0.06	.....	0.0	.....	21
	0.0	.....	.....	0.0	.....	22
	2.2	3.5	8.7	10.0	( 7.5	23
	0.5	1.4	1.6	1.2	( as Na	24
	0.1	0.0	.....	0.0	.....	25
	0.0	0.0 (0)	2.4	0.0	0.0 (0)	26
	43.4	25.4 (29.3)	112	110	68.3 (65.9)	27
	13.0	10.3	.....	27.0	45.8	28
	0.9	5.7	17.5	20.9	14.8	29
	0.0	0.0	.....	.....	.....	30
	0.2	6.0	.....	0.4	2.2	31
	5.9	6.7	7.4	2.4	2.8	32
	35.6	20.9 (24)	96.0	90.6	56.0 (54.0)	33
	9.2	13.6	44.7	34.7	56.3	34
	44.8	34.5	140.7	125	112	35
	61.1	59.0	162.8	162	147.0	36
	9.5	17.2	13.0	14.6	12.7	37
	-1.2	-2.2	+0.6	-0.1	+1.2	38
	9.8	11	7.2	8.1	9.5	39
	* also L'Islet Station		* See also Station No. 10, page 18, and Water Survey Report No. 2			



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	LONGUEUIL (concl'd) (Chambly Co.)		LORETTEVILLE (Quebec Co.)	LOTBINIERE (Lotbiniere Co.)
	Source(s) .....	St. Lawrence River		Springs and creek	Springs
		Finished water		Raw and finished water	Raw and finished water
	Sampling point .....	At plant tap		At town tap	At village tap
1	Date of sampling .....	Feb. 6/48	Aug. 14/56	July 25/55	Mar. 18/58
2	Storage period (days) .....	29	205:350	51:200	7
3	Sampling temperature, °C. ....	22.2	22.2	16.7	.....
4	Test temperature, °C. ....	.....	25.0	23.0 (22)	23.4
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	1.9	.....	6.7
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.2	2.3	3.5	3.1
7	pH .....	7.8	7.8	7.1 (6.8)	7.3
8	Colour .....	10	5	30	45
9	Turbidity .....	2	0	0	0.9†
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....	176	180	61.6	69.2
13	Ignition loss at 550° C. ....	53.6	30.4	12.8	24.0
14	Specific conductance, micromhos at 25° C. ....	293.5	305.9	58.82	81.2
15	Calcium (Ca) .....	37.9	37.6	6.3	11.5
16	Magnesium (Mg) .....	8.5	7.3	0.6	1.4
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.07	0.0	0.73	0.11
19	Manganese (Mn) .....	.....	0.0	0.02	Trace
20	Aluminum (Al) .....	.....	0.08	.....	0.0
21	Copper (Cu) .....	.....	0.0	0.15	Trace
22	Zinc (Zn) .....	.....	0.5	0.07	0.0
23	Sodium (Na) .....	8.0	9.8	2.0	2.1
24	Potassium (K) .....	1.5	1.2	0.7	0.4
25	Ammonia (NH <sub>3</sub> ) .....	.....	0.0	0.0	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	122	95.7	26.1	36.6
28	Sulphate (SO <sub>4</sub> ) .....	30.2	36.8	6.2	9.1
29	Chloride (Cl) .....	18.3	21.6	0.8	1.4
30	Fluoride (F) .....	.....	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.4	0.0	3.2	0.01
32	Silica (SiO <sub>2</sub> ), colorimetric .....	1.6	1.0	19	11
33	Carbonate hardness as CaCO <sub>3</sub> .....	100	78.5	21.4 (16)	30.0
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	29.5	45.3	6.2	4.5
35	Total hardness as CaCO <sub>3</sub> .....	130	124	27.6	34.5
36	Sum of constituents .....	159.5	163	52.5	54.9
37	Per cent sodium .....	13.0	14.5	12.7	11.4
38	Saturation index at test temperature .....	+0.03	+0.2	-2.2	-1.6
39	Stability index at test temperature .....	7.8	7.6	12	11
	Remarks:	Nitrite - 0.0 ppm			† Presumably iron precipitated

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

LOTBINIERE (concl'd) Lotbiniere Co.	LOUISEVILLE* (Maskinonge Co.)					No.
Springs	Riviere du Loup				Wells	
Raw and finished water	Raw water		Finished water		Raw and finished water	
At village tap.		At filter plant	At clear well	At filter plant tap	At town tap	
Sept. 25/58 53:88	Oct. 27/53† 23	June 8/55 7:97 22.2	Oct. 27/53 23	June 8/55 7:97 21.1	June 8/55 7:85 9.4	1 2
23.5		23.4 (24)		23.4	23.4 (19)	3 4
19	2.7		1.2			5
4.0	3	3.5	3	2.3	3.6	6
7.1	7.0	7.0 (7)	7.0	7.2	7.2 (6.9)	7
140		20		0	0	8
*	20	20 (20)	0.4	0.8	0	9
75.6				76.0	72.8	10 11
46.8				0.4	16.0	12
71.4		108.3		130.9	85.5	13 14
10.7	4.8	4.3	4.8	4.3	6.9	15
2.1	2.2	1.4	2.2	1.4	1.5	16
1.6	0.15		0.10			17
0.35				0.0	0.0	18
0.0	0.0		0.0	0.01	0.0	19
0.0				0.10	0.17	20
0.0				0.0	0.01	21
0.1						22
1.5	( 11.5	13.4	( 21.2	16.5	6.8	23
0.5	( as Na	1.0	( as Na	1.0	0.7	24
		0.1		0.0	0.0	25
0.0	0.0	0.0 (0)	0.0	0.0	0.0 (0)	26
31.1	19.5	21.3 (26.8)	19.5	21.9	34.4 (36.6)	27
9.1	5.8	19.4	27.9	25.9	9.8	28
1.3	18.4	6.4	18.4	6.5	0.5	29
0.0				0.0	0.1	30
0.0		0.8		0.4	0.2	31
10		3.3		3.9	15	32
25.5	16	16.5	16	16.5	23.4 (22.9)	33
9.8	5	0.0	5	0.0	0.0 (0.0)	34
35.3	21	16.5	21	16.5	23.4 (22.9)	35
51.2		60.5		70.8	58.1	36
8.1		62.1		66.2	36.9	37
-1.0		-2.5		-2.3	-1.9	38
11		12		12	11	39
* Iron precipitated	* River water is used for the textile plant only, the municipality uses the well water. † Analysis supplied by Permutit Co. of Canada Ltd.			Lithium - 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		LOUISEVILLE (concl'd) (Maskinonge Co.)	LUCEVILLE (Rimouski Co.)	LYSTER (Megantic Co.)	MACKAYVILLE (Chambly Co.)
No.	Source(s) .....	Wells	Springs	Deep well	St. Lawrence River
		Raw and finished water	Raw and finished water	Raw and finished water	
	Sampling point .....	At town tap	At tap in Ste. Luce	At village tap	
1	Date of sampling .....	Sept. 23/58	July 7/55	Feb. 13/58	
2	Storage period (days) .....	52:83	42:178	14:18	
3	Sampling temperature, °C. ....	16.1	19.4	7.2	
4	Test temperature, °C. ....	25.8	28.2 (21)	25.4	
5	Oxygen consumed by KMnO <sub>4</sub> .....	1.2	.....	2.0	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.7	1.7	0.0	
7	pH .....	7.3	8.2 (7.9)	8.7	
8	Colour .....	0	5	10	
9	Turbidity .....	0	0	0.4	
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	
12	Residue on evaporation, dried at 105° C. ....	46.4	181.6	320	
13	Ignition loss at 550° C. ....	23.2	20.4	26.4	
14	Specific conductance, micromhos at 25° C. ....	58.2	313.8	525.4	
15	Calcium (Ca) .....	5.3	45.2	4.9	
16	Magnesium (Mg) .....	1.1	10.0	1.2	
17	Iron (Fe) Total .....	.....	.....	.....	
18	Dissolved .....	0.03	0.0	0.03	
19	Manganese (Mn) .....	0.0	0.0	0.01	
20	Aluminum (Al) .....	0.05	0.02	0.07	
21	Copper (Cu) .....	0.0	0.0	0.02	
22	Zinc (Zn) .....	0.2	.....	0.0	
23	Sodium (Na) .....	3.5	3.9	112	
24	Potassium (K) .....	0.6	0.5	2.0	
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.0	0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	7.2	
27	Bicarbonate (HCO <sub>3</sub> ) .....	22.9	177	200	
28	Sulphate (SO <sub>4</sub> ) .....	6.8	9.7	33.1	
29	Chloride (Cl) .....	0.6	2.8	39.9	
30	Fluoride (F) .....	0.0	0.0	0.35	
31	Nitrate (NO <sub>3</sub> ) .....	0.2	4.0	0.5	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	15	8.6	11	
33	Carbonate hardness as CaCO <sub>3</sub> .....	17.8	145	17.2	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.0	8.7	0.0	
35	Total hardness as CaCO <sub>3</sub> .....	17.8	154	17.2	
36	Sum of constituents .....	44.8	172	310	
37	Per cent sodium .....	28.4	5.2	92.3	
38	Saturation index at test temperature .....	-2.0	+0.7	+0.2	
39	Stability index at test temperature .....	11	6.8	8.3	
Remarks:					

For 1955 and 1958  
*see*  
 St. Lambert;  
 since 1959, supplied  
 from Jacques Cartier;  
*see*  
 Jacques Cartier

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

MAGOG (Stanstead Co.)		MANSEAU (Nicolet Co.)	MARIEVILLE (Rouville Co.)		MARSOUI (Gaspé W Co.)	No.
Lake Memphremagog		Wells	Lake Rougemont and wells		Spring	
Raw water	Finished water	Raw and finished water	Wells	Lake Rougemont		
	At city tap	At village tap	At town tap	From lake	At reservoir	
	Aug. 8/56	Feb. 19/59	Aug. 15/56	Aug. 15/56	July 14/58	1
	19:261	8:12	187:349	226:349	10:28	2
	18.9	5.9	13.6	16.1	10.0	3
	21.7 (26)	25.4	24.2 (22)	24.1	25.8	4
	8.8	2.3	.....	5.1	1.7	5
	2.6	7.0	2.2	2.6	11	6
	7.5 (7.3)	7.1	8.3 (7.8)	7.3 (7.0)	7.3	7
	5	10	5	100 (140)	0	8
	0	1	0	4	0	9
	.....	.....	.....	6.3	.....	10
	.....	.....	.....	3.1	.....	11
	76.0	144	303	82.0	187	12
	18.8	43.2	78.0	23.6	23.2	13
	110.5	211.3	481.1	82.57	298.8	14
	16.2	26.8	49.1	7.7	43.3	15
	2.0	3.5	13.2	4.1	6.5	16
	.....	0.15	.....	1.9	.....	17
	0.01	.....	Trace	.....	0.01	18
	0.0	0.10	0.02	0.01	0.01	19
	0.13	0.06	0.0	0.0	0.0	20
	0.0	0.05	Trace	.....	0.0	21
	0.2	0.08	0.05	0.05	0.0	22
	1.6	4.9	34.7	0.9	7.1	23
	0.8	3.5	2.0	0.2	1.7	24
	0.05	0.0	0.0	0.0	0.0	25
	0.0	0.0	0.0 (0)	0.0 (0)	0.0	26
	48.8	57.4	277 (287)	31.2 (40.3)	148	27
	7.9	16.8	23.2	11.3	15.5	28
	3.2	11.9	2.6	1.7	9.6	29
	0.0	0.0	0.0	0.0	0.0	30
	0.6	20	0.2	0.8	1.5	31
	3.3	9.4	17	5.5	6.6	32
	40.0	47.1	177	25.6	122	33
	8.6	34.2	0.0	10.5	13.5	34
	48.6	81.3	177	36.1	135	35
	60.0	126	279	49.6	165	36
	6.4	10.9	29.6	4.7	10.1	37
	-1.1	-1.2	+0.9	-1.8	-0.4	38
	9.7	9.5	6.5	11	8.1	39

See  
Station No. 77,  
page 38

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	MASKINONGE (Maskinonge Co.)	MATANE (Matane Co.)	McMASTERVILLE (Vercheres Co.)	
	Source(s) .....	Maskinonge River	Lake Bernier	Lac Hertel and artesian well	Richelieu River
	Sampling point .....	At tap	At town tap		
1	Date of sampling .....	Sept. 23/58	July 12/55		
2	Storage period (days) .....	52:83	22:170		
3	Sampling temperature, °C. ....	.....	20		
4	Test temperature, °C. ....	26.0	28.6 (21)		
5	Oxygen consumed by KMnO <sub>4</sub> .....	8.1	.....		
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.5	1.9		
7	pH .....	6.9	7.8 (7.7)		
8	Colour .....	50	15		
9	Turbidity .....	.....	0.9		
10	Suspended matter, dried at 105° C. ....	.....	.....		
11	Suspended matter, ignited at 550° C. ....	.....	.....		
12	Residue on evaporation, dried at 105° C. ....	41.6	82.4		
13	Ignition loss at 550° C. ....	10.4	21.4		
14	Specific conductance, micromhos at 25° C. ....	54.2	141.6		
15	Calcium (Ca) .....	4.4	20.1		
16	Magnesium (Mg) .....	1.8	3.1		
17	Iron (Fe) Total .....	0.60	.....		
18	Dissolved .....	0.17	0.0		
19	Manganese (Mn) .....	0.02	0.0		
20	Aluminum (Al) .....	0.0	0.4		
21	Copper (Cu) .....	0.11	0.0		
22	Zinc (Zn) .....	0.05	.....		
23	Sodium (Na) .....	2.7	2.4		
24	Potassium (K) .....	0.8	0.7		
25	Ammonia (NH <sub>3</sub> ) .....	0.05	0.1		
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)		
27	Bicarbonate (HCO <sub>3</sub> ) .....	15.5	75.4 (78.1)		
28	Sulphate (SO <sub>4</sub> ) .....	6.2	4.5		
29	Chloride (Cl) .....	3.4	1.9		
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	0.2	4.0		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.8	3.3		
33	Carbonate hardness as CaCO <sub>3</sub> .....	12.7	62.0 (60.7)		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	5.7	0.9		
35	Total hardness as CaCO <sub>3</sub> .....	18.4	62.9 (60.7)		
36	Sum of constituents .....	32.2	78.4		
37	Per cent sodium .....	22.7	7.3		
38	Saturation index at test temperature .....	-2.7	-0.4		
39	Stability index at test temperature .....	12	8.6		
Remarks:					

*See*  
 Beloeil, which  
 supplies east side  
 of McMasterville  
 since 1959

*see*  
 In 1959 supplied  
 from plant of Canadian  
 Industries Limited to  
 west side of village.  
 For analyses  
 St. Marc (Vercheres  
 Co.) supply A and  
 Chambly (Chambly  
 Co.), also Station  
 No. 39, page 28



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	MONT JOLI (Rimouski Co.)	MONTMAGNY (Montmagny Co.)		MONTMORENCY (Quebec Co.)
	Source(s) .....	Metis River	Riviere des Perdris		Montmorency River
	Sampling point .....	Raw and finished water	Raw and finished water		Raw and finished water
		At town tap		At town tap	At pumphouse in Villeneuve
1	Date of sampling .....	July 8/55	Dec. 31/53†	July 5/55	July 23/55
2	Storage period (days) .....	12:71	5	8:133	51:276
3	Sampling temperature, °C. ....	15.0		19.4	20.0
4	Test temperature, °C. ....	27.4 (27)		26.0 (23)	22.0 (23.5)
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.0	1.8	1.0	1.1
7	pH .....	8.2 (7.4)	6.9	7.3 (6.9)	7.3 (7.6)
8	Colour .....	20		45 (55)	35
9	Turbidity .....	35	2.5	0.8	0
10	Suspended matter, dried at 105° C. ....	50			
11	Suspended matter, ignited at 550° C. ....	40			
12	Residue on evaporation, dried at 105° C. ....	104	44	49.2	46.4
13	Ignition loss at 550° C. ....	22.8		23.2	14.0
14	Specific conductance, micromhos at 25° C. ....	165.9		40.7	34.65
15	Calcium (Ca) .....	25.2	5.6	4.8	5.0
16	Magnesium (Mg) .....	4.2	0.5	0.4	0.3
17	Iron (Fe) Total .....		0.3		
18	Dissolved .....	0.05		0.09	0.14
19	Manganese (Mn) .....	0.01		0.0	0.0
20	Aluminum (Al) .....	0.06	0.05	0.05	0.04
21	Copper (Cu) .....	0.03		0.0	Trace
22	Zinc (Zn) .....				0.01
23	Sodium (Na) .....	1.7		1.6	0.9
24	Potassium (K) .....	0.5		0.4	0.3
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.0	0.2	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	95.1 (97.6)	7.3	13.0 (14.6)	12.9 (17.1)
28	Sulphate (SO <sub>4</sub> ) .....	4.1	13.5	3.1	2.7
29	Chloride (Cl) .....	1.3	1.2	0.4	1.4
30	Fluoride (F) .....	0.0		0.0	
31	Nitrate (NO <sub>3</sub> ) .....	1.2		1.6	1.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.5	9.2	3.8	16
33	Carbonate hardness as CaCO <sub>3</sub> .....	78.0	6	10.7	10.6 (14)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	2.2	10	2.9	2.9 (0)
35	Total hardness as CaCO <sub>3</sub> .....	80.2	16	13.6	13.4 (14)
36	Sum of constituents .....	88.9		22.6	34.7
37	Per cent sodium .....	4.3		19.6	11.7
38	Saturation index at test temperature .....	+0.2		-2.3	-2.4
39	Stability index at test temperature .....	7.8		12	12
Remarks:			† Analysis supplied by Alchem Ltd., Burlington, Ont.	Lithium - 0.0 ppm	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

MONTREAL* (Ile de Montreal)						No.
St. Lawrence River						
Raw water	Finished water			Finished water (yearly averages**)		
			At DND plant tap	At filtration plant tap		
	Apr. 15/55† 4	Oct. 6/55† 5	Jan. 1958	1953	1954	
						1
						2
						3
			24.6			4
			3.3			5
	2.6	10	1.4	1.0	0.9	6
	7.1	7.2	8.1	8.0	8.0	7
	0	0	10	5	6	8
	2	2	2	<1	<1	9
	None	Trace				10
						11
	140	185	182	189	177	12
			30.8	94	88	13
			290.2			14
	34.4		35.6	38.0	37.6	15
	7.0		7.8	8.0	7.9	16
	0.2	Trace		0.07	0.05	17
			0.04			18
	0.05	0.0	0.0			19
			0.1			20
			0.0			21
			0.05			22
			9.2			23
			1.3			24
	7.1	Trace	0.0			25
	0	0	0.0	0	0	26
	102	112	108	111	107	27
	16.2		22.8	27.8	26.2	28
	19.4		21.5	21	21	29
			0.05	0.08	0.13	30
			0.2			31
	1.5	1.7	2.4	1.0	1.9	32
	84	92	88.4	91	88	33
	31	38	32.5	37	39	34
	115	130	121	128	127	35
			154			36
			14.0			37
	-0.9	-0.7	+0.1			38
	8.8	8.5	7.9			39
See Station No. 7, page 18	* See also Station No. 7, page 18 ** Data obtained from City of Montreal Department of Public Works, Waterworks and Sewage Division. † Analyses supplied by Alchem Ltd., Burlington, Ont.					



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	MONTREAL (cont'd) (Ile de Montreal)			
	Source(s) .....	St. Lawrence River*			
	Sampling point .....	Finished water (yearly averages**)			
		At filtration plant tap			
		1955	1956	1957	1958
1	Date of sampling .....				
2	Storage period (days) .....				
3	Sampling temperature, °C. ....				
4	Test temperature, °C. ....				
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.1	2.2	1.6	0.5
7	pH .....	8.1	8.0	8.0	8.0
8	Colour .....	6	7	6	7
9	Turbidity .....	<2	1.9	1.3	1.4
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	186	184	186	184
13	Ignition loss at 550° C. ....	93	49	60	63
14	Specific conductance, micromhos at 25° C. ....				
15	Calcium (Ca) .....	38.2	37.9	38.3	36.5
16	Magnesium (Mg) .....	8.4	7.4	8.6	7.4
17	Iron (Fe) Total .....	0.08	0.06	0.11	0.12
18	Dissolved .....				
19	Manganese (Mn) .....				
20	Aluminum (Al) .....				
21	Copper (Cu) .....				
22	Zinc (Zn) .....				
23	Sodium (Na) .....				
24	Potassium (K) .....				
25	Ammonia (NH <sub>3</sub> ) .....				
26	Carbonate (CO <sub>3</sub> ) .....	0	0	0	0
27	Bicarbonate (HCO <sub>3</sub> ) .....	106	106	105	104
28	Sulphate (SO <sub>4</sub> ) .....	26.5	26.9	25.3	25.8
29	Chloride (Cl) .....	21	21	22	21
30	Fluoride (F) .....	0.06	0.11	0.1	0.1
31	Nitrate (NO <sub>3</sub> ) .....				
32	Silica (SiO <sub>2</sub> ), colorimetric .....	1.6	2.4	1.6	1.8
33	Carbonate hardness as CaCO <sub>3</sub> .....	87	87	86	85
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	43	38	42	37
35	Total hardness as CaCO <sub>3</sub> .....	130	125	128	122
36	Sum of constituents .....				
37	Per cent sodium .....				
38	Saturation index at test temperature .....				
39	Stability index at test temperature .....				
	Remarks:	* See also Station No. 7, page 18 ** Data obtained from City of Montreal, Department of Public Works, Waterworks and Sewerage Division.			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
 (In parts per million)

MONTREAL (concl'd) (Ile de Montreal)	MONTREAL EAST	MONTREAL NORTH (Ile de Montreal)	MONTREAL WEST	MONTREAL SOUTH (Chambly Co.)	MONT ST. GREGOIRE (Iberville Co.)	No.
St. Lawrence River*	St. Lawrence River			St. Lawrence River	Artesian well	
Finished water (yearly averages**)						
At filtration plant tap						
1959 ..... ..... ..... ..... 1.6 8.0 6 <1 ..... ..... 184 57 ..... ..... 38.3 7.5 0.11 ..... ..... ..... ..... ..... 0 105 25.7 22 0.1 ..... ..... 2.1 86 41 127 ..... ..... .....						1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
		<i>See Montreal</i>		<i>See Longueuil</i>	<i>See St. Gregoire le Grand</i>	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	MONT ST. HILAIRE (Rouville Co.)	MOUNT ROYAL (Ile de Montreal)	MURDOCHVILLE (Gaspé W. Co.)	MURRAY BAY (Charlevoix E Co.)
	Source(s) .....	Well and Lake Hertel	St. Lawrence River	Lake Porphyry  Raw and finished water	Springs and creeks
	Sampling point .....			At town tap	
1	Date of sampling .....			Mar. 17/58	
2	Storage period (days) .....			8:14	
3	Sampling temperature, °C. ....			3.9	
4	Test temperature, °C. ....			25.4	
5	Oxygen consumed by KMnO <sub>4</sub> .....			1.6	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....			1.6	
7	pH .....			8.1	
8	Colour .....			0	
9	Turbidity .....			0.4	
10	Suspended matter, dried at 105° C. ....			.....	
11	Suspended matter, ignited at 550° C. ....			.....	
12	Residue on evaporation, dried at 105° C. ....			134	
13	Ignition loss at 550° C. ....			18.8	
14	Specific conductance, micromhos at 25° C. ....			226.6	
15	Calcium (Ca) .....			38.6	
16	Magnesium (Mg) .....			4.7	
17	Iron (Fe) Total .....			.....	
18	Dissolved .....	<i>See</i>	<i>See</i>	0.0	<i>See</i>
19	Manganese (Mn) .....	Beocil	Montreal	Trace	La Malbaie
20	Aluminum (Al) .....			0.05	
21	Copper (Cu) .....			0.02	
22	Zinc (Zn) .....			0.0	
23	Sodium (Na) .....			1.5	
24	Potassium (K) .....			0.3	
25	Ammonia (NH <sub>3</sub> ) .....			0.05	
26	Carbonate (CO <sub>3</sub> ) .....			0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....			129	
28	Sulphate (SO <sub>4</sub> ) .....			10.3	
29	Chloride (Cl) .....			2.1	
30	Fluoride (F) .....			0.0	
31	Nitrate (NO <sub>3</sub> ) .....			1.0	
32	Silica (SiO <sub>2</sub> ), colorimetric .....			3.7	
33	Carbonate hardness as CaCO <sub>3</sub> .....			106	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....			9.5	
35	Total hardness as CaCO <sub>3</sub> .....			116	
36	Sum of constituents .....			125	
37	Per cent sodium .....			2.7	
38	Saturation index at test temperature .....			+0.3	
39	Stability index at test temperature .....			7.5	
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

NAUDVILLE (Lac St. Jean E. Co.)	NEUBOIS (Lotbiniere Co.)	NEUVILLE (Portneuf Co.)	NEW LIVERPOOL (Levis Co.)	NICOLET (Nicolet Co.)		No.
Lake St. John	Wells	Springs	St. Lawrence River	Nicolet River		
		Raw and finished water		Raw water	Finished water	
		At town tap		At filter plant		
		July 26/55		July 31/56	July 31/56	1
		52:223		63:70	195:256	2
		13.3		21.1	19.7	3
		22.6 (24)		24.2	23.3 (24)	4
		.....		.....	10	5
		1.9		2.5	2.7	6
		8.0 (7.8)		7.7 (8.1)	7.6 (7.3)	7
		5		30 (40)	10	8
		0		14	0	9
		.....		.....	.....	10
		.....		.....	.....	11
		138		.....	124	12
		15.2		.....	16.0	13
		224.9		167.2	204.6	14
		34.6		25.4	31.1	15
		4.0		3.0	2.9	16
		.....		.....	.....	17
		0.01		.....	0.03	18
		Trace		.....	0.0	19
		0.0		.....	0.13	20
		0.0		0.0	0.0	21
		0.0		0.0	0.0	22
		4.3		3.3	3.3	23
		1.1		1.2	1.4	24
		0.0		0.1	0.2	25
		0.0 (0)		0.0 (0)	0.0 (0)	26
		113 (115)		77.0 (85.3)	63.4 (69.3)	27
		17.6		13.2	39.9	28
		1.5		3.7	4.5	29
		0.1		.....	0.0	30
		3.2		1.2	0.8	31
		12		3.0	2.6	32
		92.4 (94)		63.2	52.0	33
		10.4 (4.3)		12.5	37.5	34
		103 (98)		75.7	89.5	35
		134		99.7	118	36
		8.2		8.5	7.2	37
		0.0		-0.5	-0.6	38
		8.0		8.7	8.8	39
				See also Station No. 83, page 42		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	NORMANDIN (Lac St. Jean W. Co.)	NORTH HATLEY (Stanstead Co.)		NOTRE DAME DE LIESSE (Jacques Cartier Co.)
	Source(s) .....	Springs	Lake Massawipi and springs		St. Lawrence River
			Mixed supply*	Springs	
	Sampling point .....	Raw and finished water	Raw and finished water		
At town tap		At village tap	At spring		
1	Date of sampling .....	July 19/55	Aug. 6/56	Aug. 6/56	
2	Storage period (days) .....	43:198	192:263	192:263	
3	Sampling temperature, °C. ....	13.3	19.4	12.2	
4	Test temperature, °C. ....	24.0 (21)	24.8 (26)	24.9 (22)	
5	Oxygen consumed by KMnO <sub>4</sub> .....		9.7		
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.8	1.2	0.8	
7	pH .....	6.7 (6.4)	8.1 (8.0)	8.0 (6.6)	
8	Colour .....	20	10	10	
9	Turbidity .....	0	0	2	
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	32.4	106	83.6	
13	Ignition loss at 550° C. ....	8.0	18.0	22.0	
14	Specific conductance, micromhos at 25° C. ....	22.55	167.6	122.2	
15	Calcium (Ca) .....	2.8	25.5	9.8	
16	Magnesium (Mg) .....	0.04	3.8	6.2	
17	Iron (Fe) Total .....				
18	Dissolved .....	0.32	0.03	0.04	See Montreal
19	Manganese (Mn) .....	Trace	0.0	0.0	
20	Aluminum (Al) .....	0.0	0.09	0.10	
21	Copper (Cu) .....	0.19	0.0	0.0	
22	Zinc (Zn) .....		0.1	0.05	
23	Sodium (Na) .....	1.3	2.2	3.5	
24	Potassium (K) .....	0.5	0.8	1.3	
25	Ammonia (NH <sub>3</sub> ) .....		0.1	0.1	
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0 (0)	
27	Bicarbonate (HCO <sub>3</sub> ) .....	11.6 (14.6)	86.7 (90.4)	50.8 (52.8)	
28	Sulphate (SO <sub>4</sub> ) .....	1.2	10.1	8.1	
29	Chloride (Cl) .....	0.3	2.8	5.9	
30	Fluoride (F) .....	0.0	0.0	0.0	
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.8	1.2	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	12	5.8	14	
33	Carbonate hardness as CaCO <sub>3</sub> .....	9.5 (7.2)	71.1	41.7	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	0.0 (0.0)	8.2	8.2	
35	Total hardness as CaCO <sub>3</sub> .....	7.2 (7.2)	79.3	49.9	
36	Sum of constituents .....	25.2	94.8	75.2	
37	Per cent sodium .....	24.6	5.6	12.6	
38	Saturation index at test temperature .....	-3.2	0.0	-0.8	
39	Stability index at test temperature .....	13	8.1	9.6	
Remarks:			*Normally the summer supply		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

NOTRE DAME DE LORETTE (Quebec Co.)	NOTRE DAME DE PIERREVILLE (Yamaska Co.)	NOTRE DAME DE PORTNEUF (Portneuf Co.)	NOTRE DAME D'HEBERTVILLE (Lac St. Jean E Co.)	NOTRE DAME DU BON CONSEIL (Drummond Co.)	NOTRE DAME DU ROSAIRE (Montmagny Co.)	No.
Creeks and well	Chenal Tardif River	Springs	Gamelin River	Well	Springs and wells	
	Raw and finished water		Raw and finished water	Raw and finished water	Raw and finished water	
			At town tap	At village tap	At village tap	
	Aug. 12/58 10:21		July 18/55 40	Aug. 24/56 232:368	Dec. 19/58 17:25	1
	23.7		11.7	13.9	21.1	2
	4.3		25.4 (22)	23.8	0.9	3
	7.3		3.3	2.3	2.3	4
	65		7.3 (7.2)	1.2	7.8	5
	0.8		60 (60)	5	0	6
			0	0	0	7
						8
						9
						10
	94.0		73.6	116	214	11
	27.2		23.6	40.0	88.8	12
	130.8		82.36	178.7	199.1	13
	17.4		14.1	25.2	31.9	14
	3.2		0.8	4.0	3.5	15
				0.27		16
	0.37	See	0.12	0.10	Trace	17
See	0.02	Portneuf	Trace	0.0	0.0	18
L'Ancienne Lorette	0.02		0.35	0.0	0.0	19
	Trace		0.0		0.0	20
	0.1			0.02	0.0	21
	3.7		1.1	3.9	3.2	22
	0.9		0.5	1.1	0.3	23
	0.15		0.2	0.0	0.0	24
	0.0		0.0 (0)	0.0	0.0	25
	59.6		40.0 (43.9)	86.1	94.1	26
	9.0		4.3	17.0	20.6	27
	4.5		1.5	1.7	2.3	28
	0.0		0.0	0.0	0.0	29
	0.4		1.2	0.1	0.5	30
	4.4		7.0	17	11	31
	48.9		32.8	70.6	77.2	32
	7.7		5.7	8.7	16.8	33
	56.6		38.5	79.3	94.0	34
	73.4		50.7	112	120	35
	12.0		5.5	9.5	6.9	36
	-1.2		-1.4	-0.1	-0.3	37
	9.7		10	8.3	8.4	38
						39

