ATL 111

Canadian

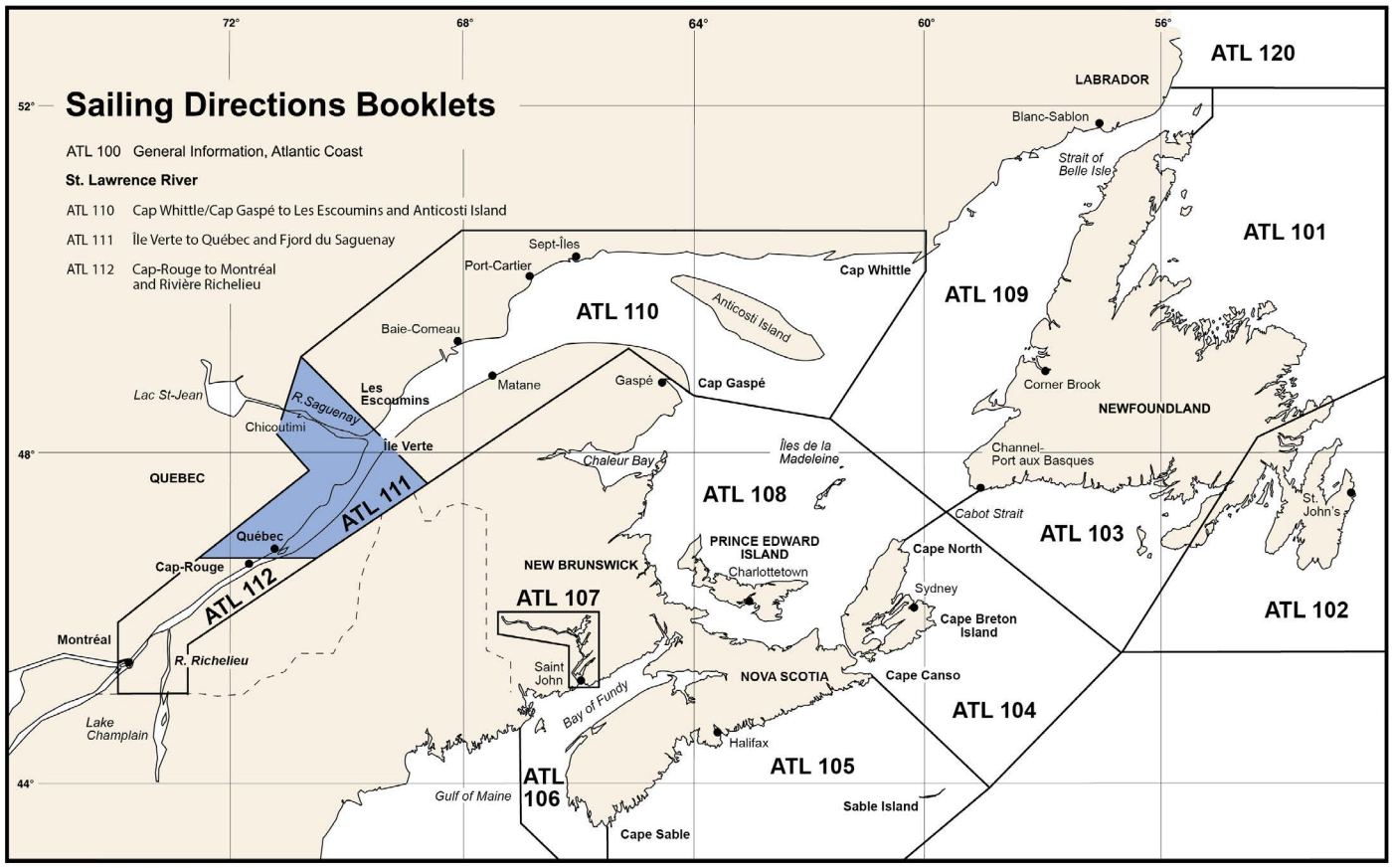
Sailing Directions

St. Lawrence River, Île Verte to Québec and Fjord du Saguenay

2025/12

Fisheries and Oceans Canada
Pêches et Océans Canada

Canada



Newfoundland and Labrador

ATL 101 Northeast and East Coasts

ATL 102 East and South Coasts

ATL 103 Southwest Coast

ATL 120 Camp Islands to Hamilton Inlet (including Lake Melville)

Nova Scotia (Atlantic Coast) and Bay of Fundy

ATL 104 Cape North to Cape Canso (including Bras d'Or Lake)

ATL 105 Cape Canso to Cape Sable (including Sable Island)

ATL 106 Gulf of Maine and Bay of Fundy

ATL 107 Saint John River

Gulf of St. Lawrence

ATL 108 Gulf of St. Lawrence (Southwest Portion)

ATL 109 Gulf of St. Lawrence (Northeast Portion)

Pictogram Legend


Anchorage


Current


Radio calling-in point


Wharf


Caution


Lifesaving Station


Marina


Light


Pilotage

Report discrepancies between real-world observations and descriptions in the publication

Users of this publication are requested to forward information regarding newly discovered dangers, changes in aids to navigation, the existence of new shoals or channels, or other information that would be useful for the correction of nautical charts and publications affecting Canadian waters to: chsinfo@dfo-mpo.gc.ca

IMPORTANT NOTICE

The Canadian Hydrographic Service no longer produces hard copies of its publications.
Updates are published in Notices to Mariners at notmar.gc.ca
and on the Canadian Hydrographic Service website at charts.gc.ca

For more information, contact:

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Record of Changes

As the CHS acquires new information, relevant changes are applied to Sailing Directions volumes in order to maintain safety of navigation. It is the responsibility of the mariner to maintain their digital Sailing Directions file by ensuring that the latest version is always downloaded. Visit charts.gc.ca to download the most recent version of this volume, with all current changes already incorporated.

The table below lists the changes that have been applied to this volume of Sailing Directions. This record of changes will be maintained for the current calendar year only.

Date	Chapter / Paragraph	Description of Change
2025/03	Entire booklet	ATL 111 has been reformatted and now meets Web Content Accessibility Guidelines (WCAG) 2.0. Other changes include updated imagery, hyper-links, and indexing.
2025/03	C1/P89	Update - Depth alongside of wharf
2025/03	C2/P35	Add - Lighted cautionary buoys
2025/03	C2/P124, P125	Update - Light
2025/07	C1/P27	Update - Altitude of Ile Rouge
2025/07	C1/P34, P35, P39, P46	Update - Dephts over rocks
2025/07	C1/P9, C2/P10, C3/P9, C4/P18	Deletion - Automated Information Service SERVOX
2025/07	C4/P4, P39, P47, P57	Deletion - Vertical clearance (with icy conditions)
2025/07	C4/P19	Add - Marine refuge upstream from the Saguenay Marine Park
2025/07	C4/P55	Add - Private lights
2025/07	A-9 - A-12	Deletion -Tables - Marina services
2025/12	C1/P38, P47	Add - Automatic Identification System (AIS)
2025/12	C2/P114	Deletion - Dredged area depth
2025/12	C3/P65	Deletion - Light (1827)
2025/12	C4/P92	Add - Cathodic protection system (Obstruction)

Contents

Preface

This Edition of *Sailing Directions, ATL 111 — St. Lawrence River, Île Verte to Québec and Fjord du Saguenay*, 2025, has been fully updated from Canadian Government and other information sources. In general, all hydrographic terms used in this booklet are in accordance with the meanings given in the Hydrographic Dictionary (Special Publication No. 32), published by the *International Hydrographic Bureau*.

General information for the Atlantic Coast is grouped within one booklet, *Sailing Directions, ATL 100 — General Information, Atlantic Coast*, 2007. It contains navigational information and a brief description of the main port facilities as well as geographic, oceanographic and atmospheric characteristics.

The detailed description of the geographical sectors is found in a series of fascicles whose boundaries appear on the map on page ii. **The appropriate descriptive booklet(s) should be consulted in conjunction with the ATL 100 — General Information booklet.**

Tide, water level and current information has been revised by the Tides, Currents and Water Levels Division of the *Canadian Hydrographic Service*.

The photographs are by *Canadian Hydrographic Service and the Canadian Coast Guard, Fisheries and Oceans Canada*.

References to Other Publications

Canadian Hydrographic Service

- *Catalogue of Nautical Charts and Publications*
- *Canadian Tide and Current Tables*

Canadian Coast Guard

- *List of Lights, Buoys and Fog Signals*
- *Radio Aids to Marine Navigation (Atlantic, St. Lawrence, Great Lakes, Lake Winnipeg, Arctic and Pacific)*
- *Annual Edition of Notices to Mariners*

Explanatory Notes

Canadian Sailing Directions expand charted details and provide important information of interest to navigation which may not necessarily be found on charts or in other marine publications. They are intended to be read in conjunction with the charts quoted in the text.

Remarks

Buoys are described in detail only where they have special navigational significance, or where the scale of the chart is too small to clearly show all the details.

Chart references, in *italics*, refer to the largest scale Canadian chart. Occasionally a smaller scale chart may be quoted where its use is more appropriate.

Tidal information relating to the vertical movements of the water is not given and the *Canadian Tide and Current Tables* should be consulted. However, abnormal changes in water level are noted.

Names have been taken from the most authoritative source. Where an obsolete name still appears on the chart or is of local usage, it is given in brackets following the official name.

Wreck information is included where drying or submerged wrecks are relatively permanent features and are of navigation or anchoring significance.

Units and terminology used in this booklet

Latitude and **longitudes** given in brackets are approximate, and are intended to facilitate reference to the chart quoted.

Bearings and **directions** refer to True North (geographic) and are given in degrees from 000° clockwise to 359°. The bearings of conspicuous objects, ranges and light sectors are given from seaward. **Courses** always refer to the course to be made good.

Tidal streams and **currents** are described by the direction towards which they flow. The **ebb** stream is caused by a falling tide and the **flood** stream is caused by a rising tide. **Winds** are described by the direction from which they blow.

Distances, unless otherwise stated, are expressed in nautical miles. For practical purposes, a nautical mile is considered to be the length of one minute of arc, measured along the meridian, in the latitude of the position. The international nautical mile, which has now been adopted by most maritime nations, is equal to 1,852 m (6,076 ft).

Speeds are expressed in knots, which mean 1 nautical mile per hour.

Depths, unless otherwise stated, are referred to chart datum. As depths are liable to change, particularly those in dredged channels and alongside wharves, it is strongly recommended these be confirmed by the appropriate local authority.

Elevations and **vertical clearances** are given above Higher High Water, Large Tides. In non-tidal waters they are referred to chart datum.

Heights of objects, distinct from the elevations, refer to the heights of the structures above the ground. A statement, “a hill ... m (... ft) high”, is occasionally used when there could be no confusion and in this case the reference will signify an elevation.

The *List of Lights, Buoys and Fog Signals* number is shown **in brackets** after the navigational aid (light, leading lights, buoy). The expression “seasonal” indicates that it is operational for a certain period during the year; mariners should consult the *List of Lights, Buoys and Fog Signals* to determine the period of operation. The expression “private” means that the navigational aid is privately maintained; it will not necessarily be mentioned in the *List of Lights, Buoys and Fog Signals* and its characteristics may change without issuance of a *Notice to Shipping*.

Time, unless otherwise stated, is expressed in local standard or daylight time. For the waters described in this booklet, local time is Atlantic Standard Time (AST Z+4).

Deadweight tonnage and **masses** are expressed in metric tonnes. The kilogram is used to describe relatively small masses.

Public wharf is a wharf that is available for public use, though certain fees may be charged by local authorities. It may be shown as “Government wharf” or “Gov’t whf” on older charts.

Conspicuous objects, natural or artificial, are those which stand out clearly from the background and are easily identifiable from a few miles offshore in normal visibility.

The expression "**small craft**" refers to pleasure craft and small vessels with shallow draught.

Diagrams have been removed from this booklet. A reference to the ENC number of each diagram has been inserted in the text at the appropriate place.

Pictograms are symbols shown at the beginning of the paragraphs to allow quick reference to information or to emphasize details. The Pictogram Legend is shown on the third page of this booklet.

Abbreviations

Units

°C	degree Celsius
cm	centimetre
fm	fathom
ft	foot
h	hour
ha	hectare
HP	horsepower
kHz	kilohertz
km	kilometre
kn	knot
kPa	kilopascal
m	metre
mb	millibar
MHz	megahertz
min	minute
mm	millimetre
NM	nautical mile
t	metric tonne
°	degree (plane angle)
‘	minute (plane angle)

Directions

N	north
NNE	north northeast
NE	northeast
ENE	east northeast
E	east
ESE	east southeast
SE	southeast
SSE	south southeast
S	south
SSW	south southwest
SW	southwest
WSW	west southwest
W	west
WNW	west northwest
NW	northwest
NNW	north northwest

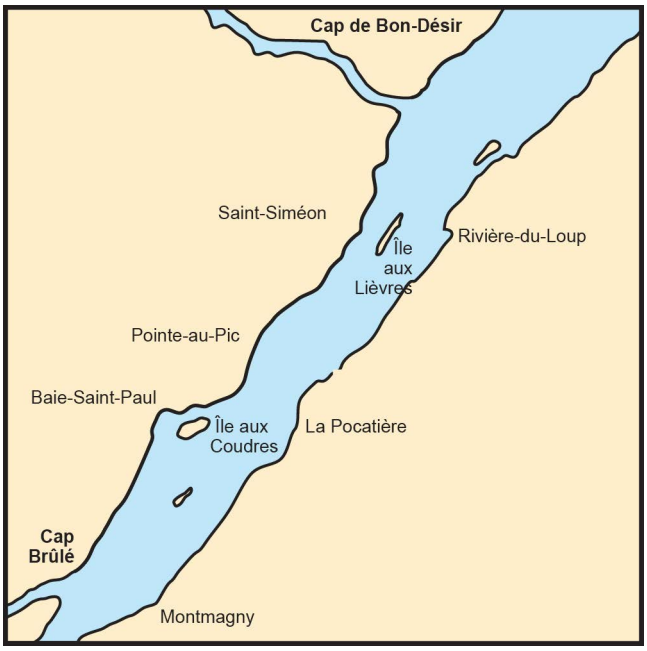
Various

A.P.A.	Atlantic Pilotage Authority
CCG	Canadian Coast Guard
CHS	Canadian Hydrographic Service
DFO	Department of Fisheries and Oceans, Canada
DWT	deadweight tonnage
ETA	estimated time of arrival
ETD	estimated time of departure
HF	high frequency
HW	high water
LW	low water
M	million, mega
MCTS	Marine Communications and Traffic Services
NAD	North American Datum
No.	number
SAR	Search and Rescue
U.S.A.	United States of America
VHF	very high frequency
VTS	Vessel Traffic Services

Chapter 1

Chenal du Nord

Cap de Bon-Désir — Cap Brûlé



General

Charts 1203, 1320, 1234, 1233, 1317

1 **Limits**. — This chapter describes Chenal du Nord in the St. Lawrence River, between Cap de Bon-Désir and Cap Brûlé.

2 **Coast**. — The north shore of the St. Lawrence River, between Cap de Bon-Désir and Cap Brûlé, forms a long, wooded, granitic mountain range which projects over the high, steep cliffs of the St. Lawrence River. At the base of these cliffs, particularly at the mouths of the rivers, there are drying flats strewn with erratic boulders. All along Chenal du Nord the coast forms a series of coves and capes.

3 **Main shipping channel**. — Chenal du Nord, dredged to 12.5 m used by commercial shipping, is wide, relatively deep and gradually narrows to a width of 305 m at Cap Gribane. Commencing at Baie-Saint-Paul *(47°25'N, 70°26'W)*, the channel is marked by buoys and leading lights.

4 **Risks of collision**. — Manoeuvrability of large commercial vessels is restricted. Additionally, the visibility in the wheelhouse of a large vessel is often limited. All small craft must keep out of the way of these vessels which have priority.

5 The following table lists the **calling-in-points** of the *Marine Communications and Traffic Services (MCTS)* in the St. Lawrence River. For more details mariners should consult the *Annual Edition of Notices to Mariners*. It should be noted that the local routine expression "Stay to the north", used in the St. Lawrence River communications, means to hug the "north shore" or the starboard limit for vessels navigating upbound. By agreement, an upbound vessel on the St. Lawrence River considers the "north shore" to be on its starboard side while the "south shore" is considered to be on its port side.

6 **Current and tidal streams**. — In this section of the estuary, the **tidal streams** are greatly influenced by the profile of the bottom which, at certain locations, causes strong **tide rips** and surf zones. Mariners may encounter cross and counter currents which may force their vessels off course. The strongest currents — up to 7 knots at the **ebb** of spring tides — with **tide rips** and **eddies**, are located off the banks of Île Rouge, at the junction of the Saguenay and St. Lawrence Rivers, as well as in Passage de l'Île aux Coudres.

Table 1.1 Calling-in-Points on the Chenal du Nord

No	Name	Distance (nautical miles) Between	Distance (nautical miles) Upstream	Distance (nautical miles) Downstream
5	Les Escoumins	—	0	113
6	Haut-fond Prince	16	16	97
7	Île Blanche	8	24	89
8	Cap-aux-Oies / Saint-Roch	38	62	51
9	Sault-au-Cochon /Beaujeu	25	87	26
10	Saint-Laurent-de-l'Île-d'Orléans	26	113	0


7 In this area, when the wind blows against the current, there is a strong **tide rip** generating waves of up to 4 m, depending on the prevailing conditions. This phenomenon may be a **hazard** for small craft. For more details, mariners should consult the *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois- Rivières* and other charted information concerning currents and tidal streams.

8 The hourly surface currents forecasts for the Estuary and the St. Lawrence River are available on the *St. Lawrence Global Observatory* Web site at http://www.ogsl.ca/ (click on the *Ocean Forecasts* tab). You can obtain hourly details of the direction and speed of surface currents forecasted for the next 48 hours.

9 For information on water levels, mariners should refer to the Canadian Tide and Current Tables and the hydrograph shown on the charts. A permanent network of digital water level gauges (PWLN) is installed along the St. Lawrence River, providing real-time water levels and forecasts at several locations on the tides website. The most recent information on water levels can be obtained by visiting the tides website at https://www.tides.gc.ca/, contacting MCTS centres by VHF.

10 The **Saguenay—St. Lawrence Marine Park** is committed to the protection and development of marine resources and covers the northern half of the St. Lawrence estuary. It stretches from Les Escoumins wharf to Gros Cap à l'Aigle and the Fjord du Saguenay to Cap à l'Est. Activities within the park, as well as the utilization of the facilities, are governed by regulations. Mariners must abide by the maximum speed limit of 25 knots in the park, with the exception of the mouth of the Saguenay River, where speed is reduced to 15 knots from May 1 to October 31. The mouth of the Saguenay is defined by the area between buoys S7 and S8 and the ferry docks between Baie-Sainte-Catherine and Tadoussac. (See charts in Appendix.) For more details, mariners should consult the charted information concerning the limits as well as the summary of the regulations shown in the Appendix, or visit the marine park website: parcmarin.qc.ca/home.

11 **Seasonal Provisional Voluntary Measures**. — From May through October inclusively, commercial vessels and cruise ships should reduce their speed to a maximum of 10 knots through the water when passing through the area extending from Les Escoumins pilot station to the vicinity of Haut-fond Prince lighthouse to reduce the risk of collision with whales in their feeding grounds. It is recommended that vessels proceed north of Île Rouge to minimize the impact of noise on pods of belugas that are in the area south of the island. For more details, please consult the latest Notice to Mariners.

12 **Anchorage** areas are situated in the following locations:

- north of Rochers du Saguenay *(48°08'N, 69°36'W, chart 1320)*;
- ENE off Baie du Moulin à Baude *(48°10'N, 69°37'W, chart 1320)*;
- east of Baie-Sainte-Catherine wharf *(48°07'N, 69°43'W, chart 1320)*;
- east of Île du Chafaud aux Basques *(48°02'N, 69°44'W, chart 1320)*;
- SW of Cap à l'Aigle *(47°39'N, 70°07'W, chart 1234)*;
- Anse de la Grosse Roche *(47°28'N, 70°16'W, charts 1233 and 1234)*;
- Mouillage de la Prairie *(47°25'N, 70°25'W, chart 1233)*.

13 **Ice**. — Ice formation usually begins in this section of the estuary about mid-December and disappears completely in late April. Essentially one can regard the ice as being controlled by tidal streams and river currents whereas the ice in the Gulf of St. Lawrence is dominated by wind and residual water currents. At the mouth of the

Saguenay River, the mixing of waters with the vertical motion imparted by the tidal surge and the broader configuration of the channel, all combine to produce an ice free zone (polynya) which may extend 27 to 36 miles east in mild weather. In spring, the extension of the polynya results in a rapid west to east clearing of the region.

14 During the winter, the lighted **buoys** are removed and some of these are replaced by spar buoys. Consult the *broadcast* and/or *written Notices to Shipping* for the list of buoys and the dates on which they are replaced.

15 Among shoal waters and behind the islands, fast ice can develop for several hundred metres offshore. When mild weather accompanies spring tides, vast areas of this ice, covered with snow, can break away and form what is locally known as "tidal icefoot". **The icefoot may drift into the channel and become a hazard to navigation; vessels should keep as clear of this hazard as is possible.** In general, the best ice conditions are found with ebb tides and/or with SW winds which cause the floes to move seaward. Flood tides and NE winds, on the other hand, restrict the motion and congestion can quickly develop, particularly in Passage de l'Île aux Coudres.

16 A Canadian Coast Guard seasonal **Search and Rescue unit** serves the St. Lawrence River and the Fjord du Saguenay. Requests for assistance can be addressed at any time to the *Marine Rescue Sub-Center (MRSC Québec)* through VHF channel 16 (156.8 MHz) or on the frequency 2182 kHz via MCTS Centre, or by telephone 1-800-463-4393. When an emergency or distress situation occurs and the request for assistance cannot be transmitted through VHF channel 16 or the frequency 2182, it is possible for owners of certain cellular telephone models to dial *16 which will put them directly in contact with the nearest MCTS Centre. **It should be noted that it is not possible for the Canadian Coast Guard to trace the origin of calls for those using their cellular telephone and that some areas do not have cellular coverage.**

17 In the St. Lawrence estuary the **salinity transition** (where salt water meets fresh water) occurs in the area upstream of latitude 47°13'N to downstream of longitude 70°52'W.

Cap de Bon-Désir to Cap de la Tête au Chien

Chart 1320

18 **Cap de Bon-Désir** *(48°16'N, 69°28'W)* is 3.5 miles above Anse aux Basques. Bon Désir **light** *(1755)*, situated on the cape, is shown from a white tower with a red upper part. The **Cap-de-Bon-Désir Interpretation and Observation Centre** is one of the land bases of the Saguenay—St. Lawrence Marine Park used for watching marine mammals. Small craft operators are requested not to navigate closer than one mile off Cap de Bon-Désir so not to disturb the observation of cetaceans.

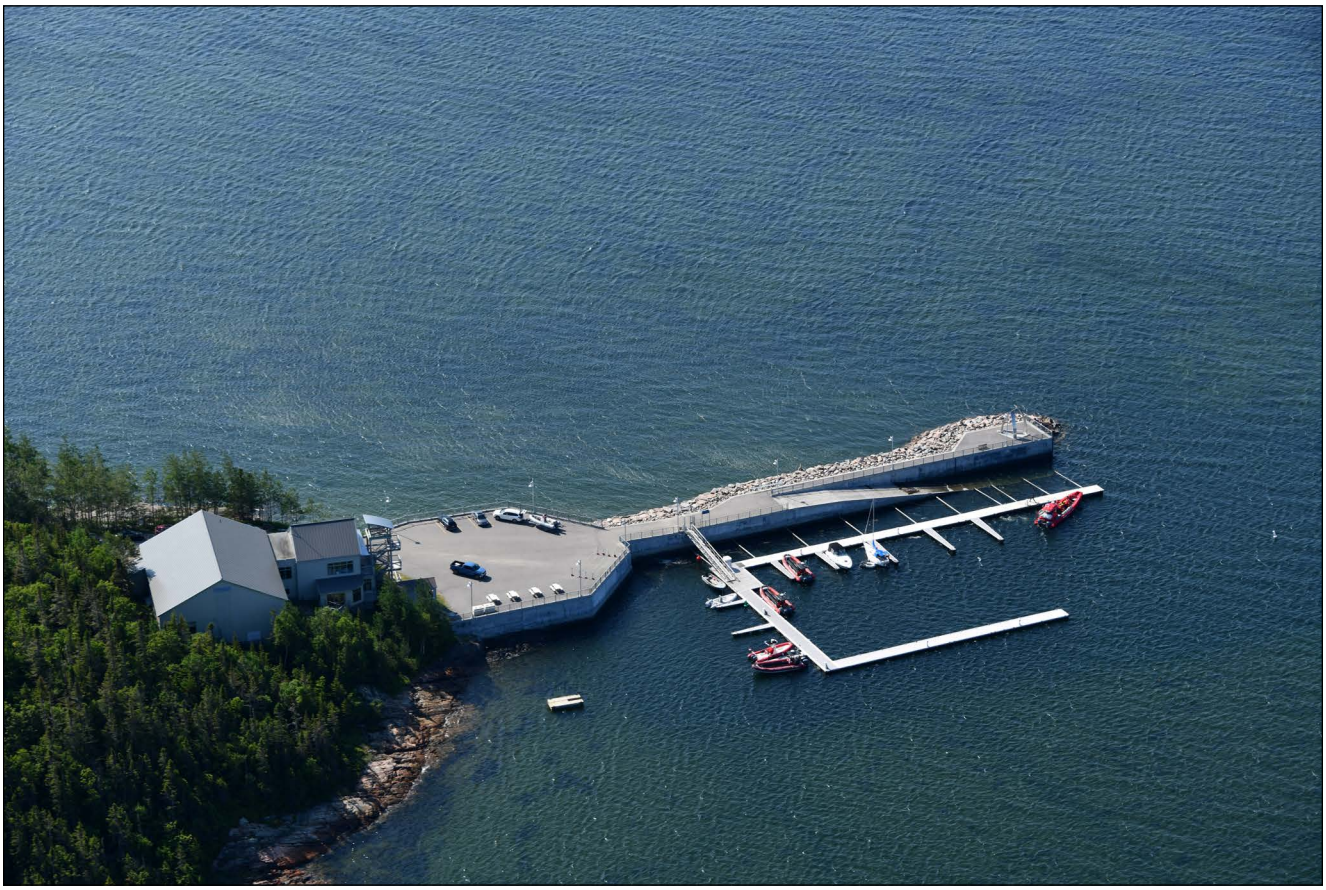
19 **Marine mammals**. — From May to October of each year, there is a large concentration of cetaceans in the area, especially off the area of Grandes-Bergeronnes and Tadoussac. In this area, within the limits of the Saguenay—St. Lawrence Marine Park, all mariners must comply with the *Marine activities in the Saguenay—St. Lawrence Marine Park Regulations*, and follow the applicable guidelines. These regulations are a means to oversee the marine activities, one of which is recreational navigation, to ensure effective protection of the whales. For more information on these regulations, visit the website *parcmarin.qc.ca.*

20 **Unexploded bombs**. — Mariners are advised that in 1949 an unknown quantity of ammunition was dumped in the St. Lawrence River near Grandes-Bergeronnes, in approximately 275 m of water. Even though the ammunitions have been submerged for a number of years, they present a potential hazard to anyone attempting to handle or recover them. If netted or trawled, the local police, Coast Guard, or military authorities should be contacted immediately. Removal and disposal by qualified Canadian Forces personnel will be arranged. For more details, consult the *Annual Edition of Notices to Mariners*.

21 **Baie des Grandes Bergeronnes** lies 4.5 miles SW of Cap de Bon-Désir; the bay dries except for a shallow, narrow stream. The village of **Grandes-Bergeronnes**, with a population of 625, is at the NE extremity of the bay. There is a conspicuous church spire.

22 A buoyed (private) channel leads to a public **wharf** which is situated at **Pointe à John**, the east entrance point to the bay. The wharf, with a length of 110 m, dries on its SE side at low water; there is a launching ramp. Silting has been reported in the channel especially in the bend, therefore lesser depths may be encountered.

GRANDES-BERGERONNES (2019)



23 A **marina** *(Club nautique de Bergeronnes)* is in the basin NW of the wharf at Pointe à John; there are floating docks. Many marina services are available.

24 **Baie des Petites Bergeronnes** lies close SW of Baie des Grandes Bergeronnes. **Pointe Sauvage**, which has a conspicuous white boulder that can be seen in good weather, is the east entrance point to the bay.

25 **Pointe à la Carriole**, situated 2.5 miles SW of Pointe Sauvage, shows up well on the radar screen.

26 **Bancs de l'Île Rouge** form an extensive **shoal area** lying in the middle of the St. Lawrence River. This obstruction divides the river into two channels, namely Chenal du Nord and Chenal du Sud.

27 **Île Rouge**, with an elevation of 11 m, is the summit of Bancs de l'Île Rouge. The island, low and sandy, has a lighthouse.

28 Île Rouge **light** *(1770)*, situated near the center of the island *(48°04'N, 69°33'W)*, is shown from a grey tower with a red upper part.

29 There is a MCTS **calling-in-point** abeam of Île Rouge.

30 In the following text, high and low water refer to the tide at Pointe-au-Père. The first of the **flood** turns SE off Grandes-Bergeronnes; it turns southward, below Bancs de l'Île Rouge, in the period between 3 and 2 hours before high water. From 2 hours before high water until nearly 1 hour after high water, the flood changes direction to south and SW passing through the channels on both sides of Bancs de l'Île Rouge. The flood sets towards Bancs de l'Île Rouge throughout this whole period, which is strongest 1 hour before high water; it sets southward with an average rate of 1.5 knots. At mean tides the flood reaches 3.5 knots in Chenal du Nord between Île Rouge and Battures aux Alouettes.

31 Off Île Rouge in Chenal du Nord, the flow turns to **ebb** between 1 and 2 hours after high water. At first, the set is to the north through the passage then changes direction toward Bancs de l'Île Rouge from low water to 2 hours after. The ebb through the passage west of

Île Rouge reaches 5 knots with mean tides, and 6 to 8 knots with large tides. Five miles north of the 10 m contour off Bancs de l'Île Rouge, the ebb sets in a northerly direction until it is deviated to the NE by the Saguenay ebb approximately 2 hours before low water. Later, with the increasing flood effect up the river from the north, the direction of the flow veers gradually, from east to south, between 3 hours after low water and 1 hour before high water with a rate for mean tides diminishing from 2 to 1 knot during this period.

32 Where the **ebb** waters of the Saguenay River meet the streams of the St. Lawrence River, **tide rips** and **eddies**, dangerous to small craft, are set up and cause great turbulence in bad weather, north and NE of Île Rouge. With strong NE winds the seas become very rough in this area.

Chart 1203

33 There are plateaus and high sandy cliffs projecting over **Baie du Moulin à Baude** *(48°09'N, 69°40'W)*, which are conspicuous from seaward. **Rivière du Moulin à Baude** cascades into the bay.

34 An **anchorage area** ENE off Baie du Moulin à Baude has depths of 9 m, sand mud bottom, with Pointe à la Carriole bearing 017°, distant 1.5 miles. Another **anchorage area**, with depths of 14.8 m, is available in the north part of a plateau named **Rochers du Saguenay** with the same point bearing 352°, distant 2.6 miles.

35 Rochers du Saguenay is an extensive rocky **shoal** with depths of 11.1 m.

36 **Pointe aux Vaches**, 1.2 miles SW from the mouth of Rivière du Moulin à Baude, is formed by high, grey, precipitous clay cliffs, with **Battures de la Pointe aux Vaches** at its base.

37 **Pointe Rouge**, a conspicuous projection of red granite, lies 0.9 mile west of Pointe aux Vaches. It is the NE entrance point to the Saguenay River and the east entrance point to Baie de Tadoussac.

38 **Haut-fond Prince**, with a least depth of 4.8 m, is the outermost obstruction in the approaches to the Saguenay River. Haut-fond Prince Pier **light** *(1773)*, situated on the shoal *(48°07'N, 69°37'W)*, is shown from a tower with red and white horizontal bands. A **fog signal**, situated on the pier light, is sounded sequentially from three fog horns; the horns point in directions of 045°, 180° and 288°. The tower is equipped with an automatic identification system (AIS).

39 A rocky **shoal** with depths of 18,8 m lies 0.8 mile NW of the Haut-fond Prince Pier Light.

40 Lateral buoys mark the approach to the Saguenay River. Fairway light and bell **buoy** SAGUE *(1774)* is moored approximately 0.8 mile NE of Haut-fond Prince Pier light.

41 The **tidal streams** at the mouth of the Saguenay River can reach 7 knots at the ebb of spring tides. On changes of tidal streams, there are heavy tide rips and eddies over the bar at the mouth of the Fjord du Saguenay *(48°07'N, 69°40'W)*.

