



ATL 104

Canadian **Sailing Directions**

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

2023/06












Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

Pictograph legend

	Anchorage		Current		Radio calling-in point
	Wharf		Caution		Lifesaving station
	Marina		Light		Pilotage

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This Second Edition of *Sailing Directions, ATL 104 — Cape North to Cape Canso (including Bras d'Or Lake)*, 2010, has been compiled 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 areas is given in a series of booklets. Their limits are printed on the back cover of the booklets. **The appropriate descriptive booklet(s) should be consulted in conjunction with the ATL 100 — General Information booklet.**

The photographs are by Fisheries and Oceans Canada (Bedford Institute of Oceanography), Dartmouth, Nova Scotia.



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.

Legend is shown on the inside front and back covers of this booklet.

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

Diagrams are large scale cartographic representations of harbours, wharves, anchorages, or marinas.

Pictographs are symbols shown at the beginning of the paragraphs to allow quick reference to information or to emphasize details. The Pictograph



References to other publications:

Canadian Hydrographic Service (www.charts.gc.ca)

- *Catalogue of Nautical Charts and Publications (Atlantic Coast)*
- *Canadian Tide and Current Tables*

Canadian Coast Guard (www.ccg-gcc.gc.ca)

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

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

Cape Breton Island (East and SE coasts)

Chart 4013

1 **Cape Breton Island** is separated from the mainland of Nova Scotia by the **Strait of Canso**. The Canso Causeway, with a navigation lock through it, allows for road and rail traffic across the strait. The salt water **Bras d'Or Lake** bisects the island, and with two natural channels at the north end, and **St. Peters Canal** at the south, provides an inland waterway for small vessels. The outer coastline of the island is 665 miles in length, and together with the Bras d'Or Lake, total 1,098 miles.

2 The main commercial centre of the island is the Regional Municipality of Cape Breton, which had a population of 105,928 in 2006. The two largest communities in the municipality are Sydney, population 33,012, and Glace Bay, population 19,968.



Cabot Strait

Chart 4022

3 **Cabot Strait**, about 56 miles wide, is the entrance to the Gulf of St. Lawrence between Cape Ray, Newfoundland, and Cape North, the NE point of Cape Breton Island. St. Paul Island presents the only danger in the strait. Mariners are advised to navigate with caution during periods of reduced visibility. A regular **ferry** service operates across the strait between North Sydney, Nova Scotia and Port aux Basques, Newfoundland. A **traffic separation scheme** is in effect for vessels passing through Cabot Strait.

4 **Winds** blow with considerable strength from the NW and west in winter, shifting to the SW and SE in spring and summer. Gales average more than 10% of the time in January and February, but are rare during summer. Tropical storms may reach the area during autumn.

5 **Visibility.** — Fog in Cabot Strait has a frequency of 15 to 20% in summer and about 5% in winter. Snow is frequently heavy in winter with visibility reduced to near zero.

Chart 4450

6 **St. Paul Island** lies about 13 miles NE of Cape North. The island is rocky and bold, and rises in two parallel ranges of hills, the SE being the higher with a summit

of 485 feet (148 m). The north point is a detached pinnacle islet which appears from seaward to be joined to the main island; it is separated from a peninsula 408 feet (124 m) in elevation by a narrow channel.



7 **Currents** around the island are variable. Soundings give little warning when approaching the island in poor visibility as the water deepens rapidly 0.5 mile offshore. There is a high incidence of fog in south, east and often SW winds.



8 There is a white tower 46 feet (14 m) high on the rocky islet at **North Point** ($47^{\circ}14'N$, $60^{\circ}08'W$).

South Point is the southern extremity of St. Paul Island.



9 With offshore winds, small vessels **anchor** off **Trinity Cove** and **Atlantic Cove**, 0.2 mile from the rocks in 10 to 12 fathoms (18.3 to 22 m), sand and gravel. In good weather, large vessels **anchor** about 0.5 mile offshore in sufficient depth, but they must be ready to weigh anchor at the first sign of deteriorating weather. Trinity and Atlantic Coves afford the only good landing places on the island. The ascent from them is easier than at other parts of the island.