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

No.	Municipality .....	OREE DES BOIS (Chicoutimi Co.)	ORMSTOWN (Chateauguay Co.)		
	Source(s) .....	Long Lake	Two wells 190 ft and 225 ft deep		
			190-ft well, (main supply)	225-ft well, emergency supply	
			Raw and finished water	Raw water	
	Sampling point .....		At well pump		
1	Date of sampling .....		Aug. 20/56	May 28/53	Aug. 20/56
2	Storage period (days) .....		231:360	6:15	231:360
3	Sampling temperature, °C. ....		10.0	9.4	9.4
4	Test temperature, °C. ....		25.4 (19)	19.8	25.3
5	Oxygen consumed by KMnO <sub>4</sub> .....		3.5	.....	2.6
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		2.7	12.0	3.7
7	pH .....		8.0	7.6	8.0 (7.6)
8	Colour .....		5	10	5
9	Turbidity .....		13*	5	12
10	Suspended matter, dried at 105° C. ....		7.2*	2.6	4.7
11	Suspended matter, ignited at 550° C. ....		3.5	0.7	0.6
12	Residue on evaporation, dried at 105° C. ....		369	899	940
13	Ignition loss at 550° C. ....		54.8	141	140
14	Specific conductance, micromhos at 25° C. ....		569.8	1,329	1,412
15	Calcium (Ca) .....		85.9	119	134
16	Magnesium (Mg) .....		21.8	41.2	39.2
17	Iron (Fe) Total .....		2.9	1.0	1.6
18	Dissolved .....		2.0	0.05	0.21
19	Manganese (Mn) .....	See Kenogami	0.0	.....	0.0
20	Aluminum (Al) .....		0.0	.....	0.04
21	Copper (Cu) .....		0.0	.....	.....
22	Zinc (Zn) .....		0.0	.....	.....
23	Sodium (Na) .....		3.5	135	100
24	Potassium (K) .....		1.5	11.5	8.0
25	Ammonia (NH <sub>3</sub> ) .....		0.05	.....	0.1
26	Carbonate (CO <sub>3</sub> ) .....		0.0	0.0	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....		158	264	258 (288)
28	Sulphate (SO <sub>4</sub> ) .....		177	233	248
29	Chloride (Cl) .....		1.3	174	171
30	Fluoride (F) .....		0.4	0.2	0.0
31	Nitrate (NO <sub>3</sub> ) .....		0.4	0.2	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....		14	9.8	15
33	Carbonate hardness as CaCO <sub>3</sub> .....		129	216	211
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		175	251	278
35	Total hardness as CaCO <sub>3</sub> .....		304	467 (458)	489
36	Sum of constituents .....		385	854	845
37	Per cent sodium .....		2.4	37.9	30.3
38	Saturation index at test temperature .....		+0.6	+0.4	+1.0
39	Stability index at test temperature .....		6.8	6.8	9.0
	Remarks:		* Iron oxide	H <sub>2</sub> S odor	H <sub>2</sub> S odor

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ORSAINVILLE (Quebec Co.)	OTTERBURN PARK (Rouville Co.)	OUTREMONT (Ile de Montreal)	PETIT BOIS (Maskinonge Co.)	PETIT METIS (Matane Co.)	PHILIPSBURG (Missisquoi Co.)	No.
Springs	Richelieu River	St. Lawrence River	Wells	McNider Creek and Lake Astle	Lake Champlain	
	Finished water				Raw and finished water	
	At tap				At village tap	
<i>See Charlesbourg</i>	Sept. 5/60 16:21	<i>See Montreal</i>	<i>See Louiseville</i>	<i>See Metis Beach</i>	Sept. 6/60 14:20	1
	.....				.....	2
	22.8				22.5	3
	3.9				5.0	4
	1.5				2.8	5
	7.7				7.3	6
	20				15	7
	2				0.4	8
	.....				.....	9
	.....				.....	10
	.....				.....	11
	.....				.....	12
	.....				.....	13
	146.7				87.9	14
	17.9				10.4	15
	3.9				2.6	16
	0.40				0.05	17
	0.16				0.01	18
	0.0				Trace	19
	0.10				0.08	20
	0.02				0.01	21
	0.14				0.57	22
	3.6				1.8	23
	1.0				0.8	24
	0.3				0.2	25
	0.0				0.0	26
	46.6				34.3	27
	24.8				12.3	28
	5.7				3.2	29
	0.0				0.0	30
	0.2				0.0	31
	1.5				1.6	32
	38.2				28.1	33
	22.6				8.6	34
	60.8				36.7	35
	81.9				50.2	36
	11.0				9.1	37
	-0.9				-1.6	38
	9.5				10.5	39
Phosphate 0.0 ppm						



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		PIERREVILLE (Yamaska Co.)	PLESSISVILLE (Megantic Co.)	POINTE AU PIC (Charlevoix E Co.)	POINTE AUX TREMBLES (Ile de Montreal)
No.	Source(s) .....	St. Francis River	Springs and wells* Springs	Creeks and springs	St. Lawrence River
		Raw and finished water	Raw and finished water	Raw and finished water	
	Sampling point .....	At pumphouse	At pumphouse tap	At town tap	
1	Date of sampling .....	Aug. 1/56	July 27/56	July 21/55	
2	Storage period (days) .....	64:71	188:256	49:210	
3	Sampling temperature, °C. ....	20	15.3	14.4	
4	Test temperature, °C. ....	23.2 (24.5)	25.4 (22)	22.7 (20)	
5	Oxygen consumed by KMnO <sub>4</sub> .....	15	10.5	.....	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	5.2	4.1	1.3	
7	pH .....	7.4 (7.2)	7.8 (7.3)	7.9 (7.4)	
8	Colour .....	30 (45)	5	10	
9	Turbidity .....	5	2	0	
10	Suspended matter, dried at 105° C. ....	6.0	.....	.....	
11	Suspended matter, ignited at 550° C. ....	3.0	.....	.....	
12	Residue on evaporation, dried at 105° C. ....	114	274	83.2	
13	Ignition loss at 550° C. ....	27.6	38.8	9.2	
14	Specific conductance, micromhos at 25° C. ....	171.6	445.5	122.2	
15	Calcium (Ca) .....	23.5	70.1	19.0	
16	Magnesium (Mg) .....	4.0	2.5	0.4	
17	Iron (Fe) Total .....	.....	.....	.....	
18	Dissolved .....	0.05	0.02	0.01	
19	Manganese (Mn) .....	0.0	Trace	0.0	
20	Aluminum (Al) .....	0.15	0.07	0.01	
21	Copper (Cu) .....	.....	Trace	0.03	
22	Zinc (Zn) .....	.....	0.3	0.2	
23	Sodium (Na) .....	5.2	12.8	4.3	
24	Potassium (K) .....	0.9	4.8	0.7	
25	Ammonia (NH <sub>3</sub> ) .....	0.3	0.05	0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....	80.2 (85.4)	181 (186)	57.8	
28	Sulphate (SO <sub>4</sub> ) .....	11.1	24.0	8.4	
29	Chloride (Cl) .....	6.8	27.0	0.5	
30	Fluoride (F) .....	0.0	0.0	0.5	
31	Nitrate (NO <sub>3</sub> ) .....	1.0	12	0.6	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.6	6.5	11	
33	Carbonate hardness as CaCO <sub>3</sub> .....	65.8	148	47.4	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	9.3	36.7	1.7	
35	Total hardness as CaCO <sub>3</sub> .....	75.1	185	49.1	
36	Sum of constituents .....	97.2	249	74.0	
37	Per cent sodium .....	12.7	14.4	15.7	
38	Saturation index at test temperature .....	-0.8	+0.4	-0.5	
39	Stability index at test temperature .....	9.0	7.0	8.9	
Remarks:			* Wells are for emergency supply only		See Montreal

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

POINTE-CLAIRE (Ile de Montreal)	POINTE DU LAC (St. Maurice Co.)	PONTBRIAND (Megantic Co.)	PONT ROUGE (Portneuf Co.)	PORT ALFRED (Chicoutimi Co.)		No.	
Lake St. Louis**	Springs	Springs	Springs	Riviere a Mars			
Finished water	Raw and finished water		Raw and finished water	Raw and finished water			
	At spring		At village tap	At town tap			
Feb. 26/59 11:23	June 6/55 13:98		July 26/55 52:223	July 16/55 41:193	Apr. 21/58 8:15	1	
.....	10.0		14.4	17.2	.....	2	
22.4	24.0 (18)		22.6 (22)	25.2 (19.5)	25.4	3	
5.4	.....		.....	.....	9.3	4	
1.5	2.7		1.7	1.4	2.0	5	
7.5	6.6 (5.9)		7.1 (6.6)	7.3 (7.3)	7.0	6	
5	15		10	20 (40)	55	7	
1*	3		0	0.3	2	8	
.....	2.6		.....	.....	.....	9	
.....	0.6		.....	.....	.....	10	
99.6	25.6		44.4	41.2	57.2	11	
76.0	2.0		11.2	17.2	26.0	12	
153	28.8		50.99	41.46	39.8	13	
20.9	2.5		5.4	3.7	5.1	14	
3.0	0.5		1.0	1.5	0.9	15	
0.04	.....		.....	.....	.....	16	
0.02	0.53		0.05	0.18	0.18	17	
0.01	0.0	<i>See St. Antoine de Pontbriand</i>	0.04	0.0	0.0	18	
0.03	0.0		0.39	0.11	0.0	0.0	19
0.0	0.0		0.17	0.0	0.0	0.0	20
0.05	.....		0.0	.....	.....	.....	21
3.3	1.0		0.0	.....	.....	.....	22
0.7	0.7		1.5	1.2	0.9	0.9	23
0.0	0.0		0.8	0.3	0.3	0.3	24
0.0	0.0		0.0	0.0	0.1	0.1	25
0.0	0.0		0.0 (0)	0.0 (0)	0.0	0.0	26
31.7	6.6		12.4 (17.1)	17.1 (22)	12.7	12.7	27
35.6	4.0	4.8	2.2	3.8	3.8	28	
2.2	1.3	1.4	1.1	1.7	1.7	29	
0.0	0.0	0.0	0.0	0.0	0.0	30	
0.2	0.4	6.0	1.6	1.0	1.0	31	
5	9.5	11	8.5	7.3	7.3	32	
26.0	5.4	10.2	14	10.4	10.4	33	
38.5	2.6	7.4	1.4	6.0	6.0	34	
64.5	8.0	17.6	15.4	16.4	16.4	35	
87.4	23.6	39.0	28.8	27.5	27.5	36	
9.8	17.7	13.3	13.5	10.1	10.1	37	
-1.2	-3.6	-2.5	-2.3	-2.6	-2.6	38	
9.9	14	12	12	12	12	39	
* Partly colloidal aluminium	Lithium = 0.0 ppm						
** Presumably mainly Ottawa River water							

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		PORT MENIER Ile d'Anticosti (Saguenay Co.)	PORTNEUF (Portneuf Co.)	PREVILLE (Chambly Co.)	PRICE (Matane Co.)
No.	Source(s) .....	Wells and Lake St. George	Springs	St. Lawrence River	Lake Fortin
		Raw and finished water	Raw and finished water		Raw and finished water
Sampling point .....			At village tap		At village tap
1	Date of sampling .....	June 27/58	June 15/55		July 7/55
2	Storage period (days) .....	14:21	19:153		42:178
3	Sampling temperature, °C. ....	10.0	10.0		14.0
4	Test temperature, °C. ....	25.2	27.7 (21)		28.2 (23)
5	Oxygen consumed by KMnO <sub>4</sub> .....	11.2			
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.0	0.6		1.8
7	pH .....	8.4	8.0 (7.3)		8.2 (7.9)
8	Colour .....	40	10		15
9	Turbidity .....	1	7		0.3
10	Suspended matter, dried at 105° C. ....		7.1		
11	Suspended matter, ignited at 550° C. ....		3.2		
12	Residue on evaporation, dried at 105° C. ....	188	77.6		181
13	Ignition loss at 550° C. ....	42.8	14.8		17.2
14	Specific conductance, micromhos at 25° C. ....	286.5	87.71		305.2
15	Calcium (Ca) .....	50.5	11.3		47.5
16	Magnesium (Mg) .....	3.3	1.9		6.4
17	Iron (Fe) Total .....				
18	Dissolved .....	0.03	0.04		0.0
19	Manganese (Mn) .....	0.0	Trace	For 1955 and 1958 analyses see	0.0
20	Aluminum (Al) .....	0.0	0.03	St. Lambert; in	0.06
21	Copper (Cu) .....	0.0	0.02	1959 supplied from	0.0
22	Zinc (Zn) .....	0.0		Jacques Cartier	
23	Sodium (Na) .....	4.9	2.1		7.0
24	Potassium (K) .....	0.3	0.6		0.6
25	Ammonia (NH <sub>3</sub> ) .....	0.05	0.0		0.0
26	Carbonate (CO <sub>3</sub> ) .....	1.9	0.0 (0)		0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	159	38.2 (45.9)		181
28	Sulphate (SO <sub>4</sub> ) .....	4.0	7.6		9.8
29	Chloride (Cl) .....	6.8	0.4		1.9
30	Fluoride (F) .....	0.0	0.0		0.05
31	Nitrate (NO <sub>3</sub> ) .....	0.3	2.4		0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.1	16		8.2
33	Carbonate hardness as CaCO <sub>3</sub> .....	134	31.3		145
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	5.6	4.7		0.0
35	Total hardness as CaCO <sub>3</sub> .....	140	36.0		145
36	Sum of constituents .....	154	60.8		172
37	Per cent sodium .....	7.1	11.0		9.4
38	Saturation index at test temperature .....	+0.8	-0.7		+0.7
39	Stability index at test temperature .....	6.8	9.4		6.8
Remarks:			Lithium - 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

PRINCEVILLE (Arthabaska Co.)	QUEBEC (Quebec Co.)					No.
Bulstrode River	St. Charles River					
Raw and finished water	Finished water *					
At village tap	At city hall tap**					
July 27/56	1953	1954	1955	1956	1957	
188:249						1
17.2	11.1	10.0	10.6	9.4	10.0	2
25.4 (22.5)						3
13						4
1.6	6.7	6.7	8.1	9.9	8.9	5
7.8 (7.2)	6.6	6.6	6.6	6.5	6.5	6
20	26	35	29	30	35	7
5	2					8
4.9						9
1.6						10
85.2	44					11
15.6	9					12
129.5						13
21.6						14
1.7						15
.....	0.3	0.25	0.3	0.25	0.2	16
0.02						17
0.0						18
0.10						19
Slight trace						20
0.3						21
1.3						22
0.7						23
0.1						24
0.0	0.0	0.0	0.0	0.0	0.0	25
61.0	15.8	12.2	15.8	14.6	13.4	26
9.1	5.4					27
3.1	3.6					28
0.0	0.15					29
0.6						30
5.0	11					31
50.0	13	10	13	12	11	32
10.9	5	7	5	5	6	33
60.9	18	17	18	17	17	34
73.5						35
4.3						36
-0.6						37
9.0						38
						39
	Dissolved oxygen	9.5	9.0	9.7	9.8	

\* See also Water Survey Report No. 12, Citadel, Quebec.  
 \*\* Yearly average figures supplied by Department of Public Health, City of Quebec.

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		QUEBEC (concl'd) (Quebec Co.)			
		St. Charles River			
Source(s) .....		Finished water*			
		City hall**		At city tap	At Y.M.C.A. swimming pool
No.	Sampling point .....	1958	1959	July 25/55	Jan. 1957
1	Date of sampling .....	1958	1959	July 25/55	Jan. 1957
2	Storage period (days) .....			45:60	
3	Sampling temperature, °C. ....	10.0	10.5	21.1	
4	Test temperature, °C. ....			22.8 (26.5)	23.1
5	Oxygen consumed by KMnO <sub>4</sub> .....				
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	8.9	13	2.4	11
7	pH .....	6.5	6.4	6.9 (7.0)	6.3
8	Colour .....	34	32	20	20
9	Turbidity .....		2.5	2	
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....		40	39.2	
13	Ignition loss at 550° C. ....		16	15.6	
14	Specific conductance, micromhos at 25° C. ....			40.2	49.4
15	Calcium (Ca) .....			5.1	4.5
16	Magnesium (Mg) .....			0.1	1.1
17	Iron (Fe) Total .....	0.2	0.27		
18	Dissolved .....			0.20	0.35
19	Manganese (Mn) .....			0.0	
20	Aluminum (Al) .....			0.05	
21	Copper (Cu) .....		0.15	0.02	
22	Zinc (Zn) .....			0.1	
23	Sodium (Na) .....			1.4	1.7
24	Potassium (K) .....			0.5	0.9
25	Ammonia (NH <sub>3</sub> ) .....			0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	13.4	15.8	11.2 (12.2)	13.5
28	Sulphate (SO <sub>4</sub> ) .....		4.5	4.3	5.7
29	Chloride (Cl) .....		3.0	2.0	2.2
30	Fluoride (F) .....		0.15	0.05	
31	Nitrate (NO <sub>3</sub> ) .....		1.2	1.2	1.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....		7	5.7	8.7
33	Carbonate hardness as CaCO <sub>3</sub> .....	11	13	9.2 (10.0)	11.1
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	7	6	3.9	4.6
35	Total hardness as CaCO <sub>3</sub> .....	18	19	13.1	15.7
36	Sum of constituents .....			26.2	33.5
37	Per cent sodium .....			17.4	17.4
38	Saturation index at test temperature .....			-2.8	-3.4
39	Stability index at test temperature .....			12.5	13.1
Remarks:		Dissolved oxygen: 10.0 ppm * See also Water Survey Report No. 12: "Citadel, Quebec". ** Yearly average figures supplied by Department of Public Health, City of Quebec.			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

QUEBEC WEST (Quebec Co.)	RAWDON* (Montcalm Co.)	REPENTIGNY (L'Assomption Co.)	RICHELIEU (Rouville Co.)	RICHMOND (Richmond Co.)	RIMOUSKI (Rimouski Co.)	No.
St. Charles River	Lake Vail	L'Assomption River	Richelieu River	Brompton Lake	Three lakes	
	Raw and finished water	Finished water	Finished water*	Finished water	Raw and finished water	
		At tap	At village tap	At town tap	At town tap	
	Feb. 22/58 10:17	Oct. 5/60 35:41	Aug. 15/56 226:349	Aug. 2/56 193:254	July 8/55 12:71	1
	.....	12.2	22.5	18.0	19.2	2
	22.7	22.5	24.1 (24)	23.2 (22)	27.4 (29)	3
	7.7	7.6	.....	13	.....	4
	2.6	0.8	1.0	3.7	1.4	5
	6.7	7.9	7.9 (7.9)	7.0 (7.0)	7.8 (7.5)	6
	50	25	10	30 (30)	10	7
	0	4	0	0.8	0.9	8
	.....	.....	.....	.....	.....	9
	.....	.....	.....	.....	.....	10
	40.8	.....	87.6	49.2	74.4	11
	25.2	.....	35.3	19.6	14.4	12
	31.5	115.2	118.5	63.3	110.1	13
	2.4	10.4	15.1	5.8	13.3	14
	1.5	2.7	2.9	3.1	1.9	15
	.....	0.45	.....	.....	.....	16
	0.12	0.0	0.02	0.05	0.01	17
See Quebec	Trace	Trace	0.0	0.01	Trace	18
	0.0	Trace	0.0	0.13	0.05	19
	0.0	0.01	.....	Trace	0.0	20
	0.3	0.02	.....	0.05	.....	21
	0.8	7.1	0.05	0.05	.....	22
	0.3	1.2	2.2	0.7	5.4	23
	0.0	0.3	0.8	0.3	0.7	24
	0.0	0.0	.....	0.2	0.0	25
	6.1	39.6	0.0	0.0 (0)	0.0 (0)	26
	6.4	10.0	47.7	21.8 (30.1)	56.1 (61)	27
	0.7	9.0	12.8	7.6	3.8	28
	0.0	0.0	2.4	2.3	2.3	29
	0.8	0.0	0.0	0.0	0.0	30
	2.4	4.5	3.6	0.8	0.8	31
	5.0	32.5	3.2	3.2	3.9	32
	7.2	4.6	39.2	17.9	41.0	33
	12.2	37.1	10.4	9.3	0.0	34
	15.7	64.5	49.6	27.2	41.0	35
	11.6	28.6	63.4	35.0	59.8	36
	-3.6	-1.0	8.6	5.0	21.8	37
	14	9.9	-0.7	-2.4	-0.7	38
			9.3	12	9.2	39
	* See also Water Survey Report No. 2.	Phosphate 0.0 ppm				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		RIVERBEND (Lac St. Jean W Co.)	RIVIERE A PIERRE (Portneuf Co.)	RIVIERE DES PRAIRIES (Ile de Montreal)	RIVIERE DU LOUP (Riviere du Loup Co.)
Source(s) .....		Lake St. John	Lac de la Montagne and spring	St. Lawrence River	Hickson Lake and Green River
No.			Raw and finished water		Raw and finished water
Sampling point .....					At city tap
1	Date of sampling .....		Apr. 16/58		July 6/55
2	Storage period (days) .....		15:20		8:15 <sup>4</sup>
3	Sampling temperature, °C. ....		17.8		19.2
4	Test temperature, °C. ....		24.6		27.4 (25)
5	Oxygen consumed by KMnO <sub>4</sub> .....		9.0		.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		5.5		3.3
7	pH .....		6.1		7.0 (6.9)
8	Colour .....		65		25
9	Turbidity .....		0.8		0.9
10	Suspended matter, dried at 105° C. ....		.....		.....
11	Suspended matter, ignited at 550° C. ....		.....		.....
12	Residue on evaporation, dried at 105° C. ....		50.4		49.2
13	Ignition loss at 550° C. ....		24.0		16.8
14	Specific conductance, micromhos at 25° C. ....		28.8		60.7
15	Calcium (Ca) .....		2.4		7.8
16	Magnesium (Mg) .....		0.8		0.7
17	Iron (Fe) Total .....		.....		.....
18	Dissolved .....		0.33		0.03
19	Manganese (Mn) .....	See	0.0	See	0.01
20	Aluminum (Al) .....	St. Joseph	0.0	Montreal	0.05
21	Copper (Cu) .....	d'Alma	0.0		0.11
22	Zinc (Zn) .....		0.05		.....
23	Sodium (Na) .....		0.8		2.6
24	Potassium (K) .....		0.4		0.6
25	Ammonia (NH <sub>3</sub> ) .....		0.3		0.2
26	Carbonate (CO <sub>3</sub> ) .....		0.0		0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....		4.3		20.7 (24.4)
28	Sulphate (SO <sub>4</sub> ) .....		6.6		6.0
29	Chloride (Cl) .....		1.0		3.5
30	Fluoride (F) .....		0.0		0.0
31	Nitrate (NO <sub>3</sub> ) .....		0.3		4.0
32	Silica (SiO <sub>2</sub> ), colorimetric .....		6.4		3.5
33	Carbonate hardness as CaCO <sub>3</sub> .....		3.5		17.0 (20)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		5.8		5.3
35	Total hardness as CaCO <sub>3</sub> .....		9.3		22.3
36	Sum of constituents .....		21.5		39.1
37	Per cent sodium .....		13.4		17.1
38	Saturation index at test temperature .....		-4.3		-2.2
39	Stability index at test temperature .....		15		11
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

RIVIERE DU LOUP EN HAUT (Maskinonge Co.)	RIVIERE DU MOULIN (Chicoutimi Co.)	RIVIERE DU SUD (Montmagny Co.)	RIVIERE PENTECOTE (Saguenay Co.)	ROBERTSONVILLE (Megantic Co.)		No.
Wells	Chicoutimi River	La Blague and Moregeau Rivers	Ruerin springs	Springs and wells		
			Finished water	Raw and finished water		
				At village tap		
			Aug. 1958	July 26/56	Aug. 16/60	1
			.....	189:250	9:16	2
			.....	13.9	.....	3
			21.6	25.6 (18)	24.2	4
			17	11	.....	5
			5.5	2.2	6.0	6
			6.3	7.5 (7.2)	7.2	7
			150	10	10	8
			3	2	0	9
			.....	.....	.....	10
			.....	.....	.....	11
			57.2	64.8	.....	12
			31.6	16.0	.....	13
			38.1	90.8	119.2	14
			1.9	12.7	18.0	15
			1.0	1.7	3.1	16
			.....	.....	0.11	17
			0.18	0.08	0.04	18
			0.0	0.02	0.20	19
			0.0	0.07	0.0	20
			0.0	0.0	0.0	21
			0.3	2.5	0.70	22
			3.5	0.8	1.1	23
			0.4	0.3	0.4	24
			.....	0.1	0.0	25
			0.0	0.0	0.0	26
			6.7	44.6	61.1	27
			3.0	6.6	8.5	28
			4.3	0.6	0.6	29
			0.0	0.0	0.0	30
			0.6	1.4	0.8	31
			7.3	5.0	5.0	32
			5.5	36.6	50.1	33
			3.4	2.1	7.6	34
			8.9	38.7	57.7	35
			25.8	53.7	68.3	36
			43.9	3.8	3.9	37
			-3.9	-1.2	-1.2	38
			14	9.9	9.6	39
					Phosphate 0.0 ppm	
See Louiseville	See Chicoutimi	See St. Pierre de la Riviere du Sud and St. Thomas de la Pointe a la Caille				



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ROBERVAL (Lac St. Jean W. Co.)	ROCK ISLAND (Stanstead Co.)		ROUGEMONT (Rouville Co.)
Source(s) .....		Ouellet Creek	Holland Pond (Spring-fed lake)		Spring and wells
No.		Raw and finished water	Raw and finished water		Raw and finished water*
Sampling point .....		At city tap	At town tap		At village tap
1	Date of sampling .....	July 18/55	Aug. 7/56	January 1959*	Aug. 15/56
2	Storage period (days) .....	41:199	192:262		187:349
3	Sampling temperature, °C. ....	14.4	18.9		15.6
4	Test temperature, °C. ....	24.8 (21)	21.6 (26)	24.4	23.0
5	Oxygen consumed by KMnO <sub>4</sub> .....		11	6.2	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	7.3	1.3	1.5	1.5
7	pH .....	6.8 (7.5)	7.2 (7.1)	7.0	7.7 (7.9)
8	Colour .....	120 (150)	20	25	10
9	Turbidity .....	0.2	0	0	0
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	68.0	48.4	41.2	114
13	Ignition loss at 550° C. ....	31.6	36.8	23.6	8.8
14	Specific conductance, micromhos at 25° C. ....	62.0	39.46	38.2	169.5
15	Calcium (Ca) .....	11.2	5.9	4.3	18.3
16	Magnesium (Mg) .....	0.7	0.2	0.8	2.5
17	Iron (Fe) Total .....				0.03
18	Dissolved .....	0.11	0.05	0.08	0.0
19	Manganese (Mn) .....	0.0	9.0	0.0	Trace
20	Aluminum (Al) .....	0.0	0.09	0.0	0.0
21	Copper (Cu) .....	0.0	0.0	0.0	
22	Zinc (Zn) .....		0.1	0.0	0.5
23	Sodium (Na) .....	1.0	1.2	1.7	9.7
24	Potassium (K) .....	0.3	0.5	0.3	0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.6	0.1	0.5	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	29.0 (34.2)	11.7 (7.6)	9.4	45.6 (52.8)
28	Sulphate (SO <sub>4</sub> ) .....	4.6	6.4	6.4	37.9
29	Chloride (Cl) .....	0.9	0.5	1.5	0.9
30	Fluoride (F) .....	0.0	0.0	0.4*	0.0
31	Nitrate (NO <sub>3</sub> ) .....	2.4	1.2	0.3	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	5.8	4.9	3.7	12
33	Carbonate hardness as CaCO <sub>3</sub> .....	23.8	9.6	7.7	31.4
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	7.0	5.9	6.3	0.0
35	Total hardness as CaCO <sub>3</sub> .....	30.8	15.5	14.0	31.4
36	Sum of constituents .....	41.3	26.9	24.1	105
37	Per cent sodium .....	6.5	13.2	20.2	26.8
38	Saturation index at test temperature .....	-2.1	-2.4	-2.8	-0.9
39	Stability index at test temperature .....	11	12	13	9.5
Remarks:			* Now chlorinated and fluoridated	* About 50% spring water	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. AGAPITVILLE (Lotbiniere Co.)	ST. ALBAN (Portneuf Co.)	ST. ALEXIS DE LA GRANDE BAIE (Chicoutimi Co.)	ST. AMBROISE (Chicoutimi Co.)	ST. AMBROISE (Quebec Co.)	ST. ANICET (Chicoutimi Co.)	
Well	Lake Veilleux*	Riviere a Mars	Springs	Springs and creek	Creek (Lake Gravel)	No.
Raw and finished water	Raw and finished water		Raw and finished water			
At village tap			At village tap			
July 24/56 132:242 21.1 26.0 (24) 11 4.9 7.8 (7.6) 10 0	May 4/58 5:15 26.6 8.0 1.1 6.5 50 0.3		Feb. 25/58 15:22 3.1 23.8 1.9 2.8 7.0 5 0			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
321 33.6 507.5 76.2 7.6	32.4 8.4 22.2 1.9 0.4		54.8 16.8 61.2 4.3 0.7			
Trace 0.02 0.25 0.06 0.05 16.5 1.7 0.05 0.0 (0) 197 (176) 52.3 32.2 0.0 4.0 12 161 60.4 221 300 13.7 +0.5 6.8	0.07 0.02 0.04 0.0 0.2 0.7 0.3 0.1 0.0 2.2 5.1 0.4 0.0 0.1 3.6 1.8 4.6 6.4 13.9 16.9 -4.2 15	See Port Alfred	0.02 Trace 0.0 Trace 0.02 5.7 0.7 0.05 0.0 17.2 3.4 7.3 0.0 0.6 11 13.6 0.0 13.6 42.4 45.7 -2.6 12	See Loretteville	See Bagorville	
	* Lake level high					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	STE. ANNE DE BEAUPRE (Montmorency No. 1 Co.)	STE. ANNE DE LA PERADE (Champlain Co.)	STE. ANNE DE LA POCATIERE (Kamouraska Co.)	
	Source(s) .....	Springs	Cossette Creek	Lake Bourgelas and springs	Springs
	Sampling point .....	At village tap	At pumphouse	At college tap	At reservoir
1	Date of sampling .....	July 22/55	June 14/55	July 6/55	July 9/59
2	Storage period (days) .....	49:113	16:145	8:154	6:18
3	Sampling temperature, °C. ....	12.8	12.8	15.6	.....
4	Test temperature, °C. ....	22.3 (20)	26.6 (20)	27.4 (24)	25.5
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	.....	.....	2.9
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.3	2.4	2.0	5.0
7	pH .....	7.4 (6.7)	6.8 (6.7)	7.5 (7.5)	7.2
8	Colour .....	10	45	5	10
9	Turbidity .....	12	5	25	2
10	Suspended matter, dried at 105° C. ....	9.5	10.0	20	.....
11	Suspended matter, ignited at 550° C. ....	6.3	8.0	14	.....
12	Residue on evaporation, dried at 105° C. ....	79.2	43.2	58.0	72.8
13	Ignition loss at 550° C. ....	15.6	12.8	12.0	9.2
14	Specific conductance, micromhos at 25° C. ....	123.6	33.64	88.1	115.5
15	Calcium (Ca) .....	12.8	3.6	12.8	8.1
16	Magnesium (Mg) .....	2.0	0.4	0.7	2.5
17	Iron (Fe) Total .....	.....	.....	1.2	0.13
18	Dissolved .....	0.27	0.34	0.0	0.04
19	Manganese (Mn) .....	0.04	0.0	Trace	0.0
20	Aluminum (Al) .....	0.07	0.12	0.0	0.09
21	Copper (Cu) .....	0.15	0.05	Trace	0.0
22	Zinc (Zn) .....	0.05	.....	.....	0.0
23	Sodium (Na) .....	6.7	1.5	2.8	11.4
24	Potassium (K) .....	2.0	0.5	0.8	1.3
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.2	0.0	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	47.8 (51.2)	9.6 (12.2)	39.5 (43.9)	50.8
28	Sulphate (SO <sub>4</sub> ) .....	13.5	4.9	4.5	11.7
29	Chloride (Cl) .....	0.7	0.6	0.8	2.0
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	6.0	1.2	1.6	0.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	11	7.7	2.3	4.7
33	Carbonate hardness as CaCO <sub>3</sub> .....	39.2	7.9	32.4	30.5
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	1.0	2.7	2.4	0.0
35	Total hardness as CaCO <sub>3</sub> .....	40.2	10.6	34.8	30.5
36	Sum of constituents .....	78.6	25.2	45.8	67.5
37	Per cent sodium .....	24.9	20.5	14.5	43.1
38	Saturation index at test temperature .....	-1.3	-2.0	-1.2	-1.6
39	Stability index at test temperature .....	10	13	9.9	10.4
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