42 When the **ebb flow** is in conjunction with an easterly gale at the mouth of the Saguenay River, a particularly **dangerous cross sea** is raised, which is dangerous for small craft. With strong NW winds, during the flood, the sea becomes very **choppy** with **breakers**.

43 **Note**. — The Fjord du Saguenay and River, from its mouth to Chicoutimi, is described in Chapter 4 of this booklet.

44 **Pointe Noire**, the south entrance point to the Saguenay River, 0.9 mile SW of Pointe Rouge, is steep-to. The **Pointe-Noire Interpretation and Observation Centre** is one of the land sites of the Saguenay—St. Lawrence Marine Park used to observe marine mammals. For the benefit of those observing from shore, small craft operators are requested to navigate more than 400 m off Pointe Noire to prevent the disturbance of cetaceans.

45 Pointe Noire **leading lights** *(1779, 1780)*, in line bearing 273°, lead to the entrance channel of the Saguenay River. Each light is shown from a tower with a fluorescent-orange and black daymark, situated on the point *(48°07'N, 69°43'W)*. The lights are visible only when in alignment. Another **light** *(1779.1)*, only visible north of a line bearing 257°, is shown from the front range light *(1779)*structure.

46 The leading line will allow vessels to cross the Saguenay Fjord bar and its restricted access with depths of 19,9 m. Close north of the leading line there is a rocky ledge with depths of 11,3 m and south of the leading line there is 12,7 m of water over the rocky ledge.

47 **Îlet aux Alouettes**, 3 m in elevation, lies at the NE point of an **extensive drying flat** covered with sand and boulders known as **Batture aux Alouettes**; the islet is about 1.5 miles SE of Pointe Noire. On the north end of the islet, there is a conspicuous fluroescent-orange **beacon** equipped with a radar reflector and with an Automatic Identification System (AIS).

48 **Baie Sainte-Catherine** lies between Îlet aux Alouettes and Pointe Noire. The village of **Baie-Sainte-Catherine** (Saint-Firmin), with a population of 188, is on the shore of the bay. A church spire stands on top of the sandy cliffs.

BAIE-SAINTE-CATHERINE (2019)

49 The Baie-Sainte-Catherine public **wharf**, which lies 0.5 miles SSW of Pointe Noire, is managed by Parks Canada. The wharf, 105 m in length with a 31 m long pierhead equipped with a movable ramp for pedestrians and floating pontoons, is used as a landing pier for tour boat activities only; written authorization from Parks Canada is required to dock at the wharf, and fees may apply. There is also a ferry terminal and a launching ramp. Vessels can berth for up to 15 minutes on the 12 m long pontoon on the SW side. However, priority is given to tour boats.

50 A crib, which is a helicopter landing platform, is linked to shore by a catwalk, is situated close west of the wharf.

51 Baie Sainte-Catherine **light** (*1781*) is shown from the movable ramp structure situated on the outer end of the public wharf (*48°07'N, 69°43'W*). Between Pointe Noire and the public wharf, the shore is rocky and steep-to.

52 **Pointe aux Alouettes**, with an approximate elevation of 23 m, is a wooded, sandy cliff about 1.5 miles SSE of Pointe Noire.

Chart 1320

53 **Pointe au Bouleau** lies 1.7 miles SW of Pointe aux Alouettes. Between these two points, there are sandy clay cliffs, appearing grey, up to 30 m in elevation. Close above Pointe au Bouleau the shore becomes rocky.

54 **Île du Chafaud aux Basques**, situated 3.2 miles above Pointe au Bouleau, is a wooded islet which lies at the mouth of a drying small creek. A small bare islet, 6.7 m in elevation, lies 0.2 mile west of the island. A waterfall, in the hills close west of the creek, is very conspicuous after rainy weather. **Cap du Basque** is a mountainous headland and steep-to situated 1.3 miles south of Île du Chafaud aux Basques.

55 There is **anchorage** east of Île du Chafaud aux Basques with depths of 17 m, clay and stiff mud bottom. It is protected from the north by Batture aux Alouettes and from the west, by the mainland. There are

berths for a number of vessels, but the best berth is with Île du Chafaud aux Basques bearing 259°, 1 mile distant.

Charts 1320, 1234

56 The St. Lawrence River, between Île Verte and Cap aux Oies (*47°29'N, 70°14'W*), is divided into two navigable channels, **Chenal du Nord** and Chenal du Sud. Chenal du Nord is the main shipping channel. The channels are separated by a bank which runs for a distance of approximately 22 miles in a NNE-SSW direction, from **Battures de l'Île Blanche** to **Banc de l'Île aux Lièvres**. On this bank are Île Blanche, Île aux Lièvres, the adjacent Îles du Pot à l'Eau-de-Vie and Récif de l'île aux Fraises with the few islets which surround it. This geographical area forms the Îles de l'Estuaire National Wildlife Area, which includes Île Blanche, Île du Pot à l'Eau-de-Vie, Île aux Fraises and Île le Long Pèlerin (*Environment and Climate Change Canada*); access regulations apply to these protected areas.

57 Also in this sector, there is the Île-aux-Lièvres biodiversity reserve (*Environment, the Fight Against Climate Change , Wildlife and Parks*).

58 **Île Blanche** *(47°56'N, 69°40'W)* is a low and sandy islet covered with high grass and situated in the middle of Battures de l'Île Blanche. Le **Pilier de l'Île Blanche** is a **reef** with a depth of 0.3 m, which lies about 2.8 miles NNE of the islet. This geographical area includes a national wildlife area and a migratory bird sanctuary (Environment Canada); access regulations apply to these protected areas.

59 There is a MCTS **calling-in-point** off Île Blanche.

60 In the following text, high and low water refer to the tide at Pointe-au-Père. Between Île Rouge and Île Blanche, the **flood stream** may reach 3 knots at mean tides; however, the surface current remains at ebb in the middle of Chenal du Nord, between Saint-Siméon and the western end of Île aux Lièvres; the flood stream is present more in depths. From 3 hours before high water to 1 hour after, the flood stream sets along the north shore. Then it increases with greater strength from Chenal du Sud, and the stream flows to the west through the whole breadth of the passage between Île Rouge and Île Blanche. In the period from 1 hour before and 1 hour after high water, the flood stream from Chenal du Sud skirts around Île Rouge and pushes against Batture aux Alouettes joining the flood stream from Chenal du Nord.

61 The stream turns to **ebb** west of Île Blanche from 2 to 3 hours after high water. Later, from 3 hours before until 2 hours after low water, there is a strong set toward Île Blanche and to the NE end of Battures de l'Île Blanche. For more details, consult the *Atlas of Tidal Currents — St. Lawrence Estuary*.

62 **Baie des Rochers**, 2.5 miles above Cap du Basque, is a drying flat of sand, mud and large boulders. A rocky pier extends from the SW shore of the bay; it has a launching ramp. Local knowledge is required to cross the bay. **Cap du Nid aux Corbeaux**, the NE entrance point of the bay, is a rocky cliff and steep-to. A wooded island about 50 m in elevation lies in the SW part of the bay.

Cap de la Tête au Chien to Cap aux Oies

Chart 1234

63 **Cap de la Tête au Chien**, 2.5 miles above Baie des Rochers, is a conspicuous and cliffy point. Between this point and the bay, the shore is mountainous with high cliffs. Cap de la Tête au Chien **light** *(1834)* is shown from a white tower on the cape *(47°55'N, 69°48'W)*.

64 A shallow stream empties into **Port aux Quilles**, a small cove situated 2 miles SW of Cap de la Tête au Chien. Temporary **anchorage** for small craft can be obtained off the mouth of the stream. **Pointe aux Quilles**, the SW entrance point to Port aux Quilles, is **conspicuous** and rises to an elevation of 240 m.

65 **Saint-Siméon**, a village with a population of 1,171, is close south of **Pointe à Xavier** *(47°51'N, 69°52'W)*. The village is on top of the hill and a conspicuous church spire rises to an elevation of 140 m.

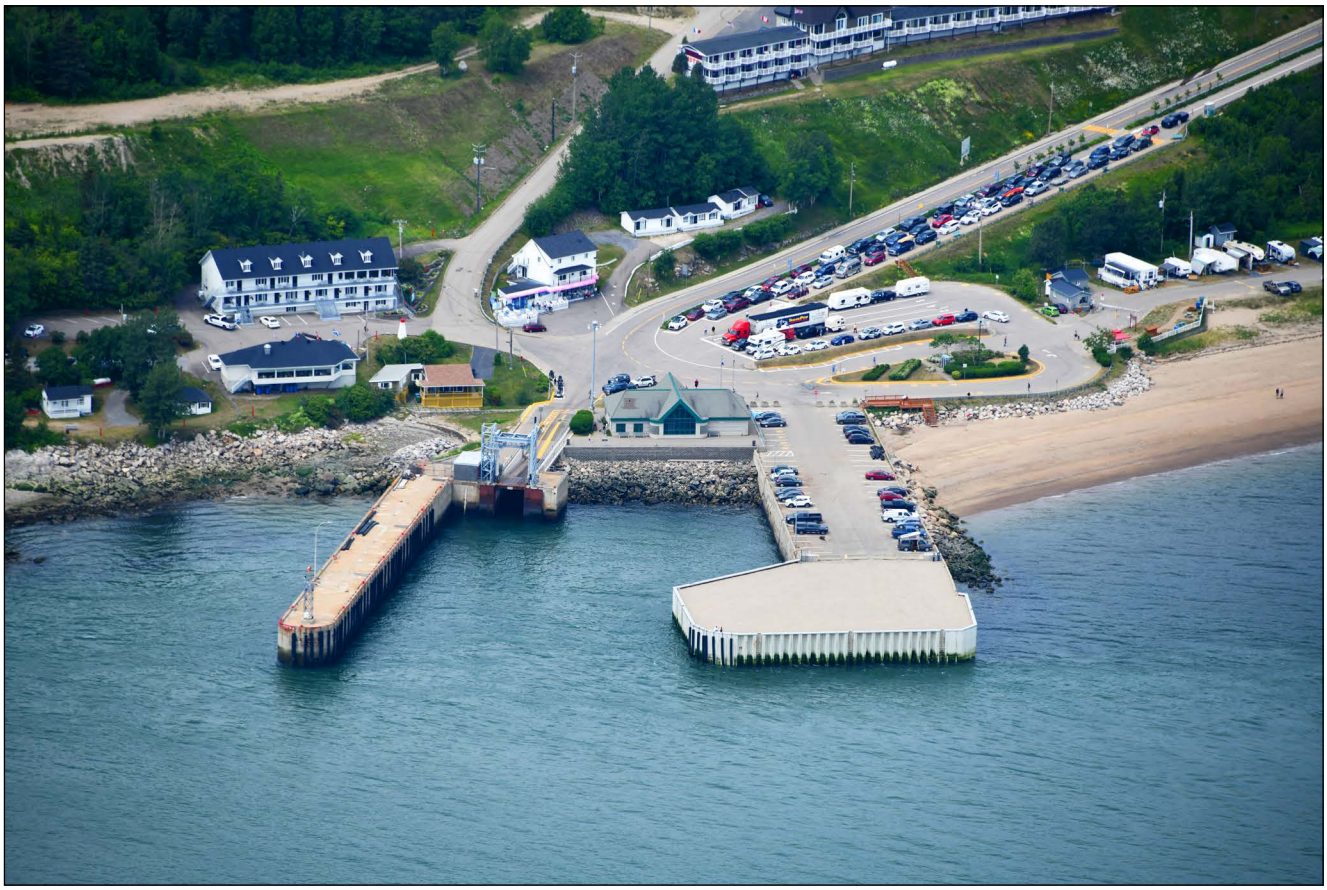
66 At Saint-Siméon, there is a public **wharf** consisting of two piers. The north pier is L-shaped, 120 m long and 41 m wide at its outer face; its north face is rocky. The south pier, used for the ferry terminal, is 85 m long and is equipped with a ferry ramp (St-Simon to Rivière-du-Loup) located inside the roadstead; the outer berthing section is 85 m long . The mobile ramp is equipped with a radar reflector on top. The wharf has water and power outlets, telephone, and restaurants are located nearby.

67 Saint-Siméon **light** *(1835)* is shown from a tower on the outer end of the south pier of the public wharf.

68 A car and passenger **ferry** operates from mid-April to early in January between Saint-Siméon and Rivière-du-Loup; the usual track of the ferry is shown on the chart.

69 **Île aux Lièvres** is 7 miles long and its greatest width is about 0.8 mile. It rises gradually from both ends to a summit of 84 m in elevation. Île aux

SAINT-SIMÉON (2019)



Lièvres **light** *(1829)* is on an islet on the SW end of the island *(47°48'N, 69°46'W)*. The light has fluorescent-orange and white daymarks with a fluorescent-orange triangle in the centre on the NW and NE faces; the light is also equipped with a radar reflector.

70 Midway between the north shore and Île aux Lièvres, the **flood stream** surface current is negligible; it is felt at greater depths. The flood stream is felt close to the north shore of the river and off Île aux Lièvres from 2 hours before until 1 hour after high water at Pointe-au-Père. During spring tides, the tidal streams set through **Passe de l'Île aux Lièvres** at a rate of 3 to 4 knots, with strong eddies, especially with the ebb stream.

71 Passe de l'Île aux Lièvres, with a depth of 3.7 m, is the **channel** separating Île aux Lièvres and Île aux Fraises. The channel is marked by a fairway light and bell **buoy** ILIEV *(1830)*.

72 The hamlet of **Port-au-Persil** is 2.3 miles above Saint-Siméon wharf. There is a wharf encased in stone that is used as a breakwater and provides shelter for small craft. A launching ramp is located west of this wharf.

73 **Pointe des Rochers** is a high bold precipitous headland situated 2.1 miles south of Port-au-Persil. **Cap au Saumon light** *(1836)* is shown from a white tower with a red upper part, located on Pointe des Rochers *(47°46'N, 69°54'W)*, and surrounded by several buildings.

74 **Récif de l'Île aux Fraises** lies about 4 miles east of Pointe des Rochers; the drying portion of this reef extends for nearly 2.7 miles in a NE-SW direction. There are two islets 1.2 to 1.8 m in elevation on the ridge of this reef. The largest islet, covered with trees and small bushes, is 0.4 mile long. This geographical area includes a national wildlife area and a migratory bird sanctuary (Environment and climate change Canada); access regulations apply to these protected areas.

75 The hamlet of **Port-au-Saumon**, 2 miles SW of Pointe des Rochers, is adjacent to a small sandy cove with

large boulders. The entrance to the cove is marked by two islets, **Île Sabère** and **Île Camarine**, barely visible from offshore.

76 **Gros cap à l'Aigle** is a high, wooded cape 3.5 miles above Port-au-Saumon. A small ledge, covered at high water, extends 0.1 mile from the south side of the cape. This also marks the upstream limit of the **Saguenay—St. Lawrence Marine Park**; for more details, consult the beginning of this chapter and the Appendix.

77 Inshore, on the south side of Cap de la Tête au Chien, Cap au Saumon and Gros cap à l'Aigle, eddies occur in **ebb** periods. These eddies cause heavy tide rips at times, seldom extending more than 0.5 mile from the shore. The flood and ebb flows attain the following rates at mean tides 1 mile off these points: Cap de la Tête au Chien 1.5 and 3 knots; Gros cap à l'Aigle 1 and 2 knots. At Gros cap à l'Aigle the flood occurs 3 to 2 hours before high water at Pointe-au-Père and the ebb 3 to 2 hours before low water.

78 At certain stages of the tide, there are heavy **tide rips** and **eddies** which are dangerous for small craft. For more details, consult the *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières*.

79 **Landmarks**. — • A microwave tower, 456 m in elevation and marked by red lights, is 1.5 miles WNW of Gros cap à l'Aigle. • One mile inland, there is a church spire midway between Port-au-Saumon and Gros cap à l'Aigle at **Saint-Fidèle-de-Mont-Murray**.

80 The village of **Cap-à-l'Aigle** is 5 miles above Gros cap à l'Aigle. The shore between these two points is composed of high wooded cliffs, bordered by flats of sand and large boulders, and uncovers at about half tide. A conspicuous white church with a spire is located in the village.

81 The **wharf** at Cap-à-l'Aigle is backed by a breakwater on its SE side. A service floating wharf is adjacent to the wharf, on its SE side. There is a **launching ramp** at the inner end of the wharf. **Cap à l'Aigle light** *(1840)* is shown from a tower on the outer end of the breakwater *(47°40'N, 70°06'W)*.

82 A **marina** *(Port de refuge de Cap-à-l'Aigle)* is located in a basin formed by a breakwater NNE of Cap-à-l'Aigle wharf; floating docks are inside the basin. Many marina services are available.

83 Cap-à-l'Aigle Marina breakwater private **light** *(1839)* is shown from a tower at the entrance of the basin. Cap-à-l'Aigle Marina Catwalk **light** *(1839.5)* is private and shown from a tower. The catwalk leads to the floating docks.

84 **La Malbaie** is a bay that lies between Cap à l'Aigle and a point situated approximately 3 miles SW. **Rivière Malbaie** empties into the bay which dries. The drying flat consists of mud, sand, gravel and scattered large boulders. A jetty, almost entirely rock filled, is situated on the west shore at the mouth of the river. An **overhead cable** and a **fixed road bridge**, with a clearance of 3.3 m, span the river close to its mouth.

85 A **submarine pipeline** crosses the bay 0.4 mile below the bridge. In addition, at 0.2 mile SE of Pointe à Gaz, the outer end of an **outfall pipe** has 4.4 m of water over it. Mariners are cautioned not to anchor in the vicinity of these obstructions.

86 The town of **La Malbaie—Pointe-au-Pic**, with a population of 8271, occupies both sides of Rivière Malbaie. There are several hotels and facilities for tourists; the conspicuous Manoir Richelieu of the Fairmont hotel chain, and its casino, are on the cliffs above Pointe au Pic.

87 **Landmarks**. — • La Malbaie church, near the mouth of the river, has a conspicuous spire 50 m in elevation. • There is also a conspicuous cross, illuminated at night, on a hill near the north entrance point of the river.

Port of Pointe-au-Pic

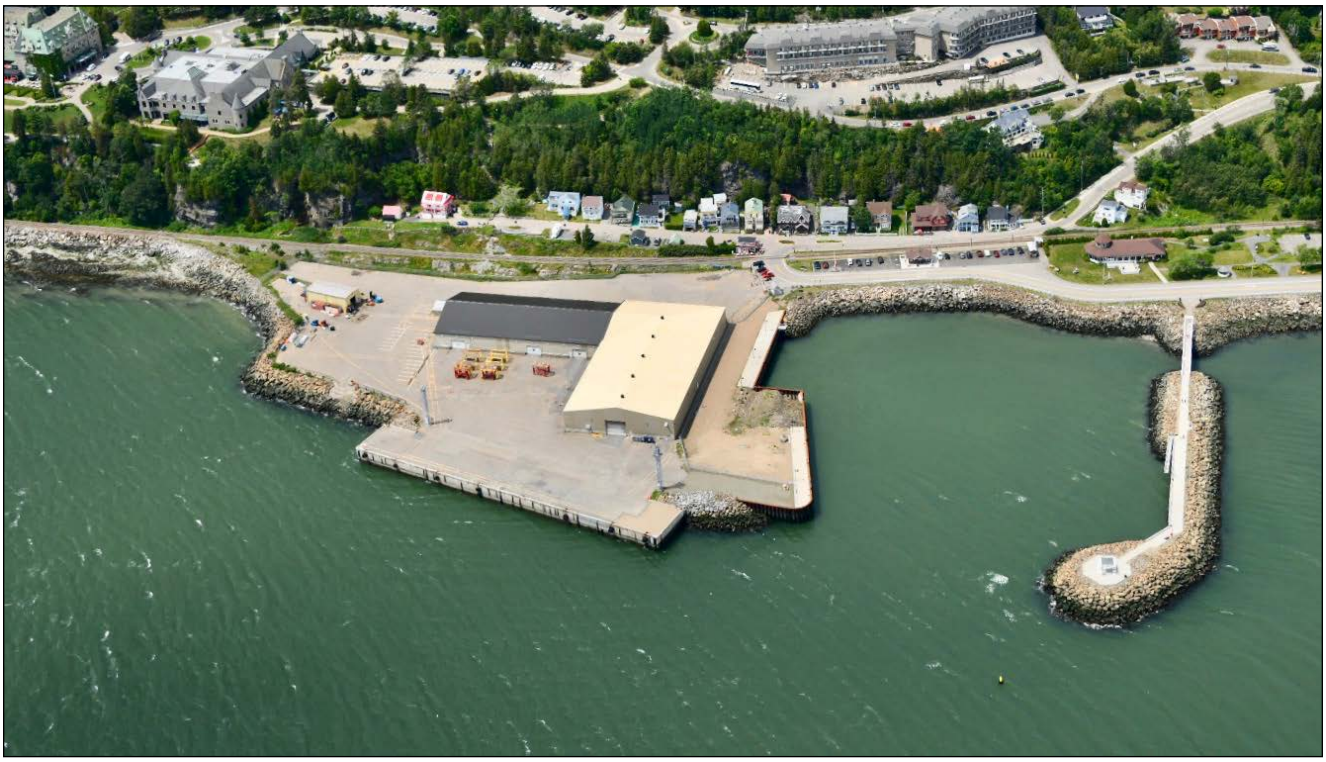
88 On the public **wharf** of the residential district of **Pointe-au-Pic** there is a warehouse operated by *Logistecs Terminals*. The SE face of the wharf has a berthing length of 125 m and a least depth alongside of 8.1 m; the wharf can accommodate vessels up to 168 m in length. Rail service, water and power outlets are available at the wharf. Pointe-au-Pic **light** *(1844)* is shown from a tower on the NE part of the wharf *(47°37'N, 70°08'W)*. Berthing is not allowed alongside the NE face of the wharf.

89 There is a small harbour NE of the public wharf. The harbour is protected to the NE by a floodlit breakwater-wharf that is linked to the inner end by a catwalk; the wharf has a berthing length of 35 m with a height of 2.7 m and depths alongside of 0.8 to 1.2 m. A light (private and seasonal) is situated on the SE end of the breakwater-wharf. These facilities are used by tour boats and pleasure craft with a length of 18 m or more.

90 **Pilotage** is compulsory. Inbound vessels are boarded by pilots off Les Escoumins pilot station at Anse aux Basques *(48°19'N, 69°25'W)* for the passage to Pointe-au-Pic.

91 The master of a ship that is to depart the port must give a first notice of departure **12 hours**

PORT OF POINTE-AU-PIC (2019)



before the estimated time of departure (ETD) to the pilot dispatch centre and a final notice confirming or correcting the EDT **6 hours** before the EDT. These notices are given by calling the pilot dispatch centre at: 1-800-361-0747 or 1-866-674-2752. For further information concerning pilotage, consult the Annual Edition of Notices to Mariners. Furthermore, the master of a ship that is to make a movement to depart a wharf or mooring must give notice to the MCTS Centre by VHF at least 15 minutes prior to movage in order to obtain authorization.

92 **Anchorage** with good holding ground can be obtained in 22 m of water, with La Malbaie—Pointe-au-Pic (La Malbaie) church bearing 289°, distant 1.5 miles. This anchorage is unaffected by the tidal streams and is well sheltered from the prevailing wind. There is also **anchorage** farther out in slightly deeper water, but here the tidal streams are much stronger.

93 **Haut-fond Morin**, with a least depth of 6.1 m, is rocky and lies 4.3 miles ESE of Pointe-au-Pic light. A port bifurcation light and bell buoy *(1841)* HFMOR is moored on the shoal. In reduced visibility great caution must be exercised when navigating in the vicinity.

94 The village of **Saint-Irénée**, with a population of 641, is 4.2 miles upstream of Pointe-au-Pic and has a conspicuous church spire. A rock-filled wharf extends 190 m offshore, approximately 0.5 mile upriver from the village.

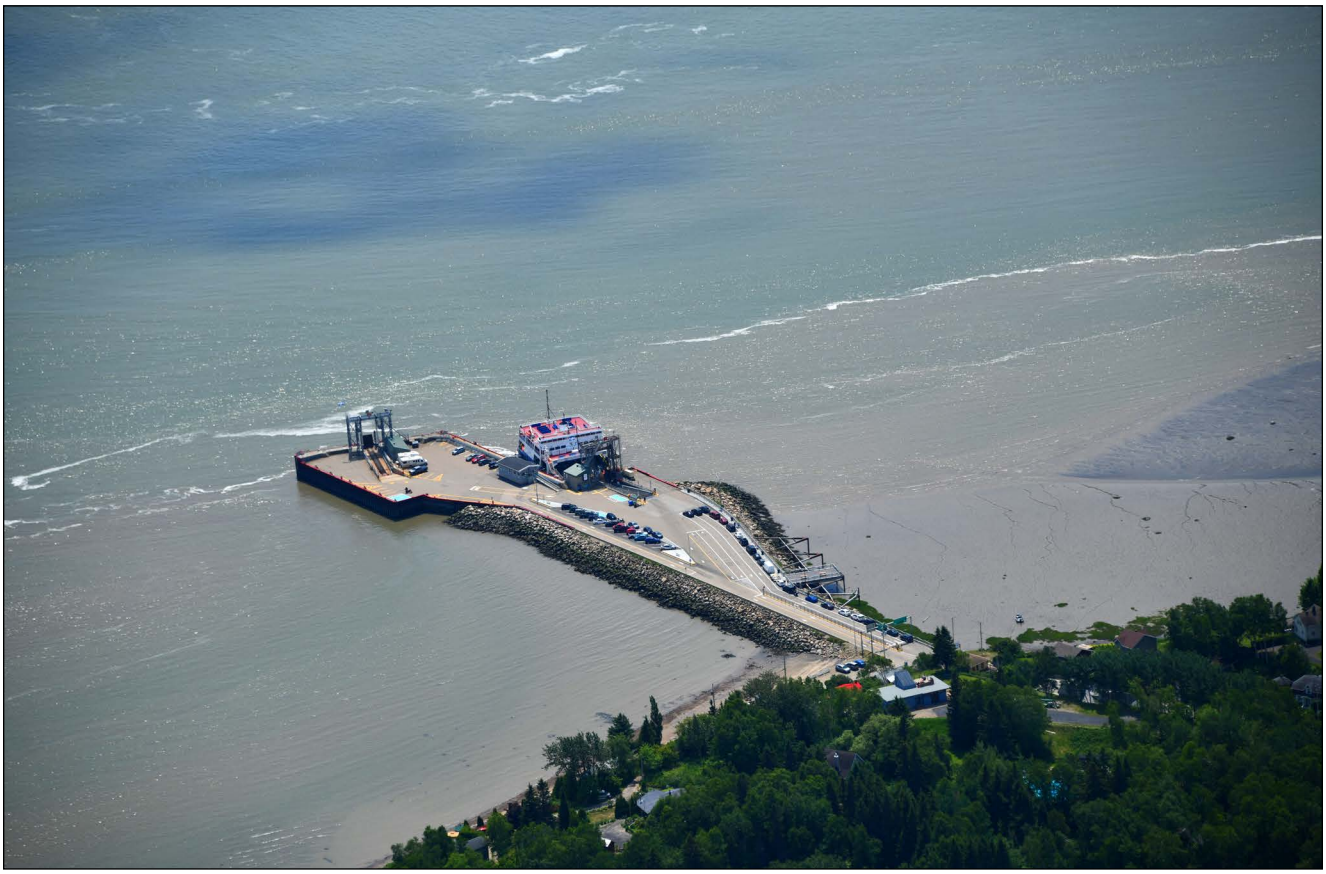
95 **Mont des Éboulements**, 766 m in elevation — the highest mountain along this part of the river — is situated 3.5 miles NW of Cap aux Oies. It is surrounded by smaller conical-shaped hills.

96 **Cap aux Oies** is a bold wooded bluff 4.7 miles above Saint-Irénée. Cap aux Oies **light** *(1849)* — seasonal — is shown from a tower on the cape *(47°29'N, 70°14'W)*.

97 **Banc des Anglais**, with a least depth of 10.4 m, lies in the middle of the St. Lawrence River off Cap aux Oies. In calm weather, the bank and shoal water north of it afford good **anchorage**.

98 In the following text, high and low water refer to the tide at Pointe-au-Père. From Gros cap à l'Aigle to Cap aux Oies, the **flood stream** sets in the channel during the period from 1 hour before high water until 2 hours after. Above Haut-Fond Morin it sets toward Saint-Irénée bight; in the same sector, there is also an area

SAINT-JOSEPH-DE-LA RIVE (2019)



where flood streams are almost non-existent. The flood stream is more predominant close along the north shore than offshore. The rate is about 2 knots with mean tides. With large tides the set is westerly and not as pronounced. At about 2 miles off Cap aux Oies, the flood stream is divided and sets toward Passage de l'Île aux Coudres and Traverse du Milieu.

99 The **ebb stream**, at its strength around the time of low water at Pointe-au-Père and with mean tides, flows from off Cap aux Oies, parallel to Banc des Anglais directly toward the south end of Banc de l'île aux Lièvres. Approximately 4 miles above Banc de l'Île aux Lièvres the stream branches with a portion entering Chenal du Sud. With mean tides the ebb stream has a rate of 2 to 3 knots below, and 3 to 4 knots above Haut-fond Morin; with large tides the rate between Cap aux Oies and Haut-fond Morin increases to 5.5 knots, and it is strongest from low water to 1 hour after.

100 Off Cap aux Oies, the **streams** turn approximately 3 hours after and 2 hours before high water. Flood stream rate with mean tides is 1.5 knots and it is strongest from high water to 1 hour after. The ebb stream rate reaches 5 knots at low water, from a point 1.5 miles SE of Cap aux Oies. **There are violent tide rips at times in the vicinity of Cap aux Oies which are dangerous for small craft.**

Cap aux Oies to Sault-au-Cochon

Chart 1233

101 Above Cap aux Oies, the St. Lawrence River is divided into **three channels** by **shoals** and islands. **Traverse du Milieu** lies between Haut-fond du Centre and Île aux Coudres, with a depth of only 1.8 m in its SW portion. In general, this channel is shallow and difficult for navigation, therefore it is not further described in this publication.

102 Chenal du Sud is described in Chapter 3 of this booklet.

103 Through **Passage de l'Île aux Coudres**, Chenal du Nord runs along the north shore of the river to Cap Brûlé.

This is the main shipping channel for vessels proceeding up and down the river; it is considered to be the best and easiest for navigation. Toward the end of December, when Chenal du Sud becomes unnavigable, Chenal du Nord often remains ice free.

104 There is a MCTS **calling-in-point** off Cap aux Oies.

105 In the following text, high and low water refer to the tide at Pointe-au-Père. The tidal stream turns to **flood** in Passage de l'Île aux Coudres approximately 2 hours before high water. There is an hour of variation in the time of the slack low water within the limits of the passage. The turn to **ebb** occurs more sharply from 3 hours to 2 h 40 min before low water. In the summer season, with mean tides, flood and ebb streams attain a rate of 3.5 and 6 knots respectively. A maximum ebb rate of 7 knots may be encountered and ebb rates are stronger during the spring due to the high flow in the river.

106 **Speed restrictions**. — During the boating season, downbound vessels must reduce their speed off L'Isle-aux-Coudres marina *(47°25'N, 70°24'W)* in order to avoid damages to the marina facilities and to moored boats; see the *Annual Edition of Notices to Mariners*, page A12-1.


107 The **ebb stream** sweeps strongly around Baie Saint-Paul and creates strong **tide rips** which are dangerous for small craft. Furthermore, mariners are cautioned that in the greater part of the ebb period there is a northerly flow over the whole breadth of the channel opposite Cap à Labranche continuing toward the north shore in the general direction of Cap aux Corbeaux and the leading lights just below it.

108 **Cap Martin** is a conspicuous sharp projecting cliff 3 miles above Cap aux Oies.

109 Between Cap aux Oies and Cap Martin, there is **anchorage** in approximately 13 m of water, sheltered from northerly winds.

110 The municipality of **Les Éboulements**, with a population of 1,331, is close above Cap Martin; it has a conspicuous church with a spire 331 m in elevation.

Île aux Coudres

111 **Île aux Coudres**, with an elevation of 100 m, is nearly 6 miles long with an average width of 2 miles. The NW shore of the island rises sheer from the water, forming cliffs 30 m high.

112 **Pointe du Bout d'en Bas**, at the NE end of Île aux Coudres, lies 5 miles SW of Cap aux Oies. The point slopes from a wooded mound 19 m in elevation which appears as an islet from a short distance at certain angles.


113 **Cap Saint-Joseph**, situated 3 miles above Cap Martin, is a promontory in front of which there are sand cliffs. **Saint-Joseph-de-la-Rive** public **wharf** extends 280 m from Cap Saint-Joseph. See map for the depths. Fresh water is available. There are two **ferry** ramps, one is situated on the outer face, the second is on the west side. The car and passenger ferry plies between this wharf and **Pointe des Roches** wharf on Île aux Coudres. There is a marine terminal.