10 **MacDougall Cove** and **Powers Cove**, situated near the north end of the island on the west and east sides, afford fair shelter for small craft.

Cape North to Sydney Harbour

Chart 4363



11 **Cape North** ($47^{\circ}02'N$, $60^{\circ}25'W$), a bold rocky headland, is steep-to and rises abruptly to an elevation of 1,000 feet (305 m). Violent local squalls are common off the headland. The cape is reported to give good radar returns to a distance of 17 miles. A **light** (854) is shown from a white tower 49 feet (15 m) high, with three red bands on a square building on **Money Point**, about 1 mile SE of the cape. A **tower**, 1,415 feet (431 m) in elevation, marked by red **lights**, is situated on the summit of a high ridge 1.3 miles SSW of Money Point.

12 From Cape North to St. Anns Harbour, 47 miles to the south, the coast is bold, mountainous and free of outlying dangers until near the Bird Islands. The hills near the coast reach heights greater than 1,400 feet (427 m), and are mostly composed of granite, with clay slate in nearly vertical strata. These rocks form the main headlands, with sandstone, shale, conglomerate and occasional beds of gypsum and red and yellow marl between them.

DINGWALL HARBOUR (Oct. 2008)



NEW HAVEN (Oct. 2008)



13 **Currents.** — After continued east to NE winds, a north-going current with a rate of 1 knot may flow from the area of St. Anns Bay to near Cape North, where it meets the predominant SE flow out of the Gulf of St. Lawrence to cause noticeable rips. Allowance should be made for the unpredictable nature of this current, which may persist for several days, or be reversed under certain conditions.



14 **Caution.** — A communications **cable** is laid from the shore 5.9 miles SW of Money Point, ENE to Searston Bay, Newfoundland.

Chart 4365



15 The entrance to **Dingwall Harbour**, 8 miles SSW of Money Point in **Aspy Bay**, is between two U-shaped breakwaters. The approach depth is 6 feet (1.8 m). **Lights** (855, 857) are shown from masts on the outer ends of each breakwater. Fairway light and bell **buoy KA** (856) is moored about 0.9 mile east of the harbour entrance.

16 The harbour provides good shelter, but cannot be entered in easterly gales. The entrance is impassable with easterly swells in the range of 6 feet (1.8 m). Depths in the harbour and approach are subject to change from silting, and navigational aids may be moved to suit the best channel. Ice forms in January and breaks up in April.



17 Inside the harbour, on the north side, lies an L-shaped Public wharf, with an outer end 153 feet (47 m) long and a least depth of 22 feet (6.7 m) alongside. A

large fish plant and a wharf, with a reported depth of 11 feet (3.4 m) alongside, lies on the south shore.

Chart 4363



18 **White Point** lies at the south side of Aspy Bay. A breakwater and Public wharf extend from the west side of the point. The south side of the wharf has two berths. The outer berth is 120 feet (37 m) long with a least depth of 11 feet (3.4 m) alongside. The inner berth, 80 feet (24 m) long, has depths of 5 to 10 feet (1.5 to 3 m) alongside. Port hand light and whistle **buoy KBI** (852.6) is moored to the NNW of White Point. A **light** (853.1) is shown from a mast on the outer end of the breakwater.

19 **Cape Egmont**, 3 miles SE of White Point, is a low granite headland that is almost bare.

20 At **New Haven**, in **Hungry Cove**, there is a boat landing formed by two breakwaters 35 feet (11 m) apart with a depth of 4 feet (1.2 m) at the outer ends. Fairway light and whistle **buoy KC** (852) is moored 0.6 mile east of New Haven.