STE. ANNE DES MONTS (Gaspe W. Co.)	STE. ANNE DE VARENNES (Vercheres Co.)	ST. ANTOINE DE PONTBRIAND (Megantic Co.)	ST. BASILE* (Portneuf Co.)	ST. BASILE LE GRAND (Chambly Co.)		ST. BENOIT LABRE (Beauce Co.)	No.	
Little Ste. Anne River	St. Lawrence River	Springs	Springs*	Springs	Wells	Lake Poulin*		
Raw and finished water		Raw and finished water	Raw and finished water	Raw and finished water		Raw and finished water		
At village tap			At village tap	At village tap	At tap	At village tap		
July 11/55		Dec. 13/58	June 15/55	Aug. 18/56	Aug. 16/60	Feb. 24/58	1	
17:157		13:31	19:153	231:253	9:16	16:23	2	
13.5		4.4	11.6	20.0	.....	10.0	3	
25.5 (17)		20.9	27.7 (19)	24.5 (26)	24.2	23.8	4	
.....		7.2	.....	1.7	.....	3.0	5	
0.0		3.0	0.5	3.0	1.5	1.8	6	
8.4 (7.8)		7.5	7.5 (6.7)	7.8 (7.4)	8.0	7.1	7	
0		0	0	5	10	10	8	
0.9		0	.....	8	2	0.3	9	
.....		.....	.....	17	.....	.....	10	
.....		.....	.....	12	.....	.....	11	
172		95.2	34	137	.....	46.8	12	
20.4		14.0	12	28.6	.....	20.0	13	
300.0		144.5	28.29	201.0	311.1	57.8	14	
46.3		22.0	3.0	23.3	21.7	6.2	15	
6.6		2.4	0.5	7.1	12.9	1.7	16	
.....		.....	.....	.....	0.22	.....	17	
0.02	See Varennnes	Trace	0.04	Trace	0.04	Trace	18	
0.0		0.0	0.0	0.01	0.0	Trace	19	
0.03		0.0	0.05	Trace	0.02	0.0	20	
0.0		0.0	Trace	Trace	0.0	0.0	21	
.....		0.0	.....	.....	5.0	0.05	0.08	22
5.2		1.4	0.9	2.4	2.4	21.4	0.9	23
0.6		0.7	0.5	1.4	1.4	2.0	0.2	24
0.0		0.0	0.0	0.0	0.0	0.0	0.05	25
2.4 (0)		0.0	0.0	0.0 (0)	0.0 (0)	0.0	0.0	26
161 (171)		59.9	9.0	78.1 (87.8)	78.1 (87.8)	92.8	14.3	27
7.4	12.4	1.4	33.8	33.8	71.4	10.5	28	
6.7	2.5	0.1	1.7	1.7	3.6	1.4	29	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	
0.8	3.0	2.4	1.0	1.0	4.0	0.6	31	
6.4	6.1	9.0	11	11	12	1.7	32	
137 (133)	49.1	7.4	64.1	64.1	76.1	11.7	33	
6.1 (6.7)	15.7	2.1	23.2	23.2	31.2	10.8	34	
143 (140)	64.8	9.5	87.3	87.3	107.3	22.5	35	
162	80.0	22.4	126	126	185	30.4	36	
2.1	4.4	16.0	5.1	5.1	29.7	7.8	37	
+0.8	-0.9	-2.4	-0.7	-0.7	-0.2	-2.4	38	
6.8	9.3	12	9.0	9.0	7.8	12	39	
			* Also St. Basile South		Phosphate: 0.04 ppm	* This supply is for a part of the parish only. For the other part, see St. Georges (Beauce Co.)		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. BONIFACE DE SHAWINIGAN (St. Maurice Co.)	ST. BRUNO DE MONTARVILLE (Chambly Co.)	ST. CASIMIR (Portneuf Co.)	STE. CATHERINE (Portneuf Co.)
Source(s) .....		Well	Factory Lake	Lake Chalifaux and Thibault Creek	Springs
No.		Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water
Sampling point .....			At town tap	At village tap	At village tap
1	Date of sampling .....	Dec. 12/58	Aug. 18/56	June 14/55	July 25/55
2	Storage period (days) .....	18:31	231:353	16:145	.....
3	Sampling temperature, °C. ....	7.2	20.0	11.6	18.9
4	Test temperature, °C. ....	28.3	26.0	26.6 (18)	22.0 (23)
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	.....	.....	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	20	2.3	4.2	1.9
7	pH .....	6.4	7.6 (7.6)	6.4 (6.2)	7.3 (7.2)
8	Colour .....	5	10	40	5
9	Turbidity .....	0	0	3	0
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....	148	80.0	33.6	46.0
13	Ignition loss at 550° C. ....	48.4	53.6	13.6	8.4
14	Specific conductance, micromhos at 25° C. ....	208.7	26.4	28.79	53.94
15	Calcium (Ca) .....	16.2	12.7	3.4	4.9
16	Magnesium (Mg) .....	4.1	4.9	0.4	1.4
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.0	0.02	0.22	0.04
19	Manganese (Mn) .....	0.02	Trace	Trace	0.01
20	Aluminum (Al) .....	0.01	Trace	0.17	0.35
21	Copper (Cu) .....	Trace	0.3	0.05	0.0
22	Zinc (Zn) .....	0.05	.....	.....	0.06
23	Sodium (Na) .....	6.9	1.8	0.7	1.8
24	Potassium (K) .....	13.4	1.0	0.4	0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.0	.....	0.10	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	35.2	46.7 (52.8)	6.8 (12.2)	17.9 (19.5)
28	Sulphate (SO <sub>4</sub> ) .....	19.6	16.3	4.5	3.9
29	Chloride (Cl) .....	11.8	1.6	0.2	1.2
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	28	0.5	2.4	6.0
32	Silica (SiO <sub>2</sub> ), colorimetric .....	7.2	2.9	3.3	14
33	Carbonate hardness as CaCO <sub>3</sub> .....	28.9	38.3	5.6	14.7
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	28.4	13.5	4.5	3.3
35	Total hardness as CaCO <sub>3</sub> .....	57.3	51.8	10.1	18.0
36	Sum of constituents .....	125	65.0	19.2	43.1
37	Per cent sodium .....	16.7	6.8	11.2	15.9
38	Saturation index at test temperature .....	-2.3	-1.2	-3.6	-2.2
39	Stability index at test temperature .....	11	9.9	14	12
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

STE. CATHERINE DE SIENNE (St. Maurice Co.)	ST. CELESTIN (Nicolet Co.)	ST. CESAIRE (Rouville Co.)	ST. CHRYSOSTOME (Chateauguay Co.)		STE. CLAIRE (Dorchester Co.)	No.
Artesian well	Springs	Springs	English River	Well	Artesian wells	
	Raw and finished water	Raw and finished water	Raw and finished water		Raw and finished water	
	At tap	At village tap	At village tap	At village tap	At well near reservoir	
See Three Rivers Parish	Aug. 24/56	Aug. 15/56	Aug. 20/56	Aug. 25/60	June 23/58	1
	232:368	226:349	230:351	27:32	11:22	2
	18.3	16.1	20.0	10.0	10.0	3
	23.8	22.0	24.3 (24)	23.0	26.0	4
	3.0	1.6	5.0	3.8	1.6	5
	1.1	1.3	1.5	2.8	1.8	6
	8.4	8.2 (7.9)	8.0 (7.5)	8.1	8.2	7
	3	0	20	5	0	8
	0	0	6	0.4	0	9
			9.8			10
			5.2			11
			122		299	12
	278	175	37.6		26.0	13
	41.6	16.8	182.7	1,125	442.8	14
	455.9	269.3	22.0	74.1	70.7	15
	71.1	39.2	7.8	22.9	11.2	16
	10.0	6.9		0.11		17
		Trace	Trace	0.01	0.01	18
	0.02		0.02	0.02	Trace	19
	0.0	0.0	Trace	0.10	0.08	20
	0.06	0.04	0.0	0.0	0.0	21
		0.3	0.0	0.18	0.05	22
		4.0	2.2	123	6.2	23
	8.1	1.6	1.8	18.0	0.8	24
	3.4	0.0	0.05	0.2	0.05	25
		0.0 (0)	0.0 (0)	0.0	0.0	26
	2.8	130 (136)	94.4 (100)	207	0.0	27
	175	29.1	10.9	186	195	28
	66.4	2.3	2.9	153	74.7	29
	16.7	0.0	0.0	0.2	1.1	30
	0.0	0.6	1.2	3.2	0.0	31
	1.2	8.8	3.1	7.5	0.4	32
	19	106	77.4	169	14	33
	148	20.0	9.6	110	160	34
	70.4	126	87.0	279	62.3	35
	218	157	98.5	689	222	36
	282	6.3	5.1	46.8	276	37
	7.3	+0.4	-2.0	+0.6	5.7	38
	+1.0	7.4	8.4	6.9	+0.8	39
6.4				6.6		
				Phosphate 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	STE. CLAIRE (concl'd) (Dorchester Co.)	ST. COEUR DE MARIE (Lac St. Jean E Co.)	ST. COME DE KENNEBEC (Beauce Co.)	STE. CROIX (Lotbiniere Co.)
	Source(s) .....	Artesian wells	Lac de l'Aqueduc	Springs - Bouchard system*	Wells and Springs
	Sampling point .....	At reservoir	At village tap	At tap	At village tap
1	Date of sampling .....	June 23/58	July 19/55	July 26/56	Aug. 23/56
2	Storage period (days) .....	11:12	50:203	189:250	230:364
3	Sampling temperature, °C. ....	.....	13.3	17.2	15.0
4	Test temperature, °C. ....	26.0	23.3 (22)	24.8 (19)	23.9
5	Oxygen consumed by KMnO <sub>4</sub> .....	1.6	.....	9.5	4.2
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.6	2.2	1.6	3.1
7	pH .....	7.9	8.1 (7.9)	8.0 (7.2)	8.1
8	Colour .....	5	20	5	10
9	Turbidity .....	0	0.3	6	0
10	Suspended matter, dried at 105° C. ....	.....	.....	10.3	.....
11	Suspended matter, ignited at 550° C. ....	.....	.....	5.3	.....
12	Residue on evaporation, dried at 105° C. ....	210	820	117	287
13	Ignition loss at 550° C. ....	22.4	29.6	15.6	33.6
14	Specific conductance, micromhos at 25° C. ....	311.5	1,540	164.0	447.1
15	Calcium (Ca) .....	68.0	32.9	23.7	87.9
16	Magnesium (Mg) .....	7.3	16.4	3.6	4.6
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.04	0.03	0.0	Trace
19	Manganese (Mn) .....	Trace	0.0	0.01	Trace
20	Aluminum (Al) .....	0.09	0.26	Trace	0.06
21	Copper (Cu) .....	0.0	Trace	Slight	Trace
22	Zinc (Zn) .....	0.0	0.05	0.6	0.05
23	Sodium (Na) .....	4.9	230	3.9	1.6
24	Potassium (K) .....	0.6	7.2	0.6	0.7
25	Ammonia (NH <sub>3</sub> ) .....	0.05	0.0	0.05	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0 (0)	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	140	169 (166)	95.6 (103)	239
28	Sulphate (SO <sub>4</sub> ) .....	41.1	67.0	4.6	46.3
29	Chloride (Cl) .....	1.3	344	0.6	1.1
30	Fluoride (F) .....	0.0	0.25	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.5	4.0	0.8	1.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	13	13	13	6.1
33	Carbonate hardness as CaCO <sub>3</sub> .....	115	138 (136)	73.9	196
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	34.9	0.0	0.0	42.1
35	Total hardness as CaCO <sub>3</sub> .....	150	59.2	73.9	238
36	Sum of constituents .....	187	797	97.8	268
37	Per cent sodium .....	6.6	76.2	10.1	1.4
38	Saturation index at test temperature .....	+0.2	+0.2	-0.1	+0.9
39	Stability index at test temperature .....	7.5	7.7	8.2	6.3
	Remarks:			*Three other private systems using springs	

TABLE III (Continued)  
**Chemical Analyses of Muncipiial Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

STE. CROIX (concl'd) (Lotbiniere Co.)	ST. CUTHBERT (Berthier Co.)	ST. CYRILLE (Drummond Co.)	ST. DAMASE (St. Hyacinthe Co.)	ST. DAMIEN DE BUCKLAND (Bellechasse Co.)	ST. DAVID DE L'AUBE RIVIERE (Levis Co.)	No.
Wells and springs	Chicot River	Wells	Lac Montagne de Rougemont *	Spring	St. Lawrence River	
Springs	Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water		
Raw and finished water						
At village tap	At village tap	At village tap	At village tap	At tap, home of A. LeRoux		
Oct. 25/58 10:36	June 7/55 6:84	Aug. 1/56 174:226	Apr. 11/58 11:20	Jan. 29/58 8:15		1
.....	11.7	14.4	.....	7.1		2
22.6	23.4 (22)	22.8 (23)	23.3	22.8		3
.....	.....	9.2	2.9	1.9		4
4.1	2.4	3.6	2.3	6.8		5
8.1	7.0 (6.9)	8.1 (7.8)	7.1	6.9		6
10	90 (120)	5	5	0		7
0	40	0	0.4	0		8
.....	34	.....	.....	.....		9
.....	25	.....	.....	.....		10
316	51.2	272	68.4	69.2		11
13.6	24.8	29.6	22.8	19.2		12
510.9	38.7	449.7	77.4	86.5		13
103	4.1	23.0	7.8	11.8		14
6.6	0.9	11.3	3.1	1.4		15
.....	.....	0.0	.....	.....		16
0.03	0.32	0.0	0.01	0.05		17
0.0	0.0	0.01	0.0	0.01		18
0.06	0.34	0.28	0.05	0.02		19
0.25	0.0	0.0	Trace	0.02		20
0.2	.....	0.3	0.15	0.0		21
1.8	1.9	59.0	0.9	1.9		22
0.7	0.4	4.7	0.2	0.3		23
0.05	0.1	0.2	0.05	0.0		24
0.0	0.0 (0)	0.0 (0)	0.0	0.0		25
307	14.3 (17.1)	268 (284)	17.7	31.5		26
30.6	4.3	2.1	16.9	6.4		27
0.8	1.1	11.4	0.9	1.7		28
0.0	0.0	0.4	0.0	0.0		29
0.1	1.2	6.0	1.5	5.0		30
7.1	7.0	13	6.0	11		31
252	11.7	104 (107)	14.5	25.8		32
31.6	2.2	0.0 (0)	17.7	9.4		33
284	13.9	104 (107)	32.2	35.2		34
302	28.7	264	46.2	55.1		35
1.4	19.6	53.2	5.6	10.3		36
+1.0	-2.7	+0.3	-2.2	-2.0		37
6.1	12	7.5	12	11		38
						39
			*An auxiliary well supply also available.			



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. DENIS (St. Hyacinthe Co.)	ST. EDOUARD DE FRAMPTON (Dorchester Co.)	ST. EDOUARD DE LOTBINIERE (Lotbiniere Co.)	STE. ELISABETH (Joliette Co.)
No.	Source(s) .....	Richelieu River	Spring	Artesian wells	Spring
		Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water
	Sampling point .....	At village tap	At tap	At tap	At spring
1	Date of sampling .....	Aug. 11/56	Feb. 18/58	July 28/56	June 7/55
2	Storage period (days) .....	195:348	13:30	191:231	6:84
3	Sampling temperature, °C. ....	23.9	5.0	15.6	10.6
4	Test temperature, °C. ....	23.8 (26)	24.5	21.4 (16)	23.4 (19)
5	Oxygen consumed by KMnO <sub>4</sub> .....	11	0.9	11	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.0	7.9	2.2	2.2
7	pH .....	7.9 (8.5)	7.3	8.3 (7.6)	6.9 (6.8)
8	Colour .....	10	5	5	15
9	Turbidity .....	10	0	7	0
10	Suspended matter, dried at 105° C. ....	0.3	.....	10.0	.....
11	Suspended matter, ignited at 550° C. ....	0.0	.....	8.6	.....
12	Residue on evaporation, dried at 105° C. ....	90.4	114	291	33.6
13	Ignition loss at 550° C. ....	13.2	20.0	35.6	12.4
14	Specific conductance, micromhos at 25° C. ....	120.4	185.4	459.5	31.8
15	Calcium (Ca) .....	14.6	28.9	45.1	3.5
16	Magnesium (Mg) .....	3.1	4.3	12.1	0.6
17	Iron (Fe) Total .....	.....	.....	0.64	.....
18	Dissolved .....	Trace	0.02	0.02	0.0
19	Manganese (Mn) .....	Trace	0.0	0.01	0.0
20	Aluminum (Al) .....	0.0	0.07	0.53	0.03
21	Copper (Cu) .....	Trace	0.0	0.0	0.0
22	Zinc (Zn) .....	0.0	0.0	0.5	.....
23	Sodium (Na) .....	3.5	1.8	36.2	0.7
24	Potassium (K) .....	0.9	0.6	4.4	0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0	0.1	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (4.9)	0.0	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	48.3 (45.3)	97.2	260 (254)	10.4 (12.2)
28	Sulphate (SO <sub>4</sub> ) .....	12.1	8.4	22.5	2.9
29	Chloride (Cl) .....	3.6	2.5	10.5	0.5
30	Fluoride (F) .....	0.1	0.0	0.1	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.8	4.8	3.2	0.0
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.5	9.4	13	10
33	Carbonate hardness as CaCO <sub>3</sub> .....	39.6	79.7	162	8.5
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	9.6	10.1	0.0	2.7
35	Total hardness as CaCO <sub>3</sub> .....	49.2	89.8	162	11.2
36	Sum of constituents .....	66.0	109	276	24.1
37	Per cent sodium .....	13.1	4.1	31.5	11.2
38	Saturation index at test temperature .....	-0.7	-0.8	+0.8	-3.0
39	Stability index at test temperature .....	9.3	8.9	6.7	13
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. ELZEAR (Ile de Montreal)	ST. EMLIEN (Lac St. Jean E Co.)	ST. EPHREM DE TRING (Beauce Co.)	ST. ESPRIT (Montcalm Co.)	ST. ETIENNE DE LA MALBAIE (Charlevoix E Co.)	ST. FELICIEN (Lac St. Jean W Co.)	No.
Wells	Red Creek	Springs	St. Esprit River and artesian well	Creeks and springs	Riviere a L'Ours	
Raw and finished water	Raw and finished water	Raw and finished water	Mixed supply *		Raw and finished water	
			Raw and finished water			
	At village tap	At village tap			At tap	
Feb. 18/59	July 18/55	Aug. 23/56	Jan. 3/58	See Pointe-au-Pic	July 19/55	1
12:21	40:199	228:364	6:13		43:198	2
1.9	16.7	19.4	.....		17.8	3
28.9	25.8 (23)	25.0	22.5		24.0 (21)	4
1.2	.....	2.4	6.1		.....	5
0	4.1	1.2	1.4		3.6	6
8.4	7.6	8.2	7.3		6.7 (7.3)	7
0	90	3	35		75 (120)	8
0	0.3	2	0.3		5	9
.....	.....	.....	.....		10.5	10
.....	.....	.....	.....		6.7	11
534	128	176	64.0		40.4	12
374	34.4	30.4	24.0		16.4	13
790	181.2	261	61.5		27.95	14
111	31.4	34.7	7.7		4.0	15
36.0	0.9	7.7	1.0		0.08	16
.....	.....	.....	.....		.....	17
0.01	0.19	0.01	0.25		0.34	18
0.01	0.04	Trace	0.0		0.0	19
0.03	0.76	0.04	0.0		0.06	20
0.09	0.34	0.0	Trace		0.14	21
0.5	.....	0.05	0.2		.....	22
14.2	1.2	6.1	1.9		1.4	23
3.5	0.8	0.8	0.2		0.5	24
0.1	0.0	.....	0.05		0.3	25
6.7	0.0	0.0	0.0		0.0 (0)	26
302	99.3	113	17.1		10.7 (14.6)	27
147	5.3	-28.9	8.7		3.6	28
32.0	0.9	4.3	3.5		0.7	29
0.0	0.0	0.1	0.0		0.0	30
0.5	2.4	3.0	0.2		1.2	31
13	6.4	18	9.3		6.7	32
259	81.5	92.3	14.0		8.8	33
167	0.6	25.9	9.3		1.5	34
426	82.1	118	23.3		10.3	35
513	99.5	159	41.4		24.0	36
6.7	2.9	10.0	14.4		20.1	37
+1.4	-0.4	+0.3	-2.0		-3.1	38
5.6	8.4	7.6	11		13	39
Phosphate -- 0.0 ppm			* 50 per cent river water			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. FELIX DE KINGSEY (Drummond Co.)	ST. FELIX DE VALIOS (Joliette Co.)	ST. FELIX DU CAP ROUGE (Quebec Co.)	ST. FEREOLE (Montmorency No. 1 Co.)
No.	Source(s) .....	Well	Springs and wells	Wells	Springs
	Sampling point .....		At village tap		
			Finished water		Raw and finished water
1	Date of sampling .....		Apr. 3/58		Feb. 4/58
2	Storage period (days) .....		6:13		14:20
3	Sampling temperature, °C. ....				
4	Test temperature, °C. ....				
5	Oxygen consumed by KMnO <sub>4</sub> .....		24.8		21.3
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		2.9		1.9
7	pH .....		4.8		2.6
8	Colour .....		6.6		7.3
9	Turbidity .....		10		5
10	Suspended matter, dried at 105° C. ....		1		0
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....		126		60.0
13	Ignition loss at 550° C. ....		43.6		11.2
14	Specific conductance, micromhos at 25° C. ....		104.1		67.0
15	Calcium (Ca) .....		9.9		8.5
16	Magnesium (Mg) .....		2.1		1.6
17	Iron (Fe) Total .....				
18	Dissolved .....				
19	Manganese (Mn) .....	See Kingsey	0.05	See Ste. Foy	0.01
20	Aluminum (Al) .....		0.13		0.0
21	Copper (Cu) .....		0.29		0.05
22	Zinc (Zn) .....		0.0		Trace
23	Sodium (Na) .....		0.0		0.05
24	Potassium (K) .....		2.2		1.6
25	Ammonia (NH <sub>3</sub> ) .....		2.7		0.3
26	Carbonate (CO <sub>3</sub> ) .....				0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....		0.0		0.0
28	Sulphate (SO <sub>4</sub> ) .....		12.3		31.3
29	Chloride (Cl) .....		10.5		3.9
30	Fluoride (F) .....		2.6		1.0
31	Nitrate (NO <sub>3</sub> ) .....		0.0		0.0
32	Silica (SiO <sub>2</sub> ), colorimetric .....		23.0		1.8
33	Carbonate hardness as CaCO <sub>3</sub> .....		8.9		12
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		10.1		25.7
35	Total hardness as CaCO <sub>3</sub> .....		23.2		2.1
36	Sum of constituents .....		33.3		27.8
37	Per cent sodium .....		68.4		46.4
38	Saturation index at test temperature .....		11.1		10.9
39	Stability index at test temperature .....		-2.8		-1.8
			12		11
Remarks: Phosphate, ppm					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. FLAVIEN (Lotbiniere Co.)	STE. FLORE* (St. Maurice Co.)	STE. FOY (Quebec Co.)				No.
Artesian wells	Lake Chretien	Deep wells				
Raw and finished water	Raw and finished water	Raw and finished water*				
At village tap	At tap	At tap, 2543 Pierre Martin St.		At tap, 274 Wolfe St.	At tap, 274 Jean Lebarge St.	
Aug. 23/56 230:364	June 11/55 17:99	Oct. 8/59 13:24	Jan. 19/60 57:107	Oct. 8/59 13:24	Jan. 19/60 57:107	
15.6	16.1	25.2	27.2	25.3	27.2	1
24.0	26.0 (23)	3.7	1.9	3.9	3.5	2
5.7	2.1	3.7	8.2	5.0	7.9	3
1.1	6.7 (5.9)	7.9	0	7.8	0	4
8.4	20	5	2	5	2	5
30	0.3	4	1.8	2	2	6
20		1.8	0.4			7
9.7		0.4				8
4.6						9
312	34.8	561		593		10
68.0	12.0	96.8		79.2		11
481.3	33.1	893.5	1,004	952.5	972.7	12
59.0	4.2	84.8	85.5	85.0	82.5	13
7.5	0.4	16.4	14.7	16.6	15.1	14
2.7		0.79	0.17	0.50	0.24	15
0.62	0.02	0.09	0.0	0.02	0.0	16
0.03	Trace	0.64	0.40	0.13	0.40	17
0.0	0.07	0.09	0.08	0.12	0.11	18
0.0	0.16	Trace	0.20	Trace	0.10	19
0.0		0.10	0.05	0.0	0.01	20
22.7	0.7	64.0	88.0	80.0	83.0	21
12.4	0.3	1.4	1.3	1.7	1.2	22
0.0						23
3.0	0.0 (0)	0.0	0.0	0.0	0.0	24
171	6.7 (9.8)	178	186	187	177	25
53.7	8.7	34.4	37.5	36.6	37.3	26
22.6	0.4	174	205	192	193	27
0.0	0.0	0.0	0.0	0.0	0.0	28
40.0	0.4	0.9	0.2	1.2	0.0	29
11	2.6	10	9	10	9	30
145	5.5	146	152	153	145	31
33.0	6.6	133	122	127	123	32
178	12.1	279	274	280	268	33
316	21.3	474	533	514	508	34
20.2	10.3	33.0	40.9	38.0	40.0	35
+0.9	-3.2	+0.5	+0.8	+0.5	+0.5	36
6.6	13	6.9	6.6	6.8	6.9	37
						38
						39
		0.09	Trace	0.08	Trace	
	* A small part of the parish is supplied by city of Grand Mere	* See also Water Survey Report No. 12: Quebec City and Environs, PMQ Area, Ste. Foy.				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	STE. FOY (concl'd) (Quebec Co.)			ST. FRANCOIS DE SALES DE LA RIVIERE DU SUD (Montmagny Co.)
	Source(s) .....	Well No. 3	Well No. 4	Well No. 5	Springs
	Sampling point .....	At wells			At house tap
1	Date of sampling .....	Oct. 1/60	Oct. 1/60	Oct. 1/60	Jan 29/58
2	Storage period (days) .....	39:45	39:45	39:45	8:15
3	Sampling temperature, °C. ....	10.0	10.0	10.0	.....
4	Test temperature, °C. ....	22.4	22.4	22.5	22.4
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	.....	.....	1.6
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	0.0	0.0	1.8	1.8
7	pH .....	8.3	8.3	8.2	6.9
8	Colour .....	15	15	15	0
9	Turbidity .....	2	10	0	0
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....	.....	.....	.....	54.0
13	Ignition loss at 550° C. ....	.....	.....	.....	19.6
14	Specific conductance, micromhos at 25° C. ....	541.0	1,383	387.3	63.3
15	Calcium (Ca) .....	84.0	91.8	62.2	5.4
16	Magnesium (Mg) .....	12.0	21.8	7.6	1.5
17	Iron (Fe) Total .....	0.45	1.5	0.10	.....
18	Dissolved .....	Trace	Trace	Trace	Trace
19	Manganese (Mn) .....	0.30	0.50	Trace	0.01
20	Aluminum (Al) .....	0.16	0.09	0.14	0.04
21	Copper (Cu) .....	Trace	Trace	Trace	0.85
22	Zinc (Zn) .....	0.05	0.03	0.02	0.07
23	Sodium (Na) .....	8.2	155	6.0	1.7
24	Potassium (K) .....	0.9	1.8	1.0	0.6
25	Ammonia (NH <sub>3</sub> ) .....	0.35	0.3	0.35	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	171	191	182	8.4
28	Sulphate (SO <sub>4</sub> ) .....	18.9	44.7	32.8	7.9
29	Chloride (Cl) .....	76.5	318	15.6	3.3
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.2	0.2	0.2	7.8
32	Silica (SiO <sub>2</sub> ), colorimetric .....	10	11	8	6.4
33	Carbonate hardness as CaCO <sub>3</sub> .....	140	157	149	6.9
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	119	162	37.4	12.7
35	Total hardness as CaCO <sub>3</sub> .....	259	319	187	19.6
36	Sum of constituents .....	296	739	223	37.8
37	Per cent sodium .....	6.4	51.1	6.4	14.3
38	Saturation index at test temperature .....	+0.9	+0.9	+0.6	-2.9
39	Stability index at test temperature .....	6.5	6.5	7.0	13
	Remarks:                      Phosphate, ppm	0.0	Trace	0.0	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. FRANCOIS DU LAC (Yamaska Co.)	ST. FRANCOIS XAVIER DE BATISCAN (Champlain Co.)		ST. FREDERIC (Beauce Co.)	ST. FULGENCE (Chicoutimi Co.)	ST. GABRIEL DE BRANDON (Berthier Co.)	No.
St. Francis River	Artesian wells		Springs	Jeannes Creek	Artesian wells	
	Raw and finished water		Raw and finished water	Raw and finished water	Raw and finished water	
	At taps		At tap	At tap	At hotel tap	
	July 27/55	Oct. 17/58	Aug. 23/56	Mar. 13/58	June 29/47	1
	47:198	5:31	230:364	6:19	338	2
	14.4	5.6	12.8	.....	13.3	3
	22.0 (17)	25.8	24.2	21.6	.....	4
	.....	0.9	2.7	3.9	.....	5
	2.3	5	5.2	1.6	0.0 (0.8)	6
	7.3 (7.0)	7.0	7.4	7.4	8.6 (8.2)	7
	5	7	3	25	25 (<5)	8
	0	0.8	0	0	2 (clear)	9
	.....	.....	.....	.....	.....	10
	72.4	90.0	110	58.8	90.8	11
	9.2	18.8	14.8	28.0	18.2	12
	99.1	111.5	173.4	70.4	140.7	13
	9.2	9.7	26.6	8.8	14.4	14
	1.6	2.6	2.1	1.0	3.5	15
	.....	.....	.....	.....	.....	16
	0.05	0.04	0.01	0.05	0.04	17
See Pierreville	0.01	0.01	0.01	Trace	.....	18
	0.00	0.04	0.0	0.0	.....	19
	0.10	0.75	Trace	0.0	.....	20
	0.02	0.20	6.0	0.0	.....	21
	5.5	6.1	1.8	2.7	10.4 as Na	22
	1.0	1.0	0.7	0.3	.....	23
	0.0	0.05	0.0	0.1	.....	24
	0.0	0.0	0.0	0.0	5.5 (0)	25
	26.5	31.9	84.4	25.1	35.1 (51.2)	26
	10.3	11.6	12.2	5.7	15.8	27
	6.2	8.2	1.4	4.6	3.3	28
	0.0	0.0	0.0	0.0	.....	29
	3.2	1.0	5.0	0.15	0.8	30
	1.8	16	8.4	9.1	25	31
	21.8	26.2	69.2	20.6	38.0	32
	7.7	8.7	5.7	5.5	12.4	33
	29.5	34.9	75.0	26.1	50.4	34
	68.2	72.7	106	44.9	102	35
	27.7	25.9	4.4	18.0	30.9	36
	-1.8	-2.0	-0.8	-1.7	-0.1	37
	11	11	9.0	11	8.8	38
						39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. GABRIEL DE BRANDON (concl'd) (Berthier Co.)	ST. GEDEON (Frontenac Co.)	STE. GENEVIEVE DE BATISCAN (Champlain Co.)	ST. GEORGES (Champlain Co.)
Source(s) .....		Artesian wells	Wells	Spring-fed creek	Spring
No. ....		Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water
Sampling point .....		At well		At tap	At village tap
1	Date of sampling .....	June 7/55	Apr. 15/58	June 14/55	June 10/55
2	Storage period (days) .....	6:42	14:21	16:145	17:96
3	Sampling temperature, °C. ....	11.1	.....	16.6	7.8
4	Test temperature, °C. ....	23.4 (19)	25.4	26.6 (23)	21.9 (15)
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	6.9	.....	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	0.9	6.2	2.6	5.2
7	pH .....	8.0 (7.6)	6.6	7.1 (7.0)	6.3 (6.0)
8	Colour .....	0	35	50	0
9	Turbidity .....	0	4	0.8	0
10	Suspended matter, dried at 105° C. ....	.....	4.8	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	4.8	.....	.....
12	Residue on evaporation, dried at 105° C. ....	107	78.4	53.6	40.4
13	Ignition loss at 550° C. ....	25.2	22.4	20.4	11.6
14	Specific conductance, micromhos at 25° C. ....	145.8	68.5	55.28	40.01
15	Calcium (Ca) .....	16.5	6.9	4.8	3.9
16	Magnesium (Mg) .....	4.7	2.6	0.9	0.6
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.01	0.07	0.44	Trace
19	Manganese (Mn) .....	0.0	Trace	0.01	Trace
20	Aluminum (Al) .....	0.06	0.05	0.37	0.0
21	Copper (Cu) .....	0.0	0.0	0.03	0.0
22	Zinc (Zn) .....	.....	0.1	.....	.....
23	Sodium (Na) .....	3.1	1.3	3.9	1.1
24	Potassium (K) .....	1.3	0.4	0.6	0.9
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.05	0.2	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	54.9 (58.6)	16.0	20.7 (24.4)	6.1 (9.8)
28	Sulphate (SO <sub>4</sub> ) .....	18.5	14.3	4.9	7.3
29	Chloride (Cl) .....	3.0	1.0	2.0	0.7
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.6	0.5	1.2	3.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	21	6.7	9.7	8.8
33	Carbonate hardness as CaCO <sub>3</sub> .....	45.0	13.1	15.7 (16.7)	5.0
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	15.5	14.8	0.0 (0)	7.2
35	Total hardness as CaCO <sub>3</sub> .....	60.5	27.9	15.7 (16.7)	12.2
36	Sum of constituents .....	95.4	41.8	39.1	29.5
37	Per cent sodium .....	9.7	8.8	30.5	15.2
38	Saturation index at test temperature .....	-0.6	-2.8	-2.3	-3.8
39	Stability index at test temperature .....	9.2	12	12	14
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. GEORGES (Beauce Co.)	ST. GEORGES WEST (Beauce Co.)	ST. GERARD (Wolfe Co.)	STE. GERMAINE DU LAC ETCHEMIN (Dorchester Co.)	STE. GERTRUDE (Nicolet Co.)	ST. GERVAIS ET PROTAIS (Bellechasse Co.)	No.
Lake Poulin	Lake Poulin	Springs	Rock Lake	Springs	Springs	
	Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water	
	At town tap	At reservoir	At village tap			
	July 26/56 189:250	Aug. 4/56 192:265	Apr. 8/58 10:14	Apr. 14/58 8:17	Apr. 22/58 9:20	1
	16.1	15.6				2
	24.9 (18)	24.2 (21)	21.7	23.3	24.6	3
	11		20.6	1.7	1.5	4
	1.7	1.0	6.8	2.9	4.3	5
	7.1 (7.0)	8.5 (7.5)	6.5	7.9	7.5	6
	10	10	70	0	0	7
	0.9	0	0.4	0	0.4	8
						9
						10
						11
	46.0	198	50.0	214	143	12
	26.0	22.8	28.0	32.4	18.0	13
	55.25	321.3	42.7	335.7	212.4	14
	6.3	51.4	5.6	42.3	30.5	15
	1.4	9.5	1.0	8.4	3.7	16
						17
	0.0	Trace	0.2	Trace	Trace	18
	0.02	0.0	0.01	0.26	0.01	19
	0.03	0.07	0.0	0.07	0.08	20
	0.0	Slight trace	0.0	Trace	0.07	21
	0.6	0.1	1.0	0.6	0.14	22
	1.1	1.6	0.8	12.5	3.0	23
	0.3	0.6	0.3	1.5	3.8	24
	0.05	0.1	0.2	0.05	0.05	25
	0.0 (0)	0.2 (0)	0.0	0.0	0.0	26
	15.0 (17.6)	191 (194)	13.5	140	89.8	27
	9.1	10.6	7.0	27.7	8.0	28
	2.1	1.9	0.7	14.2	5.0	29
	0.0	0.0	0.0	0.0	0.0	30
	0.6	4.0	0.0	6.0	17	31
	2.5	7.8	3.9	14	7.8	32
	12.3	157	11.1	115	73.7	33
	9.2	10.3	7.0	25.3	17.6	34
	21.5	167	18.1	140	91.3	35
	31.4	182	27.2	197	124	36
	9.4	2.0	7.9	15.8	6.3	37
	-2.3	+1.0	-3.1	+0.1	-0.6	38
	12	6.5	13	7.7	8.7	39
See St. Georges West						