114 With NE winds, it is not recommended to tie up alongside the east face.

115 Cap Saint-Joseph **light** *(1849.5)* is shown from the ferry ramp structure on the SSE end of the public wharf *(47°27'N, 70°22'W)* and is equipped with a radar reflector.

116 Several **submarine** power **cables** cross Passage de l'Île aux Coudres running from the mainland to Île aux Coudres; some cables are abandoned. For more information, consult the chart for their positions. Mariners are cautioned not to anchor in the vicinity of these cables.

117 An **outfall pipe** extends 375 m SSE from the shore, close west of the public wharf at Saint-Joseph-de-la-Rive.


118 The municipality of **L'Isle-aux-Coudres** has a population of 1,143. There a **wharf** 3 miles west of Pointe du Bout d'en Bas. The above-mentioned **ferry** plies between this wharf and Saint-Joseph-de-la-Rive. The wharf has an outer face of 40 m with a least depth of 5.3 m along its NW and NE faces; the SW face has depths of 2.6 to 4.2 m alongside. Near the centre of the outer face there is a ferry ramp; another ferry ramp is near the inner end of the wharf on the east side. Berthing on the north and east sides of the wharf is limited to ferry boats only. There is a marine terminal.

119 Île-aux-Coudres **light** *(1850)* is shown from the ferry ramp superstructure at the NW end of the wharf *(47°25'N, 70°24'W)*.

120 A basin, protected by a breakwater, is situated SSW of the public wharf. There are floating wharves in the basin. The basin dries completely at low water. Depths to the approach of the basin may be less, owing to continuous **silting** over rock bottom. It is recommended to obtain depth confirmation from the local authorities before entering.


121 A **shipyard** *(Groupe Océan)* is located approximately 200 m below the public wharf. The shipyard is equipped with a slipway

L'ISLE-AUX-COUDRES (2019)

which has a capacity of 3,200 t, a workshop with a lifting capacity of 600 t and mobile cranes. Construction of medium tonnage vessels is carried out as well as repairs for vessels up to 90 m in length. There is a 100 m long **wharf** at the shipyard with varying depths up to 5 m at its outer end. A private yellow **light** is on the wharf.

122 **Pointe de la Prairie** is on the NW coast of Île aux Coudres, 1.2 miles above Pointe des Roches. **Mouillage de la Prairie**, with depths of 5.5 to 18 m, lies between these two points; it is sheltered from all winds. The clay bottom is good holding ground, and the tidal streams are moderate if a vessel is not anchored too far from the shore. The best berth is in 10 m of water near the middle of the anchorage.

123 **Cap à Labranche** is the west point of Île aux Coudres and rises to a steep bluff 55 m in elevation. Between this point and Pointe de la Prairie, **La Grande Batture** extends 0.6 mile offshore; numerous large boulders lie on the shoal and dry at low water.

124 Pointe de la Prairie **light** *(1851)* is shown from a red cylindrical structure with a white upper part, situated on the NW edge of La Grande Batture *(47°25'N, 70°26'W)*.

125 **Cap aux Corbeaux** is a steep conspicuous rock cliff on the north shore 3.5 miles above Saint-Joseph-de-la-Rive.

126 **Cap aux Corbeaux leading lights**, in line bearing 024°, are on the north shore approximately 1 mile east of the cape *(47°26'N, 70°26'W)*. It is the first of a series of range lights which marks Chenal du Nord up to Québec City. Each of these lights *(1852, 1853)* is shown from a tower with a fluorescent-orange daymark. Two additional **lights** *(1852.1, 1853.1)*, one on each structure, are visible from eastward.

127 **Baie Saint-Paul** is between Cap aux Corbeaux and **Cap de la Baie**, 3.5 miles upriver, where two rivers empty into it. The bay is large and is composed of mud and sand banks with large boulders drying at low water. The wooded point, which separates the mouths of the rivers, rises to a sand hill 9 m in elevation.

128 At the mouth of **Rivière du Gouffre**, on the SW shore, there is a rock filled wharf on all sides and forms a 165 m long jetty.

129 The town of **Baie-Saint-Paul**, with a population of 4,868, is situated 1.1 miles above the mouth of Rivière du Gouffre. Two church steeples, located on the NW shore of the bay, are visible from some sectors of the shipping channel.

130 A **marina** *(Club nautique de Charlevoix)* is located at the mouth of Rivière du Gouffre, close NW of the jetty. There is a small boat basin which is only accessible at high water and is equipped with floating docks. Many marina services are available.

131 Baie-Saint-Paul Marina **leading lights** (private), in line bearing 309°, are close to the floating docks and they lead into the bay towards the small boat basin. Each of these lights *(1857.2, 1857.21)* is shown from a tower with a fluorescent-orange daymark with a black vertical stripe; they are visible only when in alignment.

132 The SW point of Île aux Coudres is a narrow peninsula consisting of a wooded hummock, 12 m in elevation, which appears as an island from a short distance.

133 **Anse de l'Église** is a small inlet on the SSW coast of Île aux Coudres. On the east point of the inlet there is a

jetty (formely *Quai de l'Anse*) – almost rock filled – with a ramp at the end of it. A church with two spires, 36 m in elevation, stands on the shore of the inlet.

134 **Coast**. — The shore between Baie Saint-Paul and Petite-Rivière-Saint-François rises steeply to the summits of high wooded hills, some of which attain elevations of over 600 m. These hills are indented by numerous valleys. From a point 1.5 miles SW of Cap de la Baie for a distance of 5 miles upriver, there is a small strip of low land lying between the foot of the hills and the high water mark.

135 The municipality of **Petite-Rivière-Saint-François (Saint-François-Xavier-de-la-Petite-Rivière)**, with a population of 814, is on the narrow small strip of land 5 miles upstream from Cap de la Baie; there is a conspicuous church with a spire. The RTM shipyard is located in Petite-Rivière-Saint-François. The **wharf** is rock filled on all sides and forms a jetty.

136 A **marina** *(Marina de Petite-Rivière)* is on the NW side of the jetty which has floating docks; there is a ramp. Many marina services are available.

137 In the following text, high and low water refer to the tide at Pointe-au-Père. This section of the St. Lawrence River, from Cap de la Baie to Cap Brûlé, is free from cross currents except near the turn of the stream, where they are weak. The **ebb stream** starts at approximately the same time over the whole of this reach, about 2 hours before low water. The turn of the flood for this reach occurs approximately 2 to 1 hour before high water. With mean tides, flood rates vary from 3 to 4 knots in this stretch and up to 5.5 knots for ebb rates off Cap de la Baie.

138 **Cap Maillard** is 3 miles above Petite-Rivière-Saint-François and rises to a conical wooded hill, 240 m in elevation, approximately 0.3 mile inland; it is conspicuous from the NE and SW. The ski resort *Le Massif* is conspicuous with its ski trails that face the river.

Sault-au-Cochon to Cap Brûlé

Chart 1317

139 **Sault au Cochon** is a place-name on the north shore 4 miles above Cap Maillard. Sault-au-Cochon **light** *(1893)*, on the shore near **Cap d'Éboulis** *(47°12'N, 70°38'W)*, is shown from mast with three fluorescent-orange daymarks and is equipped with a radar reflector. There is a MCTS **calling-in point** abeam of the Sault-au-Cochon light.

140 **Silting** has been reported in the main shipping channel between **Anse aux Bardeaux** *(47°10'N, 70°40'W)* and Saint-Jean *(46°55'N, 70°53'W)*, therefore there may be less water than shown on the chart. For information on the condition of the main shipping channel, mariners should regularly consult the website https://navigation-electronique.canada.ca/ or contact a *MCTS* Centre through VHF.

141 **Least depths** up to 0.9 m from the charted depths are reported outside the main shipping channel. The area affected is downstream from latitude *47°05'N* to the limits of *chart 1317*.

142 **Cap Gribane** is on the north shore 4 miles above Sault-au-Cochon. **Récifs de Longue Pointe**, 0.4 mile below Cap Gribane, is a rocky shoal with a least depth of 5.9 m which extends offshore in a southeasterly direction. The main shipping channel, SE of this ledge, is marked by buoys.

143 Cap Gribane **leading lights** *(47°08'N, 70°41'W)*, in line bearing 024°, lead into Chenal du Nord to Cap Brûlé and are situated in the vicinity of the cape. Each of these lights *(1895.2, 1895.3)* is shown from a tower with a fluorescent-orange daymark and a black stripe; the lights are visible only when in alignment.

144 **Cap Rouge leading lights**, in line bearing 221°, lead into Chenal du Nord between Sault-au-Cochon and the entrance to the dredged area off Cap Gribane; these lights are situated in the vicinity of the cape *(47°07'N, 70°42'W)*. Each of these lights *(1895.6, 1895.7)* is shown from a tower with a fluorescent-orange daymark and a black stripe.

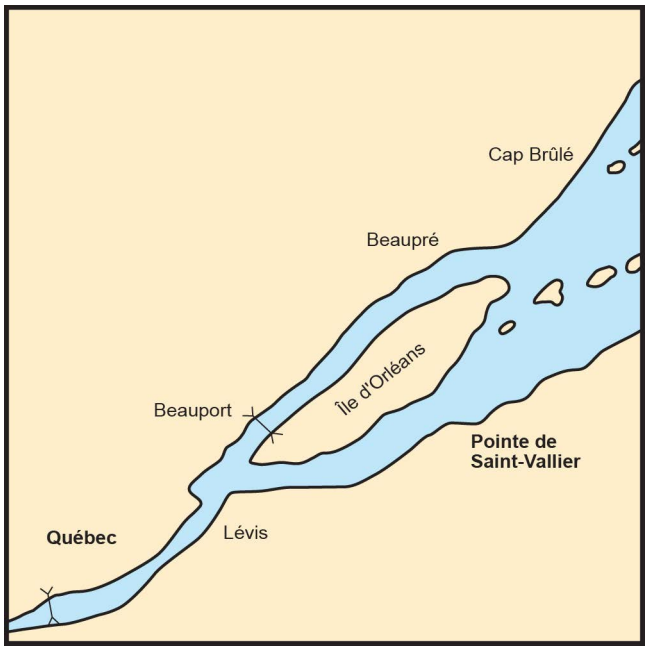
145 **Cap Brûlé** is on the north shore 2.3 miles upriver from Cap Gribane. Cap Brûlé **light** *(1902)*, situated on the cape *(47°07'N, 70°43'W)*, is shown from a tower with fluorescent-orange daymarks on each of the seaward faces.

146 **Banc du Cap Brûlé** Downstream **leading lights**, in line bearing 213½°, lead into Chenal du Nord off Cap Maillard (see *chart 1233*). The front light *(1898)* is shown from a red and white tower with a fluorescent-orange daymark and black stripe, situated on the bank *(47°06'N, 70°42'W)*. The rear light *(1899)* is shown from a white tower with a red upper part and is equipped with a **Racon** (— • —) and a fluorescent-orange daymark with a black stripe. These lights are visible only when in alignment.

147 Pointe Argentenay **leading lights**, in line bearing 213½°, are situated at the NE end of Île d'Orléans *(47°00'N, 70°48'W)*; these lights *(1910.5, 1910.6)* lead into Chenal du Nord between Anse aux Bardeaux and Cap Brûlé. Each light is shown from a tower and visible only when in alignment.

Chapter 2

Cap Brûlé — Québec



General

Charts 1317, 1316, 1315

1 **Limits**. — This chapter describes the St. Lawrence River, from Cap Brûlé to the upstream limit of the Port of Québec, passing through Chenal du Nord, Chenal des Grands Voiliers and Chenal de l'Île d'Orléans.

2 **Coast**. — At Cap Tourmente, the high mountain range which runs along the north shore from the Saguenay River, curves inland; from there the land is low, with cultivated farmland and small communities.

3 The south shore is low with cultivated farmland, bordered by low cliffs and drying flats composed of rocks or mud, with high grass extending offshore at low water. Both shores of Chenal de l'Île d'Orléans are low with large, grassy and marshy drying flats.

4 **Main shipping channel**. — The main channel, used by commercial shipping, passes between Île d'Orléans and the south shore. This channel is marked with leading lights and buoys and is dredged at certain locations. • Least depth: 12.5 m. • Least width: 305 m. • Minimum clearance: 44 m if there are no icing conditions (overhead cables close off and above Pont Pierre-Laporte) or *35 m under severe icing conditions.

5 **Least depths** up to 0.9 m from the charted depths are reported outside the main shipping channel. The area affected is downstream from latitude *47°05'N* to the limits of *Chart 1317*.

6 **Risk of collision**. — Manoeuvrability of large commercial vessels is restricted. Additionally, the visibility in the wheelhouse of a large vessel is often limited. All small craft must keep out of the way of these vessels which have priority.

7 The following table lists the **calling-in-points** of the *Marine Communications and Traffic Services (MCTS)* in the St. Lawrence River. For more information mariners should consult the *Annual Edition of Notices to Mariners*. It should be noted that the local routine expression "Stay to the north", used in the St. Lawrence River communications, means to hug the "north shore" or the starboard limit for vessels navigating upbound. By agreement, an upbound vessel on the

St. Lawrence River considers the "north shore" to be on its starboard side while the "south shore" is considered to be on its port side.

8 **Tide and tidal streams**. — The flow, initially from variable directions, becomes directly up and down the main channel as it approaches Québec City. Due to the narrowing of the river within the Port of Québec, there is an increase in the tidal range and in the strength of the tidal streams. For more information, mariners should consult the *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières* and other charted information concerning tides and tidal streams.

9 The hourly surface currents forecasts for the Estuary and the St. Lawrence River are available on the *St. Lawrence Global Observatory* Web site at http://www.ogsl.ca/ (click on the *Visualization Tools* tab and *Ocean Forecasts*). You can obtain hourly details of the direction and speed of surface currents forecasted for the next 48 hours.

10 For information on water level, mariners should refer to the *Canadian Tide and Current Tables* and the hydrograph shown on the charts. In addition, a network of digital water level gauges is installed along the St. Lawrence River. This system, called *SINECO (Coastal and Ocean Water Level Information System)*, allows mariners to obtain instantaneous water levels at different sites as well as the prediction for the next few days. The most recent information on water levels can be obtained by contacting *MCTS* Centres by VHF, or by visiting our Web site www.charts.gc.ca.

11 **Anchorage** areas are situated in the following locations:

- Pointe Saint-Jean *(46°55'N, 70°52'W, chart 1317)*;
- Pointe de Saint-Vallier *(46°56'N, 70°50'W, chart 1317)*;
- Rivière Dauphine *(46°58'N, 70°50'W, chart 1317)*;
- Rivière Maheu *(46°53'N, 70°57'W, chart 1317)*;
- off Trou Saint-Patrice *(46°51'N, 71°03'W, chart 1317)*;
- anchorage berths within the Port of Québec *(chart 1316)*.

12 **Ice**. — The ice formation pattern is similar to that of the lower river (see paragraph on "Ice" in Chapter 1). It is important to note that ice jams may develop in the spring especially in the vicinity of Pont Pierre-Laporte where the river is much narrower (due to the bottleneck effect off Québec City). These ice jams are generally cleared by Coast Guard icebreakers.

13 During the winter, the lighted **buoys** are removed and some of these are replaced by spar buoys. Consult the *broadcast* and/or *written Notices to Shipping* for the list of buoys and the dates on which they are replaced.

14 Mariners are cautioned that **ice floes** and ice jams develop in the approaches to Québec City, especially in the vicinity of the bridges, above the harbour. The ice may immobilize vessels and may carry them onto the shoals or into the bridge abutments.

15 Ice conditions from the east end of Île d'Orléans to immediately upstream Pont de Québec can be treacherous as they **obstruct sea water intakes**. A combination of currents, depths, fresh water and tides may generate **frazil ice** in depths of up to 10 m. These frazil ice conditions can be encountered at several locations along the St. Lawrence River, but particularly in this area. This phenomenom seldom occurs in other parts of the world.

Table 2.1 Calling-in-Points

No	Name	Distance (nautical miles) Between	Distance (nautical miles) Upstream	Distance (nautical miles) Downstream
9	Sault-au-Cochon / Beaujeu	—	0	38
10	Saint-Laurent-de-l'Île-d'Orléans	26	26	12
11**	Sainte-Pétronille	5	31	N/A
12	Québec	4	35	3
13*	Sillery	3	N/A	0

* Downbound vessels only.

** Upbound vessels only.

Cap Brûlé to Sainte-Pétronille via the main shipping channel

Chart 1317

16 **Main shipping channel**. — From a position abeam of Cap Brûlé *(47°07'N, 70°43'W)*, the main shipping channel heads in a 204° direction for 3 miles to the **Traverse du Nord**. This channel, east of Île d'Orléans, has a least width of 305 m and is marked with leading lights and buoys. The channel is maintained to a depth of 12.5 m through annual dredging.

17 The channel between Cap Brûlé and Saint-Jean-de-l'Île-d'Orléans *(46°55'N, 70°53'W)* is subject to continuous **silting**; therefore, there may be less water than shown on the chart. For information on the condition of the main shipping channel, mariners should regularly consult the website https://navigation-electronique.canada.ca/ or contact a *MCTS* Centre through VHF. Under the St. Lawrence Waterway MCTS Centres, mariners must comply with the Under-keel Clearance Rules. For more details, consult *Under-keel Clearance* described in the Appendix of this booklet.

18 A **submerged crib** containing metal rods, with 9.7 m of water over it, lies 0.8 mile SSW of Cap Brûlé light. The structure, used for a corrosion study, is anchored by four corner anchors each with 46 m of chain. Divers may be in the vicinity at irregular intervals; mariners will be informed in advance through the *broadcasts* and/or *written Notices to Shipping* of the diving operations.

19 Banc du Cap Brûlé Upstream **leading lights** are shown from the same pillars as the Banc du Cap Brûlé Downstream leading lights; these lights, bearing 033½°, lead into Traverse du Nord channel. The front light *(1900)* is shown from a white building with a fluorescent-orange daymark and black stripe *(47°05'N, 70°43'W)*; it is equipped with a **Racon** (— • —). The rear light *(1901)* is shown from a white tower with a fluorescent-orange daymark. These lights are visible only when in alignment.

20 Saint-Michel **leading lights**, in line bearing 213°, lead through Traverse du Nord in conjunction with the Banc du Cap Brûlé Upstream leading lights. Each of these lights *(1918, 1919)* is shown from a tower with a fluorescent-orange daymark and black stripe, close west of Saint-Michel wharf *(46°53'N, 70°55'W)*.

21 **Cap Tourmente**, 1.7 miles SW of Cap Brûlé, marks the SW end of the mountain chain that rises steeply from the river. Its summit is a densely wooded hill, 563 m in elevation, 0.7 mile NW of the cape. This geographical area is a national wildlife area (Environment and Climate Change Canada); access regulations apply to the protected area.

22 From Banc du Cap Brûlé to Battures de la Traverse, the **tidal streams** are influenced by the flow in and out of Chenal de l'Île d'Orléans. The cross currents are therefore moderate in the vicinity of Cap Brûlé and weak opposite Battures de la Traverse. Mid-flood and ebb rates with mean tides are about 2 knots at Battures de la Traverse and 3 knots opposite Banc du Cap Brûlé. The streams turn about 20 to 40 minutes before high and low water at Québec City.

23 **Pointe Argentenay**, 4.5 miles SW of Cap Tourmente, forms the NE end of **Île d'Orléans** which divides the St. Lawrence River into two channels. The island is 17.5 miles long with an average width of 3.5 miles. It is generally well cultivated on the slopes and in the valleys between the hills; the hills reach an elevation of 150 m about 3 miles from the SW end. The south coast consists of wooded hills with low escarpment, bordered with rocky banks. On the north coast, the hills are at some distance from the river, the intermediate land being flat and cultivated; the shore is fringed by a mud flat on which a coarse grass grows, indented by numerous creeks.

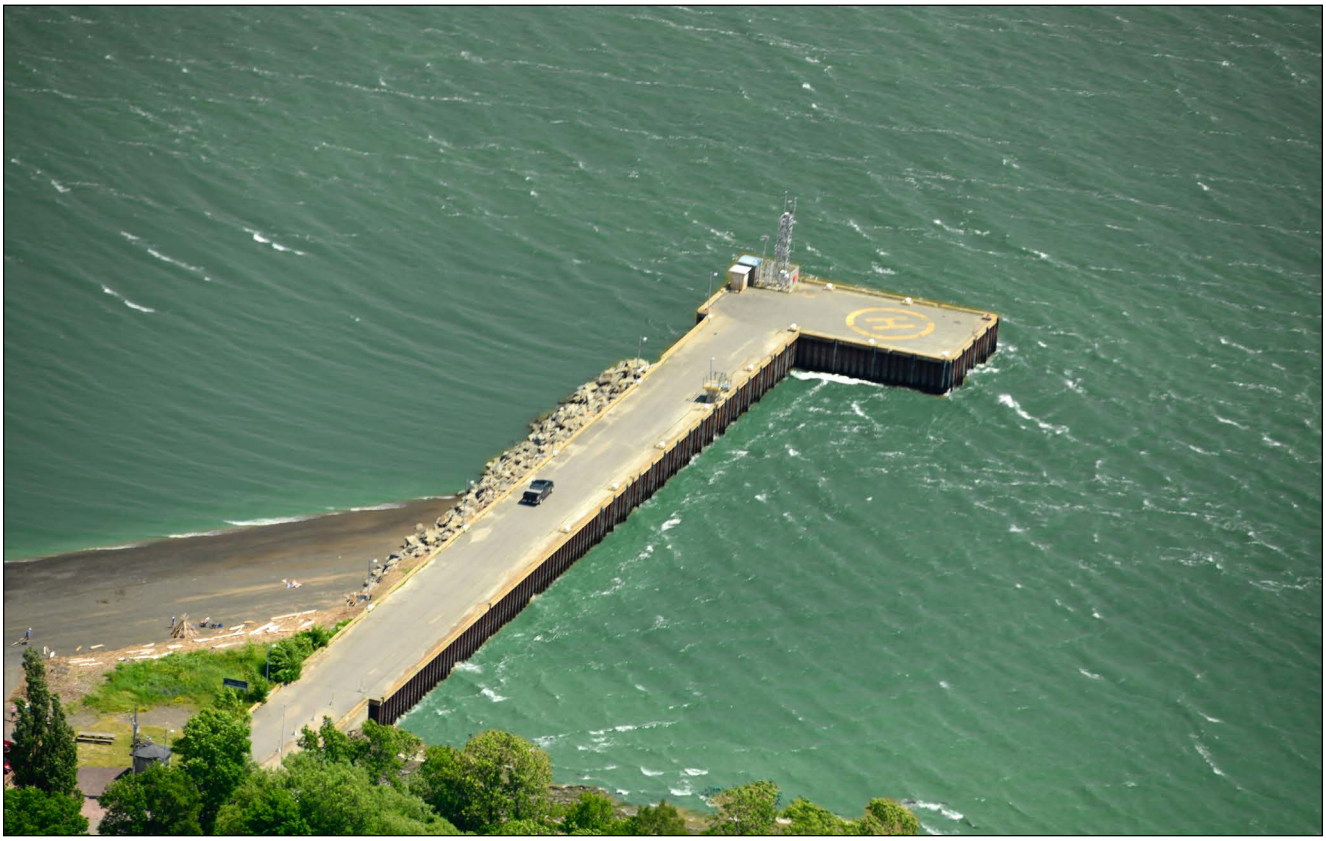
24 The municipality of **Saint-François-de-l'Île-d'Orléans**, with a population of 527, is 1.5 miles SSW of Pointe Argentenay. There is a public **wharf** 175 m long; berthage is prohibited (2014) until further notice. The downstream side of the wharf is fringed with large boulders for most of its length; the upstream side of the wharf dries almost completely. Saint-François **light** *(1913)* is shown from a tower on the outer end of the wharf *(47°00'N, 70°49'W)*.

25 **Île au Ruau** and **Île Madame**, east of Saint-François-de-l'Île-d'Orléans, separate Traverse du Nord and Chenal du Sud (described in chapter 3); these islands, low and wooded, are bordered by large drying **reefs** covered with sand and mud. At each end of these islands, there are orange beacons with radar reflectors.

26 **Tides and tidal streams**. — Off Saint-François-de-l'Île-d'Orléans, the tide rises 4.8 and 6.7 m at mean tides and spring tides, respectively. This point may be considered as the true head of the St. Lawrence estuary. The **tidal streams** curve into Traverse du Nord close along Île d'Orléans side, then the flow is directly up and down the main channel starting at Pointe Saint-Jean.

27 The mid-flood and ebb rates for mean tides off Pointe Saint-Jean are about 2 knots and the turn to **flood** occurs generally 20 to 60 minutes after low water, while the turn to **ebb** occurs from high water to 1 hour after, in reference to Québec City.

SAINT-FRANÇOIS-DE-L'ÎLE-D'ORLÉANS (2019)



In this area, when the wind blows against the current it generates **large waves** of up to 4 m, depending on the prevailing conditions. This phenomenon may be hazardous for small craft.

28 **Rivière Dauphine** flows into the St. Lawrence River approximately 2.2 miles SW of Saint-François-de-l'Île-d'Orléans; a small lagoon at its mouth affords shelter for small craft. There is good **anchorage** off the mouth of Rivière Dauphine in less than 10 m of water, mud bottom. In addition, there are two **anchorages** for ocean vessels available 0.9 mile SSE of Pointe Saint-Jean and 1.7 miles WNW of Pointe de Saint-Vallier.

29 The municipality of **Saint-Jean-de-l'Île-d'Orléans**, with a population of 1,059, is 3.5 miles above Rivière Dauphine; there is a church spire. Close above the municipality, there is a former wharf, rock filled on all faces, except on its SW face which dries. The SW face of the wharf forms a 126 m long jetty. Saint-Jean d'Orléans **light** *(1923)* is shown from a tower situated on the outer end of the jetty *(46°55'N, 70°54'W)*. The light has fluorescent-orange daymarks with a black stripe on three sides and is equipped with a **Racon** (— — •).

30 A 5.3 m covered obstruction lies 0.5 mile ENE of the jetty and a 10.2 m covered wreck lies 0.5 mile SW of the jetty.

31 From the upstream end of Traverse du Nord, the main shipping channel, **Chenal des Grands Voiliers**, follows the natural channel of the river to the Port of Québec limit, 12.5 miles upstream.

32 **Cap au Diable leading lights**, in line bearing 233½°, lead into Chenal des Grands Voiliers. These lights *(1925.2, 1925.3)* are west of the cape *(46°50'N, 71°02'W)* and each is shown from a tower with a fluorescent-orange daymark and black stripe. The lights are visible only when in alignment.

33 The municipality of **Saint-Michel-de-Bellechasse**, with a population of 1,813, is on the south shore of the river, approximately 2.5 miles SSW of Saint-Jean-de-l'Île-d'Orléans; there is a church spire. A **marina** *(Marina Anse Saint-Michel)*, protected by two

SAINT-LAURENT-DE-L'ÎLE-D'ORLÉANS (2019)

breakwaters, is located opposite the church. Many marina services are available.

34 An approach channel, 20 m wide, and with a depth of 1.3 m (2017) in mid-channel, is marked by piles topped with **day beacons** and **leading lights** that are privately maintained. A **ramp** is adjacent to the small craft basin which has depths of 0.4 to 2.1 m. An **outfall pipe** extends from the shore near the marina. To obtain the most recent information on depths, pleasure craft operators must contact the clubhouse.

35 There is a spoil ground approximately 0.4 mile NE of the Saint-Michel-de-Bellechasse marina. It is delimited by four lighted cautionary buoys. During the winter, the lighted buoys are removed. Consult the *broadcast* and/or *written Notices to Shipping* for the removal date.

36 **Rivière Lafleur** and **Rivière Maheu** flow into the St. Lawrence 1.5 and 2.7 miles SW of Saint-Jean d'Orléans light. These rivers run through deep ravines and afford shelter to small craft that may lie aground in the entrance at low water. There are three good **anchorages**, *RM1*, *RM2* and *RM3*, off the entrance to Rivière Maheu, in 10.4 to 12.3 m of water. An **overhead cable**, with a clearance of 8.6 m, spans the mouth of Rivière Lafleur.

37 Pointe de la Martinière **leading lights**, in line bearing 252°, are in the vicinity of the point *(46°50'N, 71°07'W)*. Each of these lights *(1925.6, 1925.7)* is shown from a tower; the lights are visible only when in alignment.

38 The municipality of **Saint-Laurent-de-l'Île-d'Orléans**, with a population of 1,532, is on the south shore of Île d'Orléans, 6 miles SW of Saint-Jean-de-l'Île-d'Orléans; a church with spire lies close to the shore.

39 A **marina** *(Club Nautique Île Bacchus)* opposite the church is protected from upstream by a breakwater and from downstream by a public **wharf**. Many marina services are available.

40 A mobile ramp, supported on cribs, extends the wharf 30 m in a SSE direction. Catwalks connect the cribs to the wharf. These structures

and a floating wharf — which serves as a boom — that is on the upstream side of the cribs are strictly reserved for ferries' and authorized boatmen. Saint-Laurent-de-l'Île-d'Orléans **light** *(1924)* is shown from the mobile ramp *(46°51'N, 71°00'W)*. The whole downstream side of the wharf is rock filled. A **strong current** is reported near the end of the structures which may hamper the approach. Mariners should proceed with caution in this area.

41 **Speed restrictions**. — During the boating season, all vessels must reduce their speed off the marina in order to prevent damage to the facilities and to boats tied up at the marina; see the *Annual Edition of Notices to Mariners*, page A12-1.

42 A floating breakwater, on the west side of the wharf, provides protection but restricts the entrance to the marina; the breakwater is marked by two private **lights**.

43 There is a MCTS **calling-in-point** abeam of Saint-Laurent-de-l'Île-d'Orléans.

44 The village of **Beaumont**, with a population of 2,942, is on the south shore of the river opposite Saint-Laurent-de-l'Île-d'Orléans; a church with a spire stands on a cliff. A **conspicuous** waterfall runs over the cliff, 1 mile west of the church.

45 There is good **anchorage**, in 10 m of water, off **Trou Saint-Patrice**, 1.5 miles above Saint-Laurent-de-l'Île-d'Orléans.

46 **Overhead** power **cables**, with a clearance of 50 m or of *35 m under severe ice conditions, cross the shipping channel 2.3 miles above Saint-Laurent d'Orléans light. Red lights are shown from towers on each side of the channel. See Appendix for diagram of vertical clearances.

47 **Pointe de la Martinière** is on the extremity of a small wooded hillock 4.3 miles west of Beaumont on the south shore. A **reef**, called *Rochers Maranda*, lies on the opposite shore near a rock cavity on the steep cliff.

48 The village of **Sainte-Pétronille,** population 1,033, is located near the SW end of Île d'Orléans. The village is bordered by a long breakwater along the coast all the way to a large, white inn to the south. The Sainte-Pétronille **light** (1927) is located on a tower on the south end of the breakwater near the inn (46°51′N, 71°08′W).

Chenal de l'Île d'Orléans

49 **Chenal de l'Île d'Orléans** runs NW of Île d'Orléans. It is very narrow, shallow and strewn with several **shoals** in the area of Battures des Îlets *(46°57'N, 71°02'W)*. The channel is marked by buoys and leading lights.

50 Île d'Orléans **leading lights**, in line bearing 226°, are at the north end of Île d'Orléans *(47°01'N, 70°50'W)*. Each of these lights *(1932, 1933)* is shown from a tower with a fluorescent-orange daymark and black stripe. The lights may be obscured by trees, making them difficult to see. A **shoal**, at a depth of 3.9 m, lies immediately *(47°03'N, 70°47'W)* NW of the leading lights.

51 Sainte-Anne-de-Beaupré **sector light** *(1936.1)* leads vessels into the lower entrance of the channel. The white sector covers an arc of 20 minutes, centered on the bearing of 254°. The light is shown from a tower situated on a pillar adjacent to the private wharf at Sainte-Anne-de-Beaupré *(47°01'N, 70°56'W)*.

52 **Pointe aux Prêtres** lies 3.8 miles SW of Cap Tourmente; between these two points, the shore is low and fringed with grassy drying flats that extend approximately 0.8 mile offshore. The Canadian Shield mountain range rises some distance inland.

53 The municipality de **Saint-Joachim**, with a population of 1,441, is on the north shore of the channel 1 mile west of Pointe aux Prêtres; there is a church with a spire. Dwellings are practically continuous along the shore from here to Québec City.

54 The town of **Beaupré**, with a population of 3,752, is at the mouth of **Rivière Sainte-Anne**, 3 miles above Pointe aux Prêtres. A large boulder breakwater, in poor condition and drying in places, extends 0.5 mile offshore. **Mont Sainte-Anne**, with its numerous conspicuous ski slopes — illuminated during winter —, is approximately 3.5 miles inland.