21 **Neils Harbour** is sheltered from the north by **Neil Head**, a rocky point 10 to 20 feet (3 to 6 m) high, but open to the south and SE. A **light** (851) is shown from a white square tower 33 feet (10 m) high on Neil Head. Fairway light and bell **buoy KD** (850) is moored 1 mile SE of the light.

22 A small breakwater extending to the west from Neil Head protects a small basin formed by two wharves. A **light** (850.6) is shown from a mast on the outer end of the breakwater.



NEILS HARBOUR (Oct. 2008)




Chart 4365

23 **Ingonish Bay** is divided into **North Bay** and **South Bay** by **Middle Head**, a narrow precipitous peninsula. The mountains at the head of North Bay are the highest on this coast, reaching 1,425 feet (434 m). **Cape Smokey**, on the south side of South Bay, rises steeply to 950 feet (289 m). Violent squalls from these hills are common.

24 **Ingonish Island** is 200 feet (61 m) high and rocky. Small craft can find shelter in the cove on the NW side. A spit and reef extend nearly halfway to **Jackson Point**, on the mainland, leaving only a narrow channel with a depth of 20 feet (6.1 m). **East Rocks** lie close east of the island.

  25 A breakwater extends 518 feet (158 m) to a depth of 16 feet (4.9 m) from **The Point**, which is SW of Jackson Point in North Bay. A Public wharf, about 400 feet (122 m) long, with a depth of 6 feet (1.8 m) at the outer end, lies to the NW; a drying shoal lies off the south side. A **light** (849.4) is shown at an elevation of 19 feet (5.9 m) from a mast on The Point. A Public wharf close north of **Dundas Head** has a depth of 3 feet (0.9 m) at the outer face.

 26 Vessels usually **anchor** to the west of Jackson Point. The anchorage is unsafe in easterly winds which send in a heavy sea. The bottom is a thin layer of sand over hard mud.





  27 **Ingonish Harbour** is protected from South Bay by a gravel beach. Access is through a **buoyed** channel near the south end of the beach. A **light** (847) is shown from a skeleton tower with a red and white daymark on the beach at the north side of the harbour entrance. The Public wharf on the south side of the harbour has a reported depth of 26 feet (7.9 m) at the outer face. The wharf on the north side is in ruins. Due to shifting sands, there may be less water in the entrance channel than is shown on the chart.

Chart 4367

28 The coast from Cape Smokey ($46^{\circ}38'N$, $60^{\circ}21'W$) to **Bentinck Point**, 12.7 miles distant, is less steep with mountains receding inland. Two **conspicuous towers**, marked by red **lights**, are situated 1.7 miles south of the entrance to Ingonish Harbour.

29 At **Breton Cove**, there is a 315 foot (96 m) long breakwater with 5 feet (1.5 m) of water at the outer end.

  30 At **Little River**, south of Breton Cove, a breakwater 800 feet (244 m) long, parallel to the shore and 350 feet (107 m) off, protects a Public wharf 150 feet (46 m) long with a depth of 4 feet (1.2 m) alongside. A second breakwater extends 600 feet (183 m) from the shore close south of the wharf. **Leading lights** (845.7, 845.8), in line bearing 291° , are shown from white

daymarks with red stripes. Fairway light and bell buoy *KN (845.5)* is moored 0.6 mile ESE of the entrance to Little River.

31 **St. Anns Bay** is fringed with shoal water up to 0.4 mile off the west side. Cliffs of white gypsum are seen 1.5 miles south of Bentinck Point. **Island Point** appears as an island, but it is a small wooded peninsula joined to the mainland by stony beaches.

32 The SE shore of St. Anns Bay is steep-to, with **Cape Dauphin** forming the end of the peninsula on the east side. The prominent **Bird Islands** consist of **Hertford Island** and **Ciboux Island**, two long narrow and precipitous sandstone islands, nearly bare, which together with shoals stretch to 3.5 miles to the NE from less than 1 mile off Cape Dauphin. There is a depth of 15 feet (4.6 m) over **Ciboux Shoals**, the outer extreme. **Hertford Ledge** extends 0.6 mile inshore from Hertford Island towards Cape Dauphin, leaving a channel 33 feet (10.1 m) deep between them.