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. GREGOIRE (Iberville Co.)	ST. GREGOIRE LE GRAND (Nicolet Co.)	ST. GUILLAUME (Yamaska Co.)	ST. HENRI (Levis Co.)
No.	Source(s) .....	Springs	Artesian well	David River and springs *	Wells
		Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water
	Sampling point .....	At village tap	At tap	At village tap	At village tap
1	Date of sampling .....	Aug. 16/56	Aug. 24/58	Aug. 1/56	July 24/56
2	Storage period (days) .....	225:355	232:368	194:255	129:234
3	Sampling temperature, °C. ....	15.6	15.6	14.4	14.4
4	Test temperature, °C. ....	25.0 (26)	24.0	23.4 (22)	20.2 (22)
5	Oxygen consumed by KMnO <sub>4</sub> .....	2.3	6.1	15.3	11
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.6	0.0	3.8	0.0
7	pH .....	7.7 (7.4)	8.7	7.9 (7.4)	8.5 (7.6)
8	Colour .....	0	20	40	10
9	Turbidity .....	0	20	2	0
10	Suspended matter, dried at 105° C. ....		8.9		
11	Suspended matter, ignited at 550° C. ....		8.5		
12	Residue on evaporation, dried at 105° C. ....	130	1,250	251	449
13	Ignition loss at 550° C. ....	12.8	50.0	23.6	48.8
14	Specific conductance, micromhos at 25° C. ....	192.8	1,964	390.4	719.4
15	Calcium (Ca) .....	29.1	64.2	56.1	62.5
16	Magnesium (Mg) .....	4.0	23.6	9.2	17.1
17	Iron (Fe) Total .....		0.18		0.11
18	Dissolved .....	0.02	0.15	0.0	0.02
19	Manganese (Mn) .....	0.0	0.0	0.0	0.04
20	Aluminum (Al) .....	0.0	0.03	0.12	0.15
21	Copper (Cu) .....		Slight trace	Trace	0.35
22	Zinc (Zn) .....	0.2	0.20	0.0	0.05
23	Sodium (Na) .....	3.3	344	11.7	79.0
24	Potassium (K) .....	0.7	12.0	2.3	4.7
25	Ammonia (NH <sub>3</sub> ) .....	0.0		0.3	
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	36.0	0.0 (0)	11.4 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	86.8 (93)	456	183 (191)	389 (389)
28	Sulphate (SO <sub>4</sub> ) .....	22.0	291	45.1	65.8
29	Chloride (Cl) .....	1.9	212	7.9	3.4
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.5	4.0	1.0	1.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....	13	17	6.4	14
33	Carbonate hardness as CaCO <sub>3</sub> .....	71.2	257	150	338
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	17.9	0.0	27.4	0.0
35	Total hardness as CaCO <sub>3</sub> .....	89.1	257	178	226
36	Sum of constituents .....	118	1,228	231	452
37	Per cent sodium .....	7.4	73.2	12.3	42.4
38	Saturation index at test temperature .....	-0.4	+1.6	+0.3	+1.2
39	Stability index at test temperature .....	8.5	5.5	7.3	6.1
Remarks:				* Main source	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. HILARIE (Rouville Co.)	ST. HONORE (Beauce Co.)	ST. HUGUES (Bagot Co.)	ST. HYACINTHE (St. Hyacinthe Co.)			No.
Springs and wells	Springs and well	Wells	Yamaska River			
Raw and finished water	Raw and finished water	Raw and finished water	Raw water			
At village tap (Messier St.)	At village tap	At village tap	At filter plant			
			May / 53 *	Dec. / 53 *	May / 55 *	
Feb. 8/58	July 26/56	Aug. 22/56				1
10:16	189:250	228:357				2
6.6	13.3	15.6				3
21.3	24.8 (19)	25.0				4
2.1	13	8.2				5
3.1	2.3	7				6
8.1	7.9 (7.4-7.5)	8.2	7.7	7.2	7.7	7
5	30	40	110	35	48	8
0	3	0	7	10	2	9
	4.3					10
	1.3					11
214	126	769				12
29.2	19.6	78.0				13
340.3	191.8	1,259				14
45.9	32.9	12.4				15
7.1	3.6	14.4				16
		0.05	0.4	0.2	0.5	17
Trace	0.03	0.02				18
0.0	0.01	0.0				19
0.11	0.02	0.0				20
0.03	Slight trace					21
0.07	1.0	0.10				22
11.2	0.9	267				23
2.3	0.3	11.5				24
0.0	0.1	0.0				25
0.0	0.0 (0)	0.0	0	0	0	26
130	112 (110)	682	61	49	49	27
51.7	8.6	1.5				28
7.9	0.6	92.1				29
0.2	0.0	0.0				30
1.0	0.8	6.0				31
8.6	6.0	17				32
106	91.6	89.6	50	40	40	33
37.5	5.3	0.0				34
144	96.9	89.6				35
200	110	759				36
13.9	1.9	84.7				37
+0.3	-0.1	+0.5				38
7.5	8.1	7.2				39
			* Data supplied by the Supt. of Waterworks, St. Hyacinthe, See also Table II, Station No. 52.			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. HYACINTHE (concl'd) (St. Hyacinthe Co.)			
	Source(s) .....	Yamaska River			
		Raw water		Finished water	
	Sampling point .....	At filter plant intake		At filter plant tap	
		Dec. /55*	July /58*	Aug. 10/56	Aug. 10/56
1	Date of sampling .....				
2	Storage period (days) .....			53:60	195:280
3	Sampling temperature, °C. ....			24.4	25.0
4	Test temperature, °C. ....			24.2	23.0 (27)
5	Oxygen consumed by KMnO <sub>4</sub> .....				10
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....			1.4	1.1
7	pH .....	8.0	8.0	7.9 (7.9)	8.0 (7.2)
8	Colour .....	57	35	30 (30)	20
9	Turbidity .....	6	12	10	0
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....				154
13	Ignition loss at 550° C. ....				34.8
14	Specific conductance, micromhos at 25° C. ....			195	233.8
15	Calcium (Ca) .....			21.3	26.7
16	Magnesium (Mg) .....			3.9	4.3
17	Iron (Fe) Total .....	0.3	0.7		
18	Dissolved .....				0.0
19	Manganese (Mn) .....				Trace
20	Aluminum (Al) .....				0.06
21	Copper (Cu) .....			0.08	0.0
22	Zinc (Zn) .....			0.02	0.1
23	Sodium (Na) .....			10.4	11.1
24	Potassium (K) .....			1.8	1.9
25	Ammonia (NH <sub>3</sub> ) .....			0.1	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0	0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	59	78	71.6	66.7
28	Sulphate (SO <sub>4</sub> ) .....			14.2	35.0
29	Chloride (Cl) .....			13.2	14.2
30	Fluoride (F) .....				0.0
31	Nitrate (NO <sub>3</sub> ) .....			2.4	1.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....			2.6	2.0
33	Carbonate hardness as CaCO <sub>3</sub> .....	48	64	58.7	54.7
34	Non-carbonate hardness as CaCO <sub>3</sub> .....			10.5	29.6
35	Total hardness as CaCO <sub>3</sub> .....			69.2	84.3
36	Sum of constituents .....			105	130
37	Per cent sodium .....			24.0	21.6
38	Saturation index at test temperature .....			-0.4	-0.3
39	Stability index at test temperature .....			8.7	8.6
	Remarks:	* Data supplied by the Supt. of Waterworks, St. Hyacinthe. See also Table II, Station No. 52			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. JACQUES (Montcalm Co.)	ST. JEAN BAPTISTE (Rouville Co.)	ST. JEAN DE BOISCHATEL (Montmorency No. 1 Co.)	ST. JEAN DE DIEU (Ile de Montreal)	ST. JEAN EUDES (Chicoutimi Co.)	No.
Springs	Springs	Laval River	St. Lawrence River	Chicoutimi River	
Raw and finished water	Raw and finished water				
At village tap	At tap				
Feb. 10/58	Aug. 15/56				1
8.14	226.349				2
1.7	15.5				3
21.1	24.1				4
1.7	2.8				5
1.2	1.6				6
7.4	8.0 (7.8)				7
5	0				8
0	0				9
.....	.....				10
39.6	186				11
12.0	60.0				12
41.6	263.9				13
4.9	43.0				14
0.7	1.3				15
.....	Trace				16
0.0	.....				17
0.0	0.0				18
0.03	0.05				19
Slight trace	.....				20
0.0	0.5				21
1.4	7.0				22
0.3	1.2				23
0.0	0.0				24
0.0	0.0 (0)				25
16.6	102 (88.4)				26
4.6	34.3				27
0.7	5.4				28
0.0	0.0				29
0.1	3.2				30
9.9	13				31
13.6	83.7				32
1.5	28.9				33
15.1	113				34
30.8	160				35
16.3	11.7				36
-2.2	+0.1				37
12	7.8				38
					39
		See Boischatel	See Montreal	See Arvida	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. JEROME (Lac St. Jean E. Co.)		ST. JOHN (St. Jean Co.)	
	Source(s) .....	Riviere du Lac aux Sables		Richelieu River	
		Raw and finished water	Raw water		Finished water
	Sampling point .....	At village tap	At intake pump		At filter plant tap
1	Date of sampling .....	July 18/55	May 28/53	Aug. 17/56	May 28/53
2	Storage period (days) .....	40:197	6:15	231:359	6:15
3	Sampling temperature, °C. ....	16.1	12.2	22.5	12.2
4	Test temperature, °C. ....	25.5 (23)	19.8 (14)	25.2 (26.5)	19.8 (14)
5	Oxygen consumed by KMnO <sub>4</sub> .....			3.2	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	5.2	4.0	3.0	5.0
7	pH .....	7.1 (7.4)	7.4 (7.8)	7.4 (7.7)	7.2 (7.1)
8	Colour .....	100 (140)	10 (10)	0	10 (10)
9	Turbidity .....	0.3	0 (0)	1	0 (0)
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	79.6	74.2	88.0	75.0
13	Ignition loss at 550° C. ....	32.4	11.9	28.4	13.4
14	Specific conductance, micromhos at 25° C. ....	90.45	115.9 (110)	115.2	117.9 (112)
15	Calcium (Ca) .....	14.4	18.4	13.7	16.2
16	Magnesium (Mg) .....	0.9	2.1	3.8	2.6
17	Iron (Fe) Total .....				
18	Dissolved .....	0.10	0.05	0.0	0.05
19	Manganese (Mn) .....	0.0		0.0	
20	Aluminum (Al) .....	0.0		0.0	
21	Copper (Cu) .....	0.0			
22	Zinc (Zn) .....				
23	Sodium (Na) .....	1.0	3.2	2.3	2.8
24	Potassium (K) .....	0.4	1.6	0.9	1.2
25	Ammonia (NH <sub>3</sub> ) .....	0.1			
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	40.7 (46.4)	57.5 (48.8)	46.9 (55.3)	46.8 (43.9)
28	Sulphate (SO <sub>4</sub> ) .....	5.0	13.6	13.1	18.8
29	Chloride (Cl) .....	0.8	2.0	2.1	1.9
30	Fluoride (F) .....	0.0	0.05	0.0	0.04
31	Nitrate (NO <sub>3</sub> ) .....	2.4	0.4	0.6	0.4
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.2	1.7	3.2	0.6
33	Carbonate hardness as CaCO <sub>3</sub> .....	33.4	47.2 (40)	38.5	38.4
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	6.2	7.6 (9)	11.3	12.8
35	Total hardness as CaCO <sub>3</sub> .....	39.6	54.8 (49)	48.9	51.2
36	Sum of constituents .....	53.0	71.4	61.2	67.7
37	Per cent sodium .....	5.1	10.9	8.9	10.4
38	Saturation index at test temperature .....	-1.6	-1.1	-1.2	-1.5
39	Stability index at test temperature .....	10	9.6	9.8	10
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. JOHN (concl'd) (St. Jean Co.)		ST. JOSEPH (Beauce Co.)	ST. JOSEPH (St. Hyacinthe Co.)	ST. JOSEPH D'ALMA (Lac St. Jean E. Co.)	ST. JOSEPH DE COLERAINE (Megantic Co.)	No.
Richelieu River		Springs and artificial lake	Yamaska River	Lake St. John (Grande Decharge)	East Lake	
Finished water		Raw and finished water		Raw and finished water	Raw and finished water	
Tap at Militaire Royale Drill Hall	At filter plant tap	At village tap		At city tap	At village tap	
Dec. 12/54	Aug. 17/56	July 25/56		July 19/55	Aug. 23/56	1
6:12	231:354	131:241		50:203	228:364	2
10.0	24.4	16.7		22.2	20.0	3
22.0	27	26.0 (22)		23.3 (23)	25.0	4
4.1	3.6	.....		.....	5.2	5
3.6	2.4	5.0		1.5	1.9	6
7.4	7.4 (7.0)	7.0		6.9 (7.1)	7.3	7
20	5	30		35 (55)	15	8
2	0	0.9		0.8	0	9
.....	.....	.....		.....	.....	10
.....	.....	.....		.....	.....	11
96.0	92.4	66.8		32.4	39.6	12
23.2	29.2	16.8		14.4	17.6	13
136.6	114.9	74.84		30.47	53.75	14
17.5	13.6	10.5		3.7	2.7	15
4.4	3.5	1.5		0.04	4.2	16
.....	.....	.....		.....	.....	17
0.08	0.04	0.06	<i>See St. Hyacinthe</i>	0.07	0.02	18
Trace	0.0	0.01		0.0	0.0	19
0.58	0.12	0.15		0.05	0.03	20
0.0	.....	0.03		0.0	.....	21
.....	.....	1.0		0.01	0.3	22
2.1	2.1	1.4		0.7	0.9	23
1.1	0.8	0.03		0.6	0.4	24
.....	0.0	0.1		0.1	.....	25
0.0	0.0 (0)	0.0 (0)		0.0 (0)	0.0	26
52.8	41.4 (47.8)	31.1 (22.7)		7.1 (12.2)	23.4	27
21.4	16.0	9.1	1.1	6.4	28	
2.4	2.7	0.9	1.4	0.8	29	
0.05	0.0	0.0	0.0	0.0	30	
0.8	0.6	0.8	2.4	0.2	31	
2.5	2.1	4.9	4.6	2.8	32	
43.3	34.0	25.5	5.8	19.2	33	
18.5	14.3	6.9	3.6	4.8	34	
61.8	48.3	32.4	9.4	24.0	35	
78.3	61.9	46.0	18.2	30.3	36	
6.7	8.4	7.9	12.6	7.2	37	
-1.2	-1.3	-1.9	-3.1	2.3	38	
9.6	10	11	13	12	39	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. JOSEPH DE SOREL (Richelieu Co.)	STE. JULIE (Vercheres Co.)	STE. JULIENNE DE RAWDON (Montcalm Co.)	ST. LAMBERT (Chambly Co.)
Source(s) .....		Richelieu River	Well	Springs	St. Lawrence River
Sampling point .....			At tap		From south shore
No.					
1	Date of sampling .....		Aug. 18/56		June 19/47
2	Storage period (days) .....		231:353		5
3	Sampling temperature, °C. ....		17.2		16.0 (17)
4	Test temperature, °C. ....		24.4 (26.5)		.....
5	Oxygen consumed by KMnO <sub>4</sub> .....		1.7		.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		0.0		2.1 (2.5)
7	pH .....		8.5 (8.8)		7.9 (7.9)
8	Colour .....		0		40 (60)
9	Turbidity .....		0		10
10	Suspended matter, dried at 105° C. ....		.....		.....
11	Suspended matter, ignited at 550° C. ....		.....		.....
12	Residue on evaporation, dried at 105° C. ....		370		181
13	Ignition loss at 550° C. ....		72.4		70.4
14	Specific conductance, micromhos at 25° C. ....		522.7		.....
15	Calcium (Ca) .....		8.9		33.8
16	Magnesium (Mg) .....		3.7		7.8
17	Iron (Fe) Total .....		0.27		0.73
18	Dissolved .....		0.0		.....
19	Manganese (Mn) .....	See Tracy	Trace	See St. Jacques	.....
20	Aluminum (Al) .....		0.0		.....
21	Copper (Cu) .....		0.0		.....
22	Zinc (Zn) .....		0.0		.....
23	Sodium (Na) .....		108		.....
24	Potassium (K) .....		2.6		) 6.4 as Na
25	Ammonia (NH <sub>3</sub> ) .....		0.0		.....
26	Carbonate (CO <sub>3</sub> ) .....		7.4 (49.6)		0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....		263 (181)		101 (97.6)
28	Sulphate (SO <sub>4</sub> ) .....		40.6		23.7
29	Chloride (Cl) .....		7.9		9.9
30	Fluoride (F) .....		0.6		.....
31	Nitrate (NO <sub>3</sub> ) .....		1.0		3.5
32	Silica (SiO <sub>2</sub> ), colorimetric .....		13		2.9
33	Carbonate hardness as CaCO <sub>3</sub> .....		37.4		83.0
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		0.0		33.4
35	Total hardness as CaCO <sub>3</sub> .....		37.4		116
36	Sum of constituents .....		323		129
37	Per cent sodium .....		85.2		10.7
38	Saturation index at test temperature .....		+0.4		-0.1
39	Stability index at test temperature .....		7.7		8.1
Remarks:			H <sub>2</sub> S odour		River very high Dissolved oxygen - 8.0 ppm

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. LAMBERT (concl'd) (Chambly Co.)					ST. LAURENT (Ile de Montreal)	No.
St. Lawrence River					St. Lawrence River	
Raw water		Finished water				
At plant intake well	At filter plant intake	At plant tap *	Plant tap	At filter plant tap		
Mar. 17/49	July 28/55	June 19/47	Mar. 17/49	July 28/55		1
15	46.57	11	15	48.57		2
.....	21.6	16.0	.....	21.6		3
21.9	22.0	.....	21.9	22.8		4
.....	.....	.....	.....	.....		5
2.5	1.9	9.0	4.6	2.8		6
7.9	8.0	7.2	7.6	7.8		7
40	5	5	0	5		8
0.8	12	Clear	0	0		9
.....	47	.....	.....	.....		10
.....	47	.....	.....	.....		11
168	197	.....	161	202		12
47.2	54.8	.....	23.2	58.4		13
281.3	301.1	.....	283.7	301.0		14
37.2	38.6	.....	34.0	38.0		15
8.2	5.9	.....	7.9	6.6		16
.....	.....	.....	.....	.....		17
0.07	0.02	.....	0.03	0.02	See	18
.....	0.0	.....	.....	0.0	Montreal	19
.....	0.05	.....	.....	0.18		20
.....	0.02	.....	.....	0.0		21
.....	0.10	.....	.....	0.0		22
7.7	9.0	.....	7.5	8.9		23
1.2	1.3	.....	1.2	1.1		24
.....	.....	.....	.....	0.0		25
0.0	0.0	0.0	0.0	0.0		26
112	110	83.0	105	104		27
26.0	22.5	.....	28.2	28.0		28
17.6	21.1	.....	18.0	21.6		29
0.10	0.05	.....	0.10	0.0		30
1.6	0.6	.....	0.35	0.4		31
3.6	3.4	.....	1.2	0.7		32
92.0	89.8	.....	86.0	85.2		33
34.6	30.8	.....	31.3	37.0		34
127	121	83.0**	117	122		35
152	157	.....	150	157		36
12.6	13.8	.....	13.2	13.5		37
-0.1	+0.1	.....	-0.4	-0.1		38
8.1	7.8	.....	9.4	8.0		39
	Lithium - 0.0 ppm	* Field results only ** Soap hardness		Lithium - 0.0 ppm		



TABLE III (Continued)  
 Chemical Analyses of Municipal Water Supplies  
 Lower St. Lawrence River Drainage Basin  
 (In parts per-million)

Municipality .....		ST. LAZARE (Bellechasse Co.)	ST. LEONARD (Nicolet Co.)	ST. LEONARD D'ASTON (Nicolet Co.)	ST. LEONARD DE PORT MAURICE (Ile de Montreal)
No.	Source(s) .....	Springs *	Springs	Artesian wells	St. Lawrence River
		Raw and finished water		Raw and finished water	
	Sampling point .....			At village tap	
1	Date of sampling .....	Dec. 18/58		July 31/56	
2	Storage period (days) .....	18:26		189:227	
3	Sampling temperature, °C. ....	2.2		17.2	
4	Test temperature, °C. ....	21.2		24.1 (25)	
5	Oxygen consumed by KMnO <sub>4</sub> .....	1.6		9.6	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	0.9		2.1	
7	pH .....	7.4		8.3	
8	Colour .....	0		10	
9	Turbidity .....	0		1*	
10	Suspended matter, dried at 105° C. ....	.....		.....	
11	Suspended matter, ignited at 550° C. ....	.....		.....	
12	Residue on evaporation, dried at 105° C. ....	45.2		300	
13	Ignition loss at 550° C. ....	8.4		44.4	
14	Specific conductance, micromhos at 25° C. ....	60.1		509	
15	Calcium (Ca) .....	6.0		17.6	
16	Magnesium (Mg) .....	1.4		6.2	
17	Iron (Fe) Total .....	.....		0.19	
18	Dissolved .....	0.0		0.02	
19	Manganese (Mn) .....	0.01	See Ste. Gertrude	0.01	See Montreal
20	Aluminum (Al) .....	0.0		0.15	
21	Copper (Cu) .....	0.0		0.0	
22	Zinc (Zn) .....	0.0		0.0	
23	Sodium (Na) .....	1.6		87.6	
24	Potassium (K) .....	0.6		2.1	
25	Ammonia (NH <sub>3</sub> ) .....	0.05		0.05	
26	Carbonate (CO <sub>3</sub> ) .....	0.0		0.0 (0)	
27	Bicarbonate (HCO <sub>3</sub> ) .....	14.5		261 (259)	
28	Sulphate (SO <sub>4</sub> ) .....	7.5		7.6	
29	Chloride (Cl) .....	3.2		30.8	
30	Fluoride (F) .....	0.0		0.6	
31	Nitrate (NO <sub>3</sub> ) .....	2.0		2.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	7.3		12	
33	Carbonate hardness as CaCO <sub>3</sub> .....	11.9		69.4	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	8.8		0.0	
35	Total hardness as CaCO <sub>3</sub> .....	20.7		69.4	
36	Sum of constituents .....	36.8		296	
37	Per cent sodium .....	13.9		72.2	
38	Saturation index at test temperature .....	-2.1		+0.4	
39	Stability index at test temperature .....	12		7.5	
Remarks:		* Supply No. 1, see data, page 152		* H <sub>2</sub> S odour	

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. LIN (L'Assomption Co.)	ST. LOUIS DE LOTBINIERE (Lotbiniere Co.)	STE. LOUISE (L'Islet Co.)	ST. LUC DE LAVAL (Saguenay Co.)	STE. LUCE (Rimouski Co.)	ST. MADELEINE (St. Hyacinthe Co.)	No.	
L'Achigan River and well	Springs	Springs	Springs	Springs	Spring and well *		
	Raw and finished water	Raw and finished water		Raw and finished water	Raw and finished water		
				At village tap	At village tap		
See Laurentides	Mar. 18/58 7:13	Feb. 20/58 20:27	See Forestville	July 7/55 42:178	Aug. 11/56 194:279	1	
	23.4	23.8		19.4	17.2	2	
	6.7	1.9		28.2 (21)	8.8	3	
	3.1	5.2		1.8	1.2	4	
	7.3	7.5		8.2 (7.9)	8.1 (8.2)	5	
	45	3		5	10	6	
	0.9	0		0	0	7	
	69.2	144		182	204	8	
	24.0	19.6		20.4	24.4	9	
	81.2	230.4		313.8	294.9	10	
	11.5	33.3		45.2	47.0	11	
	1.4	3.3		10.0	1.8	12	
	0.11	0.02		0.0	0.01	13	
	Trace	0.01		0.0	0.0	14	
	0.0	Trace		0.02	0.03	15	
	Trace	Trace		0.0	0.0	16	
	0.0	0.05		0.0	0.2	17	
	2.1	9.2		3.9	8.5	18	
	0.4	1.3		0.5	1.9	19	
	0.1	0.0		0.0	0.05	20	
	0.0	0.0		0.0	0.0 (0)	21	
	36.6	108		177	87.8 (95.4)	22	
	9.1	25.8		9.7	64.3	23	
	1.4	1.7		2.8	1.4	24	
	0.0	0.0		0.0	0.8	25	
	0.01	0.6		4.0	0.4	26	
	11	5.7		8.6	112	27	
	30.0	88.9		145	72.0	28	
	4.5	7.8		8.7	52.7	29	
	34.5	96.7		154	125	30	
	54.9	134		172	181	31	
	11.4	16.8		5.2	12.6	32	
	-1.6	-0.5		+0.7	+0.1	33	
	11	8.5		6.8	7.9	34	
						35	
						36	
						37	
						38	
						39	
					* Reserve supply available from an additional, privately owned, well.		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. MALACHIE (Dorchester Co.)		ST. MARC (Vercheres Co.)	
	Source(s) .....	Springs	Richelieu River	Springs	Spring
	Sampling point .....	Finished water	Raw and finished water	Raw and finished water	Raw and finished water
1	Date of sampling .....	Apr. 15/58	Oct. 20/58	Oct. 20/58	Oct. 19/58
2	Storage period (days) .....	16:21	11:28	11:28	12:29
3	Sampling temperature, °C. ....	.....	10.0	12.8	.....
4	Test temperature, °C. ....	24.9	25.2	25.0	25.2
5	Oxygen consumed by KMnO <sub>4</sub> .....	2.7	3.4	2.3	13.5
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	8.1	1.0	1.6	2.6
7	pH .....	6.8	8.0	7.4	7.0
8	Colour .....	10	25	10	80
9	Turbidity .....	0.3	20	0	0.8
10	Suspended matter, dried at 105° C. ....	.....	8.9	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	4.4	.....	.....
12	Residue on evaporation, dried at 105° C. ....	63.6	106	68.4	72.8
13	Ignition loss at 550° C. ....	17.6	22.4	15.2	32.0
14	Specific conductance, micromhos at 25° C. ....	80.8	165	82.8	63.0
15	Calcium (Ca) .....	13.4	17.9	8.4	6.6
16	Magnesium (Mg) .....	0.6	5.5	2.8	2.1
17	Iron (Fe) Total .....	.....	0.41	.....	.....
18	Dissolved .....	0.1	0.07	0.03	0.12
19	Manganese (Mn) .....	0.0	0.0	0.0	0.0
20	Aluminum (Al) .....	0.0	0.0	0.0	0.0
21	Copper (Cu) .....	0.0	0.0	0.0	0.0
22	Zinc (Zn) .....	0.0	0.05	0.1	0.0
23	Sodium (Na) .....	1.0	5.6	2.4	1.6
24	Potassium (K) .....	0.3	1.7	0.8	1.2
25	Ammonia (NH <sub>3</sub> ) .....	0.05	0.05	0.05	0.05
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	33.2	63.3	26.2	16.7
28	Sulphate (SO <sub>4</sub> ) .....	6.8	17.1	11.4	10.5
29	Chloride (Cl) .....	0.7	6.7	2.6	2.1
30	Fluoride (F) .....	0.0	0.1	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	2.0	0.3	0.1	0.1
32	Silica (SiO <sub>2</sub> ), colorimetric .....	5.4	2.0	14	11
33	Carbonate hardness as CaCO <sub>3</sub> .....	27.2	51.9	21.5	13.7
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	8.7	15.4	6.0	11.4
35	Total hardness as CaCO <sub>3</sub> .....	35.9	67.3	27.5	25.1
36	Sum of constituents .....	46.7	82.1	55.3	43.6
37	Per cent sodium .....	5.6	14.9	13.4	11.5
38	Saturation index at test temperature .....	-2.0	-0.4	-1.7	-2.4
39	Stability index at test temperature .....	11	8.8	11	11
	Remarks:		Supply A	Supply B	Supply C