55 The town of **Saint-Anne-de-Beaupré**, with a population of 2,880, is 2 miles above Rivière Sainte-Anne; there is a conspicuous basilica with two spires, approximately 90 m in height. Close upstream from the church there is a private **wharf**, 375 m long, bordered with large boulders on its upstream and downstream faces; there is a landing pier on the south face. This wharf is restricted and used exclusively by local tour boats.

56 The municipality of **Sainte-Famille-de-l'Île-d'Orléans**, with a population of 938, is on the north shore of Île d'Orléans approximately 3 miles above Sainte-Anne-de-Beaupré; there is a church in the municipality.

57 The town of **Château-Richer**, with a population of 4,126, is on the NW side of the channel, 5 miles above Sainte-Anne-de-Beaupré; there is a church with a spire. The former wharf has large boulders on all faces and is now a

jetty with a **landing pier**; there is a **ramp** on the NE side of the pier.

58 Pointe Saint-Pierre **leading lights**, in line bearing 218½°, lead into the narrow passage of **Battures des Îlets**. The lights *(1946, 1947)* on Île d'Orléans, close below **Pointe Saint-Pierre** *(46°56'N, 71°02'W)* are shown from a tower with a fluorescent-orange daymark and black stripe; the lights are visible only when in alignment.

59 Sainte-Famille-de-l'Île-d'Orléans **leading lights**, in line bearing 052½°, are close above the village *(46°58'N, 70°59'W)*. Each light *(1941, 1942)* is shown from a tower with a fluorescent-orange daymark and black stripe; the lights are visible only when in alignment.

60 **Submarine** power **cables** cross the channel from the mainland to Île d'Orléans in the vicinity of Pointe Saint-Pierre. Mariners are cautioned not to anchor in the vicinity of these cables.

61 **Fishing gear** is installed on the foreshore of the channel from July to November. Mariners are requested to navigate with caution in these areas.

62 The municipality of **L'Ange-Gardien**, with a population of 3,695, is on the NW shore 4.5 miles above Château-Richer; a church with a spire is located in the municipality.

63 **Overhead** power **cables**, with a vertical clearance of 32 m or of *16 m under severe ice conditions, span Chenal de l'Île d'Orléans close above from L'Ange-Gardien. Red lights are shown from towers on each shore.

64 L'Ange-Gardien **leading lights**, in line bearing 023½°, are on the NW shore, above the municipality *(46°54'N, 71°07'W)*. Each light *(1949, 1950)* is shown from a tower with a fluorescent-orange daymark and black stripe; the lights are visible only when in alignment.

65 The municipality of **Boischatel**, with a population of 4,069, is 2 miles SW of L'Ange-Gardien. A church with a spire is near the shore. **Rivière Montmorency** empties into the channel 2.7 miles above L'Ange-Gardien. **Chute Montmorency**, 76 m high, is conspicuous.

66 A suspension **bridge**, **Pont de l'Île-d'Orléans**, spans Chenal de l'Île d'Orléans approximately 1 mile above Boischatel. The distance between the two main piers is 323 m, with a vertical clearance of 32 m; the channel is 183 m wide.

67 **Submarine cables** cross the channel approximately 1 mile above Pont de l'Île-d'Orléans. A prohibited anchorage area is indicated on the chart.

68 The city of **Beauport**, with a population of 72,259, is between Rivière Montmorency and Québec City. A large church, with two **conspicuous** square spires, stands 2.7 miles WSW of Pont de l'Île-d'Orléans; another large church with two **conspicuous** spires, stands 3.5 miles WSW of the same bridge.

Port of Québec

Chart 1316

69 The operations of the **Port of Québec** are primarily in the vicinity of the mouth of Rivière Saint-Charles but extend to a broader section of the St. Lawrence River. Therefore, the downstream port limit in Chenal de l'Île d'Orléans is the SW end of Île d'Orléans, while in Chenal des Grands Voiliers, the limit is a line drawn between Pointe Saint-Jean and Pointe Saint-Michel. The upstream port limit is in Cap-Rouge, 2 miles above Pont Pierre-Laporte.

70 **Ice** starts to form around mid-December and disappears around the end of March. The port is open year round, but it is recommended that vessels navigating to Québec City during that period be ice strengthened.

71 **Québec City**, capital of the province of Quebec with a population of 531,902, is on the north shore at the junction of the St. Lawrence River and Rivière Saint-Charles.

72 Québec City consists of Upper and Lower Town. Upper Town is located on the ridge overlooking the St. Lawrence River and the Port of Québec. The **Citadelle**, 103 m in elevation, is a fortification occupying the highest part of the town. An imposing hotel, ***Fairmont Le Château Frontenac*** overshadows the ferry wharf in the Upper Town. Lower Town, as its name implies, is built on the low land to the north of Upper Town; there are numerous manufacturing plants, warehouses and commercial centres. The Québec City area is a service centre and an industrial heartland (pulp and paper, lumber), as well as an agricultural region (farming and livestock production).

73 In 2005, the Port of Québec handled 27.6 M tonnes of cargo, mainly grains, liquid bulk, dry bulk and general cargo. There is a petroleum refinery in the Port. It is also a port of call for numerous cruise ships.

74 **Pilotage** is compulsory. Pilots board inbound vessels at Les Escoumins pilot station (Anse aux Basques; 48°19′N, 69°25′W) for the passage to Québec City. Vessels bound for destinations farther west exchange pilots at Québec City. The harbour pilots will dock certain

types of vessels arriving from the downstream limit of the Port of Québec. They will also handle all ship movements in the port. Tankers from berths 86 or 87 are required to have a harbour pilot onboard. The distance, via the main shipping channel, from the pilot station at Les Escoumins to Québec City is 120 miles.

75 The master of a ship that is to depart the port must give a first notice of departure **12 hours** before the estimated time of departure (ETD) to the Pilot Dispatch Centre and a final notice confirming or correcting the EDT 6 hours before the EDT. The master of a ship due to make a movement in the Port of Québec must give **3 hours**' notice. Communications should be made by telephone to the Pilot Dispatch Centre at 1-800-361-0747 or 1-866-674-2752. For further information concerning pilotage, consult the Annual Edition of Notices to Mariners. Furthermore, the master of a ship that is to make a movement to depart a wharf or mooring must give notice to the MCTS Centre by VHF at least **15 minutes** prior to movage in order to obtain authorization.

76 The pilot dispatch office is located at 999, boul. de Maisonneuve Ouest, Room 1410, Montréal (QC), H3A 3L4; telephone : 514 283-6320 or 1 800 361-0747 or 1-866-674-2752.

77 **Arrival information**. — Québec City is a **customs** port of entry but not a quarantine station. For details on the *Quarantine Regulations* consult booklet *ATL 100 — General Information*. In accordance with *Transport Canada*, Deratting Certificates and Deratting Exemption Certificates can be issued by the customs officer. The fumigation of vessels is however within the jurisdiction of the *Canadian Food Inspection Agency.*

78 **Regulations**. — Under the *Canada Marine Act*, vessels manoeuvring or otherwise underway in the Port of Québec, and also while at a berth or at anchor, are subject to the *Port Authorities Operations Regulations*. Mariners may obtain a copy of the regulations from the *Québec Port Authority*.

79 Any vessel manoeuvring or otherwise underway in the port shall at all times be under the orders of the *Marine Communications and Traffic Services (MCTS)*. *Québec Port Authority* has full authority over vessels in the port and may order vessels to move, to use tugs, to berth or anchor in locations which it designates. Vessels must inform *Québec Port Authority* in advance of their intention to berth in the port.

80 The Collision Regulations and the CSA require vessels to proceed at a safe speed. Safe speed means the minimum necessary speed at which a vessel can maintain its course.

81 Specific guidelines govern the use of tug services, including manoeuvres for docking and departing in restricted visibility or in adverse weather conditions. Other regulations refer to mooring procedures in the Port of Québec during winter.

82 Vessels are regulated with respect to cargo-handling operations including the usage of equipment and lighting in these operations. Also included are instructions for reporting in the event of accidents, cargo or gear lost overboard and safety requirements.

83 Specific vessel regulations are to be observed for carriage and handling of explosives and dangerous goods, as well as fire prevention.

84 Any vessel about to leave any berth, wharf or pier shall, before leaving, sound one long blast on its whistle or siren. Any vessel going astern from any wharf, basin or dock shall sound on its whistle or siren three short blasts in succession. A vessel shall sound on its whistle or siren two long blasts, immediately before entering or leaving the outer Bassin Louise, or Estuaire de la Rivière Saint-Charles; if towing, the vessel shall sound two long blasts followed immediately by one short blast.

85 No vessel shall engage in calibration or compass adjustment except with permission and in the area designated by the harbour master.

86 Located in Quebec City, a Canadian Coast Guard seasonal **Search and Rescue station** provides services in the St. Lawrence River. Requests for assistance can be addressed, at any time, to the *Marine Rescue Sub-Centre (MRSC Québec)* in Québec City through VHF Channel 16 (156.8 MHz) or on the frequency 2182 kHz via MCTS Centre, or by telephone 1-800-463-4393. When an emergency or distress situation occurs and the request for assistance cannot be transmitted through VHF channel 16 or the frequency 2182, it is possible for owners of certain cellular telephone models to dial *16 which will put them directly in contact with the nearest MCTS Centre. **It should be noted that it is not possible for the Canadian Coast Guard to trace the origin of calls for those using their cellular telephone and that some areas do not have cellular coverage.**

87 The main shipping channel in the port is wide, deep and marked with lights and buoys.

88 **Anchoring** within the port limits **is prohibited** without the permission of the harbour master, and then only at the assigned location. Permission to anchor is to be obtained from the MCTS Centres. **Anchorage** berths "A", "B" and "C" are on the east side of the river between Quais de la Reine and Anse au Foulon Terminal; anchorage berth "D" is in the northern part of the port near the entrance to Chenal de l'Île

INDUSTRIES DAVIE SHIPYARD (2019)

d'Orléans. The Maheu **anchorage** berths (RM1, RM2 and RM3) also lie SW of Île d'Orléans, between **Pointe Saint-Laurent** and **Rivière Lafleur**. These berths are shown on the chart.

89 A **prohibited anchorage area** is north of anchorage berth "A". **Submarine cables** cross the river in this prohibited area and a submerged crib is located in the middle of the channel off Estuaire de la Rivière Saint-Charles *(46°50'N, 71°11'W)*. There is another prohibited anchorage area abeam of Anse au Foulon Terminal. These prohibited anchorage areas are shown on the chart.

90 **Tides and tidal streams**. — At Québec City, the rise of the tide is more rapid than the fall, as in all estuaries. Low water maintains a fairly constant level throughout the year, whereas the height of high water varies more between springs and neaps. As a general rule, the water rises higher with NE winds, and falls lower with SW winds. The level at Québec City is also affected noticeably by the height of the water in the river, which is highest in the spring around April, and falls gradually to attain its lowest level during winter.

91 The duration of the low water slack is approximately 35 minutes at Anse au Foulon, during which the flow does not exceed 0.5 knot in either direction. The beginning of the **flood stream** comes up the north side of the main channel, reaching the lower end of the berthing area of Anse au Foulon, approximately 1 h 20 min after low water. Before the turn of the tide occurs in the river, there are reverse streams along the wharves; these are generated from a recirculation effect caused by the shape of the shoreline. The flood stream runs an average time of 5 hours and comes to full strength approximately 1 hour before high water. For mean tides, the rate of the flood flow along the edge of the channel is 2.5 knots which holds roughly until 1 hour before high water slack. Toward the end of the flood in midstream an eddy forms in the middle of Anse au Foulon, and above the wharves the flow turns downwards inshore.

92 From 1 hour before until 1 hour after high water, there are reverse **streams** within the berthing area, the stream setting in mid-channel and turning inward by the upper end of the wharves to join the downward stream along the shoreline.

93 The duration of the high water slack in the channel is approximately 35 minutes. At Anse au Foulon, above the wharves, there are reverse **streams** approximately 1 hour after high water. The ebb stream runs an average time of 7 h 30 min and reaches full strength 3 hours to 3 h 30 min after high water. The rate is about the same as for the flood stream, 2.5 knots and may reach 3 knots with spring tides. For further details concerning tidal streams,

WHARVES AT THE ENTRANCE TO RIVIÈRE SAINT-CHARLES (2019)

consult the *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières*.

94 There is a MCTS **calling-in-point**, for upbound vessels only, abeam of the western end of Île d'Orléans.

95 The town of **Lévis**, with a population of 143,414, is on the south shore of the river.

96 A **shipyard** *(Chantier Davie Canada Inc.)* is located at Lévis (Lauzon residential district) *(46°50'N, 71°10'W)*, approximately 1.5 miles SW of the west end of Île d'Orléans. The services offered by the shipyard are detailed in the next section of this chapter, *Harbour Services and Facilities*.

97 A **water intake pipeline** extends 475 m from the shore in Anse aux Sauvages. The crib at the end of the pipeline has 2.3 m of water over it. **Fishing gear** is installed on the foreshore of the channel from July to November. Mariners are requested to navigate with caution in these areas.

98 A conspicuous MCTS Centre white radar **tower**, elevation of 55 m, stands on Pointe de Lévy and is marked with red aerial obstruction **lights**.

99 **Rivière Saint-Charles** empties into a roadstead bordered by wharves on which there are several port facilities such as *Sailor's Home*. On the north shore of **Estuaire de la rivière Saint-Charles**, there are several tanks and a plant with its two chimneys *(Papeterie Stadacona)*. Several grain silos are located between Bassin Louise and Rivière Saint-Charles. Recreational nautical facilities for small boating are located at a park close downstream of the mouth of Rivière Saint-Charles, on the sandy point that extends from the wharves.

100 A **marina** *(Marina Port of Québec)* is located in the inner **Bassin Louise**. Floating docks and a **ramp** are located in the basin where the water is regulated to maintain a constant level. Many marina services are available. For information concerning the water level in the inner basin, mariners should contact the lock master on VHF channel 71 or through port authorities; telephone: 418-648-2233.

BASSIN LOUISE (2019)

101 A **lock**, length 55.8 m, width 14 m connects the outer basin to the inner basin. Requests for the opening of the lock can be made daily between 0700 hours and 0030 hours, on VHF channel 71. The lock is operational from the first week of May to the last week of October or beyond these dates on request and at the expense of the mariner; telephone: 418-648-2233. A division of the Canada's Naval Reserve is located in the area.

102 North Limit Anchorage **light** *(1958)* is on the SE corner of a building located on **Quai de la Reine** *(46°49'N, 71°12'W)*. The regional base of the Canadian Coast Guard is located in this area.

103 A regular **ferry service** operates between Québec City and Lévis; the usual track of the ferries is shown on the chart. There is also a seasonal **ferry service** between Montréal, Québec City, Matane and Cap-aux-Meules.

104 There is a MCTS **calling-in-point** abeam of Quai de la Reine.

105 A **marina** *(Parc Nautique Lévy)*, protected by breakwaters, is on the south shore of the river, 1.3 miles above the ferry wharf. There are floating docks and a **ramp** in the small craft basin. Many marina services are available

106 The entrance to the basin is partially obstructed by a **pontoon** used for boom installation in case of an oil spill. The pontoon is attached to the outer end of the south breakwater with a **submerged cable**; vessels should not drag their anchor in the entrance. Private **lights** (seasonal) mark the entrance of the marina.

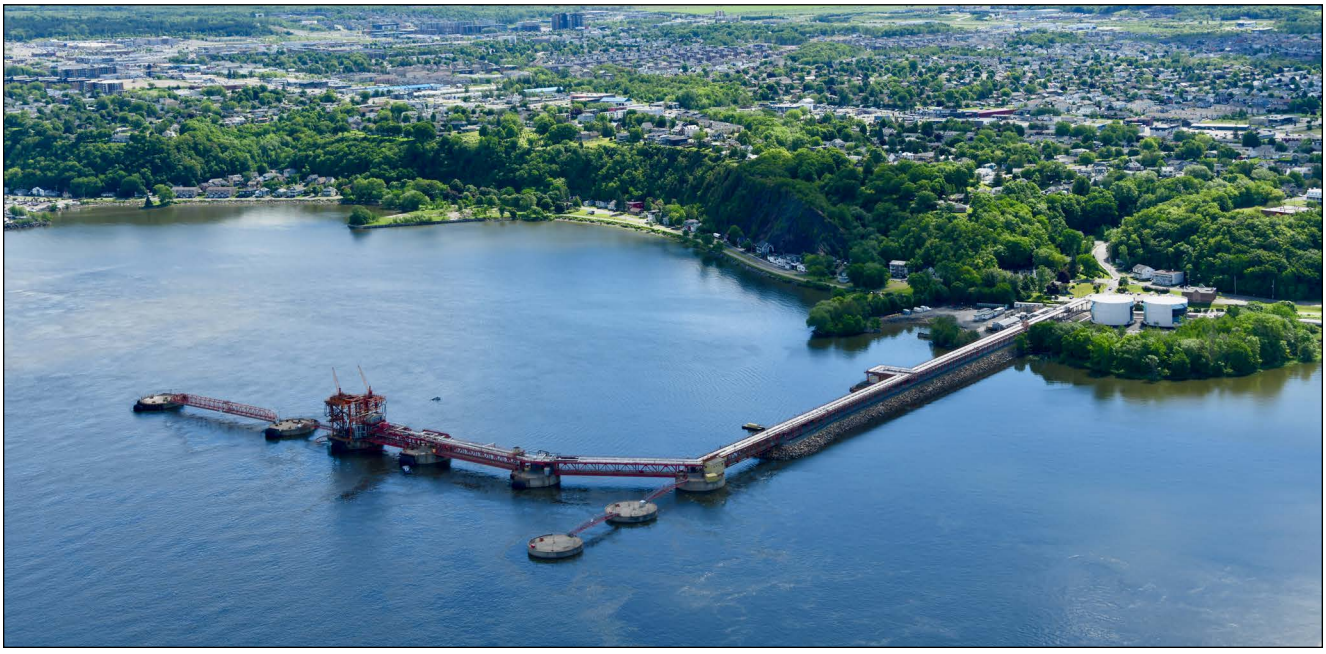
107 **Anse au Foulon**, a slight indentation of the coast bordered by steep cliffs, is on the north shore of the river between **Cap Diamant** and **Pointe à Puiseaux**, 1.2 miles SW of Cap Diamant. There is two dolphins in Bassin Brown; one of the cribs is linked to the shore by a catwalk. There are drying wharf ruins lying close south of the cribs. A large **shoal** is situated close to berths 104 and 105. There is a ramp above berth 108.

WHARVES NO. 21 AND 22 (2019)

WHARVES NO. 93 TO 98 (2019)

ANSE AU FOULON WHARVES (2019)

VALERO ENERGY REFINERY PETROLEUM TERMINAL (2019)



PONT PIERRE-LAPORTE AND PONT DE QUÉBEC (2019)

108 A **marina** *(Yacht Club de Québec)* is located in Anse au Foulon, 0.7 mile below Pointe à Puiseaux. Floating docks and a **ramp** are located in a basin that is protected by breakwaters; there are **mooring buoys** NE of the basin. Many marina services are available. (See ENC *CA54FN1A*)

109 Yacht Club de Québec **lights** *(1960.3, 1960.6)* — seasonal —, are each shown from a tower on the outer end of the two breakwaters *(46°47'N, 71°14'W)*.

110 Yacht Club de Québec **leading lights** — seasonal —, in line bearing 299°, lead into the inner basin of the marina. Each light *(1960.4, 1960.5)*, located west of the basin *(46°47'N, 71°14'W)*, is shown from an onshore tower with a fluorescent-orange daymark and black stripe. The lights are visible only when in alignment.

111 Pointe à Puiseaux **light** *(1962)* is shown from a tower situated on the point *(46°46'N, 71°15'W)*. There is a rock-filled jetty immediately downstream of the light.

112 There is a MCTS **calling-in-point**, for downbound vessels only, abeam of Pointe à Puiseaux.

113 On the SE shore and adjacent to a church with spire standing on top of the cliffs, there is the Valero Energy Refinery **Petroleum Terminal** . The T-shaped terminal extends 600 m from the shore; it is made out of big round cribs linked by catwalks supporting the pipelines that lead to the refinery. There are cargos handling structures, including a crane, on one of the cribs.

114 White **lights** in line (private) (12696, 12697) with yellow daymarks mark the limit of the dredged area alongside Berth 86. Two other orange daymarks with red **lights (12698, 12699)** still exist, but there is no longer a dredged area at this location.

115 A 470 m long **submarine pipeline**, just downstream of the petroleum terminal, extends offshore to a crib which has 9.7 m of water over it. Mariners must use extreme caution when navigating in the vicinity.

116 Juvénat Notre-Dame-du-Saint-Laurent is a conspicuous building standing on Pointe Atkinson at the mouth of **Rivière Etchemin**, 1.6 miles above the Valero Energy Petroleum Terminal. The residential district of **Saint-Romuald** is on the south side of Rivière Etchemin; there is a church with a spire.

117 **Sillery**, with a population of 13,082, is on the NW shore of the St. Lawrence River; there is a church with a spire 0.5 mile north of Pointe à Puiseaux.

118 The former wharf situated on the NW shore of the St. Lawrence River, 1.5 miles above Pointe à Puiseaux *(46°46'N, 71°15'W)*, is partly encased with stone and forms a pier on which stands an observation tower.

119 **Rivière Chaudière** empties into the St. Lawrence River from the south shore, 2.2 miles above Pointe à Puiseaux. **Overhead** power **cables**, with a vertical clearance of 18 m, cross Rivière Chaudière near its mouth.

120 A **marina** *(Marina de la Chaudière)* is situated near the mouth of Rivière Chaudière. There is a service wharf with a **ramp** on the east shore of the mouth of the river while there are **mooring buoys** and long detached **floating docks** moored in the basin, opposite the marina. Many marina services are available

121 When the tide is at its full strength, violent **currents** have been reported in the entrance of the basin of the marina.

122 **Bridges**. — Two bridges span the St. Lawrence River close above the mouth of Rivière Chaudière; at this point the St. Lawrence narrows to a width of 0.4 mile. **Pont de Québec**, an illuminated road and rail combined cantilever bridge, has a distance between the piers of 549 m, with a vertical clearance of 47 m. Remains of metallic structures that collapsed during the construction of the bridge are lying entangled on the seafloor. **Pont Pierre-Laporte**, close upstream of Pont de Québec, has a distance between the piers of 665 m, and a vertical clearance of 49 m.

123 At any given time, when ice is present in the St. Lawrence River, vessels are prohibited from meeting or passing under Pont de Québec. **Should vessels meet, the vessel with the current has priority.**

124 A green **light** *(1963)* is shown on the east side of Pont de Québec, close to the centre line of the central span. Two **white lights** and two **racons** ((—) and (— • • •)), established under each end of the central span, mark the north and south limits of the channel; the two lights are 231 m apart. In the middle of the central span, for a width of 175 m, the vertical clearance is 47 m. Two **red lights**, 396 m apart, are placed under the middle section of the cantilever arms, where the vertical clearance is 27 m.

125 A **green light** *(1963.5)* is shown on each side of Pont Pierre-Laporte to mark the centre of the channel. Approximately 40 m south of this light, a third green light (1963.1) is placed on the west side of the bridge, above the light (1963) of the Pont de Québec There are **white lights**, established on each side of the bridge, 113 m north and 117 m south of the green lights, to mark the channel limits where the vertical clearance is 49 m. There are **red lights** shown on each side of the bridge, 175 m north and 193 m south of the green lights; the vertical clearance under the red lights is 48 m.

126 The channel under the two bridges is called **Le Sault** because of the strength of the currents. With an **ebb tidal stream**, the flow at times reaches 5.5 knots; with a **flood tidal stream**, the rate is nearly 5 knots. **Tidal eddies** are formed 0.7 mile below the bridges at the beginning of the flood tidal stream, and close above the bridges at the beginning of the ebb tidal stream.

PONT DE QUÉBEC – PROFILE

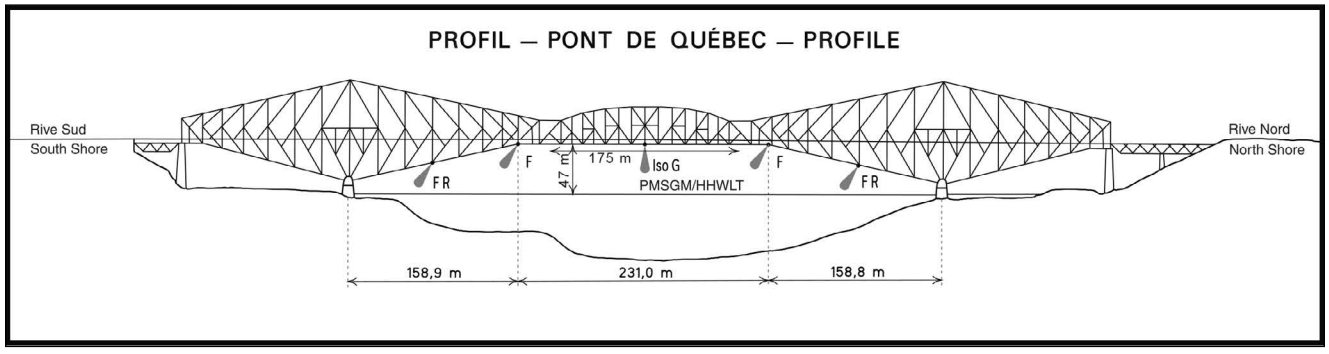


Table 2.2 Port of Québec: Québec Port Authority Wharves and Facilities

Berth	Length (m)	Depth (m) †	Elevation (m) ††	Remarks
Battures de Beauport 50	296	12	1.9	Liquid and Dry Bulk Cargo; Open Space: 16,000 m^2
Battures de Beauport 51	236	12.5	1.9	Liquid and Dry Bulk Cargo; Open Space: 34,000 m^2
Battures de Beauport 52	261	13.5	1.9	Liquid and Dry Bulk Cargo; Open Space: 39,000 m^2; Four Gantry Cranes
Battures de Beauport 53	325	15	1.9	Liquid and Dry Bulk Cargo; Open Space: 47,000 m^2; Four Gantry Cranes
Estuaire de la rivière Saint-Charles 24	168	—	—	Wharf in ruins: berthage prohibited.
Estuaire de la rivière Saint-Charles 27	293	12.0	1.6	Ro-Ro Ramp; Open Space: 9,300 m^2; Shed: 11,220 m^2 and Silo.
Estuaire de la rivière Saint-Charles 28	277	12.0	1.7	Grain loading (5,000 t/h); Ships berth starboard side to; Ro-Ro Ramp.
Estuaire de la rivière Saint-Charles 29	305	10.5	1.7	General Cargo; Shed: 10,350 m^2.
Estuaire de la rivière Saint-Charles 30	224	*9.1 to 10.3	1.7	General Cargo; Open Space: 13,570 m^2
Estuaire de la rivière Saint-Charles 31	224	*7.1	1.7	General Cargo; Open Space: 10,220 m^2
St. Lawrence River 18	241	11.0	2.0	Grain unloading (1,800 t/h)
St. Lawrence River 21	206	11.7	1.8	Cruise Ships
St. Lawrence River 22	325	10.7	1.8	Cruise Ships
St. Lawrence River 25	223	*9.0	1.3	General Cargo; Shed: 4,570 m^2.
St. Lawrence River 26	241	11.0	1.6	General Cargo; Shed: 7,290 m^2.
Bassin Louise 4	240	*6.5	1.3	Marina and Cruise Ships
Bassin Louise 5	180	*7.5	1.7	Marina and Cruise Ships
Bassin Louise 14	178	*7.1	1.7	Tourism and Wintering
Bassin Louise 17	210	*7.8	1.7	Minor Repairs and Wintering
Bassin Louise 19	192	*5.5	1.9	Sightseeing Excursions. Cruise Ships.
Bassin Louise 20	342	*6.9	1.7	Minor Repairs and Wintering; Open Space: 8,000 m^2
Anse au Foulon 101	198	11.3	1.8	General Cargo; Open Space: 8,800 m^2; Shed: 13,840 m^2
Anse au Foulon 102	160	11.3	1.8	General Cargo; Open Space: 4,000 m^2
Anse au Foulon 103	185	12.0	1.9	General Cargo; Open Space: 9,900 m^2; Berth with a protrusion
Anse au Foulon 104	211	10.3	1.9	General Cargo; Shed: 5,690 m^2
Anse au Foulon 105	195	11.3	1.8	General Cargo; Open Space: 17,140 m^2
Anse au Foulon 106	195	11.3	1.8	General Cargo; Open Space: 14,600 m^2
Anse au Foulon 107	173	10.3	1.7	General Cargo; Open Space: 11,550 m^2
Anse au Foulon 108	180	10.3	1.6	General Cargo.

† Depth below chart datum

†† Elevation above Higher High Water, Large Tide

*Depth not maintained by dredging

Table 2.3 Port of Québec: Private Berths

Berth	Length (m)	Depth (m) †	Elevation (m) ††	Remarks
Industries Davie (Lévis) 70	152	*7.1	1.3	Entrance to Champlain Dry Dock, east side. There is less water at the entrance of the Dry Dock.
Industries Davie (Lévis) 71	122	*7.1	1.3	Entrance to Champlain Dry Dock, west side
Industries Davie (Lévis) 72	107	*3.7	1.3	Outfitting Wharf
Industries Davie (Lévis) 73	164	*7.8	1.3	Outfitting Wharf
Industries Davie (Lévis) 74	141	*0.5 to 4.8	1.3	Outfitting Wharf
Industries Davie (Lévis) 75	169	*6.0	1.3	—
Industries Davie (Lévis) 76	183	*4.9 to 6.0	1.3	Outfitting Wharf
Industries Davie (Lévis) 77	170	*5.0	1.3	Entrance to Lorne Dry Dock, east side
Industries Davie (Lévis) 78	95	*5.0	1.3	Entrance to Lorne Dry Dock, west side. There is less water at the entrance of the Dry Dock.
Industries Davie (Lévis) 79	81	—	1.3	Outfitting Wharf. For depth information, consult the chart.
Société des traversiers du Québec 82	96	4.9	1.0	Lévis (Ferry Wharf)
Société des traversiers du Québec 92	140	*4.5	1.0	Québec (Ferry Wharf)
Valero Energy Petroleum Terminal 86	295	12.5	3.4	Tankers up to 20,000 DWT
Valero Energy Petroleum Terminal 87	335	16.4	3.4	Tankers up to 180,000 DWT
Stadacona 46	210	*6.7	1.9	Forest Products
Stadacona 47	205	*6.7	1.9	Forest Products; Open Space: 2,500 m^2
Canadian Coast Guard 93	134	*9.0	0.8	Canadian Coast Guard
Canadian Coast Guard 94	106	*10.0	1.0	Canadian Coast Guard
Canadian Coast Guard 95	99	*9.0	0.9	Canadian Coast Guard
Canadian Coast Guard 96	89	*9.2	0.8	Canadian Coast Guard
Canadian Coast Guard 97	117	*9.1	0.8	Canadian Coast Guard
Canadian Coast Guard 98	113	*9.3	0.8	Canadian Coast Guard
Town of Lévis 81	220	*8.9	1.8	Open Space: 14,000 m^2
Québec City 91	91	*3.5	0.8	Excursion Boats; Open Space: 2,000 m^2

† Depth below chart datum

†† Elevation above Higher High Water, Large Tide

*Depth not maintained by dredging

127 **Overhead** power **cables**, with a vertical clearance of 48 m or *33 m under severe ice conditions, span the St. Lawrence River between the two bridges. Other power cables, close above Pont Pierre-Laporte, have a vertical clearance of 44 m or of *35 m under severe ice conditions.

128 **Obstructions**. — ● A **wreck**, with a depth of 15.5 m, lies 0.2 mile downstream of Pont de Québec. ● **Ruins** of former bridge structures which fell during construction lie on the river bed, just downstream of the bridge. The structure represents (or constitutes) an **obstruction**, with depths of 23.3 m and 45 m.

129 **Berthing**. — The following tables provide detailed information on the *Québec Port Authority* berths, their adjacent sheds and private berths.

130 **Cargo handling facilities**. — The grain elevators north of Bassin Louise can store up to 224,000 tonnes of wheat. Berth 18 has two marine towers that unload wheat at a rate of 2,000 tonnes per hour. Berth 28 has galleries for loading grain and it operates at a rate of 5,000 tonnes of wheat per hour. Berths 52 and 53 are equipped with cranes that unload ore at an average rate of 1,800 tonnes per hour. The Port of Québec is also equipped with terminals for self-unloading vessels and a Ro-Ro ramp at Berth 27.