33 Good **anchorage** is reported in St. Anns Bay about 0.5 mile off the SE shore in a position 040° from Beach Point light, at a distance of 2.3 to 3 miles.

Chart 4277



34 **St. Anns Harbour** ($46^\circ 16'N$, $60^\circ 34'W$) is completely sheltered. **St. Anns Beach** extends across the entrance from the NW shore to **Beach Point**, leaving a passage only 0.1 mile wide. The beach is about 2 m high, of stones and shingle, and carries a road to the ferry wharf. **Murray Mountain** rises in steep wooded cliffs to 343 m inside the entrance on the west side. The **tidal stream** at the harbour entrance has a maximum rate of 3 to 4 knots. The sea breaks heavily over the bar in strong NE winds, particularly on the ebb.



35 A cable **ferry** operates across the harbour entrance. The **cable** is suspended between the two docks and has a maximum clearance of 7.6 m when the ferry is docked. *When in use, the cable lies close to the surface.* A green or red **light** is shown from a pole at each ferry dock. Green is shown when the ferry is docked, red when in transit.

36 **Port Shoal** is a mud bank with a least depth of 2.1 m, 0.4 mile SW of Beach Point.



37 An L-shaped wharf at **Englishtown** has an outer end 45 m long, with depths (south to north) of 3.5 to 5.5 m along the outer face, and 1.5 to 3.9 m along the inside face.

38 **Goose Cove** and **Seal Cove** form the west side of the harbour. **Shipyard Rock** lies at the entrance to Seal Cove. **Upper MacLeods Point**, showing gypsum, divides the head of the harbour into **North Gut** and **South Gut**. Gypsum cliffs, with trees, line the SW shore of South Gut; a wharf on the east side at **South Haven** is in ruins.

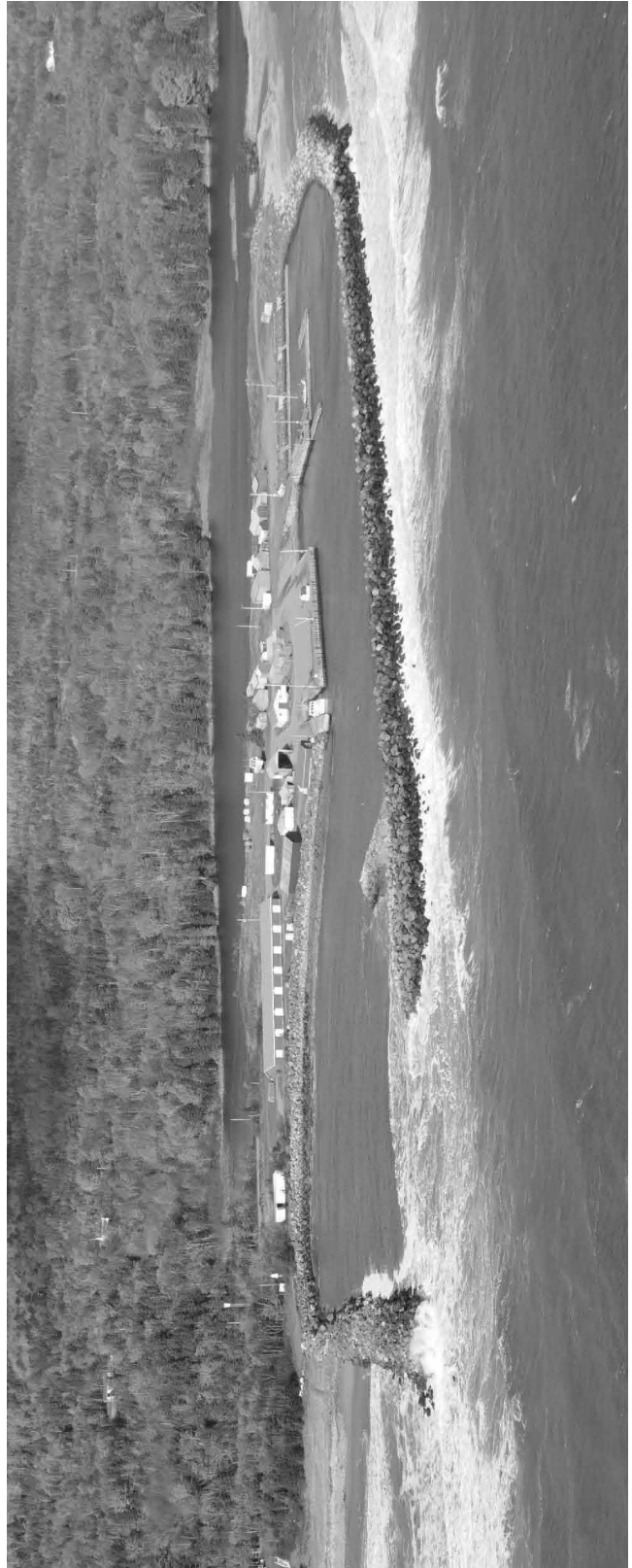
NORTH BAY INGONISH — THE POINT (2008)