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. MARC (concl'd) (Vercheres Co.)		ST. MARC DES CARRIERES (Portneuf Co.)	STE. MARIE (Beauce Co.)		No.
Springs	Richelieu River	Wells	Carter River	Belair River	
Raw and finished water	Finished water	Raw and finished water	Finished water	Raw and finished water	
		At village tap	At pump house	At town tap	
Oct. 23/58 8:25	Oct. 21/58 10:27	June 15/55 19:153	July 25/56 69:76	Sept. 24/60 6:11	1
24.9	24.8	13.9	17.8	22.3	2
2.9	4.1	27.7 (22)	24.8	7.2	3
1.7	1.8	0.7	2.9	2.8	4
7.3	7.8	7.8 (6.2)	7.5	7.6	5
15	25	10	10	30	6
0	12	0.8	0	0	7
	17				8
	12				9
67.2	103	46.4			10
19.2	32.8	14.0			11
71.8	156	52.54	123.1	152.2	12
7.3	18.0	6.6	19.2	23.4	13
2.3	4.9	0.6	1.9	2.8	14
	0.66			0.04	15
0.07	0.08	0.11		0.0	16
Trace	0.0	0.05		0.0	17
0.02	0.04	0.45		0.0	18
0.0	0.0	0.15		0.01	19
1.0	0.05		0.0	0.0	20
1.8	4.2	1.6	0.05	0.0	21
0.6	1.5	0.8	2.0	2.4	22
0.1	0.05	0.0	0.8	0.7	23
0.0	0.0	0.0 (0)	0.1	0.2	24
22.8	61.8	25.6 (24.4)	0.0	0.0	25
11.3	16.8	0.5	59.0	65.0	26
1.2	5.2	1.0	9.4	17.2	27
0.0	0.1	0.0	1.6	2.9	28
0.1	0.3	3.2		0.0	29
12	2.0	9.6	1.6	0.2	30
18.7	50.7	18.9 (18.8)	5.6	5.7	31
9.0	14.4	0.0 (0)	48.4	53.3	32
27.7	65.1	18.9 (18.8)	7.3	16.4	33
49.0	83.6	36.9	55.7	70.0	34
11.5	11.9	14.5	71.2	87.3	35
-1.9	+0.6	-1.3	7.1	6.9	36
11	9.0	10	-0.9	-0.8	37
			9.3	9.2	38
					39
Supply D	Supply E	Lithium - 0.0 ppm			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		STE. MARIE MADELEINE (St. Hyacinthe Co.)	ST. MARTIN (Beauce Co.)	STE. MARTINE (Chateauguay Co.)	ST. MATHIAS (Rouville Co.)
No.	Source(s) .....	Springs and wells	Artesian wells	Wells	Richelieu River
	Sampling point .....			Raw and finished water	
				At tap	
1	Date of sampling .....			Aug. 17/56	
2	Storage period (days) .....			232:354	
3	Sampling temperature, °C. ....			14.4	
4	Test temperature, °C. ....			24.6 (29)	
5	Oxygen consumed by KMnO <sub>4</sub> .....			3.4	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....			2.5	
7	pH .....			8.2 (7.7)	
8	Colour .....			5	
9	Turbidity .....			0	
10	Suspended matter, dried at 105°C. ....			.....	
11	Suspended matter, ignited at 550°C. ....			.....	
12	Residue on evaporation, dried at 105°C. ....			721	
13	Ignition loss at 550°C. ....			58.0	
14	Specific conductance, micromhos at 25°C. ....			1,265	
15	Calcium (Ca) .....			32.8	
16	Magnesium (Mg) .....			22.9	
17	Iron (Fe) Total .....			0.25	
18	Dissolved .....			0.0	
19	Manganese (Mn) .....	<i>See</i>	<i>See</i>	0.02	<i>See</i>
20	Aluminum (Al) .....	Ste. Madeleine	Bolduc	0.09	Richelieu
21	Copper (Cu) .....			.....	
22	Zinc (Zn) .....			0.5	
23	Sodium (Na) .....			197	
24	Potassium (K) .....			11.2	
25	Ammonia (NH <sub>3</sub> ) .....			.....	
26	Carbonate (CO <sub>3</sub> ) .....			0.0 (0)	
27	Bicarbonate (HCO <sub>3</sub> ) .....			299 (329)	
28	Sulphate (SO <sub>4</sub> ) .....			65.1	
29	Chloride (Cl) .....			215	
30	Fluoride (F) .....			0.0	
31	Nitrate (NO <sub>3</sub> ) .....			0.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....			10	
33	Carbonate hardness as CaCO <sub>3</sub> .....			176 (177)	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....			0.0	
35	Total hardness as CaCO <sub>3</sub> .....			176 (177)	
36	Sum of constituents .....			702	
37	Per cent sodium .....			69.1	
38	Saturation index at test temperature .....			+0.6	
39	Stability index at test temperature .....			7.0	
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. MATHIEU DE BELOEIL (Vercheres Co.)	ST. METHODE DE FRONTENAC (Frontenac Co.)	ST. MICHEL (Bellechasse Co.)	ST. MICHEL (Ile de Montreal)	ST. MONIQUE DES SAULES (Quebec Co.)	ST. NARCISSE (Champlain Co.)	
Hertel Lake	Well and spring	Springs	St. Lawrence River	Creek and well	Springs*	No.
	Raw and finished water	Raw and finished water			Raw and finished water	
		At tap			At village tap	
	July 6/58 17:30	Apr. 4/58 5:12			June 11/55 17:99	1
	25.0	24.7			12.8	2
	4.0	1.2			27.5 (21)	3
	6.2	7.8				4
	7.5	6.6			6.5	5
	0	10			6.8 (6.5)	6
	0.9	2			0	7
					0	8
						9
						10
	182	64.8			69.2	11
	23.2	15.2			17.6	12
	286.8	83.4			85.1	13
	40.8	5.8			9.8	14
	8.7	2.8			1.4	15
						16
						17
See Beloeil	0.02	0.06	See Montreal	See L'Ancienne Lorette	0.0	18
	0.0	0.02			0.02	19
	0.02	0.01			0.09	20
	Trace	Trace			0.12	21
	0.05	0.30				22
	5.3	4.1			2.9	23
	0.6	0.6			0.9	24
	0.05	0.05			0.0	25
	0.0	0.0			0.0 (0)	26
	138	19.7			25.6 (29.3)	27
	30.2	12.5			12.6	28
	1.9	2.8			1.2	29
	0.0	0.0			0.05	30
	1.8	2.5			4.0	31
	11	5.0			12	32
	113	16.2			21.0	33
	24.6	9.8			9.2	34
	138	26.0			30.2	35
	168	46.3			51.6	36
	7.7	24.5			16.4	37
	-0.3	-2.8			-2.2	38
	8.1	12			11	39
						* Serving 5/8 of village

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. NARCISSE (concl'd) (Champlain Co.)	ST. NARCISSE DE BEAURIVAGE (Lotbiniere Co.)	ST. NICEPHORE (Drummond Co.)	ST. OCTAVE DE METIS (Matane Co.)
No.	Source(s) .....	Artesian well	Wells	St. Francis River	Lake Fortin
		Raw and finished water	Raw and finished water		
	Sampling point .....	At village tap	At tap		
1	Date of sampling .....	June 11/55	Aug. 23/56		
2	Storage period (days) .....	17:99	230:364		
3	Sampling temperature, °C. ....	10.0	12.8		
4	Test temperature, °C. ....	27.5 (18)	24.2		
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	3.1		
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	7.0	1.4		
7	pH .....	6.8 (6.5)	8.2		
8	Colour .....	0	0		
9	Turbidity .....	0	0		
10	Suspended matter, dried at 105° C. ....	.....	.....		
11	Suspended matter, ignited at 550° C. ....	.....	.....		
12	Residue on evaporation, dried at 105° C. ....	57.2	278		
13	Ignition loss at 550° C. ....	10.8	65.6		
14	Specific conductance, micromhos at 25° C. ....	67.2	425.2		
15	Calcium (Ca) .....	9.3	55.6		
16	Magnesium (Mg) .....	0.9	5.4		
17	Iron (Fe) Total .....	.....	.....		
18	Dissolved .....	0.0	Trace		
19	Manganese (Mn) .....	0.02	0.0	See Drummondville	See Price
20	Aluminum (Al) .....	0.10	0.0		
21	Copper (Cu) .....	Trace	.....		
22	Zinc (Zn) .....	.....	0.05		
23	Sodium (Na) .....	1.5	15.2		
24	Potassium (K) .....	0.7	10.3		
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0		
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0		
27	Bicarbonate (HCO <sub>3</sub> ) .....	27.7 (31.7)	148		
28	Sulphate (SO <sub>4</sub> ) .....	8.2	26.0		
29	Chloride (Cl) .....	0.4	17.1		
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	1.2	48		
32	Silica (SiO <sub>2</sub> ), colorimetric .....	11	14		
33	Carbonate hardness as CaCO <sub>3</sub> .....	22.7 (25.5)	122		
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	4.2 (0)	39.4		
35	Total hardness as CaCO <sub>3</sub> .....	26.9 (25.5)	161		
36	Sum of constituents .....	46.6	265		
37	Per cent sodium .....	10.3	15.9		
38	Saturation index at test temperature .....	-2.1	+0.8		
39	Stability index at test temperature .....	11	7.0		
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. ODILON DE CRANBOURNE (Dorchester Co.)	ST. OURS (Richelieu Co.)	ST. PACOME (Kamouraska Co.)	ST. PASCAL (Kamouraska Co.)	ST. PAUL D'ABBOTSFORD (Rouville Co.)		No.
Springs	Springs	Spring and well	Springs	Artesian wells		
Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water	Raw and finished water		
At village tap	At tap			At tap	At tap	
Mar. 10/58 8:21	Aug. 14/56 192:345	Apr. 7/58 22:29	Feb. 17/58 10:14	Aug. 15/56 226:347	Oct. 21/60 7:13	1
.....	18.3	.....	3.2	16.1	11.1	2
24.2	23.8 (25)	25.3	25.5	23.9 (22)	25.7	3
1.1	9.8	1.2	1.7	1.9	.....	4
9.8	1.3	4.1	3.3	1.6	2.8	5
7.1	7.7 (6.9)	7.5	7.8	8.2 (7.9)	8.1	6
0	15	0	5	0	15	7
0	0	0.4	0.4	6	0	8
.....	.....	.....	.....	3.7	.....	9
.....	.....	.....	.....	3.7	.....	10
89.2	116	117	170	205	.....	11
20.0	28.0	32.4	31.2	9.6	.....	12
135.1	174.2	183.9	270.9	334.5	295.5	13
18.6	18.4	18.6	19.3	50.8	44.1	14
4.1	5.2	4.8	4.5	8.5	9.1	15
.....	.....	.....	.....	.....	Trace	16
Trace	Trace	0.0	0.0	0.0	0.0	17
0.03	0.01	0.0	0.0	0.0	0.0	18
0.0	0.08	0.0	0.08	0.02	0.04	19
0.0	0.0	0.0	0.0	0.0	0.0	20
0.3	0.3	0.0	0.5	0.05	0.2	21
2.7	4.3	10.4	30.5	5.1	5.5	22
0.4	1.7	2.3	2.4	0.9	0.7	23
0.0	0.0	0.05	0.0	0.0	0.0	24
0.0	0.0 (0)	0.0	0.0	0.0 (0)	0.0	25
73.4	42.2 (50.3)	84.8	135	160 (166)	146	26
5.7	33.3	16.8	20.1	43.8	35.1	27
1.1	3.7	2.2	4.8	0.5	1.1	28
0.0	0.0	0.0	0.0	0.0	0.0	29
1.5	6.0	4.0	1.8	0.2	0.0	30
12	14	7.1	7.6	11	11	31
60.2	34.6	66.1	66.7	131	119	32
3.1	32.7	0.0	0.0	30.5	29	33
63.3	67.3	66.1	66.7	162	148	34
82.7	107	108	158	199	178	35
8.4	11.7	24.6	48.3	6.4	7.4	36
-1.3	-1.0	-0.8	-0.3	+0.6	+0.4	37
9.7	9.7	9.1	8.4	7.0	7.3	38
						39
					Phosphate : trace	



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. PAUL DE CHESTER (Arthabaska Co.)	ST. PAULIN (Maskinonge Co.)	ST. PAUL L'ERMITE (L'Assomption Co.)	
No.	Source(s) .....	Spring and well	Springs	L'Assomption River	
	Sampling point .....		Raw and finished water	Raw water*	Finished water
			At village tap	At filtration plant	
1	Date of sampling .....		Mar. 10/58	Aug. 19/60	Aug. 19/60
2	Storage period (days) .....		3:9	6:13	6:13
3	Sampling temperature, °C. ....		22.6	26.7	21.1
4	Test temperature, °C. ....		22.6	24.1	24.0
5	Oxygen consumed by KMnO <sub>4</sub> .....		1.1	8.0	2.7
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		2.2	7.0	7.5
7	pH .....		7.3	5	15
8	Colour .....		5	25	3
9	Turbidity .....		0	3.5	
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....		50.0		
13	Ignition loss at 550° C. ....		18.4		
14	Specific conductance, micromhos at 25° C. ....		82.1	136.3	161.8
15	Calcium (Ca) .....		4.2	12.4	18.1
16	Magnesium (Mg) .....		2.1	3.3	3.2
17	Iron (Fe) Total .....		0.02	0.40	0.17
18	Dissolved .....	See Chesterville	0.02	0.03	0.09
19	Manganese (Mn) .....		Trace	0.0	0.01
20	Aluminum (Al) .....		0.0	Trace	0.20
21	Copper (Cu) .....		Trace	Trace	0.0
22	Zinc (Zn) .....		0.4	0.05	0.0
23	Sodium (Na) .....		3.6	8.5	8.2
24	Potassium (K) .....		0.7	1.8	1.7
25	Ammonia (NH <sub>3</sub> ) .....		0.05	0.2	0.0
26	Carbonate (CO <sub>3</sub> ) .....		0.0	0.0	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....		27.2	49.6	52.5
28	Sulphate (SO <sub>4</sub> ) .....		5.2	7.8	15.6
29	Chloride (Cl) .....		0.9	10.0	12.4
30	Fluoride (F) .....		0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....		0.4	1.6	1.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....		17	4.0	4.1
33	Carbonate hardness as CaCO <sub>3</sub> .....		19.1	40.7	43.1
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		0.0	3.9	15.3
35	Total hardness as CaCO <sub>3</sub> .....		19.1	44.6	58.4
36	Sum of constituents .....		47.8	74.1	90.9
37	Per cent sodium .....		2.7	28.2	22.4
38	Saturation index at test temperature .....		-2.1	-1.7	-1.0
39	Stability index at test temperature .....		12	10	9.5
Remarks:				Phosphate 0.21 *See also Station No. 31, page 26	Phosphate - 0.04 ppm

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. PHILEMON (Bellechasse Co.)	ST. PHILIPPE DE NERI (Kamouraska Co.)	ST. PIE (Bagot Co.)	ST. PIERRE (Ile de Montreal)	ST. PIERRE DE LA RIVIERE DU SUD (Montmagny Co.)	ST. PRIME (Lac St. Jean W. Co.)	No.	
Spring	Springs	Mt. Yamaska Lake	St. Lawrence River	Moregeau River and La Blague River	Springs		
Raw and finished water	Raw and finished water	Raw and finished water		Raw and finished water	Raw and finished water		
		At village tap			At village tap		
Dec. 3/58	Apr. 15/58	Aug. 10/56	See Montreal	Feb. /58	July 19/55	1	
12:33	16:21	195:280			43:198	2	
1.1	.....	16.7			13.3	3	
24.2	24.5	22.9 (25)			24.8	4	
1.3	2.5	9.7			6.4	5	
13	5.5	1.1			3.0	6	
7.0	7.3	7.4 (7.8)			6.7	7	
5	10	20			35	8	
0	0.8	3			0.9	9	
.....	.....	4.5			.....	10	
.....	.....	1.6			.....	11	
88.8	100	70.4			46.0	12	
8.8	20.4	20.8			24.0	13	
147.0	145.0	71.5			40.4	14	
25.4	21.1	9.5			4.0	15	
2.5	1.9	0.6			1.0	16	
.....	.....	.....			.....	17	
Trace	0.01	0.0			0.1	0.01	18
0.0	0.02	0.01			Trace	0.04	19
0.0	0.0	0.02			0.0	0.03	20
0.0	0.0	0.0			0.11	0.0	21
0.0	0.0	0.05			0.0	.....	22
0.6	4.7	2.2			1.7	1.3	23
0.2	0.9	0.6			0.3	0.6	24
0.0	0.05	0.05			0.05	.....	25
0.0	0.0	0.0 (0)			0.0	0.0 (0)	26
74.6	66.6	17.6 (25.1)			9.3	102 (105)	27
10.3	12.4	14.6			7.2	3.6	28
1.0	1.9	0.7			1.5	0.8	29
0.0	0.1	0.3			0.0	0.2	30
0.3	3.0	1.6			0.4	1.6	31
4.9	4.0	9.1			6.2	8.8	32
61.2	54.6	14.4			7.6	83.4	33
12.5	5.9	11.8			6.4	2.8	34
73.7	60.5	26.2			14.0	86.2	35
81.9	82.8	45.2			27.1	101	36
1.7	14.2	14.9			19.8	3.1	37
-1.2	-1.0	-1.8			-3.1	+0.1	38
9.4	9.3	11			13	7.9	39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. PROSPER (Champlain Co.)	ST. PROSPER (Dorchester Co.)	ST. RAYMOND (Portneuf Co.)	ST. REDEMPTEUR (Levis Co.)
	Source(s) .....	Cossette Creek	Springs	Springs	Artesian well
			Raw and finished water	Raw and finished water	Raw and finished water
	Sampling point .....		At tap	At town tap	At village tap
1	Date of sampling .....		Apr. 3/58	July 26/55	July 24/56
2	Storage period (days) .....		6:13	55:223	129:223
3	Sampling temperature, °C. ....		.....	11.1	12.8
4	Test temperature, °C. ....		24.8	23.8 (19)	20.8 (23)
5	Oxygen consumed by KMnO <sub>4</sub> .....		1.5	.....	12.1
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....		4.1	0.9	1.9
7	pH .....		7.5	7.4 (6.6)	8.3 (8.0)
8	Colour .....		5	10	20
9	Turbidity .....		0.9	0	0
10	Suspended matter, dried at 105° C. ....		.....	.....	.....
11	Suspended matter, ignited at 550° C. ....		.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....		124	54.0	343
13	Ignition loss at 550° C. ....		21.6	19.6	42.0
14	Specific conductance, micromhos at 25° C. ....		177.7	64.16	546.7
15	Calcium (Ca) .....		23.2	7.7	30.1
16	Magnesium (Mg) .....		6.1	0.2	6.1
17	Iron (Fe) Total .....		.....	.....	.....
18	Dissolved .....		0.02	0.02	0.2
19	Manganese (Mn) .....	See Ste. Anne de la Perade	0.0	Trace	0.02
20	Aluminum (Al) .....		0.03	0.01	2.0
21	Copper (Cu) .....		0.0	0.04	0.0
22	Zinc (Zn) .....		0.05	Trace	0.0
23	Sodium (Na) .....		2.3	2.0	71.6
24	Potassium (K) .....		0.5	1.6	6.1
25	Ammonia (NH <sub>3</sub> ) .....		0.05	0.0	0.05
26	Carbonate (CO <sub>3</sub> ) .....		0.0	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....		84.5	14.0 (17.1)	227 (226)
28	Sulphate (SO <sub>4</sub> ) .....		15.5	4.7	4.1
29	Chloride (Cl) .....		1.4	2.5	59.8
30	Fluoride (F) .....		0.0	0.0	0.2
31	Nitrate (NO <sub>3</sub> ) .....		1.5	1.2	3.6
32	Silica (SiO <sub>2</sub> ), colorimetric .....		14	11	18
33	Carbonate hardness as CaCO <sub>3</sub> .....		69.3	11.5	100
34	Non-carbonate hardness as CaCO <sub>3</sub> .....		13.7	6.7	0.0
35	Total hardness as CaCO <sub>3</sub> .....		83.0	18.2	100
36	Sum of constituents .....		107	37.4	314
37	Per cent sodium .....		5.6	16.4	56.6
38	Saturation index at test temperature .....		-0.7	-2.0	+0.5
39	Stability index at test temperature .....		8.9	11	7.3
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. REMI (Napierville Co.)	ST. REMI (Portneuf Co.)	ST. ROMAIN DE WINSLOW (Frontenac Co.)	ST. ROMUALD D'ETCHEMIN (Levis Co.)		No.		
Artesian wells	Artesian well	Springs	Springs and St. Lawrence River				
			Springs	St. Lawrence River			
Raw and finished water	Raw and finished water		Raw and finished water				
At town tap	At tap		At spring	At tap*	At plant tap		
Aug. 17/56	June 11/55		July 5/55	July 24/56	July 5/55	1	
232:354	17:99		8:133	129:242	7:133	2	
16.1	8.9		14.4	14.4	23.3	3	
24.6 (27)	27.5 (20)		26.0 (24.5)	20.5 (23)	26.3 (26)	4	
2.0				11		5	
2.4	4.8		4.0	1.5	0.9	6	
8.2 (7.5)	6.4 (6.2)		7.7 (7.7)	8.2 (7.6)	8.2 (8.0)	7	
5	0		0	30	15	8	
0	0		0.9	3	9	9	
				6.6	18.1	10	
				3.3	13.7	11	
632	47.2		170	182	164	12	
110	20.0		24.0	18.0	39.6	13	
977.5	45.4		266.0	274.0	246.5	14	
72.0	5.5		40.7	42.3	31.1	15	
36.6	0.3		5.4	4.7	5.9	16	
0.05						17	
0.0	0.0	See Winslow North	0.01	0.44	0.02	18	
0.0	0.02		0.0	0.02	0.0	0.0	19
0.0	0.15		0.02	0.14	0.03	0.03	20
0.0	0.13		0.0	0.25	Trace	Trace	21
0.5				0.05			22
76.0	1.0			3.7	7.9	7.2	23
3.6	0.8			1.6	1.2	1.0	24
0.0	0.0			0.1	0.05	0.4	25
0.0 (0)	0.0 (0)			0.0 (0)	0.0 (0)	0.0 (0)	26
259 (264)	7.7 (9.8)			124 (127)	148 (138)	92.0 (95.2)	27
140	5.2		28.9	20.0	21.8	28	
109	0.7		1.4	3.6	14.6	29	
0.6	0.0		0.0	0.0	0.0	30	
0.6	8.0		3.2	0.8	1.2	31	
14	6.3		10	14	4.0	32	
213	6.3		102 (104)	121	75.5 (78)	33	
117	8.7		21.9 (10)	3.8	26.4 (20)	34	
330	15.0		124 (114)	125	102 (98)	35	
580	31.9		157	168	132	36	
33.0	11.3		6.0	11.8	13.2	37	
+0.9	-3.3		-0.1	+0.4	+0.2	38	
6.4	13		7.9	7.4	7.8	39	
			Lithium - 0.0 ppm	* A tap in New Liverpool - Chaudier Bassin area	Lithium - 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. ROMUALD D'ETCHEMIN (concl'd) (Levis Co.)		STE. ROSE DE WATFORD (Dorchester Co.)	STE. ROSE STATION (Dorchester Co.)
	Source(s) .....	St. Lawrence River		Springs	Springs
	Sampling point .....	At plant tap*	At tap**		Raw and finished water
1	Date of sampling .....	July 5/55	Feb. 14/58		Apr. 18/58
2	Storage period (days) .....	7:133	17:33		11:18
3	Sampling temperature, °C. ....	22.2			
4	Test temperature, °C. ....	26.3 (26)	24.6		25.3
5	Oxygen consumed by KMnO <sub>4</sub> .....		1.3		4.3
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	0.9	7.0		4.9
7	pH .....	8.2 (7.8)	7.2		6.9
8	Colour .....	10	10		20
9	Turbidity .....	6	0.1		0.3
10	Suspended matter, dried at 105° C. ....	8.6			
11	Suspended matter, ignited at 550° C. ....	4.0			
12	Residue on evaporation, dried at 105° C. ....	169	147		60.0
13	Ignition loss at 550° C. ....	38.8	29.6		18.0
14	Specific conductance, micromhos at 25° C. ....	250.5	240.5		58.4
15	Calcium (Ca) .....	31.3	29.3		6.5
16	Magnesium (Mg) .....	6.1	6.3		1.6
17	Iron (Fe) Total .....			See	
18	Dissolved .....	0.03	0.05	Ste. Rose Station	0.03
19	Manganese (Mn) .....	0.0	0.02		0.0
20	Aluminum (Al) .....	0.03	0.0		0.04
21	Copper (Cu) .....	Trace	Trace		0.0
22	Zinc (Zn) .....		0.4		2.0
23	Sodium (Na) .....	7.3	7.7		1.0
24	Potassium (K) .....	1.1	1.1		0.5
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.05		0.05
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0		0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	91.8 (80.5)	69.5		24.5
28	Sulphate (SO <sub>4</sub> ) .....	20.4	35.0		5.5
29	Chloride (Cl) .....	16.1	16.2		0.7
30	Fluoride (F) .....	0.0	0.0		0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.6	0.7		1.0
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.6	2.2		4.1
33	Carbonate hardness as CaCO <sub>3</sub> .....	75.3	57.0		20.1
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	27.9	42.0		2.7
35	Total hardness as CaCO <sub>3</sub> .....	103	99.0		22.8
36	Sum of constituents .....	133	133		35.1
37	Per cent sodium .....	13.2	14.2		7.5
38	Saturation index at test temperature .....	+0.2	-1.0		-2.3
39	Stability index at test temperature .....	7.8	9.2		12
	Remarks:	Lithium - 0.0 ppm * Old plant and treatment.	** From new plant		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

ST. SAMUEL DE GAYHURST (Frontenac Co.)	ST. SIMEON (Charlevoix E. Co.)	ST. SIMON DE DRUMMOND (Drummond Co.)	ST. SOPHIE DE LEVRARD (Nicolet Co.)	ST. STANISLAS DE CHAMPLAIN * (Champlain Co.)	STE. THECLE (Champlain Co.)	
Springs	Lac de la Riviere Noire	St. Francis River	Springs	Lake	Springs	No.
	Raw and finished water		Raw and finished water		Raw and finished water	
	At village tap				At village tap	
	July 14/55 40:195 19.4 22.0 (21)		Apr. 15/58 14:21		June 11/55 17:99 8.9 26.0 (20)	1 2 3 4
	.....		.....		.....	5
	3.1 7.0 (7.2) 15 0		4.0 6.5 5 0.3		2.8 7.0 (6.5) 0 4	6 7 8 9
	.....		.....		11.8 9.0	10 11
	30.6 10.6 40.16 5.0 0.5		50.0 17.6 54.1 5.5 1.1		66.0 18.8 61.4 5.9 1.7	12 13 14 15 16
See Gayhurst	.....	See Drummondville	.....	See Deux Rivieres	.....	17
	0.02 0.0 0.15 0.0		0.04 0.01 0.0 0.0		0.03 0.0 0.0 0.0	18 19 20 21
	.....		.....		.....	22
	1.5 0.5 0.1 0.0 (0) 18.4 (21.9) 1.2 0.0 0.0 3.2 6.5 14.5 (14.8) 0.0 (0.0) 14.5 (14.8) 27.7 16.9 -2.5 12		0.3 1.4 1.3 0.05 0.0 8.1 6.7 1.9 0.0 8.0 9.5 6.6 11.7 18.3 39.8 12.9 -3.3 13		1.8 1.2 0.0 0.0 (0) 17.6 (19.5) 8.1 1.3 0.0 4.0 13 14.4 7.3 21.7 45.5 14.4 -2.4 12	23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
				* Also known as St. Stanislas Station		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	ST. THEOPHILE (Beauce Co.)	ST. THOMAS DE LA POINTE A LA- CALLE (Montmagny Co.)	ST. THURIBE (Portneuf Co.)	STE. TITE (Champlain Co.)
	Source(s) .....	Springs	Riviere la Perdrix	Lake Chalifaux and Thibault Creek	Eric Lake
	Sampling point .....	At village tap			At town tap
1	Date of sampling .....	July 26/56			June 11/55
2	Storage period (days) .....	189:250			17:99
3	Sampling temperature, °C. ....	13.9			14.5
4	Test temperature, °C. ....	24.8 (18)			26.0 (22)
5	Oxygen consumed by KMnO <sub>4</sub> .....	11			.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	2.3			1.9
7	pH .....	7.0 (7.5)			6.7 (6.5)
8	Colour .....	10			20
9	Turbidity .....	0			0
10	Suspended matter, dried at 105° C. ....	.....			.....
11	Suspended matter, ignited at 550° C. ....	.....			.....
12	Residue on evaporation, dried at 105° C. ....	65.6			29.2
13	Ignition loss at 550° C. ....	15.6			10.8
14	Specific conductance, micromhos at 25° C. ....	90.67			26.1
15	Calcium (Ca) .....	14.3			3.2
16	Magnesium (Mg) .....	1.0			0.4
17	Iron (Fe) Total .....	.....			.....
18	Dissolved .....	0.01			0.05
19	Manganese (Mn) .....	0.01	<i>See</i>	<i>See</i>	0.0
20	Aluminum (Al) .....	0.03	Montmagny	St. Casimir	0.08
21	Copper (Cu) .....	0.0			0.07
22	Zinc (Zn) .....	0.6			.....
23	Sodium (Na) .....	1.4			0.6
24	Potassium (K) .....	0.3			0.3
25	Ammonia (NH <sub>3</sub> ) .....	0.05			0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)			0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	45.3 (47.7)			6.0 (9.8)
28	Sulphate (SO <sub>4</sub> ) .....	5.6			6.1
29	Chloride (Cl) .....	0.6			0.3
30	Fluoride (F) .....	0.0			0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.6			0.4
32	Silica (SiO <sub>2</sub> ), colorimetric .....	6.9			3.8
33	Carbonate hardness as CaCO <sub>3</sub> .....	37.2			4.9
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	2.6			4.7
35	Total hardness as CaCO <sub>3</sub> .....	39.8			9.6
36	Sum of constituents .....	53.6			18.3
37	Per cent sodium .....	6.8			10.9
38	Saturation index at test temperature .....	-1.2			-3.4
39	Stability index at test temperature .....	9.9			14
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

STE. TITE DES CAPS (Montmorency No. 1 Co.)	ST. ULRIC (Matane Co.)	ST. URBAIN (Charlevoix W. Co.)	STE. URSULE (Maskinonge Co.)	ST. VICTOR (Beauce Co.)		No.
				Springs	Wells	
Springs	Blanche River	Springs	Riviere du Loup and wells	Springs	Wells	
Raw and finished water	Raw and finished water	Raw and finished water		Raw and finished water		
At tap	At village tap	At tap		At village tap		
July 22/55 49:209 13.9 22.3 (19)	July 22/55 36:166 17.5 27.2 (21)	July 21/55 48:210 13.9 23.2 (21.5)		Aug. 23/56 230:364 14.4 24.2 2.7 1.0 8.0 3 0	Aug. 19/60 31:32 23.5 3.4 3.0 7.5 10 0	1 2 3 4 5 6 7 8 9
5.4 7.2 (6.9) 3 0	8.3 (8.0) 10 5	1.8 7.7 (7.5) 20 3		94.0 15.6 144.6 19.5 3.9 0.18 Trace 0.01 0.04 Slight trace 0.05 2.2 0.5 0.0 0.0 57.8 17.6 1.1 0.0 3.4 9.7 47.4 17.3 64.7 86.5 6.8 -0.4 8.8	161.2 22.0 4.2 0.06 0.02 0.07 0.0 0.10 2.6 0.5 0.35 0.0 63.6 19.3 3.1 0.0 1.6 11 52.2 20.0 72.2 95.3 7.1 -0.9 9.3	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
.....	14.8 11.2	.....				
83.6 12.0 103.2 11.6 1.9	146 19.2 245.4 39.2 4.6	71.2 11.6 91.78 16.0 0.3				
0.0 Trace 0.0 0.10 0.01 3.3 0.6 0.0 0.0 (0) 50.8 (56.1) 1.1 0.5 0.05 3.2 25 36.8 0.0 36.8 72.3 16.1 -1.6 10	..... 0.04 0.05 0.0 ..... 5.4 0.7 ..... 0.0 (0) 140 (142) 8.2 4.3 ..... 3.2 5.0 114 2.3 117 140 9.1 +0.6 7.1	0.01 0.0 0.0 Trace 0.03 1.9 0.3 0.0 0.0 (0) 51.0 (56.1) 2.0 0.3 0.0 0.6 14 41.2 0.0 41.2 60.5 9.0 -0.9 9.5	See Louiseville			
					Phosphate - 0.0 ppm	



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		ST. ZENON (Berthier Co.)	ST. ZEPHIRIN DE COURVAL (Yamaska Co.)	ST. ZOTIQUE (Soulanges Co.)	SALABERRY DE VALLEYFIELD (Beauharnois Co.)
No.	Source(s) .....	Lake St. Louis	Wells	Lake St. Francis (St. Lawrence River)	St. Lawrence River
	Sampling point .....	At tap			At plant tap
		Raw and finished water	Raw and finished water		Raw and finished water
1	Date of sampling .....	June 8/55	May 18/58		June 13/51
2	Storage period (days) .....	7:83	21:22		5:21
3	Sampling temperature, °C. ....	12.8			16.1
4	Test temperature, °C. ....	23.4 (23)	26.5		22.0 (21)
5	Oxygen consumed by KMnO <sub>4</sub> .....		11		
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	7.2	2.9		2.5
7	pH .....	6.8 (7.0)	8.5		7.9 (8.2)
8	Colour .....	5	60		7 (10)
9	Turbidity .....	0	3		2 (<5)
10	Suspended matter, dried at 105° C. ....				
11	Suspended matter, ignited at 550° C. ....				
12	Residue on evaporation, dried at 105° C. ....	56.4	933		
13	Ignition loss at 550° C. ....	12.0	48.8		
14	Specific conductance, micromhos at 25° C. ....	67.2	1,597		274.0 (260)
15	Calcium (Ca) .....	9.8	2.6		37.9
16	Magnesium (Mg) .....	0.3	4.5		7.5
17	Iron (Fe) Total .....				
18	Dissolved .....	0.0	0.04		
19	Manganese (Mn) .....	0.0	0.0		
20	Aluminum (Al) .....	0.7	0.0		
21	Copper (Cu) .....	0.0	0.0		
22	Zinc (Zn) .....		0.0		
23	Sodium (Na) .....	0.9	356		8.3
24	Potassium (K) .....	0.4	10.0		1.4
25	Ammonia (NH <sub>3</sub> ) .....	0.0			
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	33.4		0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	27.4 (29.3)	572		110 (115)
28	Sulphate (SO <sub>4</sub> ) .....	9.5	1.5		23.9
29	Chloride (Cl) .....	0.3	196		19.5
30	Fluoride (F) .....	0.0	1.8		
31	Nitrate (NO <sub>3</sub> ) .....	0.2	0.2		0.8
32	Silica (SiO <sub>2</sub> ), colorimetric .....	9.6	8.0		1.9
33	Carbonate hardness as CaCO <sub>3</sub> .....	22.5 (24.0)	25.0		90.2 (94)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	3.2 (3.1)	0.0		35.2 (30)
35	Total hardness as CaCO <sub>3</sub> .....	25.7 (27.1)	25.0		125 (124)
36	Sum of constituents .....	45.2	896		155
37	Per cent sodium .....	5.9	95		12.4
38	Saturation index at test temperature .....	-2.2	+0.2		-0.1
39	Stability index at test temperature .....	11	8.1		8.1
Remarks:					