131 Mariners should use extreme caution when they are manoeuvering their vessel near the wharves where the **cranes** are located. In fact, any part of a vessel extending outward toward the wharf can run into the cranes. In addition, certain parts of cranes overhang the dock wall. Therefore, the available vertical clearance is restricted under these structures and mariners must be watchful of the equipment and structures overhanging their vessel such as derrick cranes and antennae.

132 **Supplies of fuel, water and provisions**. — In the Port of Québec, fresh water is available at all berths; electric power is available at certain berths. All types of provisions as well as deck and engine stores are available.

133 A wide variety of fuel, diesel and lubricating oils are also available. Deliveries of liquid fuels can be made by tanker truck upon prior arrangement with the oil companies and the harbour master.

134 **Environmental emergencies**. — When a marine oil spill occurs, mariners will immediately inform the Canadian Coast Guard via the *MCTS* centre through VHF Channel 12 or 16.

135 The *Eastern Canada Response Corporation (ECRC)* is a private company, certified by the Canadian Coast Guard, which can provide marine oil spill response services. It has equipment located at various strategic locations along the St. Lawrence River, including the Port of Québec. The company can be reached by telephone at 418-692-8989.

136 **Port services**. — *Industries Davie* shipyard located at Lévis has five shipbuilding berths, that include two dry docks of 360 m and 180 m long, which are also available for repairs of all kinds.

137 The companies *OCÉAN Remorquage Québec* can provide all kinds of ship repairs and overhauls.

138 The service of various types and capacities of **cranes** can be provided. See *Groupe Ocean* 418-694-1414.

139 The necessity for use of **tugs** for ship handling in the harbour is dependent upon the size of the vessel, the location of the berth, the state of the tide, the expected tidal stream and the weather conditions. The tug company *OCEAN Remorquage Québec* operates a fleet of tugs who serves the region.

140 The **service** of linesmen **to tend mooring lines** for docking, departing, or for any vessel movement, is performed by a group of local boatmen. A minimum of three hours notice is required for this service and should be requested through the ship's local agent. This service is compulsory for ocean-going vessels.

141 Ships' gangways or accommodation ladders may be used in Québec City. However, **gangways** are available at all berths, and vessels requiring them should inform their agent well in advance of arrival.

142 **Communications**. — There is a broad railway system, owned by Canadian Pacific Railway and CN, which connects to railways in the Port of Québec. Trucking firms link the port to many regions in Canada and the United States.

143 Coastal shipping serves various parts of the Gulf of St. Lawrence, the Saguenay River and ports on the Atlantic Coast. From April to December, the St. Lawrence Seaway connects the Port of Québec to ports on the Great Lakes.

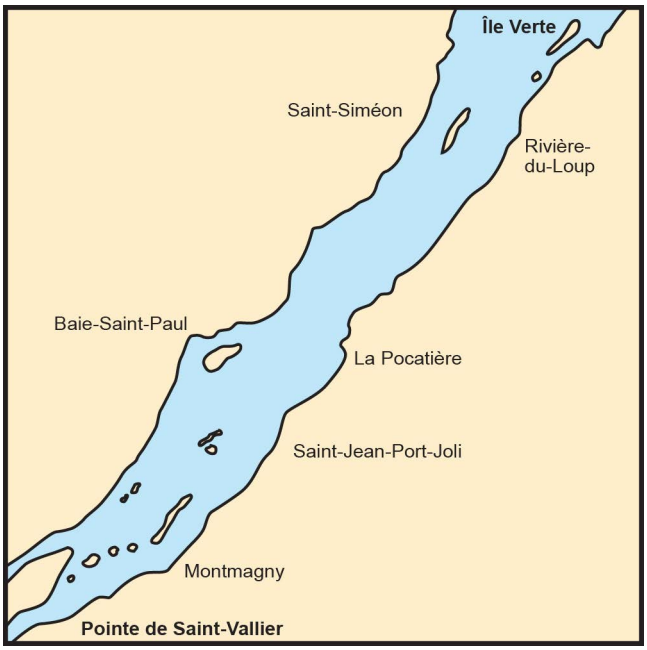
144 International Airport Jean-Lesage, at Ancienne-Lorette, links Québec City with most major cities as well as remote locations.

145 **Note**. — The St. Lawrence River, above Québec City, is described in booklet *ATL 112 — Cap-Rouge to Montréal and Richelieu River*.

Chapter 3

Chenal du Sud

Île Verte — Pointe de Saint-Vallier



General

Charts 1320, 1234, 1233, 1317

1 **Limits**. — This chapter describes the St. Lawrence River, from Île Verte to Pointe de Saint-Vallier passing through Chenal du Sud.

2 **Coast**. — In this area the south shore of the St. Lawrence River is generally low and flat. Low hills and mountains are visible in the background, while the intermediate lands are cultivated and inhabited in places. The shore is a succession of coves and points, bordered with mud and clay banks strewn with boulders, sometimes extending a good distance offshore.

3 From Île Verte, the St. Lawrence River is strewn with islands and islets owned by various private organizations. Several islands are also protected by migratory bird sanctuaries or national wildlife areas. There are facilities for the conservation of wildlife and cultural resources however, access to these islands and recreational activities are restricted. Mariners wishing to visit must obtain information from the responsible organizations.

4 **Secondary shipping route**. — Chenal du Sud is not recommended for commercial shipping. Up to Pointe de Saint-Vallier the channel is shallow and strewn with islets and **shoals**. The channel is marked by buoys and at Traverse de Saint-Roch *(47°23'N, 70°15'W)* has a least width of 0.25 mile between the 10 m contour lines. Navigation in the vicinity of Traverse de Saint-Roch is difficult and local knowledge is required.

5 **Least depths** of up to 0.9 m from the charted depths are reported outside the main shipping channel. The area affected is downstream from latitude *47°05'N* to the limits of *Chart 1317*.

6 For upbound and downbound vessels, the following tables list the **calling-in-points** of the *Marine Communications and Traffic Services (MCTS)* in the St. Lawrence River. For more information mariners should consult the *Annual Edition of Notices to Mariners*. It should be noted that the local routine expression "Stay to the north", used in the St. Lawrence River communications, means to hug the "north shore" or the starboard limit for vessels navigating upbound. By agreement, an upbound vessel on the St. Lawrence River considers the "north

shore" to be on its starboard side while the "south shore" is considered to be on its port side.

7 **Tidal streams**. — The streams are similar to those in Chenal du Nord for **eddies** and **tide rips** encountered in some areas; consult the paragraph on tidal streams under "General" in Chapter 1. In Traverse de Saint-Roch the tidal streams attain their greatest strength, an **ebb** rate up to 8 knots, at spring tides. For more information mariners should consult the *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières* and other charted information concerning currents and tidal streams. There are also Current Tables for Traverse de Saint-Roch available in the *Canadian Tide and Current Tables, Volume 3*.

8 The hourly surface currents forecasts for the Estuary and the St. Lawrence River are available on the *St. Lawrence Global Observatory* Web site at http://www.ogsl.ca/ (click on the *Visualization Tools* tab and *Ocean Forecasts*). You can obtain hourly details of the direction and speed of surface currents forecasted for the next 48 hours.

9 For information on water levels, mariners should refer to the *Canadian Tide and Current Tables* and the hydrograph shown on the charts. In addition, a network of digital water level gauges is installed along the St. Lawrence River. This system, called *SINECO (Coastal and Ocean Water Level Information System)*, allows mariners to obtain instantaneous water levels at different sites as well as the prediction for the next few days. The most recent information on water levels can be obtained by contacting *MCTS* Centres by VHF or by visiting our Web site www.charts.gc.ca.

Table 3.1 Calling-in-Points, upbound vessels on the Chenal du Sud

No	Name	Distance (nautical miles) Between C.I.P.	Distance (nautical miles) Cumulative
5A	Les Escoumins	—	0
6 *	Haut-fond Prince	19	19
7	Île Blanche	9	28
8	Cap-aux-Oies / Saint-Roch	40	68
9	Sault-au-Cochon / Beaujeu	21	89
10	Saint-Laurent-de-l'Île-d'Orléans	27	116

* SE of Haut-fond Prince.

Table 3.2 Calling-in-Points, downbound vessels on the Chenal du Sud

No	Name	Distance (nautical miles) Between C.I.P.	Distance (nautical miles) Cumulative
10	Saint-Laurent-de-l'Île-d'Orléans	—	0
9	Sault-au-Cochon / Beaujeu	27	27
8	Cap-aux-Oies / Saint-Roch	21	48
7	Île Blanche	40	88
6 *	Haut-fond Prince	9	97
5B	Les Escoumins	13	111

* SE of Haut-fond Prince.

QUAI D'EN BAS ON ÎLE VERTE (2019)

10 **Saguenay—St. Lawrence Marine Park**. — The Saguenay—St. Lawrence Marine Park is committed to the protection and development of marine resources and covers the northern half of the estuary. It stretches from Les Escoumins wharf to Gros Cap à l'Aigle. Activities within the park, as well as the utilization of the facilities, are governed by regulations. Additionally, mariners must always abide the maximum speed limit of 25 knots when proceeding in the protected area of the marine park. For more details mariners should consult the charted information concerning the limits as well as the summary of the regulations shown in the Appendix or by visiting the marine park website: parcmarin.qc.ca/home.

11 **Anchorage** areas, described later in this chapter, are situated at the following locations:

- NE of Île aux Pommes *(48°07'N, 69°19'W, Chart 1320)*;
- Rade de l'Île Verte *(48°05'N, 69°24'W, Chart 1320)*;
- east of the reef called "Le Pilier de l'Île Blanche" *(47°58'N, 69°37'W, Charts 1234 and 1320)*;
- north of Rocher de Cacouna *(47°58'N, 69°30'W, Charts 1234 and 1320)*;
- NNE of Îles du Pot à l'Eau-de-Vie *(47°55'N, 69°39'W, Charts 1234 and 1320)*;
- off Îles du Pot à l'Eau-de-Vie *(47°52'N, 69°41'W, Chart 1234)*;
- SW of Îles de Kamouraska *(47°35'N, 69°55'W, Chart 1234)*;
- off Pointe aux Orignaux *(47°30'N, 70°03'W, Chart 1234)*;
- NW of Trois-Saumons *(47°11'N, 70°21'W, Chart 1317)*;
- off La Grosse Île *(47°01'N, 70°40'W, Chart 1317)*.

12 **Ice**. — Ice conditions are the same as for Chenal du Nord; consult the note on *ice* under "General" in Chapter 1.

13 During the winter, the lighted **buoys** marking Chenal du Sud are removed with the exception of the fairway buoy marking Passe de l'Île aux Lièvres and that is replaced by a **spar buoy**. Consult the *broadcast* and/or *written Notices to Shipping* for the list of changes to aids to navigation and the dates on which they occur.

L'ISLE-VERTE WHARF (ON THE MAINLAND) (2019)

14 A Canadian Coast Guard seasonal **Search and Rescue unit, located at Tadoussac,** serves the St. Lawrence River. Requests for assistance can be addressed at any time to the *Marine Rescue Sub-Center (MRSC Québec)* through VHF channel 16 (156.8 MHz) or on the frequency 2182 kHz via MCTS Centre, or by telephone 1-800-463-4393. When an emergency or distress situation occurs and the request for assistance cannot be transmitted through VHF channel 16 or the frequency 2182, it is possible for owners of certain cellular telephone models to dial *16 which will put them directly in contact with the nearest MCTS Centre. **It should be noted that it is not possible for the Canadian Coast Guard to trace the origin of calls for those using their cellular telephone and that some areas do not have cellular coverage.**

Île Verte to Pointe aux Orignaux

Chart 1320

15 **Chenal du Sud**. — This section of Chenal du Sud is preferred by some mariners, especially those who have local knowledge regarding the tidal streams; the tidal streams are not as strong as those in Chenal du Nord and nowhere is the water too deep for anchorage.

16 **Bancs de l'Île Rouge** is an extensive **shoal area** lying in the middle of the St. Lawrence River. **Île Rouge** is the summit of the shoal of the same name. Île Rouge **light** *(1770)* is near the centre of the island. For further details concerning the island and its light, consult Chapter 1 of this booklet.

17 There is a MCTS **calling-in-point** abeam of Île Rouge.

18 In the following text, high and low water refer to the tide at Pointe-au-Père. Between Île Rouge and Île Blanche, the tidal stream turns to **flood** 2 to

1 hour before high water and runs strongest at high water (HW) with mean tides, almost westerly and at a rate of 2.5 knots. The flood stream from Chenal du Sud passes nearby Île Rouge and sets toward the south portion of Batture aux Alouettes. This condition is most definite 1 hour before to 1 hour after HW.

19 Commencing approximately 3 hours after HW, in the vicinity SE of Île Rouge and over to the west end of Île Verte, the first of the **ebb flow** comes from Chenal du Sud. Two hours later, the ebb of Chenal du Nord passes between Île Blanche and Île Rouge, and until 3 hours after LW, the flow of Chenal du Sud turns toward Île Verte. Approximately 1.5 miles SE of Île Rouge the rate of flow with mean tides, 30 minutes before to approximately 1 h 30 min after LW, is about 5 knots, and with large tides may attain 6 to 7 knots. The maximum ebb flow is one hour following low water (LW). Parallel to the shore of Île Verte the ebb rate attains 3 knots with mean tides and is strongest around the time of LW. The stream sets strongly NE over the reefs extending from the lower end of the island.

20 With the change of tidal streams, heavy **tide rips** are generated in a line drawn approximately from the east end of Île Verte to Battures de l'Île Blanche, varying their position along this line as the stream sets eastward (ebb) or westward (flood). For more information mariners should consult the publication *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières* and other charted information concerning currents and tidal streams.

21 The municipality of **Notre-Dame-des-Sept-Douleurs**, with a population of 36, extends over the whole length of **Île Verte**. The island, approximately 6.5 miles long, is situated about 3 miles SW of Île aux Pommes. The NE point of the island consists of a rocky ridge which at high water forms a series of islets about 7 m high. The NW coast of the island is composed of low wooded lands fringed by rocky ridges. There are low, cultivated and inhabited plains on the SE coast of the island. **Pointe du Bout d'en Haut** is low and grassy.

22 At the locality of **La Richardière**, on the SE side of Île Verte 1.7 miles from the NE end, there is a L-shaped public **wharf** *(Quai d'en Bas)* with an outer face of 29 m on the east side. The wharf is 85 m long and dries completely at low water. There is a **ramp** used as a landing pier for the ferry on the SW side of the wharf.

23 A **marina** *(Marina du Gros Cap)* is on the east side of *Quai d'en Bas* and has floating docks. The marina is accessible at high water only and local knowledge is required. Many marina services are available.

24 Île Verte **light** *(1761)* is shown from a white tower with a red upper part, situated on the NW shore, on the NE side of the island *(48°03'N, 69°25'W)*. The point is low and appears to be detached from the island when seen at a distance from the NE.

25 A seasonal **light** *(1762)* is shown from a tower on the end of the *Quai d'en Bas* of Île Verte *(48°02'N, 69°24'W)*.

26 **Landmark**. — • A private white beacon is situated SE of the Île Verte light *(1761)*.

27 Another public wharf (Quai d'en Haut) is at the SW end of the island on the same side. There is also a launching ramp.

28 **Rade de l'Île Verte** is north of the NE point of the island and has good **anchorage**. A good berth is in 10 m of water with the Île Verte light *(1761)* bearing 214°, distant 1.9 miles; the holding ground is stiff mud. Smaller vessels can anchor closer to the island.

29 The village of **L'Isle-Verte**, with a population of 1,294, is on the south shore abeam of Île Verte; there is a church with a spire. The shore NE of the village is low and bordered by grassy swamps. Earth cliffs, 15 to 30 m high, are in the background of the village.

30 L'Isle-Verte public **wharf**, which dries completely, has an outer end of approximately 90 m long. The north end of the wharf is fringed with rocks on all sides which forms a jetty with **daybeacons**. A narrow and tortuous channel leads to the wharf. Between may and novembrer, the channel is identified with buoys.

31 A **ferry ramp** and a ramp are located on the SSW face of the wharf.A seasonal **ferry** (cars and passengers) plies between the mainland and Île Verte during high tides only. **Floating docks** are available for fishermen and small craft on the SW side, but it is recommended not to anchor there when the ferry is in operation. A marina (Marina du Gros Cap) is also available for small craft, on the NE side of the wharf, in a drying area. This geographical area includes a national wildlife area and a migratory bird sanctuary (Environment and Climate Change Canada); access regulations apply to these protected areas.

32 In the following text, high and low water refer to the tide at Pointe-au-Père. The **flood stream** at mid-channel, between the reef called "Le Pilier de l'Île Blanche" and Le Gros Cacouna, sets up channel 2 to 3 hours after low water. At mean tides the flood stream attains a rate of 2 knots.

33 At the same location the stream turns to **ebb** approximately 2 hours after high water. The rate varies from 2 to 4 knots one hour before low water and the

PORT OF GROS-CACOUNA (2019)

stream sets down channel, then turns towards Île Verte when joined by currents south of Île Rouge.

34 **Île Ronde**, 23 m in elevation, lies on sand and mud flats nearly 1.5 miles WNW from the outer end of L'Isle-Verte wharf.

35 **Cacouna-Est** is a hamlet on the south shore 4 miles above L'Isle-Verte. There is a public **wharf**, drying at low water, which offers dockage alongside the 10 m long outer face. A private heliport is located near the wharf.

36 Four **submarine cables** are laid between Cacouna-Est and Île Verte. Mariners are cautioned not to anchor in the vicinity of these cables.

37 On the SE shore, near the SW end of Île Verte, a wharf (Quai d'en Haut) and a launching ramp are accessible for small craft.

38 **Rocher de Cacouna** is a bare rock 7 m in elevation, situated 0.3 mile west of the NE point of Le Gros Cacouna.

39 There is good **anchorage** with depths of 13 to 14 m between the SW end of Île Verte and Rocher de Cacouna, the latter bearing 167°, distant 0.7 mile; the anchorage has mud bottom and is protected from easterly winds. Small craft can anchor in depths of 7 m, 0.3 mile NE of the previous anchorage position, thereby escaping the heavy tidal eddies which are occasionally experienced in the outer anchorage.

40 **Le Gros Cacouna**, 80 m in elevation, lies with its NE end 2 miles south of Île Verte. This peninsula is joined to the south shore by swampy grasslands crossed by a causeway. Le Gros Cacouna is wooded and faced by cliffs along the NW and south sides. It is very **conspicuous** as it stands out clearly against the gradual rise of the mainland.

Port of Gros-Cacouna

Chart 1320

41 **Port de Gros-Cacouna** is a harbour enclosed with breakwaters at the SW end of Gros Cacouna. The navigable entrance between the breakwaters is 170 m wide. Leading lights and lateral buoys mark the entrance. A 282 m long wharf runs along the ESE side of the harbour. Refer to current chart for depths. The port is managed by *Transports Québec* and the harbour master has an office on site, telephone: 418-867-1784 and 418-868-9920.

42 Due to **silting**, mariners are cautioned that depths may be less than those shown on the chart.

43 Port of Gros-Cacouna **leading lights**, in line bearing 082°, are situated on the mainland east of the harbour *(47°56'N, 69°29'W)*. Each of these lights *(1824.1, 1824.2)* is shown from a tower with a fluorescent-orange daymark and black stripe; the lights are visible only when in alignment.

44 Port of Gros-Cacouna North and South **lights** *(1824.3, 1824.4)* are each shown from a tower on the outer ends of the breakwaters *(47°56'N, 69°31'W)*.

45 Port of Gros-Cacouna is open year-round; Canadian Coast Guard icebreakers ensure access in winter. In 2005, the port handled 323,000 tonnes of general cargo, primarily lumber and pulp and paper.

46 **Pilotage** is compulsory. Inbound vessels are boarded by pilots at Les Escoumins pilot station (Anse aux Basques, *48°19'N, 69°25'W*) for the passage to Port of Gros-Cacouna. A vessel, with a minimum deadweight tonnage of 17,500 t, arriving or departing, is required to have a harbour pilot onboard; however, any vessel can request the services of a harbour pilot.

47 The master of a vessel that is to depart from Port of Gros-Cacouna must give a first notice of departure 12 hours before the estimated time of departure (ETD) to a *MCTS* Centre and a final notice confirming or correcting the ETD at least 6 hours before the ETD. Communications should be made by telephone to the Pilot Dispatch Centre at 1-800-361-0747 or 1-866-674-2752. For further information concerning pilotage, consult the Annual Edition of Notices to Mariners. Furthermore, the master of a ship that is to make a movement to depart a wharf or mooring must give notice to the MCTS Centres by VHF at least **15 minutes** prior to movage in order to obtain authorization.

48 **Arrival information**. — Port of Gros-Cacouna is a **customs** port of entry but not a quarantine station; however, deratting certificate extensions can be issued at the port. For details on *Quarantine Regulations*, consult the booklet *ATL 100 — General Information*.

49 **Regulations**. — The port is under the jurisdiction of Transport Québec. Vessels manoeuvring or otherwise underway, berthed alongside or at anchor in Port of Gros-Cacouna, are subject to the *Public Ports and Public Port Facilities Regulations*.

50 The harbour master has full powers over vessels in the harbour and may order vessels to move, use tugs, berth, or anchor in designated locations.

51 No vessel in a public port shall navigate at a speed exceeding 7 knots, or such other speed as may be set out in the *Annual Edition of Notices to Mariners*, when passing port facilities, works under construction, another vessel or within 300 m of the shore.

52 Masters of vessels are regulated with respect to mooring and anchoring procedures and to cargo-handling operations. There are specific vessel regulations for the carriage and handling of explosives and dangerous goods, as well as rules to be observed for the prevention of fire. Mariners should consult the *Public Ports and Public Port Facilities Regulations*.

53 **Harbour services and facilities**. — Located adjacent to the wharf is warehouse of 2,800 m^2. Various types of mobile cranes are available.

54 **Supplies of fuel, water and provisions**. — Fresh water and provisions are available on site. Deliveries of fuel, diesel and lubricating oil can be made by truck.

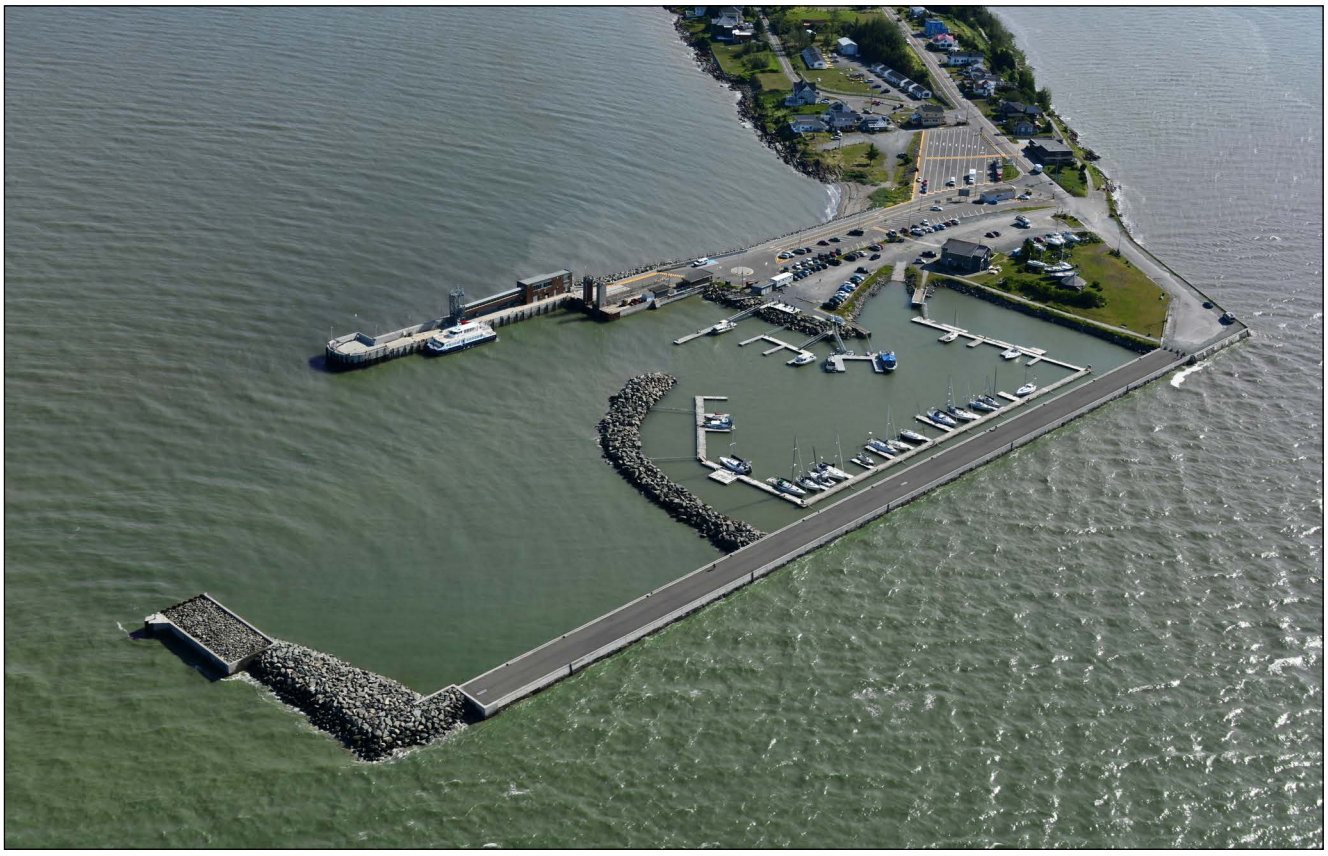
55 **Landmarks** — The Meunerie Cacouna, with its tall buildings, several grain silos and conveyors, is located opposite the port and is visible from offshore. Two **conspicuous towers** lie 1.6 miles east of the port.

56 The village of **Cacouna**, with a population of 1,864, is situated south of Gros Cacouna; there is a church with two spires 51 m in elevation.

Chart 1234

57 The St. Lawrence River between Île Verte and Cap aux Oies *(47°29'N, 70°14'W)* is divided into two navigable channels, known as Chenal du Nord and Chenal du Sud. Chenal du Nord is the main shipping channel. The channels are separated by an extensive flat — comprised of Île Blanche, Île aux Lièvres, and Récif de l'île aux Fraises with a few surrounding islets — which extends for approximately 22 miles in a NNE-SSW direction, from Battures de l'Île Blanche to Banc de l'Île aux Lièvres. For details concerning these islands and their **lights**, consult Chapter 1 of this booklet.

RIVIÈRE-DU-LOUP (2019)



58 This geographical area forms the Îles de l'Estuaire National Wildlife Area, which includes Île Blanche, **Îles du Pot à l'Eau-de-Vie**, Île aux Fraises and Île le Long Pèlerin (*Environment and Climate Change Canada*); access regulations apply to these protected areas. Also in this area is the Île-aux-Lièvre biodiversity reserve (*Environnement et Lutte contre les changements climatiques Québec*).

59 There is a MCTS **calling-in-point** off Île Blanche.

60 There is **anchorage**, with depths of 11 to 13 m, 1.5 miles NE of the NE end of Île aux Lièvres.

61 **Brisants Barrett** are two small rocks NE of Banc du Milieu and marked by starboard hand light and bell **buoy** H56 *(1825)*. The rock situated to the NE is covered with 1.8 m of water and another has 3 m of water over it.

62 **Chenal du Pot à l'Eau-de-Vie**, between **Banc du Pot à l'Eau-de-Vie** and Banc du Milieu, leads to Passe de l'Île aux Lièvres described in Chapter 1. Vessels may **anchor** anywhere in this channel as the holding ground is good throughout. In Chenal du Sud, **Hauts-fonds du Milieu** is marked by starboard hand light **buoy** H58 *(1825.5)*.

63 East of Île aux Lièvres are **Îles du Pot à l'Eau-de-Vie** 1.7 miles south of the NE end of Île aux Lièvres; they are joined together at low water.

64 These islets are wooded and fringed with rocks; the west islet of this group is the highest with an elevation of 40 m. There is good anchorage for small craft sheltered from easterly and westerly gales; there are good **anchorage** berths on either side of the islets. A submerged **rock** lies approximately 0.2 mile NE of the islets.

65 **Landmarks** — A building, surmounted by a white tower with a red upper part, which is also the disused lighthouse, located on the east end of the east islet *(47°52'N, 69°41'W)*.

66 In Chenal du Sud, the rate of the **tidal streams** varies from 2 to 3.5 knots. Off Rivière-du-Loup, the **ebb tidal stream** sets strongly around the bay and along the south side of Pointe de la Rivière du Loup public wharf. At the end of the wharf, strong tide rips are generated with strong northerly winds combined with an ebb stream.

67 There is **spoil ground** on the SE side of Chenal du Sud, 4 miles upstream of Port of Gros-Cacouna. Mariners should not attempt to navigate through this area.

68 **Pointe de la Rivière du Loup** is on the south shore approximately 5 miles above the Port of Gros-Cacouna. There is a chapel with a steeple, barely visible, situated 0.7 mile NE of the point. A **wharf** 80 m long is for **ferry** use (seasonal) — cars and passengers — which plies between Rivière-du-Loup and Saint-Siméon. There are also several **floating docks** and **landing piers** for tour boat activities, located SE of the wharf. In addition, a 366 m long jetty extends west of the point.

69 A private **light** is at the outer end of the jetty.

70 A **marina** *(Club nautique de Rivière-du-Loup)*, protected by a breakwater to the west, is situated between the ferry wharf and the jetty. A **ramp** is located at the marina. Many marina services are available.

71 Due to **silting**, mariners are cautioned that depths may be less than those shown on the chart. Continual silting occurs especially at the entrance of the marina and mariners should contact the marina clubhouse for the latest information about depths.

72 Pointe de la Rivière du Loup **light** *(1826)* is shown from a tower on the outer end of the ferry wharf *(47°51'N, 69°34'W)*.

73 The town of **Rivière-du-Loup**, with a population of 19,507, is approximately 0.5 mile inland on the hill SE of the point. There are three conspicuous churches; a variety of supplies can be obtained in town. A hospital is also located in town. The land in the vicinity of Rivière-du-Loup consists of a series of ridges that are parallel to the river and separated by cultivated valleys. In the valley east of Pointe de la Rivière du Loup an isolated hill rises to an elevation of 83 m; from the west the hill appears as a sharp cone. The shore ridges, all of which are faced by cliffs, extend 5.5 miles south to Notre-Dame-du-Portage.

74 **Landmarks**. — • A church with a steeple, 59 m in elevation, is situated at the head of the town. • An illuminated cross 22 m high is 0.7 mile SE of the above-mentioned church. • A microwave tower with an elevation of 188 m stands 0.7 mile SSW from this cross. • Behind the town two other churches with spires stand on the summit of the ridge.

75 The municipality of **Notre-Dame-du-Portage**, with a population of 1,151, is 5 miles SSW of Pointe de la Rivière du Loup; there is a church with a spire. Two radio **towers** and an aeronautical **light** are farther inland. A rock-filled jetty with a landing pier is situated at the head of the village; a **ramp** is at the inner end on the NE side of the jetty.

76 On the south shore of the St. Lawrence River, from Notre-Dame-du-Portage to La Pocatière *(47°22'N, 70°03'W, Chart 1233)*, the foreshore is obstructed by a significant amount of **fishing gear** and most of the locations are shown on the chart. Mariners are requested to proceed with caution in this area.

77 Port hand light and bell **buoy** H63 *(1831)* is moored on the SE side of Chenal du Sud to pass off **Battures des Pèlerins**.

78 **Les Pèlerins** form a group of five **islands** with some **rocks** situated on the SE side of Chenal du Sud, 5.5 miles SW of Notre-Dame-du-Portage. This geographical area includes a national wildlife area , La Réserve nationale de faunes des Îles-de-l'Estuaire (*Environment and Climate Change Canada*); access regulations apply to these protected areas. **Le Long Pèlerin** is a narrow island, partially wooded and approximately 2 miles long; its NE end rises up to 35 m in elevation.

79 Long Pèlerin **light** *(1832)* — seasonal — is shown from a tower situated at mid-island, beside the old lighthouse *(47°43'N, 69°45'W)*.

80 **Le Gros Pèlerin**, the highest island of the group, is composed of grey rock partly covered with grass and stunted trees in the hollows. The extremities of the island rise to rounded hills of about 50 m in elevation. **Le Pèlerin du Milieu** is partly wooded and 50 m in elevation; a **rocky foreshore** connects it to **Le Pèlerin du Jardin**, a smaller island 30 m in elevation. **Le Petit Pèlerin**, 27 m in elevation, is the most southerly island of the group and is almost linked to Le Long Pèlerin. A narrow **passage** leads into a small craft **anchorage** situated between Le Long Pèlerin and Le Pèlerin du Jardin; the anchorage is well protected but local knowledge is required.