See  
Coteau Landing

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

SALABERRY DE VALLEYFIELD (concl'd) (Beauharnois Co.)	SARAGUAY (Jacques Cartier Co.)	SAULT AU MOUTON (Saguenay Co.)	SCOTSTOWN (Compton Co.)	SEPT ILES (Saguenay Co.)	No.
St. Lawrence River	St. Lawrence River	Red Creek	Mountain Brook	Wells	
Raw and finished water		Raw and finished water	Raw and finished water	Raw and finished water	
At pumphouse tap		At village tap	At town tap	At village tap	
Aug. 21/56		July 14/55	Aug. 3/56	Aug. 28/58	1
230:359		40:195	193:259	94:97	2
21.7		13.9	14.4	3.3	3
24.9 (23)		26.2 (20)	24.7 (20)	21.0	4
3.4		.....	14.5	1.2	5
2.8		1.7	1.6	3.1	6
7.8 (8.1)		7.3 (6.8)	7.1 (7.1)	6.7	7
5		90 (110)	10	0	8
3		0	0	0	9
.....		.....	.....	.....	10
.....		.....	.....	.....	11
188		56.0	36.0	33.2	12
47.6		18.0	9.6	11.2	13
301.9		51.9	35.72	41.0	14
37.3		4.1	3.8	2.6	15
8.3		1.0	0.6	1.0	16
.....		.....	.....	.....	17
Trace	See Montreal	0.66	0.0	0.02	18
0.0		Trace	0.0	0.0	19
0.07		0.18	0.04	0.03	20
.....		0.02	Trace	0.04	21
0.05		.....	0.5	0.5	22
9.6			1.1	2.2	23
1.2			0.0	0.4	24
0.0			0.1	0.05	25
0.0 (0)			0.0 (0)	0.0 (0)	26
109 (118)			21.8 (24.4)	12.6 (17.6)	9.5
26.1		2.8	4.4	3.9	28
22.0		3.0	0.6	3.4	29
0.0		0.0	0.0	0.0	30
0.8		4.0	0.8	0.1	31
3.5		12	9.8	7.7	32
89.6		14.3	10.3	7.8	33
35.6		0.0	1.7	2.8	34
126		14.3	12.0	10.6	35
163		44.4	28.3	26.7	36
14.1		38.2	15.0	28.1	37
-0.1		-2.1	-3.4	-3.4	38
8.0		12	12	14	39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	SHAWINIGAN (St. Maurice Co.)			
	Source(s) .....	Shawinigan River and Lac La Peche (Lac des Piles*)			
		Lac la Peche	Shawinigan River		
		Raw water	Raw water	Finished water	
	Sampling point .....	At pumphouse	At pumphouse	After filters**	At city tap***
1	Date of sampling .....	June 10/55	June 10/55	June 10/55	Nov. 7/55
2	Storage period (days) .....	17:76	17:96	18:105	3
3	Sampling temperature, °C. ....	18.3	19.4	18.4	.....
4	Test temperature, °C. ....	21.9 (22)	21.9 (23)	26.0 (21)	.....
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	.....	.....	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	3.2	2.2	0.0	1.8
7	pH .....	6.4 (6.7)	6.8 (7.1)	7.7 (8.5)	7.0
8	Colour .....	20	20	10	10
9	Turbidity .....	0.3	9	2	2
10	Suspended matter, dried at 105° C. ....	.....	.....	.....	Trace
11	Suspended matter, ignited at 550° C. ....	.....	.....	.....	.....
12	Residue on evaporation, dried at 105° C. ....	37.2	44.4	50.0	55
13	Ignition loss at 550° C. ....	16.8	16.8	18.8	.....
14	Specific conductance, micromhos at 25° C. ....	29.4	38.75	56.4	.....
15	Calcium (Ca) .....	3.6	3.7	7.7	8.0
16	Magnesium (Mg) .....	0.4	0.7	0.7	0.5
17	Iron (Fe) Total .....	.....	.....	.....	Trace
18	Dissolved .....	0.02	0.08	0.04	.....
19	Manganese (Mn) .....	Trace	Trace	Trace	.....
20	Aluminum (Al) .....	0.05	0.03	0.29	0.32
21	Copper (Cu) .....	Trace	0.0	0.08	.....
22	Zinc (Zn) .....	.....	.....	.....	.....
23	Sodium (Na) .....	0.7	1.8	1.1	.....
24	Potassium (K) .....	0.3	0.4	0.3	.....
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.1	0.0	0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0	.....
27	Bicarbonate (HCO <sub>3</sub> ) .....	4.8 (7.3)	8.5 (14.6)	14.0	.....
28	Sulphate (SO <sub>4</sub> ) .....	6.1	5.3	11.3	8.1
29	Chloride (Cl) .....	0.5	1.8	1.6	10.9
30	Fluoride (F) .....	0.0	0.0	0.0	.....
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.8	0.4	.....
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.6	4.3	4.0	4.0
33	Carbonate hardness as CaCO <sub>3</sub> .....	3.9	7.0	11.5	14
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	6.7	5.1	10.6	8
35	Total hardness as CaCO <sub>3</sub> .....	10.6	12.1	22.1	22
36	Sum of constituents .....	18.5	23.3	34.4	.....
37	Per cent sodium .....	11.8	23.2	9.0	.....
38	Saturation index at test temperature .....	-3.8	-3.2	-1.6	.....
39	Stability index at test temperature .....	14	13	11	.....
Remarks:				Lithium - 0 ppm	
		* For Lac des Piles water, see Grand'Mere ** May contain some Lac la Peche water. *** Analysis by Alchem Ltd. Burlington, Ont.			

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

SHAWINIGAN SOUTH (Champlain Co.)		SHEFFORD (Shefford Co.)		SHELTER BAY (Saguenay Co.)	SHENLEY (Beauce Co.)	No.
Springs		Yamaska River and Springs		Rock River	Springs and well	
		Yamaska River*	Springs			
Raw and finished water		Raw and finished water		Raw and finished water		
At village tap		At village tap				
June 10/55	Jan. 31/58	Aug. 8/56	Sept. 26/60	May 28/58		1
17:96	6:13	195:273	4:9	6:15		2
11.1	.....	28.9	.....	6.7		3
21.8 (22)	22.7	20.2	22.2	23.1		4
.....	1.5	10	2.0	11		5
3.0	1.9	1.1	5.9	1.5		6
6.8 (6.4)	6.9	7.7	7.1	6.4		7
5	5	10	15	60		8
3	0.8	0.9	0	0.8		9
7.5	.....	.....	.....	.....		10
4.1	.....	.....	.....	.....		11
116	120	55.2	.....	28.8		12
38.4	35.2	20.4	.....	22.4		13
148.3	116.7	77.94	125.4	20.3		14
14.9	15.9	10.3	11.2	1.8		15
2.6	3.2	1.7	5.0	0.5		16
.....	.....	.....	0.01	.....		17
0.06	0.07	0.0	0.0	0.09	See St. Honore	18
0.02	0.02	0.02	0.0	0.05		19
0.12	0.0	0.0	0.0	0.0		20
0.18	0.31	Trace	0.0	.....		21
.....	0.05	0.05	0.02	.....		22
4.6	5.6	1.6	3.0	0.7		23
2.9	3.0	0.8	2.9	0.3		24
0.0	0.0	0.05	0.05	0.15		25
0.0 (0)	0.0	0.0	0.0	0.0		26
11.0 (14.6)	9.0	30.6	42.9	2.3		27
25.8	28.9	8.6	17.3	2.3	28	
6.0	10.5	1.6	2.9	1.6	29	
0.0	0.0	0.0	0.0	.....	30	
24	21	1.2	1.0	0.1	31	
8.3	7.6	3.5	14	3.6	32	
9.0	7.4	25.1	35.2	1.9	33	
38.9	45.4	7.6	13.4	4.6	34	
47.9	52.8	32.7	48.6	6.5	35	
92.4	101	44.5	78.4	12.2	36	
16.0	17.5	9.3	11.1	17.5	37	
-2.5	-2.5	-1.3	-1.7	-4.2	38	
12	12	10	11	15	39	
		* See also Station No. 48, page 30				

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

Municipality .....		SHERBROOKE (Sherbrooke Co.)	SILLERY (Quebec Co.)		
Source(s) .....		Magog River	St. Lawrence River		
No.			Raw water	Finished water	
	Raw and finished water				
Sampling point .....		At pumphouse	At intake well	At filter plant tap	At filtration plant
1	Date of sampling .....	Aug. 6/56	July 26/55	July 26/56	Dec. 5/60
2	Storage period (days) .....	192:263	52:233	52:223	3:8
3	Sampling temperature, °C. ....	20.6	23.3	24.4	15.6
4	Test temperature, °C. ....	25.1 (26)	22.6	22.6 (27)	22.3
5	Oxygen consumed by KMnO <sub>4</sub> .....	9.5			6.4
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.6	1.9	2.3	4
7	pH .....	7.9 (7.2)	7.9	7.8 (7.3)	7.4
8	Colour .....	10	20	20	25
9	Turbidity .....	2	20	2	5
10	Suspended matter, dried at 105° C. ....		20.5		
11	Suspended matter, ignited at 550° C. ....		14.0		
12	Residue on evaporation, dried at 105° C. ....	79.2	146	156	
13	Ignition loss at 550° C. ....	15.2	30.0	36.4	
14	Specific conductance, micromhos at 25° C. ....	116.7	235.5	251.4	238
15	Calcium (Ca) .....	15.6	30.7	30.2	28.2
16	Magnesium (Mg) .....	2.5	4.4	5.6	6.8
17	Iron (Fe) Total .....				0.17
18	Dissolved .....	Trace	0.01	0.04	0.07
19	Manganese (Mn) .....	0.0	0.0	0.0	Trace
20	Aluminum (Al) .....	0.07	0.0	0.13	0.25
21	Copper (Cu) .....	0.0	0.0	0.0	0.02
22	Zinc (Zn) .....	0.05	0.0	0.0	0.02
23	Sodium (Na) .....	3.5	7.3	8.3	7.6
24	Potassium (K) .....	0.9	1.1	1.1	1.4
25	Ammonia (NH <sub>3</sub> ) .....	0.2	0.0	0.0	0.2
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0	0.0 (0)	0.0
27	Bicarbonate (HCO <sub>3</sub> ) .....	52.8 (60.3)	86.5	82.4 (85.4)	71.9
28	Sulphate (SO <sub>4</sub> ) .....	8.6	19.0	25.5	31.1
29	Chloride (Cl) .....	3.8	15.1	17.4	17.9
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.8	2.4	1.6	0.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.8	4.6	2.8	1.9
33	Carbonate hardness as CaCO <sub>3</sub> .....	43.3	71.0	67.6	59.0
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	5.9	23.7	30.8	39.3
35	Total hardness as CaCO <sub>3</sub> .....	49.2	94.7	98.4	98.3
36	Sum of constituents .....	65.8	127	133	131
37	Per cent sodium .....	12.9	14.2	15.2	14.0
38	Saturation index at test temperature .....	-0.7	-0.2	-0.4	-0.9
39	Stability index at test temperature .....	9.3	8.3	8.6	9.2
Remarks:					Phosphate: 0.0 ppm

TABLE III (Continued)

Chemical Analyses of Municipal Water Supplies  
 Lower St. Lawrence River Drainage Basin  
 (In parts per million)

SOREL (Richelieu Co.)		STANSTEAD (Stanstead Co.)	STRATFORD (Wolfe Co.)	SUTTON (Brome Co.)	SWEETSBURG (Missisquoi Co.)	No.
Richelieu River		Spring-fed lake	Springs	Springs	Crystal Lake	
Raw water	Finished water		Raw and finished water	Finished water	Finished water	
	At filter plant tap			At village tap	At village tap	
See Station No. 42, page 28	Aug. 13/56		June 26/58	Aug. 9/56	Aug. 9/56	1
	193:346		8:18	194:276	144:175	2
	24.2		11.7	16.1	20.6	3
	23.7 (26)		25.9	20.6 (26)	23.4 (21)	4
	9.6		1.0	8.9	.....	5
	0.9		1.8	1.1	3.2	6
	7.8 (7.0)		8.1	7.5	7.0 (7.0)	7
	10		5	5	10	8
	0		0	0	0	9
	.....		.....	.....	.....	10
	.....		.....	.....	.....	11
	82.4		138	46.0	48.4	12
	22.4		8.4	10.8	16.8	13
	128.6		277.9	60.89	62.42	14
	15.0		45.4	8.6	6.7	15
	3.7		6.9	0.8	1.9	16
	.....		.....	.....	.....	17
	Trace	See Rock Island	0.01	0.0	0.01	18
	0.0		Trace	Trace	Trace	19
	0.07		0.10	0.22	0.12	20
	0.0		0.0	0.0	Trace	21
	0.0		0.0	0.3	0.1	22
	2.5		1.3	1.0	1.0	23
	0.9		1.1	0.3	0.7	24
	0.0		0.05	0.05	0.1	25
	0.0 (0)		0.0	0.0	0.0 (0)	26
	35.0 (40.3)		157	21.5	18.5 (25.1)	27
	22.5		10.8	10.3	11.9	28
	4.7		1.2	0.6	0.6	29
	0.0		0.0	0.0	0.0	30
	0.4		3.0	1.2	1.2	31
	2.1		11	6.0	1.8	32
	28.7		129	17.6	15.2	33
	23.9		12.6	7.1	9.3	34
	52.6		142	24.7	24.5	35
	69.1		159	39.9	35.2	36
	9.1		1.9	7.5	7.6	37
	-1.0		+0.5	-1.7	-2.3	38
	9.8		7.1	11	12	39

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	TADOUSSAC (Saguenay Co.)	THREE RIVERS (St. Maurice Co.)		
	Source(s) .....	Lac de l'Aqueduc	St. Maurice River and wells		
			St. Maurice River		Wells
	Sampling point .....	At village tap	Raw and finished water	Raw water	Finished water
At plant intake			At filter plant tap	At well No. 5	
1	Date of sampling .....	July 14/55	June 9/55	June 9/55	June 9/55
2	Storage period (days) .....	35:39	13:74	13:74	13:74
3	Sampling temperature, °C. ....	18.6	19.4	18.3	10.0
4	Test temperature, °C. ....	28.3 (21.5)	24.4 (24)	24.6 (23)	24.6 (22)
5	Oxygen consumed by KMnO <sub>4</sub> .....	.....	.....	.....	.....
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.8	4.1	1.3	28
7	pH .....	6.7 (7.3)	6.6 (6.8)	7.3 (7.5)	6.8 (6.3)
8	Colour .....	5	50 (80)	10	10
9	Turbidity .....	0	3	0	0.3
10	Suspended matter, dried at 105° C. ....	.....	14	.....	.....
11	Suspended matter, ignited at 550° C. ....	.....	12	.....	.....
12	Residue on evaporation, dried at 105° C. ....	19.6	49.6	64.0	305
13	Ignition loss at 550° C. ....	8.8	35.2	19.2	2.4
14	Specific conductance, micromhos at 25° C. ....	21.4	36.6	79.7	486.1
15	Calcium (Ca) .....	2.1	4.3	11.3	41.7
16	Magnesium (Mg) .....	0.3	0.5	0.7	13.4
17	Iron (Fe) Total .....	.....	.....	.....	.....
18	Dissolved .....	0.02	0.33	0.01	0.41
19	Manganese (Mn) .....	0.0	0.0	0.0	0.0
20	Aluminum (Al) .....	0.05	0.0	0.17	0.36
21	Copper (Cu) .....	0.0	0.0	0.0	0.0
22	Zinc (Zn) .....	0.1	0.01	0.01	0.01
23	Sodium (Na) .....	0.9	0.9	0.9	26.7
24	Potassium (K) .....	0.2	0.6	0.5	6.7
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.2	0.0	0.0
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	5.9 (9.8)	10.0 (12.2)	16.7 (195)	113 (112)
28	Sulphate (SO <sub>4</sub> ) .....	2.9	5.9	15.2	75.5
29	Chloride (Cl) .....	0.7	1.2	2.7	36.7
30	Fluoride (F) .....	0.0	0.0	0.0	0.0
31	Nitrate (NO <sub>3</sub> ) .....	0.6	1.0	0.2	12
32	Silica (SiO <sub>2</sub> ), colorimetric .....	1.6	4.9	4.9	16
33	Carbonate hardness as CaCO <sub>3</sub> .....	4.8	8.2	13.7	92.4 (92)
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	1.7	4.6	17.4	66.7 (67)
35	Total hardness as CaCO <sub>3</sub> .....	6.5	12.8	31.1	159 (159)
36	Sum of constituents .....	12.3	24.7	44.8	285
37	Per cent sodium .....	21.7	12.1	5.6	25.4
38	Saturation index at test temperature .....	-3.5	-3.2	-1.8	-1.1
39	Stability index at test temperature .....	14	13	11	9.0
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

THREE RIVERS PARISH (St. Maurice Co.)	THETFORD MINES (Megantic Co.)		TRACY (Richelieu Co.)		TREMBLAY (Chicoutimi Co.)	No.
Artesian well	Creek and Trout Lake		Richelieu River		Chicoutimi River	
		Creek	Lac a la Truite			
Raw and finished water	Raw and finished water		Raw water	Finished water		
At tap	At city tap	At city tap	At plant intake	At filter plant intake		
June 9/55	July 27/56	July 27/56	Aug. 13/56	Aug. 13/56		1
13.96	188:224	188:224	50:57	193:346		2
9.4	20.6	15.6	23.9	23.9		3
24.2 (20)	25.5 (24)	25.6 (20)	24.1 (26)	23.9 (27)		4
.....	.....	15	.....	10		5
3.7	2.8	1.6	2.6	1.4		6
7.4 (7.0)	7.3 (7.2)	7.1 (7.0)	7.5 (7.6)	7.7 (7.2)		7
5	50 (55)	30 (20)	10	15		8
3	3	0.9	20	3		9
.....	3.5	.....	.....	1.3		10
.....	1.6	.....	.....	0.3		11
129	72.8	55.2	.....	78.8		12
12.0	26.4	28.8	.....	18.8		13
187.6	75.84	48.09	123.9	128.7		14
23.3	8.8	4.8	15.0	15.3		15
5.1	2.2	2.2	3.6	3.6		16
.....	.....	.....	.....	.....		17
2.0	1.2	0.08	.....	0.03		18
0.02	0.04	0.01	.....	0.01		19
0.12	0.07	0.0	.....	0.0		20
0.03	Slight trace	Trace	0.0	0.0		21
.....	2.5	0.1	0.0	0.01		22
3.6	0.8	0.7	2.6	2.8		23
1.2	0.3	0.5	0.8	1.0		24
0.0	0.2	0.1	0.1	0.0		25
0.0 (0)	0.0	0.0	0.0 (0)	0.0 (0)		26
57.2 (56.1)	31.0	14.4	49.2 (57.8)	45.1 (47.8)		27
35.3	9.1	6.6	11.8	16.4		28
2.1	1.8	2.5	3.3	4.6		29
0.0	.....	0.0	.....	0.0		30
2.4	0.2	1.2	1.2	0.6		31
20	4.0	3.3	1.7	2.0		32
46.9 (46.0)	25.4	11.8	40.4	37.0		33
32.2 (33.3)	5.6	9.2	11.8	16.0		34
79.1 (79.3)	31.0	21.0	52.2	53.0		35
121	46.5	29.0	64.3	68.7		36
8.8	4.3	6.4	9.6	10.1		37
-1.0	-1.7	-2.5	-1.1	-1.0		38
9.4	11	12	9.7	9.7		39
Lithium - 0.0 ppm						

See  
Chicoutimi North



TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

No.	Municipality .....	TRING JONCTION (Beauce Co.)	TROIS PISTOLES (Riviere du Loup Co.)	UPTON (Bagot Co.)	VALCARTIER (Quebec Co.)
	Source(s) .....	Springs	Springs	Wells	Wells
		Raw and finished water	Raw and finished water	Raw and finished water	
	Sampling point .....	At village tap	At town tap	At village tap	
1	Date of sampling .....	Aug. 23/56	July 7/55	Aug. 10/56	
2	Storage period (days) .....	236:364	41:171	195:277	
3	Sampling temperature, °C. ....	16.1	12.2	16.1	
4	Test temperature, °C. ....	24.2	27.4 (26)	22.9 (24)	
5	Oxygen consumed by KMnO <sub>4</sub> .....	3.8	.....	8.7	
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.1	1.3	1.3	
7	pH .....	7.7	8.2 (7.9)	8.2 (7.6)	
8	Colour .....	5	0	5	
9	Turbidity .....	8	0	0	
10	Suspended matter, dried at 105° C. ....	22	.....	.....	
11	Suspended matter, ignited at 550° C. ....	15	.....	.....	
12	Residue on evaporation, dried at 105° C. ....	54.8	166	166	
13	Ignition loss at 550° C. ....	13.2	56.0	24.4	
14	Specific conductance, micromhos at 25° C. ....	68.68	278.0	275.3	
15	Calcium (Ca) .....	7.1	45.2	34.7	
16	Magnesium (Mg) .....	2.9	4.3	8.1	
17	Iron (Fe) Total .....	.....	.....	0.38	
18	Dissolved .....	0.02	0.0	Trace	
19	Manganese (Mn) .....	Trace	0.0	.....	An army installation
20	Aluminum (Al) .....	0.0	0.0	0.22	See
21	Copper (Cu) .....	0.0	0.0	0.0	Water Survey
22	Zinc (Zn) .....	0.0	.....	0.0	Report No. 12
23	Sodium (Na) .....	1.4	3.8	9.7	
24	Potassium (K) .....	0.5	0.7	1.2	
25	Ammonia (NH <sub>3</sub> ) .....	0.0	0.0	0.05	
26	Carbonate (CO <sub>3</sub> ) .....	0.0	0.0	0.0	
27	Bicarbonate (HCO <sub>3</sub> ) .....	32.2	137	130	
28	Sulphate (SO <sub>4</sub> ) .....	4.9	11.8	34.7	
29	Chloride (Cl) .....	0.6	6.7	3.1	
30	Fluoride (F) .....	0.0	0.0	0.1	
31	Nitrate (NO <sub>3</sub> ) .....	1.5	6.0	0.4	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	11	7.2	20	
33	Carbonate hardness as CaCO <sub>3</sub> .....	26.4	112.2	107	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	3.2	18.3	13.4	
35	Total hardness as CaCO <sub>3</sub> .....	29.6	131	120	
36	Sum of constituents .....	45.5	153	176	
37	Per cent sodium .....	9.1	5.9	14.7	
38	Saturation index at test temperature .....	-1.4	+0.5	+0.2	
39	Stability index at test temperature .....	11	7.2	7.8	
Remarks:			Lithium - 0.0 ppm		

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

VALCOURT (Shefford Co.)	VALLEE JONCTION (Beauce Co.)	VALLEYFIELD (Beauharnois Co.)	VARENNES (Vercheres Co.)	VERCHERES (Vercheres Co.)	VERDUN (Ile de Montreal)	No.
Springs	Morency River	St. Lawrence River	St. Lawrence River	St. Lawrence River	St. Lawrence River	
Raw and finished water	Finished water		Raw and finished water	Raw and finished water		
	At pumphouse		At village tap	At village tap		
Apr. 10/58 8:12	July 25/56 69:76		Aug. 14/56 192:350	Aug. 13/56 193:346		1
.....	17.2		22.8	20.6		2
21.7	24.8		23.8	23.9 (28)		3
1.7	.....		10	9.9		4
9.5	1.6		1.2	1.5		5
7.1	7.8		8.2	8.0 (8.2)		6
0	20		10	5		7
0.4	0.8		15	20		8
.....	.....		8.2	5.2		9
.....	.....		8.2	3.1		10
133	.....		178	190		11
18.4	.....		26.4	35.6		12
197.8	132.7		299.8	298.4		13
28.7	20.2		37.5	37.6		14
4.5	1.7		7.5	7.8		15
.....	.....		.....	.....		16
0.01	0.0	See Salaberry de Valleyfield	0.02	Trace	See Montreal	17
Trace	.....		0.0	0.0		18
0.03	0.10		0.0	Trace		19
0.0	0.0		0.02	0.01		20
0.0	0.1		0.3	0.01		21
3.9	1.2		9.7	9.5		22
0.7	0.5		1.2	1.3		23
0.05	0.1		0.0	0.0		24
0.0	0.0		0.6	0.0		25
76.7	59.0		110	107		26
19.7	10.8		24.8	25.5		27
4.6	1.2		21.7	21.8		28
0.0	.....		0.0	0.1		29
10	0.8		0.2	0.8		30
13	3.7		4.5	2.8		31
62.9	48.4		90.6	88.1		32
27.2	9.0		33.8	37.8		33
90.1	57.4	124	126	34		
123	69.4	162	160	35		
8.5	4.2	14.3	13.9	36		
-1.1	-0.6	+0.2	0.0	37		
9.	9.0	7.8	8.0	38		
				39		

**TABLE III (Continued)**  
**Chemical Analyses of Municipal Water Supplies**  
**Lower St. Lawrence River Drainage Basin**  
*(In parts per million)*

Municipality .....		VICTORIAVILLE (Arthabaska Co.)		VILLENEUVE (Quebec Co.)	VILLERS (Nicolet Co.)
No.	Source(s) .....	Beaudet River		Montmorency River	Springs
		Raw water	Finished water	Raw and finished water	
	Sampling point .....	At intake pump	At filter plant tap	At pump	
1	Date of sampling .....	July 20/56	July 30/56	July 23/55	
2	Storage period (days) .....	189	190:253	51:276	
3	Sampling temperature, °C. ....	20.0	17.2	20	
4	Test temperature, °C. ....	24.2 (20)	24.4 (19)	22.0 (23.5)	
5	Oxygen consumed by KMnO <sub>4</sub> .....	12			
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.2	4.0	1.1	
7	pH .....	8.0 (8.5)	7.3 (6.9)	7.3 (7.6)	
8	Colour .....	30 (35)	5	35	
9	Turbidity .....	4	0	0	
10	Suspended matter, dried at 105° C. ....	4.5			
11	Suspended matter, ignited at 550° C. ....	0.0			
12	Residue on evaporation, dried at 105° C. ....	101		46.4	
13	Ignition loss at 550° C. ....	26.0		14.0	
14	Specific conductance, micromhos at 25° C. ....	146.0	175.9	34.65	
15	Calcium (Ca) .....	25.0	24.6	5.0	
16	Magnesium (Mg) .....	1.9	2.2	0.3	
17	Iron (Fe) Total .....				
18	Dissolved .....	0.04	0.01	0.14	
19	Manganese (Mn) .....	0.0	0.02	0.0	
20	Aluminum (Al) .....	0.13	0.08	0.04	
21	Copper (Cu) .....	Trace		Trace	
22	Zinc (Zn) .....	0.0		0.01	
23	Sodium (Na) .....	1.4	5.1	0.9	
24	Potassium (K) .....	0.7	0.8	0.3	
25	Ammonia (NH <sub>3</sub> ) .....	0.1	0.1	0.0	
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (4.9)	0.0 (0)	0.0 (0)	
27	Bicarbonate (HCO <sub>3</sub> ) .....	72.7 (61.7)	49.4 (50.3)	12.9 (17.1)	
28	Sulphate (SO <sub>4</sub> ) .....	12.1	39.4	2.7	
29	Chloride (Cl) .....	2.1	2.1	1.4	
30	Fluoride (F) .....	0.0	0.0		
31	Nitrate (NO <sub>3</sub> ) .....	0.8	0.6	1.2	
32	Silica (SiO <sub>2</sub> ), colorimetric .....	3.8	2.5	16	
33	Carbonate hardness as CaCO <sub>3</sub> .....	59.6	40.5	10.6	
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	10.6	29.9	2.9	
35	Total hardness as CaCO <sub>3</sub> .....	70.2	70.4	13.5	
36	Sum of constituents .....	83.9	102	34.9	
37	Per cent sodium .....	4.0	13.3	11.7	
38	Saturation index at test temperature .....	-0.2	-1.1	-2.4	
39	Stability index at test temperature .....	8.4	9.5	12	
See Ste. Gertrude					
Remarks:					

TABLE III (Continued)  
**Chemical Analyses of Municipal Water Supplies**  
 Lower St. Lawrence River Drainage Basin  
*(In parts per million)*

WARWICK (Arthabaska Co.)		WATERLOO (Shefford Co.)			WATERVILLE (Sherbrooke Co.)	No.
Artesian well and springs		Wells and springs			Springs and wells	
Artesian well *	Spring	Wells	Springs	Springs and wells		
Raw and finished water		Raw water	Raw water	Finished water	Raw and finished water	
At town tap		At well pump	At spring	At town tap		
July 31/56		Aug. 8/56	Aug. 8/56	Nov. 12/52†	Apr. 18/58	1
189:252		194:273	194:273	22	13:24	2
14.4		12.2	8.9	.....	.....	3
24.2 (22)		24.8 (24)	24.8 (23)	.....	24.4	4
9.5		.....	.....	10	1.3	5
1.6		5.9	0.9	7	1.2	6
7.9 (7.3)		7.5 (7.0)	8.3 (7.0)	7.4	8.3	7
5		5	5	5	5	8
2		2	0	30	0.3	9
.....		.....	.....	.....	.....	10
.....		.....	.....	.....	.....	11
122		155	183	.....	194	12
11.0		32.8	35.6	.....	22.8	13
183.5		246.7	292.4	.....	295.8	14
27.7		33.8	39.1	30.4	51.3	15
3.8		5.8	7.8	6.3	5.5	16
0.52		0.12	.....	0.1	.....	17
0.0		0.0	0.2	.....	0.02	18
0.0	No data	Trace	Trace	0.9	0.0	19
0.06		0.41	0.0	.....	0.07	20
0.0		0.0	0.0	.....	0.05	21
0.05		0.0	0.0	.....	0.35	22
2.2		5.5	6.6	.....	2.4	23
0.6		3.8	3.3	.....	0.4	24
0.05		0.05	0.05	.....	0.05	25
0.0 (0)		0.0	0.0	.....	0.0	26
75.2 (75.4)		120	122	116	160	27
23.5		15.0	29.0	11.5	14.7	28
2.4		7.4	9.2	5.7	3.2	29
0.0		0.1	0.0	.....	0.0	30
2.8		3.2	6.0	.....	6.0	31
11		10	13	7.4	9.8	32
61.7		98.2	99.7	95	131	33
23.0		10.0	29.9	7	19.6	34
84.7		108	130	102	151	35
111		135	174	127	172	36
5.3		9.4	9.7	13.4	3.3	37
-0.3		-0.4	+0.4	-0.5	+0.7	38
8.5		8.3	7.5	10.5	6.9	39
* Main supply				† Analysis supplied by the Permutit Company of Canada Ltd.		

TABLE III (Concluded)

Chemical Analyses of Municipal Water Supplies  
Lower St. Lawrence River Drainage Basin  
(In parts per million)

Municipality .....		WEEDON CENTRE (Wolfe Co.)	WESTMOUNT (Ile de Montreal)	WEST SHEFFORD (Shefford Co.)	WINDSOR (Richmond Co.)
No.	Source(s) .....	Springs	St. Lawrence River	Springs and Yamaska River	Watopeka River
	Sampling point .....	Raw and finished water			Raw and finished water
Municipality .....		At village tap			At town tap
1	Date of sampling .....	Aug. 4/56			Aug. 2/56
2	Storage period (days) .....	193:258			192:254
3	Sampling temperature, °C. ....	15.0			15.3
4	Test temperature, °C. ....	24.6 (21)			25.1 (21)
5	Oxygen consumed by KMnO <sub>4</sub> .....	10			15
6	Carbon dioxide (CO <sub>2</sub> ), (calculated) .....	1.1			5.0
7	pH .....	8.2 (7.6)			7.0 (7.0)
8	Colour .....	30			40 (70)
9	Turbidity .....	0			4.6
10	Suspended matter, dried at 105° C. ....	.....			10.4
11	Suspended matter, ignited at 550° C. ....	.....			3.1
12	Residue on evaporation, dried at 105° C. ....	119			76.4
13	Ignition loss at 550° C. ....	17.2			28.0
14	Specific conductance, micromhos at 25° C. ....	178.5			80.49
15	Calcium (Ca) .....	29.9			9.7
16	Magnesium (Mg) .....	3.9			2.0
17	Iron (Fe) Total .....	.....			.....
18	Dissolved .....	0.0			0.25
19	Manganese (Mn) .....	0.0	See Montreal	See Shefford	0.02
20	Aluminum (Al) .....	0.03			0.07
21	Copper (Cu) .....	Trace			.....
22	Zinc (Zn) .....	0.3			0.1
23	Sodium (Na) .....	1.1			1.9
24	Potassium (K) .....	0.4			0.4
25	Ammonia (NH <sub>3</sub> ) .....	0.1			0.1
26	Carbonate (CO <sub>3</sub> ) .....	0.0 (0)			0.0 (0)
27	Bicarbonate (HCO <sub>3</sub> ) .....	101 (106)			30.4 (32.7)
28	Sulphate (SO <sub>4</sub> ) .....	7.9			8.3
29	Chloride (Cl) .....	1.3			3.4
30	Fluoride (F) .....	0.0			0.0
31	Nitrate (NO <sub>3</sub> ) .....	1.6			1.2
32	Silica (SiO <sub>2</sub> ), colorimetric .....	4.8			5.2
33	Carbonate hardness as CaCO <sub>3</sub> .....	82.4			24.9
34	Non-carbonate hardness as CaCO <sub>3</sub> .....	8.2			7.5
35	Total hardness as CaCO <sub>3</sub> .....	90.6			32.4
36	Sum of constituents .....	101			48.5
37	Per cent sodium .....	2.5			10.4
38	Saturation index at test temperature .....	-0.3			-2.0
39	Stability index at test temperature .....	8.8			11
Remarks:					

TABLE III (Concluded)

Chemical Analyses of Municipal Water Supplies  
 Lower St. Lawrence River Drainage Basin  
 (In parts per million)

WINSLOW NORTH (Frontenac Co.)	WOTTONVILLE (Wolfe Co.)		YAMACHICHE (St. Maurice Co.)	YAMASKA EAST (Yamaska Co.)	No.
	Wells and spring		Wells	Yamaska River*	
	Wells	Spring			
Raw and finished water	Raw and finished water		Raw and finished water	Raw water	
	At village tap		At village tap	From river	
Nov. 21/58	Aug. 2/56		Sept. 23/58	Aug. 13/56	1
13:24	193:254		52:83	193:346	2
3.3	15.6		18.9	25.0	3
23.4	25.1 (20)		26.0	23.8 (27)	4
1.0	12		1.6	12.5	5
2.0	2.7		4.0	2.3	6
8.1	7.9 (7.5)		6.8	7.9 (8.3)	7
0	10		5	60	8
0	0.9		0	18	9
.....	.....		.....	30.7	10
.....	.....		.....	27.2	11
168	130		31.2	182	12
12.0	20.4		0.8	22.0	13
275.2	194.9		38.2	307.5	14
41.6	27.6		3.8	29.4	15
10.2	6.0		0.9	7.4	16
.....	.....		.....	.....	17
Trace	0.02	No data	0.0	Trace	18
0.0	Trace		0.02	0.0	19
0.05	0.04		0.02	0.02	20
0.0	0.0		0.08	Trace	21
1.0	0.4		0.3	0.0	22
1.9	3.1		1.6	21.1	23
0.5	0.9		0.5	2.8	24
0.05	0.1		0.1	0.0	25
0.0	0.0 (0)		0.0	0.0 (0)	26
165	113 (113)		17.4	116 (123)	27
10.7	8.4		1.9	24.5	28
1.5	1.2		1.0	21.8	29
0.0	0.0		0.0	0.0	30
3.0	1.6		0.2	1.5	31
11	13		16	4.8	32
135.1	93.0		13.2	95.0	33
10.6	0.5		0.0	8.8	34
146	93.5		13.2	104	35
163	118		34.4	170	36
2.7	6.6		19.3	29.9	37
+0.4	-0.1		-2.8	-0.1	38
7.3	8.1		12	8.1	39
				* See also Station No. 53, page 32	

Figure 4

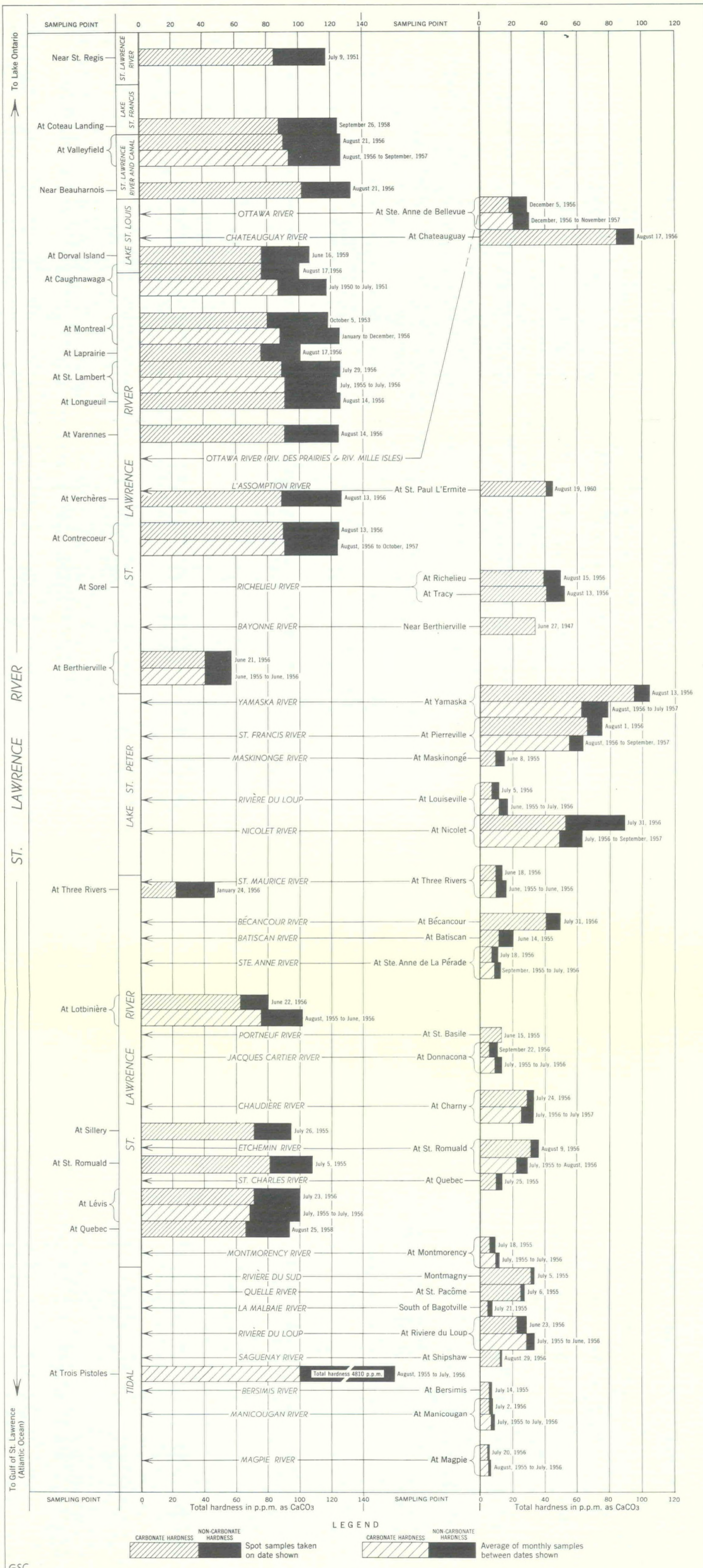
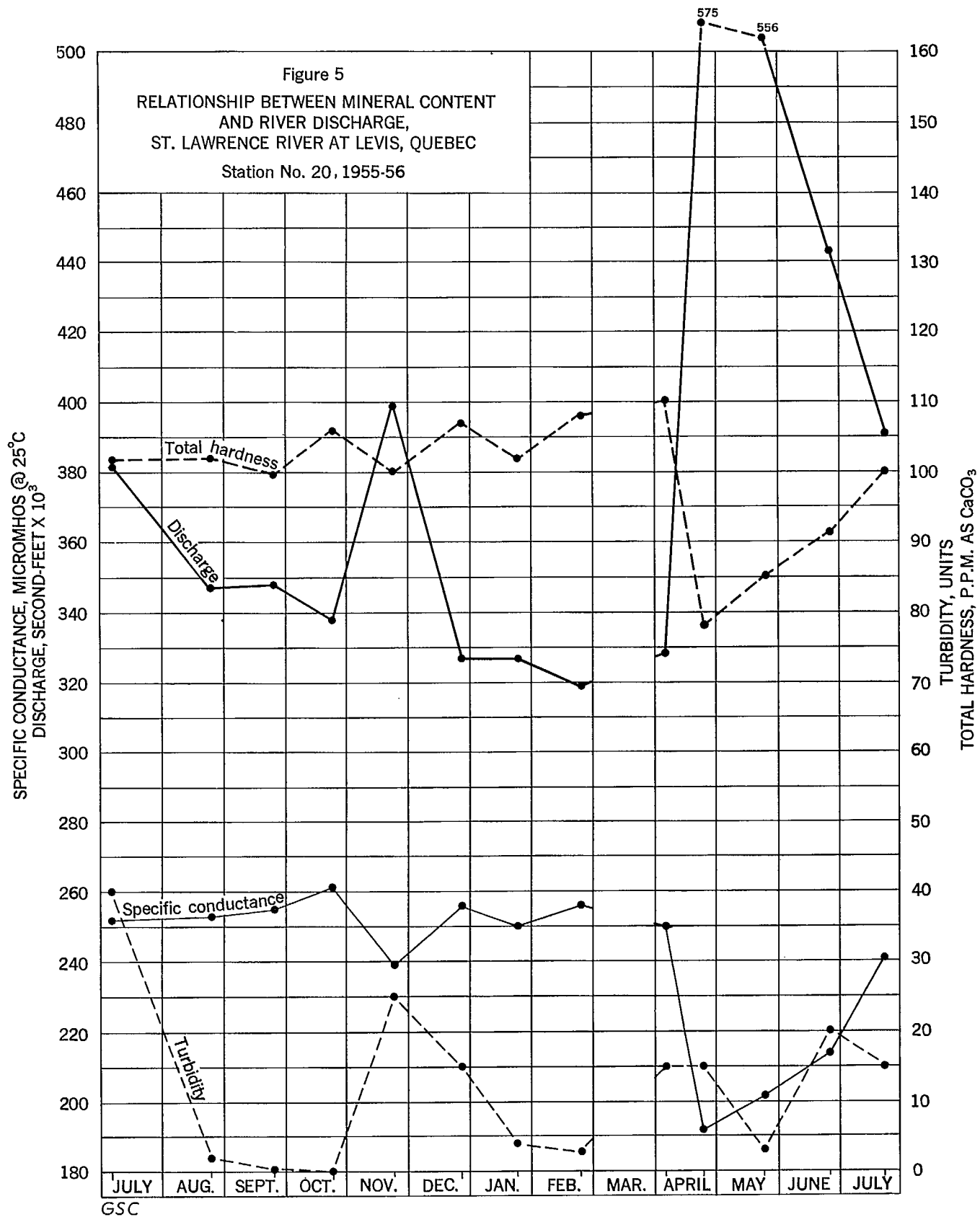
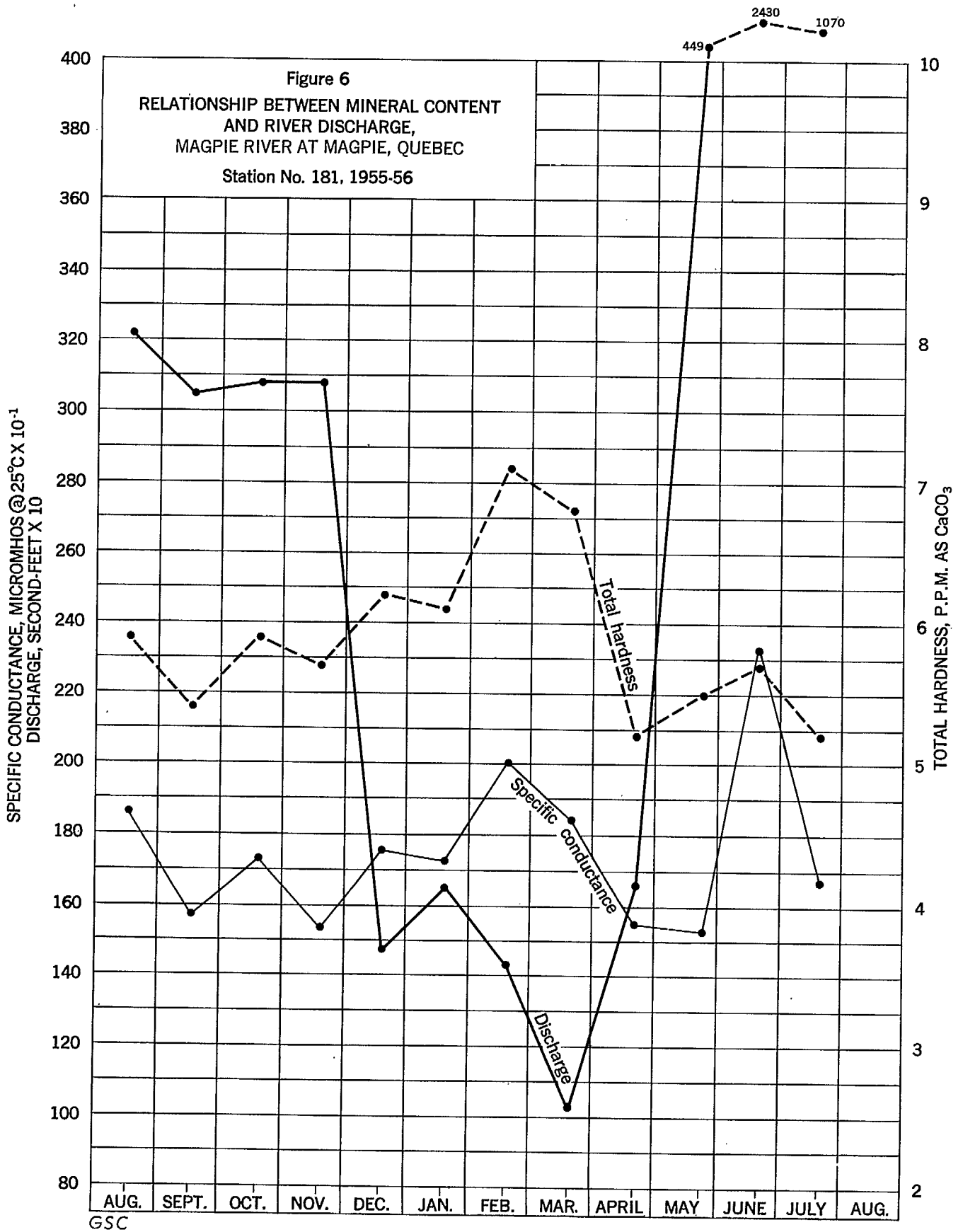


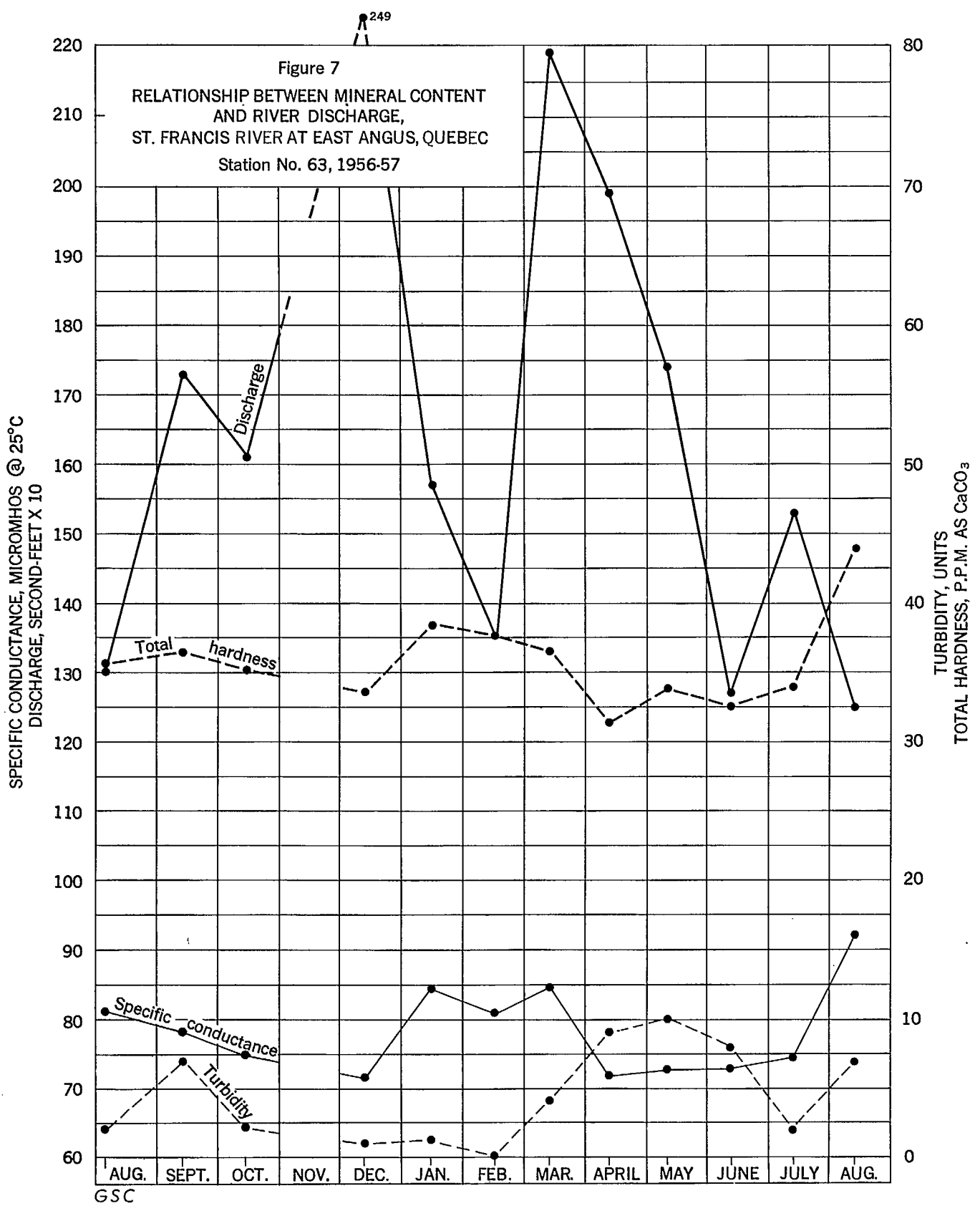
FIGURE 4. VARIATION IN WATER HARDNESS IN THE LOWER ST. LAWRENCE RIVER SYSTEM IN CANADA



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## DISCUSSION

The drainage basin covered by this report (Table 1) represents about 5.2 per cent of Canada and 31.9 and 9.8 per cent of the areas of Quebec province and Labrador, respectively. However, within these areas dwell about 84 and 17 per cent of the populations of Quebec and Labrador, illustrating the importance of this basin, especially to Quebec province.

The entire area drained, some 200,800 square miles, comprises about 16.5 per cent of eastern Canada (defined as the entire area of Canada east of the Nelson River drainage basin, about 31.6 per cent of Canada). The Lower St. Lawrence River drainage basin is 3 to 4 times the size of other basins of the St. Lawrence River-Great Lakes system, and about twice the size of the Churchill River basin (WSR No. 9) and of the Atlantic Provinces - St. John River drainage basin (WSR No. 11). The relations of this basin and others of Canada are shown in Table I, and figures 1 and 2.

This drainage area includes some of the oldest settled parts of Canada, and, in 1956, about 24 per cent of Canada's population (about 3,928,700 persons) lived there. About 40 per cent of the basin population (over 1,577,000 persons) lived in metropolitan Montreal, a relatively small area including Montreal Island. By 1958 the population of the basin in Quebec province had increased by 5.6 per cent, much of the increase being in the metropolitan Montreal area.

The chemical quality of the larger and industrially important rivers of the area is reported in Table II. It is believed that most surface waters not studied are similar in chemical character to nearby waters dealt with in this table (see also Figure 3). Since many rivers flow through the same geological region under essentially similar climatic conditions, they should be quite similar in character. Table II does show differences in some watersheds, indicating significant variations in local geological and climatic conditions.

No attempt is made to discuss the data of Table II in detail. It is realized that a statistical study of at least some of the data might be advantageous not only in determining mean quality but also in extrapolating the data for other periods. However, lack of discharge records at many points and the fact that this survey was not designed for statistical evaluation hinders any such treatment. Such studies may at some future date be made on smaller basins requiring detailed study.

Generally, surface waters of the basin range from very soft to the upper limit of medium hard, most being soft waters as detailed in the following table.

<u>Classification</u>		<u>Total Hardness as CaCO<sub>3</sub> (in parts per million)</u>
Very soft	-	up to and including 30
Soft	-	up to 60
Medium hard	-	61 to 120
Hard	-	121 to 180
Very hard	-	Greater than 180

Mineralization in waters of this basin is mostly due to the hardness salts, principally the bicarbonates of calcium and magnesium. Except for the St. Lawrence River most waters are relatively low in alkalis, sulphate and chloride and have a negative saturation index, that is, a tendency to be corrosive.

Figure IV graphically shows the soft character of the major rivers of this portion of the St. Lawrence River - Great Lakes drainage basin. Although the data shown on this chart cover a period of several years, it can be applied to the same period of any year to indicate the change in hardness and mineralization as one proceeds down river from Montreal. The St. Lawrence River differs from other rivers of the area in being somewhat harder, less coloured and relatively higher in sulphate and chloride, especially the latter. Above Montreal, the St. Lawrence River and Lake St. Francis have a hardness of about 120 to 130 ppm as CaCO<sub>3</sub>. Below the entrance of the Ottawa and Chateauguay Rivers, both softer than the St. Lawrence, especially the Ottawa, a slight decrease to about 100 to 125 ppm in hardness in the main river is noted.

Inflow from tributary rivers have little effect on the main river at Sorel. The sample collected at Berthierville was evidently mainly Bayonne River water; that collected at Three Rivers was also a mixture of river waters. At

Lotbiniere, the St. Lawrence River as a result of inflow from the St. Maurice River and other tributary rivers, soft in character, has a hardness of about 90 to 100 ppm as  $\text{CaCO}_3$ . Additional inflow of softer waters, especially very soft waters from the north shore further slightly decreases the hardness of the main river so that at Quebec or Levis its hardness was about 90 to 95 ppm as  $\text{CaCO}_3$ .

Despite the heavy inflow of very soft water from the north and soft to barely medium hard waters from the south, the chemical quality of the main river is little changed. However, sampling of the main river was carried out at only a few locations and even at these it was difficult to obtain samples known to be truly representative of the main flow in this large, wide river. It is realized that truly representative sampling would require extensive cross-sectional sampling of the river and more detailed sampling as to time and depth. Samples for this study were usually collected at plants using St. Lawrence River water as municipal and industrial supply. While their intakes are usually well out in the river it is evident that in some cases (e.g. Berthierville) the influence of nearby tributary rivers may still be great. However, the present study does indicate that even with considerable inflow from soft tributary rivers, the chemical quality of the large St. Lawrence River is only slightly affected.

Because the major surface supplies of this basin are usually soft and hardness salts are the main mineralization, the river waters are correspondingly low in mineral content. Those, including the Ottawa River, flowing from the north, that is, rising in and flowing through the Canadian Shield, are usually very soft (5 - 10 ppm as  $\text{CaCO}_3$ ), especially low in mineral content and highly coloured. Some of the shorter rivers from the north and particularly those near Montreal travelling considerable distances in the St. Lawrence Lowlands and through cultivated lands, do show more hardness and mineral content. Some of these variations are no doubt also due to local geological conditions. An example is Lake St. John which has a much harder water (20 - 45 ppm as  $\text{CaCO}_3$ ) than nearby rivers, no doubt due to its location in a lowland within the Shield.

In general, rivers from the south are harder, more mineralized and lower in colour than those from the north. Those not rising in the Appalachian Highlands are often still harder and evidence of variations in the chloride content, possibly due to contamination, are noted in some of the shorter rivers. Some of these short rivers rising in the Gaspé Peninsula are even harder, e.g. the Metis River (Station No. 170).

Figures 5, 6 and 7 are included to illustrate the seasonal change in some of the larger rivers. Similar graphs can be prepared from the data in Table II for other rivers sampled on a monthly basis.

Figure 5 shows that at Levis, Que. despite considerable variation in discharge, the St. Lawrence River varies little in hardness and total mineralization (specific conductance) until spring flooding, which in 1956 occurred during April and continued until after mid July. The long period of high discharge was no doubt due to variations in the times of spring break-up in the northern basins of the tributary rivers. With spring flooding came a major increase in discharge but a considerable decrease in mineralization and hardness. The spring flood waters were soft and relatively clear as much of the flooding was from the Canadian Shield. To accurately assess the effects of tributary rivers on the quality of the main river requires more knowledge on tributary inflow and quality not only in this basin but throughout the entire system including the basin area in the United States. Discharge and quality are also influenced by control dams.

Turbidity in the main river did not increase with increased flow, the highest turbidities being recorded in July 1955 when discharge was not particularly high. These turbidities could have been due to local flood conditions. While turbidity did not increase with spring flooding it did when a lower increase in discharge occurred in November 1955. A monthly-sampling station is being operated at this location for a 5-year period so that long-term relationships may be obtained.

Figure 6, shows the relation between water quality and discharge, on the Magpie River, a typical large tributary river rising in and flowing through the Canadian Shield. This very soft water showed relatively minor variations in hardness and mineralization despite considerable variation in discharge. Both hardness and mineralization decreased slightly with increased discharge and *visa versa*. During the winter when the river was frozen, (late November to early May) the discharge decreased rapidly, reaching a low about March. It rose rapidly with spring break-up and persisted well into July, no doubt due to the late melting of snow in the northern, wooded reaches of the basin. As expected turbidity in this river was never high and showed little change with discharge. This river flowing over Precambrian rocks and heavily wooded land picks up little mineralization - only small amounts of organics and colouring matter.

**TABLE IV**  
**Municipal Systems, Treatment and Population Served, 1956 and 1958**

Year	Served with water by organized system									Number of systems			Number of and different types of water sources				
	Number of communities																
	Cities	Towns	Villages	Parishes	Without designation*	Townships	Others**	Total	No. of communities over 2,000 population	Municipally owned	Privately owned	Mixed ownership	Total	Ground water	Surface water	Mixed water	Total
1956	45	94	144	70	32	12	8	405	159	278	91	1	370	160 (2)††	177 (39)	23 (2)	360 (43)
1958	45	98	147	73	34	12	8	417	161	285	89	1	375	165 (2)	179 (39)	26 (3)	370 (44)

\* Presumably similar to a rural municipality

\*\* Includes company townships, unorganized districts, government-owned communities and Indian reserves

† Includes government-owned systems

†† Purchased supplies

**TABLE V**  
**Municipal Water Hardness, 1956 and 1958**

Year	Number of communities considered			Number of sources (systems) considered				Number of sources using waters classed as			
	Cities Towns and Villages	Parishes etc.	Total	Ground water	Surface water	Mixed water	Total	Soft	Medium hard	Hard	Very hard
1956	283	122	405	160	177	23	360	192 (19)*	90 (7)	61 (17)	17 (0)
1958	290	127	417	165	179	26	370	196 (19)	94 (7)	63 (18)	17 (0)

\* Purchased supplies

**TABLE IV (Concluded)**  
**Municipal Systems, Treatment and Population Served, 1956 and 1958**

Estimated population in hundreds served with waters classed as:				Number of sources treated as follows:			Estimated population in hundreds served with water treated as follows:			Percentage of population served using	
Ground water	Surface water	Mixed water	Total	No treatment	Chlorination	Additional treatment	No treatment	Chlorination	Additional treatment	Surface waters	Untreated waters
2,446	26,830	1,166	30,442	218 (7)††	65 (9)	77 (27)	3,970	5,636	20,836	88.1	13.0
2,844	29,627	1,264	33,735	223 (8)	69 (9)	78 (27)	4,520	6,124	23,091	87.8	13.4

**TABLE V (Concluded)**  
**Municipal Water Hardness, 1956 and 1958**

Estimated population in hundreds served with waters classed as:				Percentage of total population served in each basin with waters classed as:				Weighted average hardness of waters (ppm as CaCO <sub>3</sub> )
Soft	Medium hard	Hard	Very hard	Soft	Medium hard	Hard	Very hard	
9,573	3,363	17,127	379	31.4	11.0	56.4	1.2	72
10,425	3,833	19,018	459	30.9	11.3	56.5	1.3	71

TABLE VI

Source, Treatment, Hardness and Population Served, 1956 and 1958 – by counties

County	Year	Approximate population		Percentage of population served with water	Number of communities served with water				
		In area	served with water		Cities	Towns	Villages	Parishes	Others
Arthabaska	1956	41,422	24,210	58.4		3	3		
	1958	42,539	25,586	60.1		3	3		
Bagot	1956	20,213	6,441	31.9		1	3		
	1958	20,334	6,690	32.9		1	3		
Beauce	1956	59,957	25,272	42.2		5	8	5	2
	1958	56,007	27,429	49.0		5	8	5	2
Beauharnois	1956	42,691	32,006	75.0	2		1		
	1958	47,266	35,979	76.1	2		1		
Bellechasse*	1956	26,203*	14,500				1	5	
	1958	26,160	15,430				1	6	
Berthier*	1956	26,359*	9,605			1	1	3	
	1958	26,378	9,398			1	1	3	
Bonaventure*	1956	43,240*	1,100						1
	1958	41,331*	1,100						1
Brome	1956	13,790	3,228	23.4		3			
	1958	13,926	3,324	23.9		3			
Chambly	1956	111,979	89,466	79.8	3	9			
	1958	129,738	108,323	83.5	3	9			
Champlain*	1956	102,674 *	73,931		2	2	6	6	
	1958	106,304 *	77,758		2	2	6	6	
Charlevoix East	1956	14,706	7,464	47.5		1	3		1
	1958	16,395	7,938	48.4		1	3		1
Charlevoix West	1956	14,557	4,600	31.6			1	1	
	1958	14,682	5,869	40.0			1	1	
Chateauguay	1956	22,588	4,092	18.1		0	3	1	
	1958	25,257	7,992	31.6		1	3	1	
Chicoutimi	1956	137,999	98,824	71.6	4	3	4		1
	1958	164,102	112,277	68.4	4	3	4		1
Compton	1956	25,057	8,441	33.7		3	1		2
	1958	20,234	8,372	41.4		3	1		2

\* Figure represents total population of county, part of which does not lie within the Lower St. Lawrence River drainage basin.