81 The village of **Saint-André**, with a population of 658, is on the south shore abeam of Le Petit Pèlerin; there is a church with a spire. **Pointe Saint-André**, situated 0.7 mile above Saint-André, is a round and rocky peninsula, 40 m in elevation, with a few stunted trees.

82 **Îles de Kamouraska** form a group of five wooded islets and bare rocks extending approximately 2 miles offshore. They run parallel to the south shore and are joined to it by a drying flat. **La Grande Île**, the NE islet of this group, is partially wooded with an elevation of 33 m. This geographical area includes a national wildlife area, réserve nationale de faune des Îles-de-l'Estuaire (*Environment and Climate Change Canada*); access regulations apply to these protected areas.

POINTE AUX ORIGNAUX WHARF (2019)

83 La Grande Île **light** *(1838)* — seasonal — is shown from a tower on the NE part of the island *(47°37'N, 69°52'W)*.

84 **Île Brûlée**, with an elevation of 28 m, is wooded and lies in the middle of the group. Île Brûlée and La Grande Île are steep-to on the NW side. **Île aux Corneilles** is a long narrow islet situated 0.7 mile south of Île Brûlée. On the summit of Île aux Corneilles, towards the SW end, there is a **conspicuous** cross with an elevation of 33 m.

85 The shore between Saint-André and the village of Kamouraska, 8.5 miles above, is flat, low and fringed by grassy swamps. There is a range of hills that rise abruptly close inland. Abeam of the NE part of Îles de Kamouraska, and connected by grassy swamps to the mainland are **Îlots de la Ferme**, which are rocky with an approximate elevation of 30 m.

86 The village of **Kamouraska**, with a population of 616 (2016), is 4 miles above Îlots de la Ferme; it has a church with a **conspicuous** spire 52 m in elevation. Close above the church, there are two public **wharves** that dry at low water. The downstream wharf is in ruin but there is a fonctionnal **ramp** on the NE side, close to the inner end. The upstream wharf is L-shaped and 110 m long.

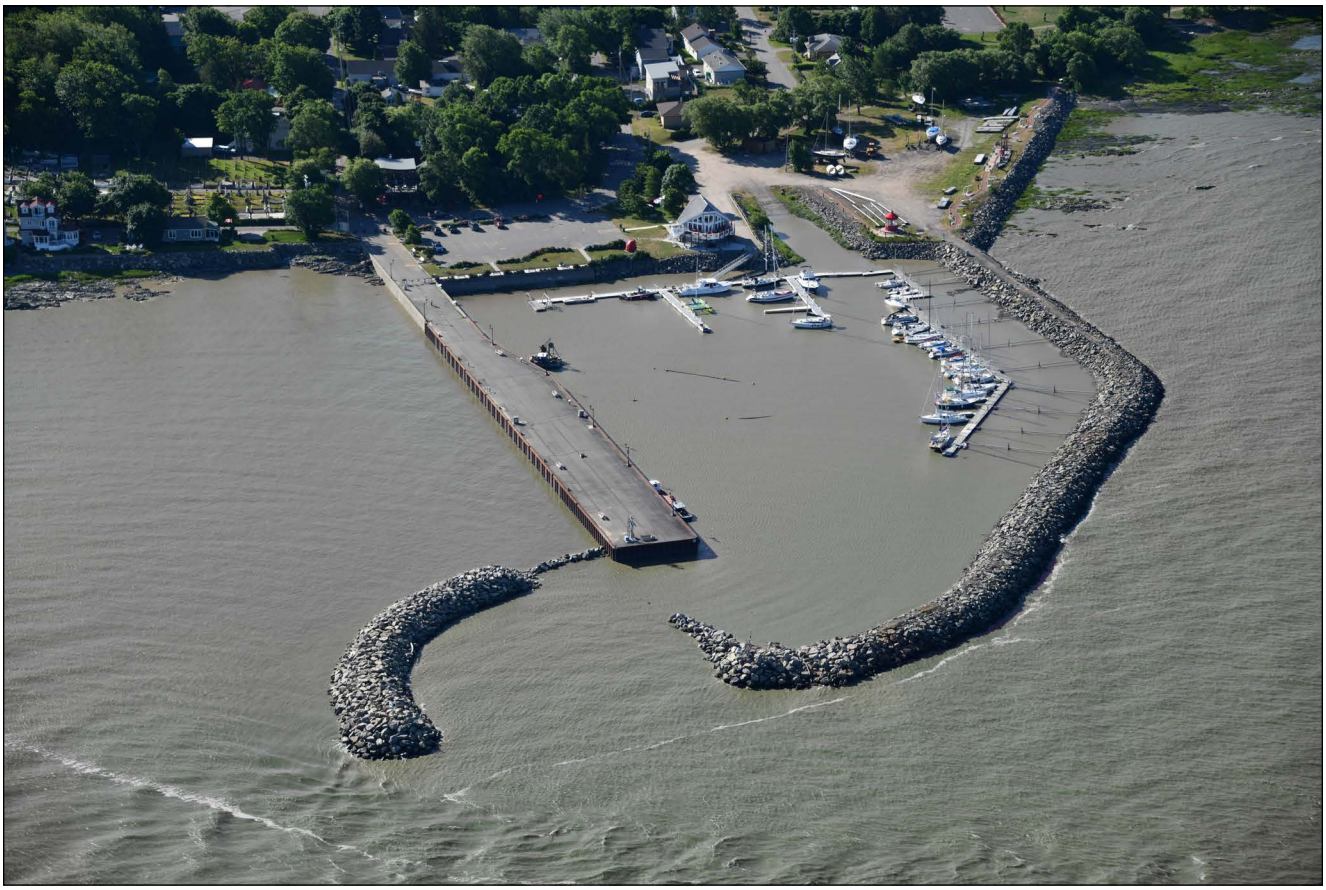
87 There is an **anchorage** off Kamouraska in 14 to 15 m of water with mud bottom. It is exposed to winds from the NW. The best berth is with Kamouraska church bearing 111° and La Grande Île light bearing 042°.

88 **Cap au Diable** lies 3 miles SW of Kamouraska. The north extremity of the cape is low and sandy, but it rises to a round wooded hill 70 m in elevation, making the cape **conspicuous**.

89 The municipality of **Saint-Denis-De La Bouteillerie**, with a population of 517, is on the low, flat lands south of Cap au Diable; it has a church with a spire, 86 m in elevation, showing over the shore ridges.

90 **Pointe Saint-Denis** lies 3 miles SW of Cap au Diable and forms the NE extremity of a low

SAINT-JEAN-PORT-JOLI (2019)



wooded peninsula. **Pointe aux Orignaux** is low and situated 1.7 miles SW of Pointe Saint-Denis. There is a **wharf** fringed with rocks on its NE and SW sides; the outer end is 15 m with a **ramp**. A hotel, a few houses and a small chapel are located close to the wharf.

91 There is **anchorage**, with mud bottom, 1.1 miles NW of Pointe aux Orignaux in 9 to 11 m of water.

Pointe aux Orignaux to Pointe de Saint-Vallier

Chart 1233

92 **Chenal du Sud**. — From Pointe aux Orignaux, Chenal du Sud trends SW to Traverse de Saint-Roch, then for the most part, it runs parallel to the south shore via Chenal de Beaujeu and Chenal de Saint-Thomas, joining the main shipping channel above Traverse du Nord. This secondary shipping route leads along the SE side of Archipel de L'Isle-aux-Grues. **This section of Chenal du Sud is not recommended for commercial shipping.** Except for Traverse de Saint-Roch, the tidal streams are more moderate than in Chenal du Nord. The **limiting depth** through the narrows of Chenal de Beaujeu Ouest is 7.9 m.

93 **Rivière Ouelle** flows into the St. Lawrence River south of **Pointe de la Rivière Ouelle**, 4 miles above Pointe aux Orignaux. This **conspicuous** point gradually reaches an elevation of 33 m, forming the west summit of a partially wooded ridge that extends some distance inland.

94 The municipality of **Rivière-Ouelle**, with a population of 970, is 2 miles upstream from a fixed road bridge, with a vertical clearance of 1.5 m, which spans the river; there is a church with two spires. Just east of the bridge, an **overhead cable** with a vertical clearance of 6.2 m crosses the river. A **marina** *(Parc nautique de la rivière Ouelle)*, equipped with a **ramp**, is situated 0.4 mile below the bridge. The marina is accessible at high water and local knowledge is required. There are private **beacons**

MUSÉE MARITIME DU QUÉBEC (2005)

from the river mouth to the marina. Many marina services are available.

95 The town of **La Pocatière**, with a population of 4,120, lies on the slopes of **Montagne du Collège**, a prominent round hill, situated 4 miles south of Rivière-Ouelle; there is a large college with a **conspicuous** cupola. Several isolated hills lie SW of Montagne du Collège.

96 Starboard hand light and bell **buoy** H68 *(1867)* is moored at the NE extremity of Haut-fond du Centre. The buoy marks the northern extremity of the boundary between Chenal du Sud and **Traverse du Milieu**. There is a MCTS **calling-in-point** abeam of this buoy.

97 **Traverse de Saint-Roch** is the portion of Chenal du Sud lying between **Hauts-fonds de Sainte-Anne** and **Hauts-fonds de Saint-Roch** to the east, and **Haut-fond du Centre** to the west. The channel at Traverse de Saint-Roch is marked by buoys and has a least width of 0.25 mile between the two 10 m contour lines.

98 In Traverse de Saint-Roch the **tidal streams** attain their greatest strength in the St. Lawrence estuary. The rate of the **ebb tidal stream** is 7 to 8 knots, and that of the **flood stream** 6 to 7.5 knots. These rates decrease gradually upstream to about 1.5 miles below Haut-fond du Chenal, where the ebb tidal steam attains a rate of 4.5 knots with spring tides. The rate of the ebb stream increases to 5 knots south of Les Piliers, and decreases to 3 knots at Île aux Grues, while the flood stream runs about 1 knot less at the respective locations.

99 For more information concerning tidal streams consult the publication *Atlas of Tidal Currents — St. Lawrence Estuary, from Cap de Bon-Désir to Trois-Rivières* and other charted information. There are also current tables of Traverse de Saint-Roch in the *Canadian Tide and Current Tables, Volume 3*.

100 The municipality of **Saint-Roch-des-Aulnaies**, with a population of 971, situated on the south shore 6.5 miles SW of La Pocatière; there is a church, with two spires, that stands close to the shore.

101 The shore from Saint-Roch-des-Aulnaies to Saint-Jean-Port-Joli, 7 miles upstream, is generally bordered by

ÎLE AUX GRUES (2019)

small rocky cliffs and wooded hills that rise to elevations of approximately 90 m.

102 The municipality of **Saint-Jean-Port-Joli**, with a population of 3,407, is situated 7 miles above Saint-Roch-des-Aulnaies; it has a church with two spires. The public **wharf** is 216 m long and dries; a curved breakwater extends north from the wharf.

103 The presence of a **strong current** during the ebb stream is reported at the end of the breakwater and may hamper the approach.

104 A **marina** *(Parc Nautique Saint-Jean-Port-Joli)*, protected by a breakwater, is above the public wharf; there is a **ramp** at the marina. Many marina services are available.

105 Saint-Jean-Port-Joli wharf **light** *(1875)* — seasonal — is shown from a tower situated on the outer end of the wharf *(47°13'N, 70°16'W)*.

106 *Parc Nautique Saint-Jean-Port-Joli* **leading lights** — private and seasonal — in line bearing 144½°, lead to the marina entrance. The front light *(1875.5)* is on the NE face of the wharf; the rear light *(1875.7)* is shown from a lamppost. Each light has a white daymark with a red stripe. The leading lights are visible only in line of range. There are **lights** *(1875.9, 1875.8)* on each end of the breakwaters, at the entrance to the basin.

107 **Haut-fond du Chenal**, with depths of 5.9 m, is a narrow shoal lying on the NW edge of Chenal du Sud, approximately 2.5 miles NW of Saint-Jean-Port-Joli wharf light. Chenal du Sud, abeam of Haut-fond du Chenal, narrows to a width of approximately 0.25 mile.

108 **Le Pilier de Pierre** is a small bare rocky islet situated 3.5 miles WSW of Saint-Jean-Port-Joli wharf. **Le Pilier de Bois**, 14 m in elevation, is a steep rocky islet 1.5 miles WSW of Le Pilier de Pierre. **Le Pilier du Milieu** lies between the two above-mentioned islets; this rock is especially **dangerous** because it covers when the tide reaches the height of 3.5 m. **Roche à Veillon** is a drying rock lying 0.3 mile SE of Le Pilier de Pierre; there are ruins of an old structure.

MONTMAGNY (2008)

109 Le Pilier de Pierre **light** *(1876)* — seasonal — is shown from a tower situated on the islet *(47°12'N, 70°22'W)*.

110 There is good **anchorage** off the south shore, along the shoal edge 1.7 miles south of Le Pilier de Pierre, with good clay bottom holding ground.

Chart 1317

111 **Least depths** of up to 0.9 m from the charted depths are reported outside the main shipping channel. The area affected is downstream from latitude *47°05'N* to the limits of *Chart 1317*.

112 The village of **L'Islet-sur-Mer** is situated on the south shore, 6.5 miles above Saint-Jean-Port-Joli. The *Musée Maritime du Québec* is located at the heart of the village. There is a **wharf** which dries completely; a **ramp** is situated on the NE side. In the seaward extension of the wharf, the remains of a former wharf can be seen over a distance of approximately 300 m. Between the Anse de Trois-Saumons and the Pointe de L'Îslet are migratory bird sanctuaries (Environment and Climate Change Canada) where access regulations apply.

The hamlet of **L'Anse-à-Gilles** is situated 4 miles above L'Islet-sur-Mer.

113 **Landmarks**. — • A church with two spires at L'Islet-sur-Mer. • A black cross with an elevation of 18 m stands on a cliff 1 mile NE of the church.

114 **Île aux Oies**, situated abeam of L'Islet-sur-Mer, is 2.8 miles long in a NE-SW direction, with a greatest width of 0.7 mile. The island is wooded and divided by a valley between two ridges that run the length of the island. **Batture de l'Île aux Oies** extends for 4.5 miles to SW of Île aux Oies and connects it with Île aux Grues. With spring tides, Batture de l'Île aux Oies is only slightly visible at high water.

115 **Chenal de Beaujeu**, which runs parallel to Batture de l'Île aux Oies, is marked by a north cardinal light **buoy** BEAUJ *(1879.5)*, moored NW of **Banc de Beaujeu**.

116 Île aux Grues **light** *(1887)* — seasonal — is on the mobile ramp structure of the Île aux Grues wharf *(47°03'N, 70°32'W)*.

ARCHIPEL DE L'ISLE-AUX-GRUES (LA GROSSE ÎLE IN THE FOREGROUND) (2005)

117 **Pointe aux Pins light** *(1891.2)* — seasonal — is shown from a tower and is situated on the point at the SW end of Île aux Grues *(47°02'N, 70°35'W)*.

118 There is a MCTS **calling-in point** in Chenal de Beaujeu, 2.6 miles downstream of Pointe MacPherson-LeMoine.

119 **Île aux Grues** is 3.3 miles long in a NE-SW direction and 0.7 mile wide. It is generally flat in outline, its greatest elevation being 46 m close to the SW end. The lower parts of the land are cultivated but the summit and the SW slope are wooded. **Pointe MacPherson-LeMoine** is the NE point of Île aux Grues.

120 A large concrete pier *(47°04'N, 70°31'W)*, in ruins, 0.5 mile south of Pointe MacPherson-LeMoine, is exposed.

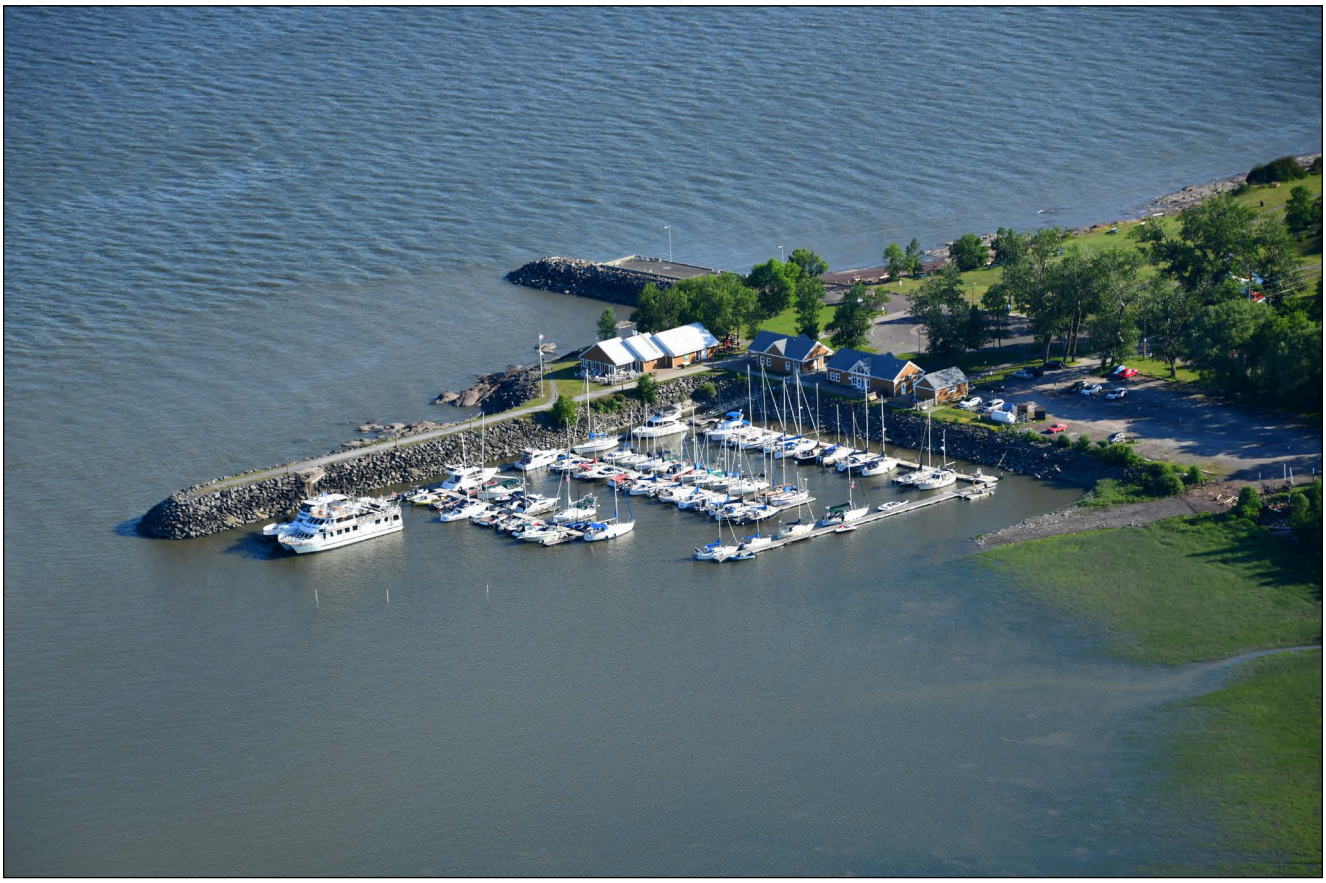
121 A public **wharf** is on the east side of the island 1.5 miles above Pointe MacPherson-LeMoine; it is 220 m long and 50 m wide at the outer end with a least depth of 3.3 m alongside. There is a mobile ramp for the **ferry** (cars and passengers) that plies between Montmagny and Île aux Grues. There are also **landing piers** situated on each side of the wharf, at the inner face. It includes a river station.

122 A **submarine** power **cable** crosses the channel from the SE side of Île aux Grues, 1 mile below the wharf to Cap Saint-Ignace on the south shore. Another **submarine cable** crosses the channel from Île aux Grues, 0.4 mile above the wharf to the south shore. Two additional **submarine cables** cross the channel 0.9 mile above the wharf. Mariners are cautioned not to anchor in the vicinity of these cables.

123 **Cap Saint-Ignace** is a rocky and wooded mound, 16 m in elevation, extending offshore; it is situated on the south shore, 6.7 miles above L'Islet-sur-Mer. This geographical area includes a migratory bird sanctuary (Environment and Climate Change Canada); access regulations apply to this protected area. The municipality of **Cap-Saint-Ignace**, with a population of 3,089, lies approximately 0.7 mile beyond the cape; there is a church with a spire.

124 Information light **buoy** MTGNY *(1890.6)*, moored 1 mile SE of Pointe aux Pins, indicates the approach channel to Montmagny. This channel, marked by buoys and a sector light, leads through **Banc de Saint-Thomas**, and dries at low water.

BERTHIER-SUR-MER (2019)



125 The Montmagny (seasonal) **sector light** *(1890)* marks the approach channel leading to Montmagny. It consists of a 30-minute white sector centred on the 168½° bearing. The light is shown from a tower that is at the inner end of the old wharf *(46°59'N, 70°33'W)*. A **channel marked** by buoys, some of which are lighted, starts about 0.7 mile from the public wharf. There are also (private) stakes fitted with daybeacons which lead to the Montmagny public wharf through a narrow channel. Another channel, marked by **buoys and a leading light (private)**, leads to the marina which is on the east side of the basin.

126 **Landmarks**. — • A church with a spire is situated near the junction of the two rivers that are described later in the text. • A hospital chimney stands approximately 1.7 miles WSW of the Montmagny church.

127 The town of **Montmagny**, with a population of 11,255, is on the south shore, 5 miles above Cap Saint-Ignace, where two rivers, **Bras Saint-Nicolas** and **Rivière du Sud**, join. Rivière du Sud, blocked by a dam that is approximately 9 m high, empties into a small bight called **Le Bassin**.

128 At Montmagny, there is an L-shaped public **wharf**, with an outer face 61 m long, which dries at low water. Diesel fuel and gasoline are available by truck. There is a mobile ramp on the east side and a landing pier on the south side of the wharf; when tides permit, it is used by the **ferry** that plies between Montmagny and Île aux Grues. There is a ferry terminal.

129 A former wharf, on the west side of Le Bassin close below the falls, is completely rock-filled. There is a **ramp** east of the falls near the ruins of a windmill. A **shipyard** (Les Chantiers Lachance) is situated on the SE shore of Le Bassin; shipbuilding and repairs of vessels up to 21 m in length can be carried out. The shipyard is equipped with a **ramp** and a **slipway** with a capacity of 75 tonnes. This geographical area includes a migratory bird sanctuary (Environment and Climate Change Canada); access regulations apply to this protected area.

130 A **marina** *(Marina de Montmagny)* is on the east shore of Le Bassin; there is a 79 m long floating dock and a campsite. Many marina services are available.

131 **La Grosse Île**, 4 miles WSW of Pointe aux Pins, is the highest island of **Archipel de L'Isle-aux-Grues**; it rises to an elevation of 52 m. La Grosse Île is a national historic site (Grosse Île and the Irish Memorial National Historic Site of Canada). The site is managed by Parks Canada and access to this protected area is regulated.

132 La Grosse Île **wharf** is situated on the SE shore, 0.3 mile below the SW end of the island; it is 153 m long and 26 m wide with a least depth of 6.5 m alongside the outer face. Access to the landing piers, situated on each side of the wharf, is restricted to boatmen in possession of a commercial permit from Parcs Canada. Therefore, mooring at La Grosse Île wharf is prohibited to all boats without a permit.

133 Between La Grosse Île and Île aux Grues, there are several islets separated by narrow **passages** which lead to "*Traverse du Milieu*". These fairways are strewn with **reefs** which dry at times and the **ebb tidal streams** are quite strong which makes navigation hazardous. Local knowledge is required when navigating in the vicinity.

134 **Haut-fond de la Grosse Île** is a rocky ledge with a depth of 2 m situated 0.5 mile SE La Grosse Île wharf; it is 1.1 miles long extending in a NE/SW direction. **Rocher de la Grosse Île**, with a depth of 1.8 m, lies 0.2 mile ENE of the wharf and a drying rock of 1.1 m lies 0.3 mile to the NNE. **Batture Sainte-Marguerite**, drying at low water, is an extensive isolated rocky shoal area extending south from **Île la Sottise** and Île Sainte-Marguerite.

135 There is good **anchorage** in 9 m of water between Haut-fond de la Grosse Île and Batture Sainte-Marguerite. Vessels may also anchor between La Grosse Île and Haut-fond de la Grosse Île.

136 In **Chenal de Saint-Thomas**, **Rocher Wye** lies approximately 3 miles west of Montmagny. Rocher Wye dries 0.2 m and is marked by port hand light **buoy** H121 *(1891.6)* moored 0.2 mile north of the **shoal**.

137 The municipality of **Berthier-sur-Mer**, with a population of 1 555, is situated on the south shore near **Pointe Verte**, approximately 8 miles SW of Montmagny; there is a church with a spire. A rock-filled wharf extends just below the entrance to **Trou de Berthier**; a **ramp** is located at the wharf.

138 A **marina** *(Le Havre de Berthier-sur-Mer)*, protected by a breakwater, is situated in Trou de Berthier; the approach to the marina is marked with private **buoys** and **leading lights**. There are perches indicating the drying area. Many marina services are available. A floating **wharf** used by tour boats is situated near the end of the breakwater. The approach to the small craft basin is restricted by a **shoal** with a depth of 0.3 m (2015). (See ENC *CA54HN6A*)

139 **Caution**. — Mariners are cautioned that depths may be less due to **silting**. The approach channel to the small craft basin is particularly subject to silting. Mariners should contact the marina clubhouse for the latest information about depths.

140 A **shoal**, with a depth of 0.1 m, is 0.4 mile NW of **Pointe de Berthier Est** *(46°57'N, 70°44'W)*.

141 An abandoned **submarine cable** crosses Chenal du Sud from Pointe Verte to La Grosse Île wharf.

142 **Île de Bellechasse** is a narrow rocky islet situated 1.5 miles WSW of Pointe Verte. The (seasonal) Bellechasse Island light (1920) rests on a grey tower that rises from the top of the island (46°56'N, 70°46'W).

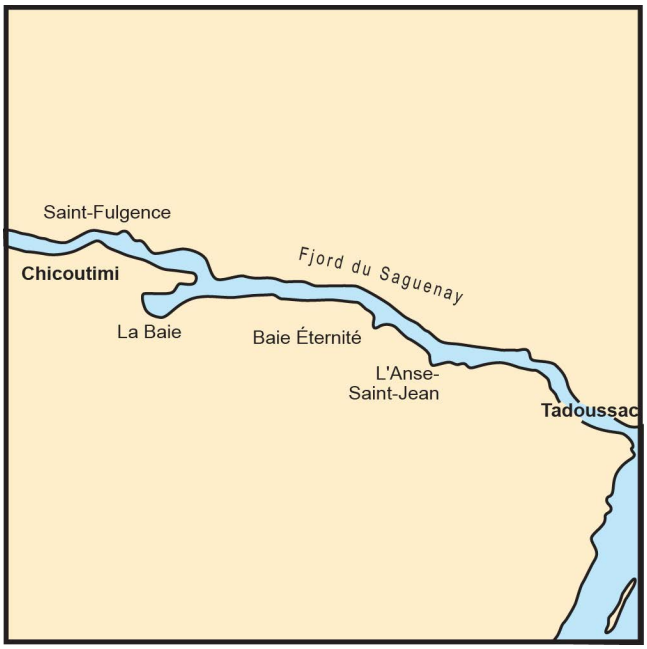
143 **Pointe de Saint-Vallier** marks the end of a **conspicuous** wooded bluff, 39 m in elevation and situated on the south shore, 1.3 miles above Île de Bellechasse. Further upstream is the **Banc de Saint-Vallier** and the **Anse de Saint-Vallier** ,which includes a migratory bird sanctuary (Environment and Climate Change Canada); access regulations apply to this protected area. The municipality of **Saint-Vallier**, with a population of 1,061, is 1.8 miles SW of the point; there is a church with a spire.

144 **A shipyard** (Le Chantier de la Rivière des Mères), accessible at high water, is situated in the SW part of Anse de Bellechasse in the mouth of the river; shipbuilding of small boats and repairs can be carried out and storage facilities can be provided.

145 **Note.** — The St. Lawrence River, above Pointe de Saint-Vallier, is described in Chapter 2 of this booklet.

Chapter 4

Fjord du Saguenay
Tadoussac — Chicoutimi



General

Charts 1203, 1202, 1201

1 **Limits**. — This chapter describes Fjord du Saguenay from Tadoussac to the upstream limit of Chicoutimi bridges.

2 **Coast**. — Fjord du Saguenay is a fiord, formed during the ice age, which flows into the St. Lawrence River between Pointe Rouge and Pointe Noire *(48°07'N, 69°43'W)*. For the first 50 miles the Saguenay has a width of 0.6 to 2 miles and flows between granite hills that are at right angles to the St. Lawrence River. The hills rise more or less abruptly from the river and form, in places, steep-to headlands over 305 m in elevation. These granitic formations are generally quite bare except for the wooded valleys through which tributary streams descend. These streams are filled with alluvial deposits of sand and clay.

3 Above Cap de la Mer *(48°27'N, 70°54'W)*, Fjord du Saguenay becomes Saguenay River. The north shore is inhabited and composed of low plateaus and drying flats; the mountains rise close inland. The slopes on the south shore are farmlands and less elevated than the north shore; the shore is composed of clay or sandy drying flats with large boulders.

4 **Main Shipping Channel**. — Fjord du Saguenay and the Saguenay River are approximately 93 miles in length and navigable for 68 miles, beginning 6 miles above Chicoutimi. The minimum vertical clearance, situated at Cap Sainte-Marguerite *(48°14'N, 69°56'W)*, is 47 m (when there is no ice on cables). From Pointe Noire to Baie des Ha! Ha! *(48°21'N, 70°49'W)*, there are significant depths of 183 to 278 m. These depths become rapidly shallower above Cap de la Mer, where the channel narrows and is marked by **buoys** and **leading lights**.

5 Above Chicoutimi, the channel is **shallow**, sinuous and suitable only for small craft; local knowledge is required.

6 A series of hydro-power dams and rapids intersect the Saguenay River which has its upstream limit at **Lac Saint-Jean**. The lake is a large body of water, 22 miles long and 18 miles wide, bordered by low and fertile land. It is characterized by a smooth and shallow bottom with shores

fringed by long sandy beaches, making it an ideal location for recreational navigation; there are several marinas.

7 Although the lake offers little danger, mariners should exercise caution near the mouth of its numerous tributaries. There are sandy banks and islands that are created and move with floods and storms. In addition, in the last few years, a shore stabilization project has been implemented using several rockfills and breakwaters along the lake shores; these infrastructures are not always shown on *Chart 6100* which covers Lac Saint-Jean.

8 A seasonal **shuttle** with **shore-to-shore service** for pedestrians connects several landing piers situated at stop-overs on the shores of the Saguenay and of the Lac Saint-Jean. There are also a variety of **tour boats** on the Saguenay, from Tadoussac to Chicoutimi, as well as on Lac Saint-Jean.

9 **Risk of Collision**. — Manoeuvrability of large commercial vessels is restricted. Additionally, the visibility from the wheelhouse of a large vessel is often limited. All small craft must keep out of the way of these vessels which have priority.

10 For upbound and downbound vessels, the following table lists the **calling-in-points** of the *Marine Communications and Traffic Services (MCTS)* in the St. Lawrence River. For more information, mariners should consult the *Annual Edition of Notices to Mariners*. It should be noted that the local routine expression "Stay to the north", used in the St. Lawrence River communications, means to hug the "north shore" or the starboard limit for vessels navigating upbound. By agreement, an upbound vessel on the St. Lawrence River considers the "north shore" to be on its starboard side while the "south shore" is considered to be on its port side.

11 **Tide and Tidal Streams**. — The tide is present in the Saguenay up to Barrage de Shipshaw, 6 miles above Chicoutimi. The waters of the Saguenay form two distinct layers; the fresher and warmer waters — reaching 18°C during the summer — cover the colder and saltier waters (1°C), which are situated below depths of 20 m. With mean tides, Fjord du Saguenay waters flow under the fresh surface waters of the Saguenay River to approximately Rivière au Caribou *(48°27'N, 71°00'W)*. The **surface streams** in the Saguenay are generally weak and run parallel to the shores.

12 The **flood tidal stream** enters Fjord du Saguenay at Tadoussac at a rate of 3 to 4 knots with spring tides. However, the body of water associated with the flood tidal stream sets under the Saguenay River flow and produces a noticeable front. The flood tidal stream in the river is almost unnoticeable above Baie Sainte-Marguerite, 14 miles above Tadoussac, except for a weak stream close to shore.

13 The **ebb tidal stream** varies from 3 to 5 knots, according to the width of the river, and is strongest near the mouth of the river, where with spring tides it sets at a rate of 6 to 7 knots. In this area, when the wind blows against the current, there is a strong **tide rip** and large **waves** may present a significant **hazard** for small craft. See pertinent remarks in Chapter 1, under *Current and tidal streams*.