TABLE VI—(continued)  
 Source, Treatment, Hardness and Population Served, 1956 and 1958 — by counties

Percent of population served with			Per cent of population served with water treated as follows:			Per cent of population served with water classed as:				Weighted average hardness of water (ppm as CaCO <sub>3</sub> )
Ground water	Surface water	Mixed water	No treatment	Chlorination	Additional treatment	Soft	Medium hard	Hard	Very hard	
22.0	78.0	0	22.0	11.7	66.2	0.2	98.7	0	1.6	78
22.6	77.4	0	22.6	11.8	65.6	0.2	98.2	0	1.6	79
19.3	80.7	0	45.7	0	54.3	80.7	19.3	0	0	46
18.8	81.2	0	44.4	0	55.6	81.0	19.0	0	0	46
27.8	71.2	1.0	45.2	31.2	14.6	77.3	22.7	0	0	43
26.2	72.9	0.9	51.0	29.9	19.1	67.9	32.1	0	0	45
94.4	55.6	0	4.4	73.7	21.9	0	0	95.6	4.4	130
46.0	54.0	0	4.6	72.9	22.5	0	0	95.4	4.6	131
25.2	74.8	0	100	0	0	97.9	2.1	0	0	7.6
27.4	72.6	0	100	0	0	95.5	4.5	0	0	9.4
0	66.0	34.0	24.4	34.0	41.6	24.4	75.6	0	0	57
0	65.4	34.6	25.0	34.6	40.4	25.0	75.0	0	0	57
100	0	0	100	0	0	0	100	0	0	110
100	0	0	100	0	0	0	100	0	0	110
43.4	15.2	41.1	100	0	0	58.9	41.1	0	0	47
43.6	16.6	39.8	100	0	0	60.2	39.8	0	0	47
1.0	99.0	0	1.0	7.8	91.2	7.8	1.0	91.2	0	119
1.4	98.6	0	1.4	8.0	90.6	8.0	1.4	90.6	0	119
56.0	44.0	0	35.6	64.4	0	98.4	0	1.6	0	20
57.0	43.0	0	35.8	64.2	0	98.3	0	1.7	0	21
10.0	38.4	51.6	48.4	51.6	0	100	0	0	0	30
10.6	39.0	50.4	49.6	50.4	0	100	0	0	0	29
19.6	80.4	0	100	0	0	100	0	0	0	53
26.4	73.6	0	100	0	0	100	0	0	0	50
80.6	19.4	0	80.6	19.4	0	0	19.4	35.5	45.1	209
43.4	56.6	0	43.4	56.6	0	0	56.6	19.0	24.4	164
7.6	92.4	0	13.5	86.5	0	95.1	0	4.9	0	27
8.6	91.4	0	14.3	85.7	0	95.3	0	4.7	0	27
33.8	66.2	0	100	0	0	74.1	8.3	0	17.6'	59
33.7	66.3	0	100	0	0	73.7	8.4	0	17.9	59



TABLE VI - (continued)

## Source, Treatment, Hardness and Population Served, 1956 and 1958 - by counties

County	Year	Approximate population		Percentage of population served with water	Number of communities served with water				
		In area	served with water		Cities	Towns	Villages	Parishes	Others
Dorchester*	1956	34,692*	5,450					5	2
	1958	39,363	5,978					5	2
Drummond	1956	55,565	33,909	61.0	1		3		2
	1958	55,599	34,468	67.4	1		3		3
Frontenac	1956	31,433	12,203	38.8		1	3	1	3
	1958	31,637	13,310	42.1	1	1	3	1	3
Gaspé East	1956	41,319	5,550	13.4		2			
	1958	43,042	7,450	17.3		2			
Gaspé West	1956	19,021	7,444	39.1		1	2		1
	1958	19,427	8,350	43.0		1	2		1
Huntingdon	1956	14,278	3,550	24.9		1	1		2
	1958	14,620	3,805	26.0		1	1		2
Iberville	1956	15,724	6,885	43.8		1	1		
	1958	16,301	7,435	45.6		1	1		
Joliette*	1956	40,706*	22,065		1		2	1	
	1958	43,142	23,046		1		2	1	
Kamouraska*	1956	27,817*	6,419				2	2	
	1958	26,943	6,598				2	2	
Lac St. Jean East	1956	28,273	26,069	68.1	1	2	5		3
	1958	37,123	29,066	78.3	1	2	5		3
Lac St. Jean West	1956	58,400	26,649	45.6	1	4	5		
	1958	47,455	29,948	63.1	1	4	5		
Laprairie	1956	24,620	5,490	22.3		1			1
	1958	27,509	6,925	25.2		2			1
L'Assomption	1956	28,642	18,651			3	2	2	
	1958	32,921	22,135			3	2	2	
Levis	1956	46,839	34,012	72.6	2		3	1	
	1958	48,715	35,706	73.3	2		3	1	
L'Islet*	1956	24,047*	1,400				1	1	
	1958	23,999	1,480				1	1	

\* Figure represents total population of county, part of which does not lie within the Lower St. Lawrence River drainage basin.

TABLE VI - (continued)  
Source, Treatment, Hardness and Population Served, 1956 and 1958 - by counties

Per cent of population served with			Per cent of population served with water treated as follows:			Per cent of population served with water classed as:				Weighted average hardness of water (ppm as CaCO <sub>3</sub> )
Ground water	Surface water	Mixed water	No treatment	Chlorination	Additional treatment	Soft	Medium hard	Hard	Very hard	
72.5	27.5	0	96.3	0	3.7	36.7	45.0	18.3	0	71
71.2	28.8	0	92.5	0	7.5	41.5	41.8	16.7	0	67
4.1	95.9	0	4.1	0	95.9	0	99.7	0	0.3	74
4.0	96.0	0	4.0	0	96.0	0	99.7	0	0.3	74
44.3	55.7	0	44.3	55.7	0	69.7	5.4	13.1	11.8	63
45.1	54.9	0	45.1	54.9	0	67.6	5.3	15.1	12.0	66
0	100	0	54.1	45.9	0	54.1	45.9	0	0	68
0	100	0	47.0	53.0	0	47.0	53.0	0	0	74
30.2	69.8	0	30.2	69.8	0	0	22.8	51.0	26.2	158
27.5	72.5	0	27.5	72.5	0	0	30.5	46.1	23.4	153
8.5	91.5	0	8.5	0	91.5	0	91.5	0	8.5	91
13.3	86.7	0	13.3	0	86.7	0	86.7	0	13.3	103
8.9	91.1	0	8.9	0	91.1	91.1	8.9	0	0	58
8.5	91.5	0	8.5	0	91.5	91.5	8.5	0	0	58
16.4	83.6	0	16.4	0	83.6	100	0	0	0	23
15.7	84.3	0	15.7	0	84.3	100	0	0	0	23
61.1	0	38.9	100	0	0	38.9	61.1	0	0	53
62.1	0	37.9	100	0	0	37.9	67.1	0	0	53
0	100	0	29.2	70.8	0	92.3	7.7	0	0	24
0	100	0	27.7	72.3	0	93.0	7.0	0	0	23
11.4	72.4	16.2	80.0	20.0	0	85.7	14.3	0	0	30
10.7	73.6	15.7	70.4	29.6	0	86.9	13.1	0	0	29
0	100	0	0	100	0	0	100	0	0	100
0	100	0	0	97.5	2.5	0	97.5	2.5	0	101
0	78.0	22.0	0	22.0	78.0	85.0	0	15.0	0	74
0	81.1	18.9	0	18.9	81.1	87.2	0	12.8	0	72
3.9	96.1	0	3.9	9.6	86.5	9.6	88.6	0	1.8	98
3.8	96.2	0	3.8	10.6	85.6	10.6	87.6	0	1.8	95
25.0	75.0	0	100	0	0	75.0	25.0	0	0	58
23.0	77.0	0	100	0	0	77.0	23.0	0	0	57

TABLE VI -- (continued)  
 Source, Treatment, Hardness and Population Served, 1956 and 1958 -- by counties

County	Year	Approximate population		Percentage of population served with water	Number of communities served with water				
		In area	served with water		Cities	Towns	Villages	Parishes	Others
Lotbiniere	1956	30,116	7,456	24.8			7	3	
	1958	29,885	8,245	27.6			8	3	
Maskinonge	1956	20,870	9,035	43.3		1	1	1	
	1958	21,233	11,031	52.0		1	2	1	
Matane*	1956	34,957*	13,059			1	3	1	1
	1958	36,163	14,069			1	3	1	1
Megantic	1956	53,028	32,432	61.2	1	2	3	1	2
	1958	55,037	34,743	63.1	1	2	3	1	2
Missisquoi	1956	26,773	15,237	56.9	1	2	2		
	1958	28,621	16,760	58.6	1	2	2		
Montcalm*	1956	18,670*	5,499				2	2	
	1958	18,512	5,861				2	2	
Montmagny*	1956	25,969*	9,750			1		1	3
	1958	25,844	11,825			1		2	3
Montmorency No. 1 and Montmorency No. 2	1956	19,863	8,210	41.3			3	3	1
	1958	19,557	10,296	52.6			3	3	1
Montreal Isle and Jesus and Jacques Cartier	1956	1,489,512*			12	12	1	1	
	1958				12	12	1	1	
Napierville	1956	10,140	2,200	21.7		1			
	1958	10,386	2,800	27.0		1			
Nicolet	1956	31,248	7,279	30.3		1	4	2	2
	1958	31,483	8,618	27.4		1	5	2	2
Portneuf	1956	46,098	22,993	49.9		2	8	4	4
	1958	46,319	26,203	56.3		2	8	4	4
Quebec	1956	288,754	258,523	89.5	4	8	1	3	3
	1958	306,744	279,548	91.1	4	9	1	4	3
Richelieu	1956	36,086	28,104	77.9	1	3			
	1958	37,119	29,915	80.6	1	3			
Richmond	1956	38,641	24,621	63.7		5			
	1958	41,101	26,928	65.5		5			

\* Figure represents total population of county, part of which does not lie within the Lower St. Lawrence River drainage basin.

TABLE VI - (continued)  
 Source, Treatment, Hardness and Population Served, 1956 and 1958 - by counties

Per cent of population served with			Per cent of population served with water treated as follows:			Per cent of population served with water classed as:				Weighted average hardness of water (ppm as CaCO <sub>3</sub> )
Ground water	Surface water	Mixed water	No treatment	Chlorination	Additional treatment	Soft	Medium hard	Hard	Very hard	
100.0	0	0	100	0	0	17.7	25.4	17.0	39.9	161
100.0	0	0	100	0	0	25.9	23.0	15.8	35.3	147
100.0	0	0	100	0	0	100	0	0	0	20
84.6	15.4	0	84.6	0	15.4	100	0	0	0	20
		0	90.1	7.6	2.3	0	75.0	25.0	0	89
		0	91.0	7.2	1.8	0	76.3	23.7	0	87
26.6	73.4	0	43.0	57.0	0	78.4	1.2	2.4	18.0	61
26.0	74.0	0	42.7	57.3	0	78.9	1.3	2.3	17.5	60
0	100	0	1.9	54.5	43.6	84.9	15.1	0	0	45
0	100	0	1.7	57.6	40.7	84.5	15.5	0	0	45
45.1	37.3	17.6	82.4	17.6	0	100	0	0	0	15
45.5	37.4	17.1	82.9	17.1	0	100	0	0	0	15
16.4	83.6	0	100	0	0	95.9	4.1	0	0	18
30.2	69.8	0	100	0	0	96.6	3.4	0	0	18
54.3	22.6	23.1	100	0	0	100	0	0	0	28
46.7	31.9	21.4	100	0	0	100	0	0	0	28
	100	0	.09	0	99.9	0	0	0	100	125
	100	0	.13	0	99.9	0	0	0	100	125
100.0	0	0	100	0	0	0	0	0	100	330
100.0	0	0	100	0	0	0	0	0	100	330
48.2	51.8	0	48.2	0	51.8	14.0	62.1	7.3	16.6	107
53.0	47.0	0	53.0	0	47.0	12.3	65.3	6.2	16.2	106
67.1	32.9	0	83.9	0	16.1	89.6	10.4	0	0	23
61.2	38.8	0	81.5	0	18.5	90.8	9.2	0	0	22
11.4	82.0	6.6	22.4	72.1	5.5	88.8	5.0	0.5	5.7	36
13.7	78.7	7.6	25.4	68.9	5.7	83.7	8.5	0.6	7.2	41
2.8	97.2	0	2.8	0	97.2	97.2	2.8	0	0	53
2.7	97.3	0	2.7	0	97.3	97.3	2.7	0	0	53
9.3	50.2	40.5	9.3	23.9	66.8	90.7	0	9.3	0	49
10.7	46.9	42.4	10.7	22.0	67.3	89.3	0	10.7	0	51

TABLE VI - (concluded)

## Source, Treatment, Hardness and Population Served, 1956 and 1958 - by counties

County	Year	Approximate population		Percentage of population served with water	Number of communities served with water				
		In area	served with water		Cities	Towns	Villages	Parishes	Others
Rimouski*	1956	61,357*	24,100			2	3	1	
	1958	64,470	28,190			2	3	1	
Rouville	1956	22,083	12,078	54.7		1	4	3	1
	1958	23,114	13,372	57.9		1	4	3	1
St. Hyacinthe	1956	40,302	29,828	74.0	1		5	1	
	1958	42,189	31,643	75.0	1		5	1	
St. Jean	1956	34,054	24,367	71.6	1				
	1958	37,199	27,200	73.1	1				
St. Maurice	1956	102,050	86,317	84.6	2		3	2	2
	1958	106,836	93,137	87.2	2		3	2	2
Saguenay*	1956	51,481*	17,574		1	2	3		8
	1958	60,681	30,330		1	3	3		8
Shefford	1956	48,665	32,428	66.6	1	1	2		
	1958	49,652	33,164	66.8	1	1	2		
Sherbrooke	1956	70,568	61,974	87.8	1	1	1		
	1958	74,480	65,520	84.6	1	1	1		
Soulanges*	1956	9,736*	2,037				3		
	1958	9,899	2,087				3		
Stanstead	1956	35,319	24,265	68.7	1	2	3		1
	1958	36,725	25,172	68.5	1	2	3		1
Temiscouta Riviere du Loup*	1956	39,461*	14,450		1	1	1	1	
	1958	39,951	15,136		1	1	1	1	
Vercheres	1956	20,908	11,986	57.3		1	4	3	
	1958	21,904	12,507	57.1		1	4	3	
Wolfe	1956	18,774	7,985	42.5			5		3
	1958	18,965	7,973	42.0			5		3
Yamaska	1956	16,616	3,275	19.7					
	1958	16,466	3,445	20.9					
Total	1956	3,928,695	3,044,218		45	94	140	67	52
	1958	4,150,426	3,373,462		45	98	143	70	53

\* Figure represents total population of county, part of which does not lie within the Lower St. Lawrence River drainage basin.

TABLE VI -- (concluded)  
 Source, Treatment, Hardness and Population Served, 1956 and 1958 -- by counties

Per cent of population served with			Per cent of population served with water treated as follows:			Per cent of population served with water classed as:				Weighted average hardness of water (ppm as CaCO <sub>3</sub> )
Ground water	Surface water	Mixed water	No treatment	Chlorination	Additional treatment	Soft	Medium hard	Hard	Very hard	
10.8	89.2	0	73.0	27.0	0	66.8	27.0	6.2	0	59
11.5	88.5	0	76.7	23.3	0	69.3	23.3	7.4	0	59
51.7	19.5	18.8	80.5	19.5	0	26.1	33.3	40.6	0	105
54.3	18.1	27.6	81.9	18.1	0	24.4	35.1	40.5	0	107
3.6	93.4	3.0	6.5	3.0	90.5	6.0	90.4	3.6	0	83
3.6	93.6	2.8	6.4	2.9	90.7	5.7	90.7	3.6	0	83
0	100	0	0	0	100	100	0	0	0	55
0	190	0	0	0	100	100	0	0	0	55
5.6	35.9	58.5	7.1	0	92.9	39.8	60.2	0	0	66
5.6	37.5	56.9	7.0	0	93.0	41.3	58.7	0	0	64
40.5	57.2	2.3	63.7	33.5	2.8	97.7	0	2.3	0	13
53.2	45.1	1.7	70.5	27.9	1.6	98.3	0	1.7	0	15
15.3	83.5	1.2	3.6	96.4	0	84.7	15.3	0	0	51
15.2	83.7	1.1	3.5	96.5	0	84.8	15.2	0	0	51
6.9	93.1	0	6.9	93.1	0	93.1	0	6.9	0	55
7.1	92.9	0	7.1	92.9	0	92.9	0	7.1	0	55
0	100	0	0	100	0	0	0	100	0	124
0	100	0	0	100	0	0	0	100	0	124
33.5	63.7	2.8	33.5	55.2	11.3	90.5	9.5	0	0	81
35.6	61.3	3.1	35.6	52.7	11.7	88.5	11.5	0	0	80
34.9	65.1	0	34.9	65.1	0	74.7	0	25.3	0	51
35.3	64.7	0	35.3	64.7	0	74.7	0	25.3	0	51
7.4	41.2	51.4	51.5	40.7	7.8	58.8	5.7	35.5	0	76
7.5	40.8	51.7	52.3	40.0	7.7	59.2	5.8	35.0	0	76
77.0	6.9	16.1	93.1	6.9	0	33.2	55.9	10.9	0	91
77.5	5.9	16.6	94.1	5.9	0	32.2	55.4	12.4	0	93
7.6	61.9	30.5	38.2	61.8	0	15.3	54.2	30.5	0	102
8.7	62.3	29.0	37.7	62.3	0	16.5	54.4	29.1	0	100
244,618	268,369	316,587	397,008 (13%)	563,649 (16.5%)	2,084,241 (68.5%)					72
284,355	2,963,390	126,457	452,038 (13.3%)	612,354 (18.1%)	2,309,810 (68.6%)					71

In Figure 7 the St. Francis River at East Angus is shown to vary little in hardness or mineralization despite considerable fluctuation in discharge. Even though the river at East Angus had already passed through cultivated lands its pick-up of minerals was not appreciable, even at times of flooding. The 1956 spring run-off started in mid February, reached a peak in early March and lasted well into May. Some increase in turbidity was noted but values no higher than 10 were recorded although higher peaks could have occurred for short periods. In 1955 the discharge, rising steadily until the freeze-up in mid December, was greater than in 1956. This 1955 flooding was not accompanied, according to available records, by a corresponding rise in turbidity.

Many of the communities in this older, settled area of Canada are supplied with water from organized systems; many of these are quite small, are privately owned and have been in operation for many years. Consequently, a high proportion of the population is served with water; in 1956 over 77 per cent of the basin population.

In 1956, 405 different communities were totally or partially served with water from organized systems; by 1958, 417 were similarly served. Communities are classed somewhat differently in Quebec than they are in some other areas of Canada: e.g. cities, towns, villages, parishes, townsites, townships, unorganized districts and "areas without designation". In many cases, village or town systems supply persons in neighbouring townships, parishes, etc. or *visà versa*. As a result, Table IV records a much larger number of "communities served" than "organized systems". On the other hand, a number of older communities are served by two or more small, privately owned systems, often using different well or surface waters. The number of these small systems is indicated by figures for 1956: of 370 systems studied, only 159 served over 2,000 persons.

Because of changing conditions within the more highly industrialized and heavily populated areas of the basin - construction of new systems and the development of new water sources - it was necessary to continue the survey of this basin for several years. Even so, some smaller systems may have been missed and the data on all those reported may not be up to date at the time this report is published. Population growth and economic expansion across Canada, within the past decade, make it almost impossible to keep up to date reports on all municipal water supplies. However, the data presented in this report adequately illustrates the source and quality of waters generally available for municipal and industrial use in this basin.

Table IV clearly shows the importance of surface waters in the basin area where in 1956 and 1958, 177 and 179 of a total of 360 and 370 supplies respectively, were surface waters. When mixed supplies are included, about 55 per cent of the supplies and about 88 per cent of the population served use surface waters. Thus, while a large number of ground waters are used they are mainly used in the systems supplying the very small communities.

The high quality of both ground and surface waters used for municipal supply in the basin is illustrated in the data of Tables IV and V. Only 78 of the 370 sources studied in 1958 were treated other than by chlorination; about 60 per cent of all waters were used without any treatment at all. Only 13.4 per cent of the population served used untreated waters, further illustrating the relatively large number of very small systems using untreated ground waters. In 1958 about 87 per cent of the population served with water received waters treated prior to distribution; about 18 per cent received only chlorinated water.

The weighted average hardness of the waters supplied by these organized systems is 71 - 72 ppm as  $\text{CaCO}_3$ , that is at the lower range of a medium hard water, and considerably softer than water from the St. Lawrence River. In 1956 and 1958 between 78 and 79 per cent of all systems supplied waters below 120 ppm hardness as  $\text{CaCO}_3$  and served about 42 per cent of the population. These statistics are significantly influenced by the Montreal city system which supplies some 18 municipalities in the metropolitan Montreal area with St. Lawrence River water with a hardness of about 125 ppm as  $\text{CaCO}_3$ ; that is a hard water. When this system is not included in the statistics of Table V, 88 per cent instead of 42 per cent of the population served, receive waters classed as soft or medium hard. Most of the population served, therefore, receive waters below 125 - 130 ppm hardness as  $\text{CaCO}_3$ , only about one per cent using very hard well waters.

Table VI shows some of the statistics of Tables IV and V separated as to county. Only in the counties of Beauharnois, Napierville, Chateauguay, Gaspé West, Lotbinière, Soulanges and Montreal Island does the weighted average hardness of municipal waters exceed 120 ppm as  $\text{CaCO}_3$ .

## SUMMARY

Surface waters of the Lower St. Lawrence River drainage basin are generally soft to medium hard. The St. Lawrence River despite heavy inflow of very soft, coloured waters from the Canadian Shield to the north and of generally soft waters from the Appalachian Highlands to the south shows only minor changes in hardness and chemical quality from above Montreal to tidal influence near Levis, Que.

Most of the larger tributary rivers, especially those from the north, also show little seasonal change in chemical quality, including turbidity, with wide variations in discharge.

The larger and industrially important rivers of the basin are usually very suitable for industrial and domestic use although problems due to high colour and corrosivity are to be expected.

The good chemical quality of the surface-and ground-water supplies of the basin is evident since a large portion are used without any treatment other than chlorination.

A large proportion of the basin population is served by organized systems. Many of the systems are very small, and use ground waters often having little hardness. Surface waters supply most of the population served by organized systems. One system, that at Montreal, uses St. Lawrence River water, supplying over 1½ million people in 18 communities.

In this older, settled portion of Canada there still are many small, privately owned systems but the trend, as elsewhere in Canada, is the replacement of these by larger systems using treatment and often supplying several communities. In some cases the plants are jointly owned and operated by several municipalities. As these smaller systems generally using untreated ground waters are replaced by larger systems using treated surface waters, prevention of the pollution of the surface waters becomes increasingly important.

As in most areas of Canada where industrial expansion and rapid population growth are occurring, the importance of surface waters for both industrial and municipal use is increasing since these are often the only sources available in sufficient quantity. It is therefore essential that the chemical quality of these sources be maintained and the water utilized to the greatest advantage.



APPENDIX A  
SURFACE-WATER SAMPLING LOCATIONS

<i>Station No.</i>	PAGE
145 Ashuapmuchuan River at St. Felicien, Lac St. Jean W. Co. ....	60
111 Batiscan River at Lac aux Sables, Portneuf Co. ....	50
113 Batiscan River at Ste. Genevieve de Batiscan, Champlain Co. ....	50
112 Batiscan River at St. Narcisse, Champlain Co. ....	50
45 Bayonne River near Berthierville, Berthier Co. ....	30
* Beaudet River at Victoriaville, Arthabaska Co.	
132 Beaurivage River at St. Etienne, Levis Co. ....	56
109 Becancour River at Becancour, Nicolet Co. ....	50
108 Becancour River at Lyster, Megantic Co. ....	48
110 Belair River at Ste. Marie, Beauce Co. ....	50
* Belly Lake at Chambord, Lac St. Jean W. Co.	
* Bernier Lake at Matane, Matane Co.	
169 Bersimis (Betsiamites) River at Bersimis, Saguenay Co. ....	66
168 Bersimis (Betsiamites) River at Labrieville, Saguenay Co. ....	66
143 Black Lake at St. Simeon, Charlevoix E. Co. ....	58
54 Black River at St. Pie, Bagot Co. ....	32
185 Bonaventure River at Bonaventure, Bonaventure Co. ....	72
96 Bostonnais River near La Tuque, Champlain Co. ....	46
47 Brome Lake (Centre Yamaska River) near Foster, Brome Co. ....	30
80 Brompton River at Richmond, Richmond Co. ....	40
84 Bulstrode River near Princeville, Arthabaska Co. ....	42
106 Caribou Lake near Black Lake, Megantic Co. ....	48
131 Carter River at Ste. Marie, Beauce Co. ....	56
187 Cascapedia River at Cascapedia, Bonaventure Co. ....	72
47 Centre Yamaska River at Foster, Brome Co. ....	30
48 Centre Yamaska River at West Shefford, West Shefford Co. ....	30
25 Chateauguay River at Chateauguay, Chateauguay Co. ....	24
23 Chateauguay River at Huntingdon, Huntingdon Co. ....	24
24 Chateauguay River at Ste. Martine (Primeauville) Chateauguay Co. ....	24
125 Chaudiere River at Beauceville, Beauce Co. ....	54
127 Chaudiere River at Charny, Levis Co. ....	54
126 Chaudiere River at St. Joseph, Beauce Co. ....	54
* Chenal Tadif River at N.D. de Pierreville, Yamaska Co.	
46 Chicot River at St. Cuthbert, Berthier Co. ....	30
156 Chicoutimi River at Chicoutimi, Chicoutimi Co. ....	64
* Chretien Lake at Ste. Flore, St. Maurice Co.	
* Clearwater Creek at L'Ancienne Lorette, Quebec Co.	
72 Coaticook River at Coaticook, Stanstead Co. ....	38
74 Coaticook River at Lennoxville, Sherbrooke Co. ....	38
73 Coaticook River at Waterville, Sherbrooke Co. ....	38
* Cossette Creek at Ste. Anne de la Perade, Champlain Co.	
95 Croche River neat La Tuque, Champlain Co. ....	46
* Crystal Lake at Sweetsburg, Missisquoi Co.	
* East Lake at St. Joseph de Coleraine, Megantic Co.	
71 Eaton River at Cookshire, Compton Co. ....	38
26 English River at St. Chrysostome, Chateauguay Co. ....	24
101 Eric Lake (Eric Brook) near Ste. Tite, Champlain Co. ....	48
164 Escoumains River at Les Escoumains (Escoumins), Saguenay Co. ....	66
133 Etchemin River at St. Romauld d'Etchemin, Levis Co. ....	56
* Factory Lake at St. Bruno, Lac St. Jean E. Co.	

\* Not shown on Figure 3

<i>Station No.</i>	<i>PAGE</i>
128 Fortin Lake at Beauceville, Beauce Co. ....	56
* Fortin Lake at Price-Matane Co.	
118 Grande Riviere du Chene near Leclercville, Lotbiniere Co. ....	52
151 Ha-Ha Bay at Bagotville, Chicoutimi Co. ....	62
161 Ha-Ha River near Grande Baie, Chicoutimi Co. ....	64
122 Jacques Cartier River at Donnacona, Portneuf Co. ....	52
121 Jacques Cartier River at Ste. Catherine, Portneuf Co. ....	52
* Jeanne's Creek at St. Fulgence, Chicoutimi Co. ....	
154 Kenogami Lake at dam near Jonquiere, Chicoutimi Co. ....	62
* Lac a la Roche at Ste. Germaine du Lac Etchemin, Dorchester Co.	
* Lac a Pit at Grandes Bergeronnes, Saguenay Co.	
* Lac aux Sables at St. Jerome (Metabetchouan, Que.), Lac St. Jean E. Co.	
* Lac de l'Aqueduc at Grandes Bergeronnes, Saguenay Co.	
* Lac de l'Aqueduc at St. Coeur de Marie (Delisle) Lac St. Jean E. Co.	
* Lac de l'Aqueduc at Tadoussac, Saguenay Co.	
143 Lac de la Riviere Noire (Lac Noir; Riviere Noire) at St. Simeon, Charlevoix E. Co. ....	58
103 Lac des Piles near Grande'Mere, Champlain Co. ....	48
* Lac des Roches at Giffard, Quebec Co.	
33 L'Achigan River at L'Epiphanie, L'Assomption Co. ....	26
102 Lac la Peche near Grande'Mere, Champlain Co. ....	48
143 Lac Noir at St. Simeon, Charlevoix E. Co. ....	58
149 Lac St. Jean at Roberval, Lac St. Jean W. Co. ....	60
98 Lac Toro Reservoir at St. Michel des Saints Berthier Co. ....	46
61 Lake Aylmer at Beaulac, Wolfe Co. ....	34
35 Lake Champlain at Lacolle, St. Jean Co. ....	26
34 Lake Champlain at Philipsburg, Missisquoi Co. ....	26
174 Lake Comeau near Baie Comeau, Saguenay Co. ....	68
101 Lake Eric at Ste. Tite, Champlain Co. ....	48
75 Lake Massawippi at North Hatley, Stanstead Co. ....	38
124 Lake Megantic at Lac Megantic, Frontenac Co. ....	52
77 Lake Memphremagog at Magog, Stanstead Co. ....	38
2 Lake St. Francis at Coteau Landing, Soulanges Co. ....	16
3 Lake St. Francis at (Salaberry de) Valleyfield, Beauharnois Co. ....	16
149 Lake St. John at Roberval, Lac St. Jean W. Co. ....	60
5 Lake St. Louis at Dorval Island, Ile de Montreal ....	16
59 Lake St. Louis at St. Zenon, Berthier Co. ....	34
* Lake Valpy at Chandler, Gaspé E. Co.	
* Lake Veilleux at St. Alban, Portneuf Co.	
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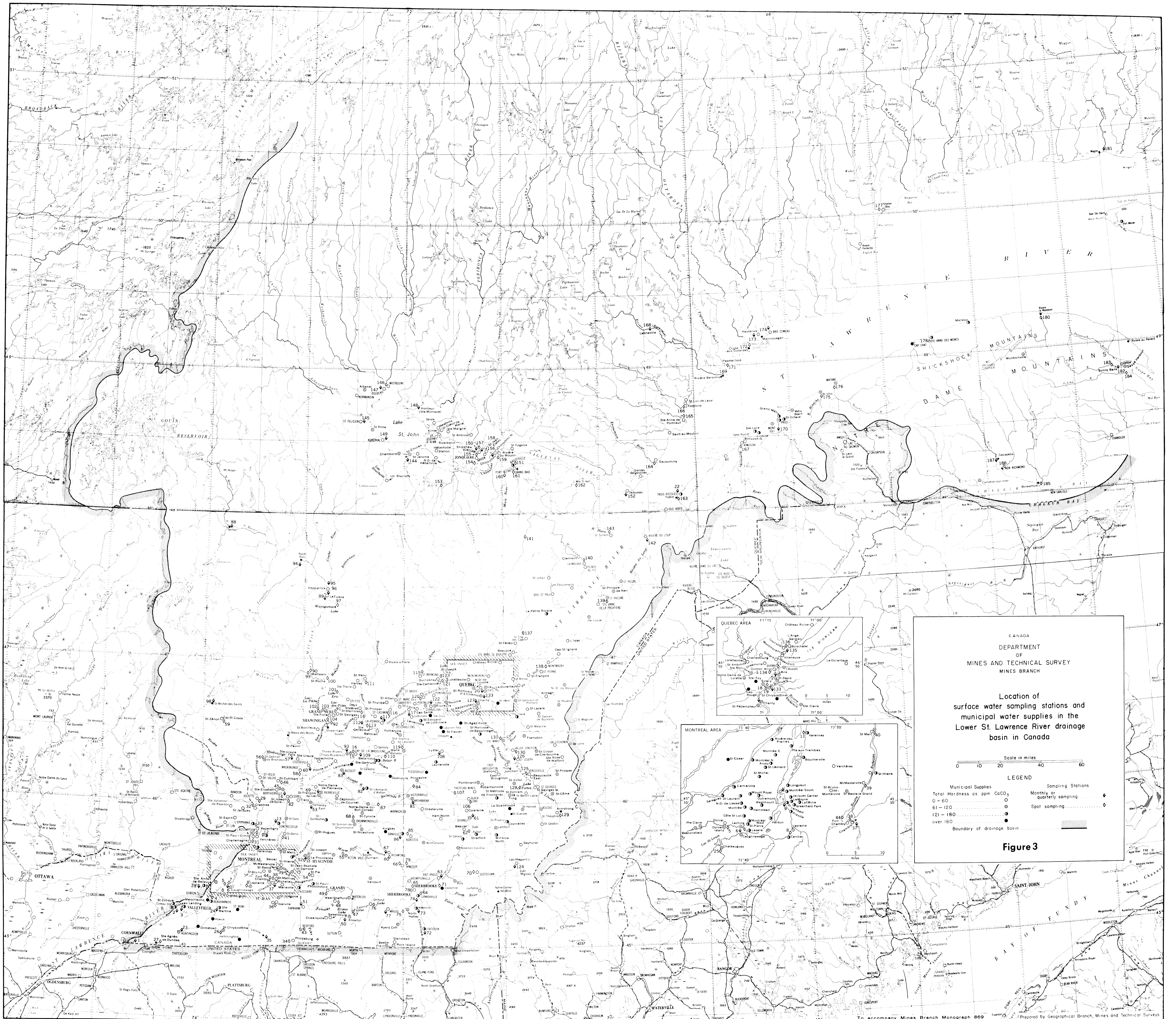
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\* Army installation



CANADA  
DEPARTMENT  
OF  
MINES AND TECHNICAL SURVEY  
MINES BRANCH

Location of  
surface water sampling stations and  
municipal water supplies in the  
Lower St. Lawrence River drainage  
basin in Canada

Scale in miles  
0 10 20 40 60

LEGEND

○	Municipal Supplies	○	Sampling Stations
○	Total Hardness as ppm CaCO <sub>3</sub>	○	Monthly or quarterly sampling
○	0 - 60	○	Spot sampling
○	61 - 120	○	
○	121 - 180	○	
○	over 180	○	
—	Boundary of drainage basin		

**Figure 3**



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