14 The hourly surface currents forecasts for the mouth of Fjord du Saguenay are available on the *St. Lawrence Global Observatory* Web site at http://www.ogsl.ca/ (click on the *Visualization Tools* tab and *Ocean Forecasts*). You can obtain hourly details of the direction and speed of surface currents forecasted for the next 48 hours.

15 From Anse Saint-Jean to Cap de la Mer, the **surface current** is never strong. However, in many locations, especially during spring tides, sudden and variable currents occur below the surface to a depth of 20 m. These current variations are caused by obstructions such as rocks, shoals, the shoreline or a wharf, at which time the current may be decreased, deviated or increased. These currents are strong with the flood tidal stream but almost unnoticeable during the ebb stream.

Table 4.1 Calling-in-Points

No	Name	Distance (nautical miles) Between	Distance (nautical miles) Upstream	Distance (nautical miles) Downstream
6	Haut-fond Prince	—	0	57
S1	Île Saint-Louis	19	19	38
S2	Chicoutimi	38	57	0

16 Guidelines for the Transit of Wide Beam Vessels and Long Vessels are described in Notice C27A of the Annual Edition of Notices to Mariners.

17 From Cap de la Mer to the entrance of Rivière Chicoutimi, the **stream** is steady and even, in some areas setting onto the **shoals** but without any undercurrent. At spring tides a large body of water passes over the shoals in Chicoutimi at a very high rate during the **ebb tidal stream**, then falling suddenly into deep water leaving just a slight stream on the surface.

18 For information on water levels, mariners should refer to the *Canadian Tide and Current Tables* and the hydrograph shown on the charts. In addition, a network of digital water level gauges is installed along the St. Lawrence River. This system, called *SINECO (Coastal and Ocean Water Level Information System)*, allows mariners to obtain instantaneous water levels at different sites as well as the prediction for the next few days. The most recent information on water levels can be obtained by contacting *MCTS* Centres by VHF or by visiting our Web site www.charts.gc.ca.

19 **Marine refuge** - Upstream from Cap à l'Est and the Parc Marin du Saguenay as far as the limit of the Dubuc Bridge, there is a marine refuge dedicated to the conservation of corals and sponges. No human activity incompatible with the conservation of ecological components of particular interest may be carried out or planned in this zone under the Fisheries Act.

Saguenay—St. Lawrence Marine Park. — The Saguenay—St. Lawrence Marine Park is committed to the protection and development of marine resources and covers Fjord du Saguenay between Tadoussac and Cap à l'Est. Activities within the park, as well as the utilization of the facilities, are governed by regulations. Mariners must abide by the maximum speed limit of 25 knots in the park, with the exception of the mouth of the Saguenay River, where speed is reduced to 15 knots from May 1 to October 31. The mouth of the Saguenay is defined by the area between buoys S7 and S8 and the ferry docks between Baie-Sainte-Catherine and Tadoussac. For more details, mariners should consult the charted information concerning the limits as well as the summary of the regulations shown in the Appendix, or visit the marine park website: parcmarin.qc.ca/home.

21 **Anchorage** areas, described later in the text, are situated in the following locations:

- Baie de Tadoussac
  (48°08'N, 69°43'W, Chart 1203);
- Anse à la Barque
  (48°09'N, 69°44'W, Chart 1203);
- Anse de Saint-Étienne
  (48°12'N, 69°54'W, Chart 1203);
- SE of Île Saint-Louis
  (48°15'N, 70°01'W, Chart 1203);
- Anse Saint-Jean
  (48°15'N, 70°12'W, Chart 1203);
- Baie Éternité
  (48°18'N, 70°20'W, Chart 1202);
- Baie des Ha! Ha!
  (48°21'N, 70°52'W, Chart 1202);
- SE of Cap de la Mer
  (48°26'N, 70°52'W, Chart 1202).

22 **Ice**. — There is ice in the Saguenay from mid-December until the end of March. The ice covers the whole width of the fiord and forms fast ice attached to the shore. Vessels navigating up the Saguenay must be ice strengthened. Therefore, vessels can navigate up to Grande Anse *(48°24'N, 70°50'W)*, but icebreaker assistance from the CCG is sometimes necessary. At the mouth of Fjord du Saguenay the mixing of waters, combined with the vertical motion imparted by the tidal surge and the broader configuration of the channel, produce an ice free zone (polynya).

23 The lighted **buoys** are removed for the winter; consult the *broadcast* and/or *written Notices to Shipping* to confirm the dates of their removal.

24 Every year, from December through March, **fishing cabins** are temporarily placed on the ice in several bays and coves of Fjord du Saguenay, including Baie des Ha! Ha! To minimize the movement of these cabins, mariners are requested to take all appropriate action, especially by reducing their speed between Île Saint-Louis and Cap Éternité.

25 A Canadian Coast Guard seasonal **Search and Rescue unit,** located at Tadoussac**,** serves the St. Lawrence River and Fjord du Saguenay. Requests for assistance can be addressed, at any time, to the *Marine Rescue Sub-Center (MRSC Québec)* through VHF channel 16 (156.8 MHz) or on the frequency 2182 kHz via MCTS Centre, or by telephone 1-800-463-4393. When an emergency or distress situation occurs and the request for assistance cannot be transmitted through VHF channel 16 or the frequency 2182, it is possible for owners of certain cellular telephone models to dial *16 which will put them directly in contact with the nearest MCTS Centre. **It should be noted that it is not possible for the Canadian Coast Guard to trace the origin of calls for those using their cellular telephone and that some areas do not have cellular coverage**.

TADOUSSAC (2019)

26 **Magnetic Disturbances**. — There are magnetic disturbances at some places in the Saguenay River; these locations are mentioned later in this chapter.

Tadoussac to Cap à l'Est

Chart 1203

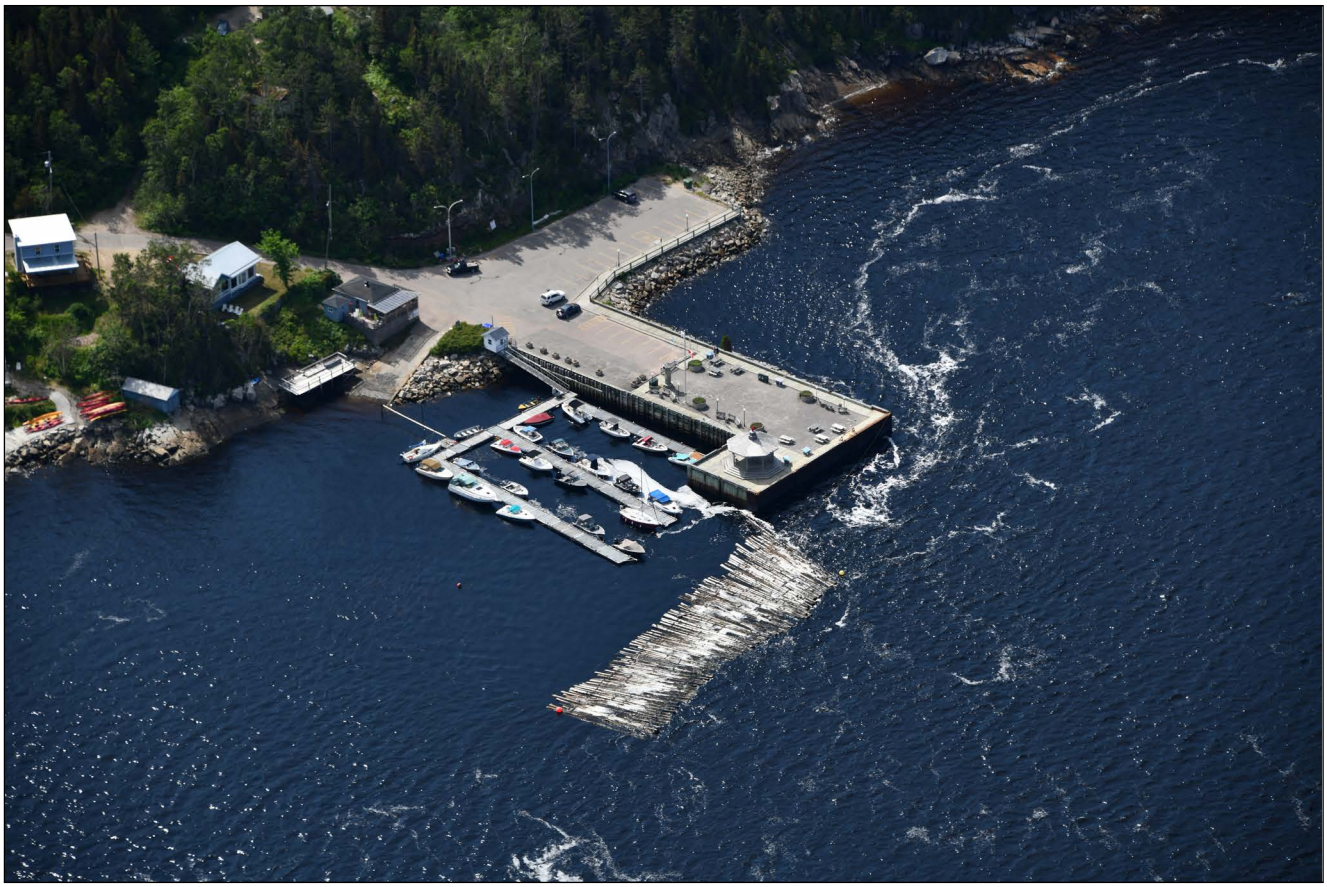
27 **Baie de Tadoussac** lies between Pointe Rouge and Pointe de l'Islet. The bay is well sheltered, but with NW winds the gusts down the river are extremely strong. There is **anchorage** for vessels in 30 to 33 m of water, hard sand and clay bottom. Small craft may anchor closer to the shore in depths of 13 to 15 m but caution should be exercised because debris of a wreck can be found.

28 The village of **Tadoussac**, with a population of 799, is situated at the head of the bay on semi-circular terraces of sand and clay. It is backed by slopes of granite and is frequented by tourists during the summer months. The village has an illuminated cross and three churches, one of which is the oldest wooden chapel in America having been erected in 1747. Tadoussac also has several hotels, one that is **conspicuous**, red and white in colour, surmounted by a cupola and is visible for many miles from the SE.

29 **Pointe de l'Islet** is a bare rocky point, 3 m in elevation, situated 0.6 mile west of Pointe Rouge. It is joined to a small peninsula, 28 m in elevation with a few stunted trees, and forms the west entrance point of Baie de Tadoussac. On the NE side of this peninsula, there is a public **wharf** with a 77 m long outer face and depths of 6.1 m alongside; a mobile ramp for pedestrians is located nearby. The SE section of the wharf, 31.5 m long, has depths alongside of 2 to 5 m.

30 Cathodic protection to control corrosion is present on the Tadoussac public wharf. When mooring to this wharf certain **operational procedures** must be observed to prevent damage to vessels. For general information and more information on the operational procedures, mariners should contact the port warden at 418-665-5243.

SACRÉ-COEUR (L'ANSE-DE-ROCHE AREA) (2019)



31 Tadoussac is home port for several excursion boats. Due to **heavy traffic** in the area, mariners are advised to exercise extreme caution when approaching the harbour, especially in reduced visibility. There is also a **floating dock** and a landing pier located on the NW face of the wharf; these facilities are used by the CCG cutter for Search and Rescue. Close to the west of the wharf there are other **floating docks** used by the excursion boats; they are connected to the wharf by a catwalk.

32 A **marina** *(Club Nautique de Tadoussac)* is located close NW of the public wharf. Many marina services are available. The small craft basin is equipped with floating docks.

33 Pointe de l'Islet **light** *(1783)* is shown from a tower on the point *(48°08'N, 69°43'W)*.

34 A **dry dock** is located approximately 0.3 mile NW of Pointe de l'Islet; it is used for wintering small craft and small vessels. Approach to the dry dock can only be made in the fall and spring at large tides.

35 **Anse à l'Eau** is a cove situated close west of Tadoussac; it includes a fish hatchery. There are **ferries** that maintain a year round, 24 hours a day, service between Anse à l'Eau and **Anse du Portage**, 0.5 mile west of Pointe Noire on the south side of the Saguenay; the normal track of the ferry is shown on the chart.

36 Public **wharves** at Anse à l'Eau and Anse du Portage are equipped with mobile ramps and are used exclusively by the ferries; there is a marine terminal. The **lights** at Anse à l'Eau *(1784)* and Anse du Portage *(1784.5)* are each shown from a tower situated on the outer end of the wharves *(48°08'N, 69°44'W)*. Anse à l'Eau light is equipped with a radar reflector.

37 **Anse à la Barque** is situated 1 mile above Tadoussac on the same side of the river and provides limited but well sheltered **anchorage** for small craft.

38 **Cap de la Boule**, 3.5 miles above Tadoussac on the north shore, is a high rounded hill

PETIT-SAGUENAY (2019)

forming a steep headland. Cap de la Boule **light** *(1785)* is shown from a tower on the cape *(48°09'N, 69°48'W)*.

39 **Overhead cables**, with a minimum vertical clearance of 89 m cross the river 0.5 mile west of Cap de la Boule.

40 **Anse de Sable light** *(1786)* is on the south shore of the river, approximately 2 miles west of Cap de la Boule *(48°09'N, 69°51'W)*.

41 Three coves including **Anse de Saint-Étienne**, with a total width of 1 mile, are on the west shore of the river. **Pointe de Saint-Étienne**, the downstream end of these coves, is situated 3.1 miles above Anse de Sable light. There is **anchorage** in the bay, along the edge of the drying flat, with depths of 18 to 55 m with clay bottom.

42 **Pointe aux Crêpes** is situated NNE of Anse de Saint-Étienne. Pointe aux Crêpes **light** *(1788)* is shown from a tower on the point *(48°13'N, 69°54'W)*.

43 **Anse de Roche** lies on the shore opposite to Pointe aux Crêpes. There is a public **wharf** 75 m long with a pierhead 31 m in length; there is a **ramp** and a landing pier adjacent to the wharf.

44 A **marina** *(Club de Yacht de Sacré-Coeur)* is located on the NE side of the hamlet **L'Anse-de-Roche** public wharf. Many marina services are available. The marina is exposed to northwesterly winds. Therefore a **floating breakwater** is located at the NW end perpendicular to the wharf.

45 L'Anse-de-Roche private **light** *(1789)* is on the wharf *(48°13'N, 69°53'W)*. **Anse à Pierrot light** *(1787)*, in position *(48°14'N, 69°54'W)*, is on the north shore 1.2 miles above the afore-mentioned wharf.

46 A radio **tower**, with an elevation of 30 m, is 0.3 mile SE of L'Anse-de-Roche wharf.

47 **Overhead** power **cables**, with a vertical clearance of 47 m cross the river about 2 miles above Pointe aux Crêpes. The towers on both shores are marked with red **lights**. (See the **CAP SAINTE-MARGUERITE CABLE — VERTICAL CLEARANCES** diagram in the Appendices.)

L'ANSE-SAINT-JEAN (2019)

48 **Île Saint-Louis** is situated on the south shore of the Saguenay, 5 miles above Pointe aux Crêpes. There is good **anchorage** between the south shore and the SE extremity of the island in 18 to 55 m of water with sand and mud bottom. Small craft can anchor closer to the island in 4 to 5 m of water.

49 Île Saint-Louis **light** *(1790)* is shown from a square tower on the north side of the island *(48°15'N, 70°01'W)*.

50 **Les Îlets Rouges** (**La Petite Île** and **Île Saint-Barthélemy**) are two steep-to islets situated on the north shore of the Fjord du Saguenay, near **Anse Gagnon**, 1 mile NW of Île Saint-Louis. There is **anchorage** for small craft NW of the east islet (Île Saint-Barthélemy) in 15 to 27 m of water.

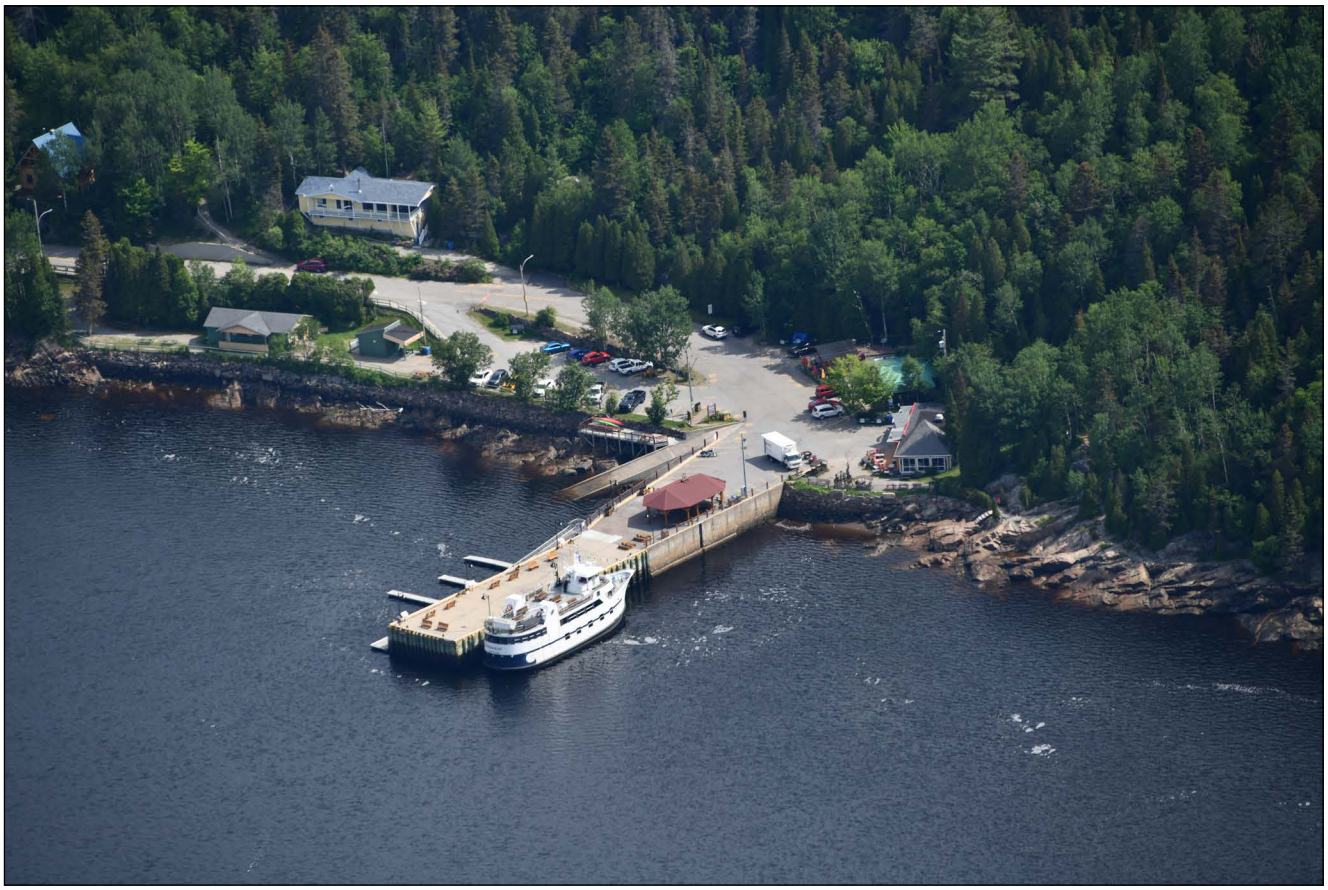
51 **Anse du Petit Saguenay** lies on the south shore of the Saguenay, 3 miles above Île Saint-Louis. A public **wharf** with an outer face 44 m long is situated at the extremity of a 325 m long coated jetty, which is at the west entrance point of the cove. A **floating dock**, joined to a **landing pier** and a **ramp**, is located on the downstream side of the wharf. Another **floating dock** is located further upstream on the jetty.

52 **Pointe Claveau** is situated on the north shore of the Saguenay, 2.8 miles above Les Îlets Rouges. There is an area of **magnetic disturbance** in the vicinity of Pointe Claveau. Pointe Claveau **light** *(1791)* in on the point *(48°16'N, 70°07'W)*.

53 **Anse Saint-Jean** lies on the south shore of the Saguenay with **Pointe au Boeuf**, its NW entrance point, 3 miles west of Pointe Claveau. There is a detached islet 0.2 mile SE of Pointe au Boeuf. A waterfall is visible in the spring or during heavy rain on the west side of the cove. In Anse Saint-Jean, off the drying flat, there is **anchorage** for small craft in 15 to 55 m of water with mud bottom.

54 The **wharf** of the municipality of **L'Anse-Saint-Jean** — population 1,201 — is situated on the south shore of the cove and is fringed with rocks forming a jetty with a landing pier. There is a **ramp** on the east side of the jetty.

SAINTE-ROSE-DU-NORD (2019)



55 A **marina** *(Club Nautique de L'Anse-Saint-Jean)* is located west of the jetty and floating docks are situated nearby. A floating **breakwater**, marked by private **lights** and two **daybeacons**, protects the floating docks. Many marina services are available. An outfall pipe extends from the shore close west of the marina.

56 **Anse de Tabatière light** *(1793)*, situated on the extremity of a point *(48°16'N, 70°12'W)*, is approximately 0.5 mile above and on the same side as Anse Saint-Jean.

57 **Overhead cables**, with a vertical clearance of 61 m cross the river just upstream of the Anse de Tabatière light.

Chart 1202

58 **Cap Éternité**, on the south side of the river, 4 miles above the Anse de Tabatière light, is the SE entrance point of **Baie Éternité**. There is good **anchorage** near the head of the bay, on the SW side, on water with mud bottom; there are also **mooring buoys**.

59 **Floating docks**, 80 feet (24 m) long and 20 feet (6 m) wide, are located on the NW side of Baie Éternité at its SW extremity and near the mouth of Rivière Éternité. One side of the floating docks is reserved for excursion boats while the other sides are available for boats on short visits.

60 **Cap Trinité** is the NW entrance point of Baie Éternité and it has the appearance of three steps when seen from upstream or downstream. A statue, 32 feet (10 m) high, is erected on the lowest step, approximately 400 feet (122 m) in elevation. A cross stands on the next step, about 700 feet (213 m) in elevation. The cape rises to an elevation of 1,500 feet (457 m).

61 **La Niche** is a **conspicuous** cavity in the cliffs situated on the south shore 1.5 miles above Cap Trinité.

62 Baie Trinité **light** *(1794)* is situated on the north shore opposite La Niche *(48°21'N, 70°21'W)*. There is no anchorage in **Anse des Fortin** and **Baie Trinité** as both have deep water and are exposed. There is a local **magnetic disturbance** in the vicinity of the light.

63 The municipality of **Saint-Basile-de-Tableau** is on the north shore 5 miles upstream of Baie Trinité Light; there is a chapel. **Le Tableau** is a **conspicuous** rocky cliff situated on the south shore opposite the municipality.

64 **Pointe Rouge (Cap Rouge)** is a **conspicuous** point on the north shore of the river, 2.7 miles west of Saint-Basile-de-Tableau. Cap Rouge **light** *(1795)* is shown from a tower on the point *(48°22'N, 70°32'W)*.

65 The municipality of **Sainte-Rose-du-Nord**, with a population of 439, lies along the shores of **Anse Théophile** 2.2 miles above Pointe Rouge. A church stands near the shore. South of the church, there is a public **wharf** 253 feet (77 m) long, with a pierhead 40 feet (12 m) in length. There is a **conspicuous** rocky cliff situated between Anse Théophile and **Anse à Cléophe (Anse Xavier)**. Anse Théophile can be used as an anchorage, but local knowledge is required.

66 A **marina** *(Halte Nautique Sainte-Rose-du-Nord)* is situated just north of the wharf; there is a 112 feet (34 m) long floating dock — used as a small craft landing pier — and a **ramp** at the marina. Many marina services are available.

67 **Anse à la Croix** is situated on the south shore of the river, 3.5 miles above Anse aux Érables. There is a local **magnetic disturbance** in the vicinity of Anse à la Croix.

68 **Cap à l'Est** lies on the north shore approximately 4.7 miles above Sainte-Rose-du-Nord. Cap de l'Est **light** *(1798)* is on the cape *(48°23'N, 70°42'W)*. The **Saguenay—St. Lawrence Marine Park**, committed to the protection and development of marine resources, extends downstream of Cap à l'Est.

Baie des Ha! Ha!

69 **General Information**. — **Baie des Ha! Ha!** is a deep natural harbour 6 miles long. Four rivers empty into the bay at its SW extremity. The harbour is open year round with berths for a considerable number of vessels, but it is exposed to easterly winds. Beginning at **Pointe du Fort**, situated 3 miles SW of Cap de l'Est, the land surrounding the bay is mostly cultivated. There is a sawmill 0.4 mile above Pointe du Fort.

70 The residential district of **La Baie**, part of the city of Saguenay, lies at the WSW extremity of the bay. La Baie includes the former municipalities of **Port-Alfred**, **Bagotville** and **Grande-Baie**. The aluminum manufacturing plant *Alcan* is located at La Baie. At Grande-Baie there is a church with a spire and a wharf. The wharf is rock-filled on its east and west faces which forms a jetty that ends with an outer face 66 feet (20 m) long and drying completely.

71 The harbour facilities of Baie des Ha! Ha! are administered by Port Saguenay: Port Saguenay, 6600 Quai-Marcel-Dionne Rd, La Baie, Quebec, G7B 3N9; telephone: 418-697-0250.

72 In 2005 4.7 M tonnes of cargo, such as bulk cargo (alumina and bauxite) and aluminum, were handled at the facilities of Baie des Ha! Ha!.

73 There is an area of local **magnetic disturbance** on the north side of Baie des Ha! Ha!

74 **Ice**. — The average thickness of the smooth shore-fast ice is 33 in (83 cm) with a record maximum thickness in 1972 of 40 in (102 cm). Freeze-up usually occurs at the beginning of December and the bay is completely ice covered around the middle of the month. Break-up begins during the last week of March with the bay clearing of ice about mid-April. One to four week variations in break-up and freeze-up can occur.

75 **Pilotage** is compulsory. Inbound vessels are boarded by pilots at Les Escoumins pilot station (Anse aux Basques; *48°19'N, 69°25'W*), for the passage to La Baie. A vessel, with a minimum deadweight tonnage of 50,000 t, arriving or departing, is required to have a harbour pilot onboard; however, any vessel can request the services of a harbour pilot.

76 The master of a ship that is to depart Port Saguenay must give a first notice of departure 12 hours before the estimated time of departure (ETD) to the pilot dispatch center and a final notice confirming or correcting the EDT 6 hours before the EDT. These notices are given by calling the pilot dispatch center at: 1-800-361-0747 or 1-866-674-2752. The master of a ship that is to make a movage within Port Saguenay must give notice 15 minutes by VHF to the *MCTS* prior to movage. For further information concerning pilotage, consult the *Annual Edition of Notices to Mariners*.

77 **Arrival Information.** — Baie des Ha! Ha! is a **customs** port of entry but not a quarantine station; however, Deratting Certificate Extensions or Deratting Exemption Certificates can be issued by Transport Canada. For details on the Quarantine Regulations consult ATL 100 — General Information. The fumigation of vessels is, however, within the jurisdiction of the Canadian Food Inspection Agency.

78 **Regulations**. — Baie des Ha! Ha! berths are under the control of Port Saguenay. Under the *Canada Marine Act*, vessels manoeuvring or otherwise underway in the Port of Saguenay, and also while at a berth or at anchor, are

LA BAIE (2019)

subject to the *Port Authorities Operations Regulations*. Mariners may obtain a copy of the regulations from the *Saguenay Port Authority*.

79 Regulations require that no vessel shall move in the port at a speed that may endanger life or property. *Saguenay Port Authority* has full authority over vessels in the port and may order vessels to move, to use tugs, to berth or anchor in locations in which it designates. Vessels must inform *Saguenay Port Authority* in advance of their intention to berth in the port.

80 Vessels are regulated with respect to cargo-handling operations including the usage of equipment and lighting in these operations. Also included are instructions for reporting in the event of accidents, cargo or gear lost overboard and safety requirements.

81 Specific vessel regulations are to be observed for carriage and handling of explosives and dangerous goods, as well as fire prevention.

82 All vessels proceeding into Baie des Ha! Ha!, west of Pointe du Fort, shall monitor VHF channel 9 (156.45 MHz) in accordance with the MCTS system. Berthing instructions are given on this channel.

83 The *Alcan* Company has its own specific regulations for vessels docking at Duncan and Powell wharves.

84 Port-Alfred private **leading lights** are in line bearing 262° and lead to Duncan and Powell wharves. The lights *(1799.2, 1799.3)* are each shown from a mast situated on buildings *(48°20'N, 70°52'W)* and are visible only when in alignment.

85 Bagotville wharf **light** *(1799.4)* is on a dolphin situated just SE of the wharf *(48°21'N, 70°53'W)*.

86 private **light** is shown from each of the outer corners of Powell wharf as well as at the outer end of Duncan wharf.

87 **Landmarks**. — • A church with a spire at Port-Alfred 0.5 mile WSW of the above-mentioned wharf. • The hospital situated 0.2 mile west of the Bagotville public

wharf. • A church with a spire at Bagotville approximately 0.3 mile SW of the same wharf.

88 Vessels awaiting berths can **anchor** off **Anse à Philippe** *(48°21'N, 70°53'W)*.

89 A **groyne**, submerged at high water during large tides, lies at the mouth of **Rivière à Mars** north of the Duncan wharf. An **outfall pipe** extends 755 feet (230 m) offshore, south of the Powell wharf, immediately south of a wharf in ruins.

90 Three private **lights** are situated on the groyne located at the mouth of Rivière à Mars.

91 At La Baie, Powell and Duncan **wharves** are operated by *Alcan*. All of these wharves are built on piles and berthing is difficult with NE winds. The following table shows the characteristics of these wharves.

92 A new cathodic protection system to control corrosion is in operation at Duncan and Powell wharves. This system includes **submerged** installations laid on the bottom, in three different areas near the wharves, connected with **submarine cables**. Refer to current chart for locations and depths of these areas. Mariners must take the necessary precautions during approach and berthing operations to avoid damaging these installations or vessels.

93 In the residential district of Bagotville, there is an L-shaped public **wharf** being used as a terminal for cruise ships. The outer end, on pilings, has a length of 656 feet (200 m) which is terminated at each end by a dolphin, connected by causeways. The **floating docks** situated on the west side of the wharf are used by excursion boats; fuelling and septic tank pumping facilities are also available. In 2003, the small craft basin was dredged to a depth of 9.5 feet (2.9 m). A **ramp** is adjacent to the wharf. Two private **lights** are located at the western end of the longest floating deck.

94 A **marina** *(Marina de la ville de La Baie)* is located in **Anse à Benjamin**, 0.8 mile NE of Bagotville wharf; there are a series of floating docks and a ramp. Many marina services are available. A **water intake** is located immediately west of the floating wharves.

95 **Supplies**. — Deck and engine stores are available; deliveries of fuels, diesel and other liquid fuels can be made by tanker truck. Fresh water and a variety of provisions are also available.

96 **Harbour Facilities**. — The **service** of **linesmen** for docking, departing, or for any vessel movement is provided by the *Alcan* Company.

97 Mobile **cranes** of various capacities are available with advance notice. There are warehouses for bauxite, silos for alumina and open spaces for coke, situated near the private wharves. The wharves are fitted with oil and water pipelines, power and telephone cables; they also have railway connections. Minor ship repairs can be made in local machine shops.

98 **Tugs** are mandatory for all vessels of more than 3,000 GWT that are docking or shifting at the Duncan wharf, and for all tankers of more than 5,000 GWT docking or shifting at the Powell wharf. Furthermore, regardless of the vessel's tonnage, the port's management may impose, at any given time, the use of tugs. *Alcan* operates two tugs, one 3000 HP, the other 2400 HP.

Table 4.2 La Baie: Wharves and Facilities

Berth	Length (m)	Depth (m) †	Remarks
Duncan Wharf 1 (Western half)	192	11.9	Unloading dry bulk cargo (450 t/h); Mobile Crane: 10 t; Railway
Duncan Wharf 2 (Eastern half)	194	11.9	Unloading dry bulk cargo (2,000 t/h); Railway
Powell Wharf 1 (Southern side)	173	10.0	Western half; General cargo
Powell Wharf 2 (Southern side)	173	11.0	Eastern half; General cargo; Two cranes: 5 t each; Shed: 4,633 m^2
Powell Wharf 3 (Pierhead)	67	10.1	Liquid Bulk Cargo; Bunker and caustic soda pumping stations
Powell Wharf 4 (Northern side)	147	11.0	Liquid Bulk Cargo; Two bunker pumping stations and one caustic soda pumping station Unloading fuel oil

† Depth below chart datum

GRANDE-ANSE MARINE TERMINAL (2019)

99 **Communications**. — The Roberval & Saguenay Railway connects La Baie to Arvida, where it joins the CN Railway. The provincial roadway system links La Baie with major cities. Bagotville (La Baie) has flights to Québec City and Montréal.

Cap à l'Est to Chicoutimi

Charts 1202, 1201

Port Saguenay

100 **General**. — **Port Saguenay**, administered by the *Saguenay Port Authority*, comprises the waters of the Saguenay above **Cap à l'Ouest** *(48°22'N, 70°45'W)* to below the downstream bridge at Chicoutimi. The channel above the bridge is very narrow and shallow. Port Saguenay includes four harbour operation sites.

101 The Fjord du Saguenay up to Grande-Anse Marine Terminal is open year-round; Canadian Coast Guard icebreakers ensure winter access. **Pilotage** is compulsory; consult the text that refers to pilotage in the section of Baie des Ha! Ha! In 2005, 311 000 tonnes of general cargo such as pulp and paper, lumber, liquid and solid bulk were handled.

102 The large city of Saguenay — with a population of 145 949 — was created by the amalgamation of surrounding municipalities. The residential district of **Chicoutimi** is situated approximately 15 miles above Cap à l'Ouest. Agriculture, lumber, pulp and paper, and aluminum industries are predominant in the surrounding area.

103 **Arrival Information**. — Granse-Anse Marine Terminal is a **customs** port of entry but not a quarantine station; however, Deratting Certificate Extensions or Deratting Exemption Certificates can be issued by Transport Canada. For details on the *Quarantine Regulations* consult *ATL 100 — General Information*. The fumigation of vessels is however within the jurisdiction of the *Canadian Food Inspection Agency.*

104 **Regulations**. — The applicable Regulations are the same as mentioned earlier for Baie des Ha! Ha!

105 Additionally, vessels manoeuvring or otherwise underway in the harbour shall at all times be under the

orders of the *Marine Communications and Traffic Services (MCTS)*. There is a speed limit of 7 knots within 2 miles radius of Port Saguenay property.

106 Except for an emergency anchorage, anchoring within the port limits is prohibited without the permission of the harbour master, and then only at the assigned location.

Chart 1202

107 **Pointe aux Pins** is the southern extremity of a high, rocky headland projecting from the north shore of the Saguenay. Pointe aux Pins **light** *(1799.5)* is on the point *(48°25'N, 70°50'W)*; it is shown from a tower with a fluorescent-orange daymark.

108 The cove situated immediately NNE of **Cap Jaseux** *(48°25'N, 70°49'W)* gives access to the Parc regional du Cap-Jaseux.

109 **La Grande Anse** is situated on the south side of Fjord du Saguenay opposite Pointe aux Pins; it has deep water close to shore and is relatively well sheltered from prevailing winds.

110 **Grande-Anse Marine Terminal** is 938 feet (286 m) long and it is marked by private **lights** at its extremities. Port Saguenay operates this terminal and its characteristics are described later in the harbour facilities table. There are storage tanks close above the wharf.

111 **Pilotage** is compulsory. A vessel, with a minimum deadweight tonnage of 17,500 tonnes, docking at the Grande-Anse wharf, is required to have a harbour pilot onboard; however, any vessel can request the services of a harbour pilot.

112 The municipality of **Saint-Fulgence**, with a population of 2,071, is situated on the north shore of the Saguenay, 3 miles above Pointe aux Pins. The municipality is at the base of **Cap de la Mer**. A **ramp** is located just NE of Cap de la Mer. An **outfall pipe**, 250 m long, extends from the shore 0.7 mile east of Cap de la Mer. A **crib**, drying at 1.4 m, lies at the outer end of the outfall pipe. The ruins of a submerged **crib** lie 0.6 mile SE of Cap de la Mer.

113 There is a MCTS **calling-in-point** 1.8 miles West of Pointe aux Pins.

114 A **spoil ground** area is located on the north side of the channel, 1.2 miles SE of Cap de la Mer. Mariners should not navigate in this area.

115 There is good **anchorage** in depths of 30 m or less, on the north side of the river, between Pointe aux Pins and a position east of the spoil ground.

Chart 1201

116 The natural deepwater channel of the river ends off Saint-Fulgence, 2 miles above Pointe aux Pins. From this point the **channel** becomes narrow and shallow and is no longer maintained by dredging; it is marked by **leading lights** and **buoys**. The channel courses are indicated on the chart.

117 Above Saint-Fulgence, the Saguenay assumes the usual character of a river with drying mud and sand flats and **shoals** with large boulders on both sides; the water is fresh at low water.

118 There is a wildlife refuge (*Environnement et Lutte contre les changements climatiques Québec*) in the area of Battures de Saint-Fulgence; access regulations apply to this protected area.

119 The channel from Saint-Fulgence to the area adjacent to the Chicoutimi wharf is subject to **silting**. Depths may be less than shown on the chart.

120 **Poste-Saint-Martin leading lights** *(1801, 1802)* are in line bearing 287 ½°. Each light is shown from a tower with a fluorescent-orange daymark and black stripe; the lights are on both shores of the Saguenay River *(48°27'N, 70°59'W)*, approximately 3 miles above Saint-Fulgence. These lights are visible only when in alignment.

121 Rivière Valin **leading lights** *(1805, 1806)* are in line bearing 314°. Each light is shown from a tower with a fluorescent-red daymark and black stripe, situated on the north shore close east of the mouth of **Rivière Valin** *(48°28'N, 70°59'W)*. These lights are visible only when in alignment.

122 Rivière Caribou **leading lights** *(1808, 1809)* are in line bearing 283½°. Each light is shown from a tower with a fluorescent-orange daymark and black stripe, situated on the north shore, close east of the mouth of **Rivière Caribou** *(48°27'N, 71°01'W)*. These lights are visible only when in alignment.

123 An oil terminal, completely dismantled in 2008, is located on the south shore of the river, immediately east of **Pointe à l'Îlet** *(48°27'N, 70°59'W)*. There are storage tanks SSE of Pointe à l'Îlet.

124 Simard **leading lights** *(1811, 1812)* are in line bearing 256°. Each light is shown from a tower with a fluorescent-orange daymark and black stripe, situated on the north shore, 0.5 mile SW of the mouth of Rivière Caribou *(48°27'N, 71°01'W)*. The rear light is visible only when in alignment.

125 Rivière-du-Moulin Lower **leading lights** *(1814, 1815)* are in line bearing 215°. The front light is shown from a tower with a fluorescent-orange daymark and black stripe, situated on the south shore near the residential district of **Rivière-du-Moulin** *(48°26'N, 71°02'W)*. The rear light is shown from a tower with a fluorescent-orange daymark.

126 Monument Price white **sector light** *(1822)* is the route to follow. The white sector covers an arc of 20 minutes, centred on the bearing of 232°. The light is shown from a tower situated on the south shore, about 0.4 mile west of the entrance to Rivière du Moulin *(48°26'N, 71°03'W)*.

127 Rivière-du-Moulin Upper **leading lights** *(1817, 1818)* are in line bearing 081½°. The front light, visible only when in alignment, is shown from a tower with a fluorescent-orange daymark, situated on the south shore near Rivière-du-Moulin. The rear light, with a similar daymark, is shown from the same structure as the rear light of Rivière-du-Moulin Lower leading light *(1815)*.

128 **Landmarks**. — • A chimney is situated 785 m SE of Club de Yacht de Chicoutimi. • A church with a spire is situated 975 m to the east of the same Yacht Club.

129 **Tides and Tidal Streams**. — As Chicoutimi is on the river, 8 miles above the head of the Fjord du Saguenay (Cap de la Mer), the tidal range is reduced somewhat by the river slope, especially during the freshet months, which are usually from April to the end of July. During this period, there may be a **strong seaward flow of water**, which reinforces the ebb tidal stream and can at times overcome the flood tidal stream.

130 At Chicoutimi, the rate of the **ebb stream** depends upon whether the flood gates above are opened or closed. It has been reported that during the freshet there is no **flood stream**, and the maximum **ebb rate** is 4 knots.

131 An **outfall pipe** extends off the south shore approximately 1 mile SW of Pointe à l'Îlet.

132 Chicoutimi Old Port **wharf** runs parallel to the Saguenay south shore and is located at the head of the city, 1 mile west of Rivière du Moulin. A fountain emerges from the water near the west extremity of the wharf. A division of Canada's Naval Reserve is located in the area.

133 **Bridges**. — At Chicoutimi, two bridges span the Saguenay River close above the Chicoutimi wharf. Approximately 244 m above this wharf, the first **bridge**, **the Saint-Anne bridge**, with a vertical clearance of 3.1 m, crosses from Chicoutimi to Chicoutimi-Nord; private air obstruction **lights** are shown from the bridge span. A **crib** in ruins is just above and below the bridge.

134 Close above the afore-mentioned bridge, there is a second **bridge, the Dubuc bridge**. It is a fixed highway bridge which stands on six piers 73 m apart. The minimum vertical clearance under the centre span of the bridge is 7.8 m. Above these two bridges the river channel is suitable only for small craft; local knowledge of the channel is essential for safe navigation. Further upstream, navigation is no longer possible due to the Shipshaw Hydro-Power Dam facilities.

135 The table 4.3 shows the characteristics of the **wharves** of Port Saguenay; consult the caution note previously mentioned concerning silting in the harbour.

136 A **marina** *(Club de Yacht de Chicoutimi)* is located on the east end of Chicoutimi wharf. In addition to the floating docks, the marina has a **ramp**. Many marina services are available.

Table 4.3 Port Saguenay: Wharves and Facilities

Berth	Length - ft (m)	Depth - ft (m) †	Remarks
Grande Anse Terminal 1 (East)	469	45	General cargo. Open space: 7.1 ha (71 000 m²). Water and electricity.
Grande Anse Terminal 2 (West)	469	45	General cargo. Shed area: 5 715 m². Water and electricity.
Vieux-Port de Chicoutimi	2750	* 27 to 29	Naval Reserve and tour boats.

† Depth below chart datum
* Depth no longer maitained by dredging since 1988

137 **Supplies**. — Deliveries of fuels, diesel and other liquid fuels can be made by tanker truck. A variety of provisions and stores can be obtained in town. Water supply is available at the Grande-Anse Marine Terminal.

138 **Harbour Services**. — Boatmen are available to assist vessels in securing at the wharf. Various types of cranes can be rented. Minor ship repairs can be carried out. Tugs are available from La Baie as required.

139 **Small Craft Repairs**. — A small craft **shipyard** *(Centre du Navigateur Marc Perron)* is situated on the south shore of the river, below Poste Saint-Martin front leading light. The shipyard, with a maximum length of 42 feet (12.8 m) and a maximum width of 14 feet (4.3 m), carries out small craft repairs; it has a **slipway**, a **ramp** and a **boat lift** with a lifting capacity of 13 t.

140 **Communications**. — Provincial roads link Chicoutimi with major cities.

Sail Plan

Adapted from Transport Canada Publication TP 511E.

Fill out a sail plan for every boating trip you take and file it with a responsible person. Upon arrival at your destination, be sure to close (or deactivate) the sail plan. Forgetting to do so can result in an unwarranted search for you.

Sail Plan

Owner Information

Name: _____

Address: _____

Telephone Number: _____ Emergency Contact Number: _____

Boat Information

Boat Name: _____ Licence or Registration Number: _____

Sail: _____ Power: _____ Length: _____ Type: _____

Colour _____ Hull: _____ Deck: _____ Cabin: _____

Engine Type: _____ Distinguishing Features: _____

Communications

Radio Channels Monitored: HF: VHF: MF:

MMSI (Maritime Mobile Service Identity) Number: _____

Satellite or Cellular Telephone Number: _____

Safety Equipment on Board

Lifejackets *(include number)*: _____

Liferafts: _____ Dinghy or Small Boat *(include colour)*: _____

Flares *(include number and type)*: _____

Other Safety Equipment: _____

Trip Details — Update These Details Every Trip

Date of Departure: _____ Time of Departure: _____

Leaving From: _____ Heading To: _____

Proposed Route: _____ Estimated Date and Time of Arrival: _____

Stopover Point: _____ Number of People on Board: _____

Search and Rescue Telephone Number: _____

The responsible person should contact the nearest Joint Rescue Coordination Centre (JRCC) or Maritime Rescue Sub-Centre (MRSC) if the vessel becomes overdue.

Act smart and call early in case of emergency. The sooner you call, the sooner help will arrive.

JRCC Victoria (British Columbia and Yukon) 1-800-567-5111
+1-250-413-8933 (Satellite, Local or out of area)
727 (Cellular)
+1-250-413-8932 (fax)
jrccvictoria@sarnet.dnd.ca (Email)

JRCC Trenton (In Canada) 1-800-267-7270
+1-613-965-3870 (Satellite, Local or Out of Area)
+1-613-965-7279 (fax)
jrcctrenton@sarnet.dnd.ca (Email)

MRSC Québec (Quebec Region) 1-800-463-4393
+1-418-648-3599 (Satellite, Local or out of area)
+1-418-648-3614 (fax)
mrscqbc@dfo-mpo.gc.ca (Email)

JRCC Halifax (Maritimes Region) 1-800-565-1582
+1-902-427-8200 (Satellite, Local or out of area)
+1-902-427-2114 (fax)
jrcchalifax@sarnet.dnd.ca (Email)

MRSC St. John's (Région de Terre-Neuve-et-Labrador) 1-800-563-2444
+1-709-772-5151 (Satellite, Local or out of area)
+1-709-772-2224 (fax)
mrscsj@sarnet.dnd.ca (Email)

MCTS Sail Plan Service

Marine Communications and Traffic Services Centres provide a sail plan processing and alerting service. Mariners are encouraged to file Sail Plans with a responsible person. In circumstances where this is not possible, Sail Plans may be filed with any MCTS Centre by telephone or marine radio only. Should a vessel on a Sail Plan fail to arrive at its destination as expected, procedures will be initiated which may escalate to a full search and rescue effort. Participation in this program is voluntary.

See Canadian Radio Aids to Marine Navigation.

Other References

Information for the Protection of Right Whales:
https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commerciale/atl-arc/narw-bnan/index-eng.html

Atlantic Pilotage Authority Regulations:
https://www.atlanticpilotage.com/acts-regulations/

Meteorological data:
https://www.canada.ca/en/services/environment/weather.html

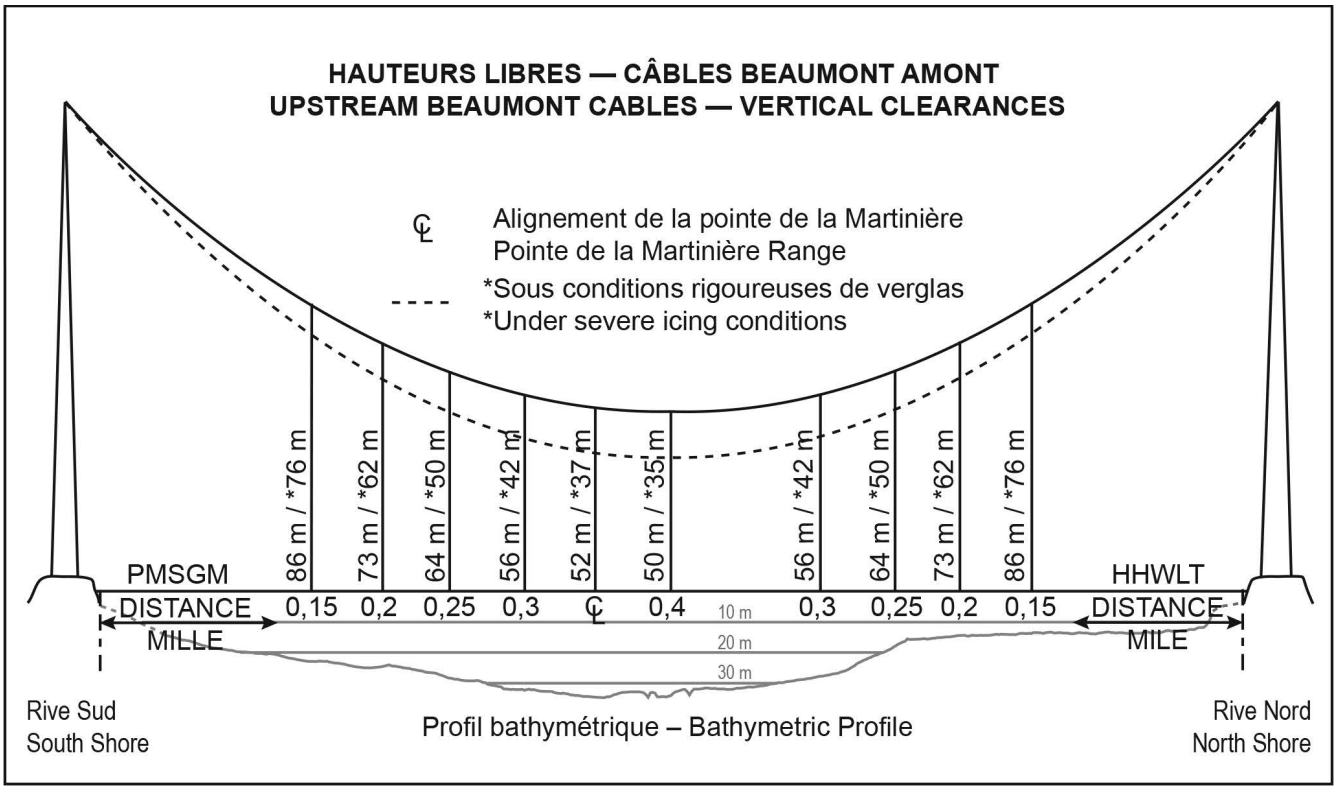
Marine Forecasts and Warnings for Canada:
https://weather.gc.ca/marine/index_e.html

Current Predictions (Data Viewer by DFO - MSDI Dynamic Current Layer):
https://gisp.dfo-mpo.gc.ca/apps/dataviewer/?locale=en

Customs:
https://www.cbsa-asfc.gc.ca/travel-voyage/pb-pp-eng.html

SAR:
Search and rescue (ccg-gcc.gc.ca)

Upstream Beaumont Cables — Vertical Clearances

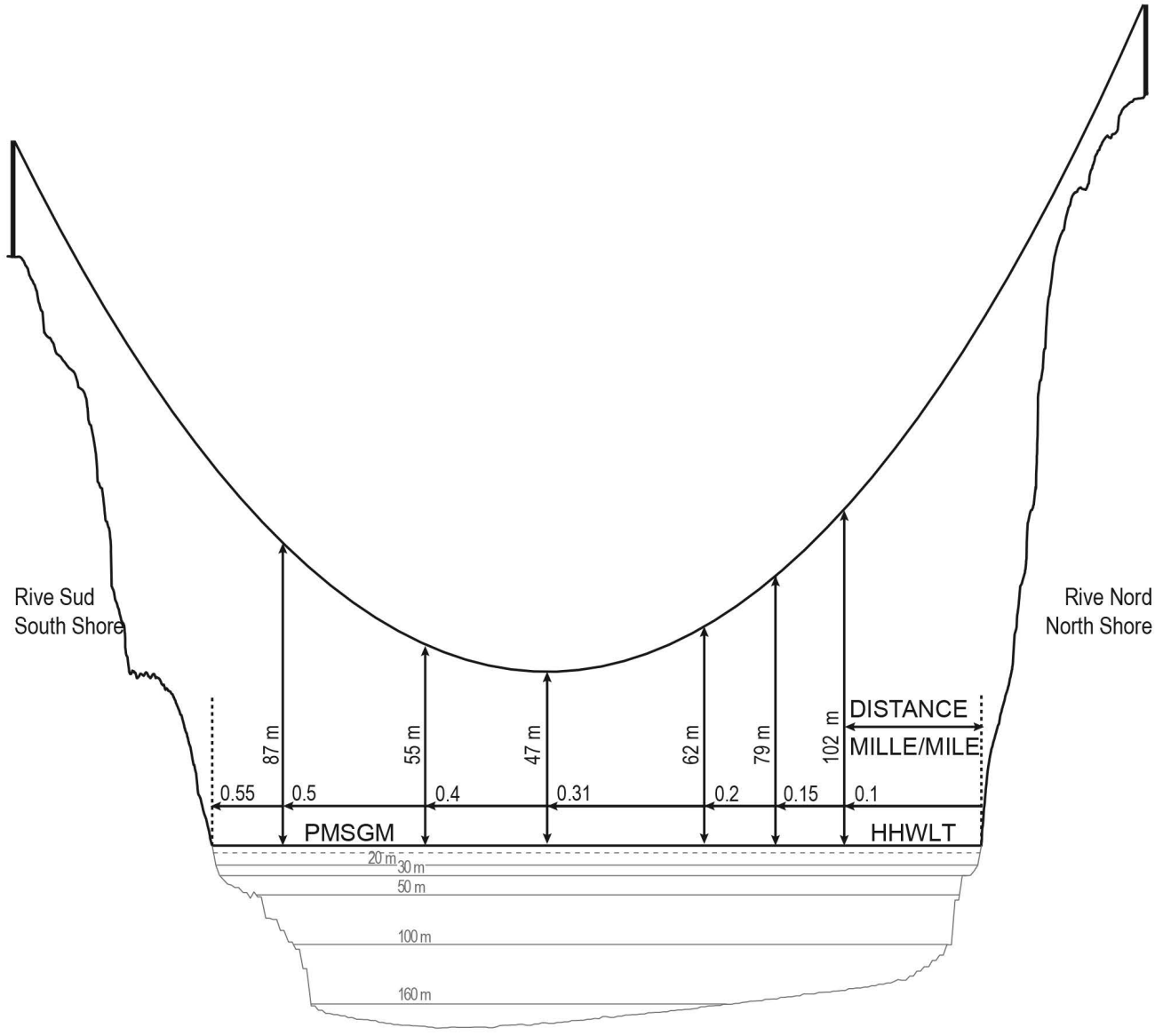


Cap Sainte-Marguerite Cable — Vertical Clearances

HAUTEURS LIBRES — CÂBLE CAP SAINTE-MARGUERITE
CAP SAINTE-MARGUERITE CABLE — VERTICAL CLEARANCES

Hauteurs libres en mètres par rapport à PMSGM à L'Anse Saint-Jean
Vertical clearances in metres referred to HHWLT at L'Anse Saint-Jean

Distances en milles marins sous le câble par rapport à la rive Nord
Distances under the cable are measured in nautical miles from the North shore.



Profil bathymétrique – Bathymetric Profile

Cables Upstream Pierre-Laporte Bridge — Vertical Clearances

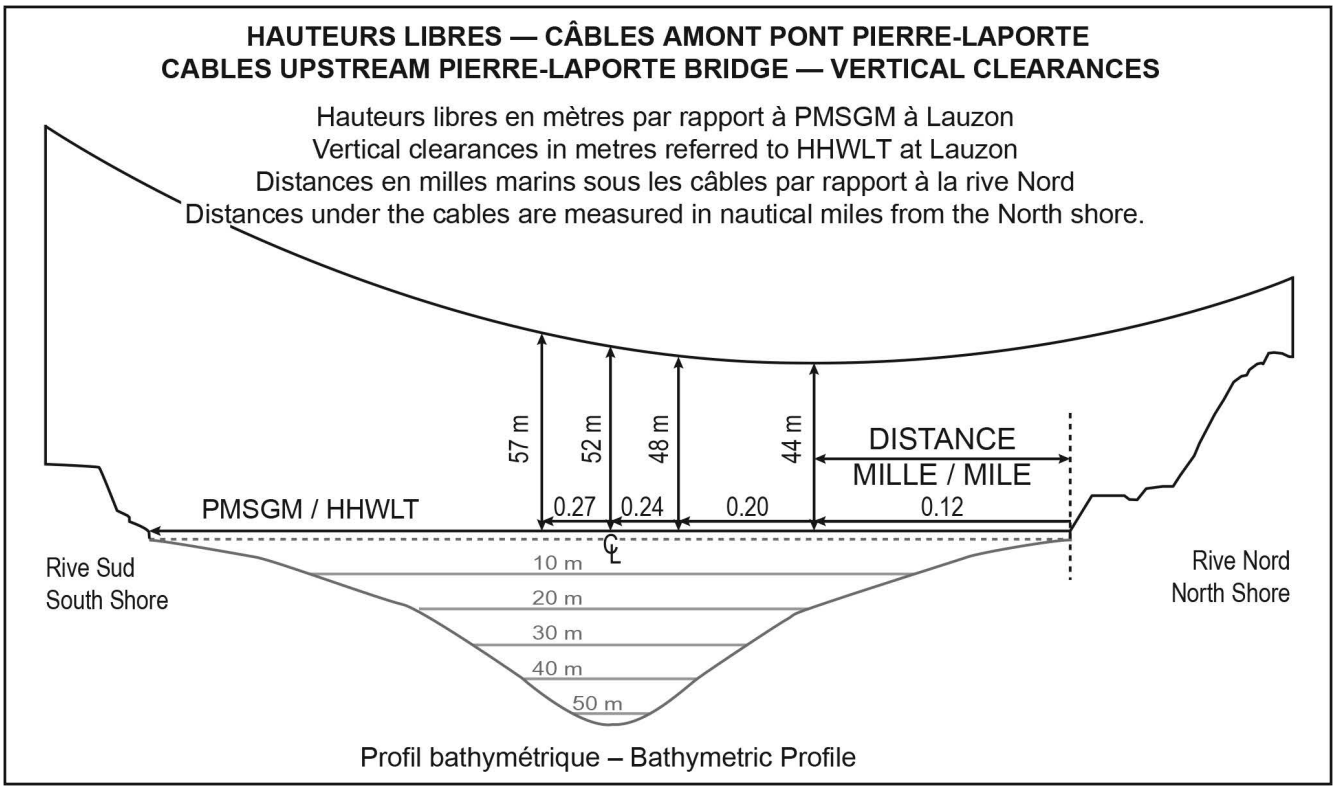


Table 1 — Under-Keel Clearance

ST. LAWRENCE RIVER, BELOW QUÉBEC (Traverse du Nord)

For the purpose of promoting safe and efficient navigation, and environmental protection, the marine traffic regulator (MTR) is empowered by the Canada Shipping Act of 2001 (art. 126), in certain circumstances, to issue traffic directions to a ship. Within the exercise of their powers, MTRs will consider the under-keel clearance of the vessels transiting below Québec (Traverse du Nord). Marine Communications and Traffic Services will determine the under-keel clearance by way of the parameters reproduced in the table below:

Table 1.1 — Required under-keel clearance

Vessel Beam not exceeding	Vessel's speed not exceeding 7 knots	Vessel's speed not exceeding 8 knots	Vessel's speed not exceeding 9 knots	Vessel's speed not exceeding 10 knots	Vessel's speed not exceeding 11 knots	Vessel's speed not exceeding 12 knots	Vessel's speed not exceeding 13 knots	Vessel's speed not exceeding 14 knots
31 m	0.86	0.95	1.06	1.17	1.38	1.60	1.84	2.09
34 m	0.87	0.97	1.08	1.20	1.41	1.64	1.89	2.15
37 m	0.89	0.98	1.10	1.22	1.44	1.68	1.93	2.20
40 m	0.90	1.00	1.11	1.25	1.47	1.72	1.97	2.25
43m	0.91	1.01	1.13	1.27	1.50	1.75	2.01	2.29
46 m	0.92	1.03	1.15	1.29	1.53	1.78	2.05	2.34
49 m	0.93	1.04	1.17	1.32	1.56	1.81	2.09	2.38
52 m	0.94	1.05	1.18	1.34	1.58	1.85	2.13	2.42

Required under-keel clearance (which included estimated squat and the manoeuvrability's safety margin)

Table 1.2 — Estimated squat

Vessel Beam not exceeding	Vessel's speed not exceeding 7 knots	Vessel's speed not exceeding 8 knots	Vessel's speed not exceeding 9 knots	Vessel's speed not exceeding 10 knots	Vessel's speed not exceeding 11 knots	Vessel's speed not exceeding 12 knots	Vessel's speed not exceeding 13 knots	Vessel's speed not exceeding 14 knots
31 m	0.25	0.34	0.45	0.56	0.70	0.84	1.00	1.18
34 m	0.27	0.36	0.47	0.59	0.73	0.88	1.05	1.23
37 m	0.28	0.37	0.49	0.62	0.76	0.92	1.09	1.28
40 m	0.29	0.39	0.51	0.64	0.79	0.95	1.14	1.33
43m	0.30	0.40	0.52	0.66	0.82	0.99	1.18	1.38
46 m	0.31	0.42	0.54	0.68	0.84	1.02	1.21	1.42
49 m	0.32	0.43	0.56	0.71	0.87	1.05	1.25	1.47
52 m	0.33	0.44	0.57	0.73	0.90	1.08	1.29	1.51

Table 1.3 — Manoeuvrability/safety margin

Vessel Beam not exceeding	Vessel's speed not exceeding 7 knots	Vessel's speed not exceeding 8 knots	Vessel's speed not exceeding 9 knots	Vessel's speed not exceeding 10 knots	Vessel's speed not exceeding 11 knots	Vessel's speed not exceeding 12 knots	Vessel's speed not exceeding 13 knots	Vessel's speed not exceeding 14 knots
—	0.61	0.61	0.61	0.61	0.69	0.76	0.84	0.91

The above parameters are presented on the basis that the vessel's Master or Officer-in-charge has given consideration to other specific elements which may have an impact on under-keel clearance, some of which are: the accurate determination of water level (including tides) during vessel's transit; the vessel's speed; the wind and waves effects and the vessel's response to it; the estimation of the vessel's draught (changes in ballast); and any additional squat effects due to passing within close proximity to the bank of the channel or when overtaking another vessel. The vessel's Master or Officer-in-charge has the ultimate responsibility for the vessel's safety at all times.

Source: Canadian Coast Guard (TC-L95-134; AMA8035-10-1; Notice to Mariners No. 479, Bi-weekly Edition No. 17/1995)

Table 2 — Summary of air obstructions for this booklet

Location	Type	Position (centroid)	Bridge / Bare cable Overhead clearance (on nautical charts)	Cable with ice Overhead clearance (on nautical charts)	Datum	Datum Relative to C.D.
Main Shipping Channel (*see Chapter 2*) Beaumont - Upstream	Cable	46°50.6'N; 71°03.3'W	50 m	35 m	H.H.W.L.T.	6.1 m
Main Shipping Channel (*see Chapter 2*) Pont de Québec	Bridge	46°44.8'N; 71°17.3'W	47 m	—	H.H.W.L.T.	6.1 m
Main Shipping Channel (*see Chapter 2*) Pont de Québec - Upstream	Cable	46°44.7'N; 71°17.4'W	48 m	33 m	H.H.W.L.T.	6.1 m
Main Shipping Channel (*see Chapter 2*) Pont Pierre-Laporte	Bridge	46°44.8'N; 71°17.5'W	49 m	—	H.H.W.L.T.	6.1 m
Main Shipping Channel (*see Chapter 2*) Pont Pierre-Laporte - Upstream	Cable	46°44.7'N; 71°17.7'W	44 m (1)	35 m	H.H.W.L.T.	6.1 m
Chenal de l'Île d'Orléans (*see Chapter 2*) Pont de l'Île d'Orléans	Bridge	46°52.8'N; 71°07.9'W	32 m	—	H.H.W.L.T.	6.1 m
Chenal de l'Île d'Orléans (*see Chapter 2*) L'Ange-Gardien	Cable	46°53.9'N; 71°06.2'W	32 m	16 m	H.H.W.L.T.	6.1 m
Fjord du Saguenay (*see Chapter 4*) Cap de la Boule	Cable	48°08.7'N; 69°48.8'W	89 m	78 m	H.H.W.L.T.	5.4 m
Fjord du Saguenay (*see Chapter 4*) Cap Sainte-Marguerite	Cable	48°14.0'N; 69°56.2'W	47 m	43 m	H.H.W.L.T.	6.7 m
Fjord du Saguenay (*see Chapter 4*) Anse de Tabatière	Cable	48°16.8'N; 70°12.1'W	62 m	50 m	H.H.W.L.T.	6.7 m
Fjord du Saguenay (*see Chapter 4*) Pont Sainte-Anne (Chicoutimi)	Bridge	48°26.0'N; 71°04.1'W	3.1 m	—	H.H.W.L.T.	6.1 m

(1) Bare cable at Pont Pierre-Laporte — Upstream (in zero wind condition):
The minimum safety clearance of 44 m is at 250 m north of the centre of the usual main shipping channel.
At 60 m north of the centre of the usual main shipping channel, the safety clearance is 50 m.
At 30 m north of the centre of the usual main shipping channel, the safety clearance is 53 m.
At the centre of the usual main shipping channel, the safety clearance is 56 m.
At 30 m south of the centre of the usual main shipping channel, the safety clearance is 59 m.
At 60 m south of the centre of the usual main shipping channel, the safety clearance is 62 m.

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