INGONISH HARBOUR (Oct. 2008)



LITTLE RIVER (Oct. 2008)



BIRD ISLANDS (Oct. 2008)



39 **Anchorage** is available west of Port Shoal in 15 m, mud, clear of the tidal stream. Anchorage off Seymour Point in Goose Cove is more sheltered. Gales from the NE can be violent anytime after mid August.

Chart 4367

40 **Table Head** ($46^{\circ}20'N$, $60^{\circ}22'W$) is precipitous, with shoal water extending 0.2 mile from it and embracing **Table Rock**. The shore of the bight to the SW of Table Head is composed of red cliffs.

41 **Coast.** — There is a change in the character of the coast at this point. The mountainous coast to the NW gives way to land of moderate elevation to the SE, characterized by cliffs of sandstone and shale, until the older rocks of Mira Bay and Scatarie Island are reached. Shoals extend offshore, deepening rapidly at the seaward edges, giving little warning of the dangers when approaching the coast.



42 **Point Aconi**, the NE extremity of **Boularderie Island**, is formed from eroding cliffs of coal. A **light** (796) is shown at an elevation of 88 feet (26.9 m), from a skeleton tower on Point Aconi. Fairway light and whistle **buoy U** (789.5) is moored 2.2 miles NE of Point Aconi.

43 A power generating station is easily visible to the SW of Point Aconi. The chimney, 347 feet (106 m) in elevation, 1.9 miles SW of Point Aconi, is marked by white strobe flashing lights.

Chart 4276

44 **Little Bras d'Or**, 4.4 miles long, is narrow and winding, and leads along the east side of Boularderie Island to the wide and deep St. Andrews Channel of the Bras d'Or Lake system. Entrance to St. Andrews Channel is restricted to small power craft by a highway bridge, with a clearance of only 6.4 m at the south end of Little Bras d'Or.

**ENTRANCE TO ST. ANNS HARBOUR
(FROM THE SOUTH)** (Oct. 2008)

45 The entrance to Little Bras d'Or, 1.5 miles south of Point Aconi, is closed by breakers when there is a heavy sea, especially when the strong tidal streams set against the wind. The east side of the entrance terminates at **Alder Point**, a prominent steep sedimentary cliff with trees. **High Cape**, on the west side 0.8 mile south of Point Aconi, is a remarkable steep bluff. An open pit mine is **conspicuous** 0.2 mile south of the cape. A water tower, elevation 36 m, is **conspicuous** 0.7 mile south of Alder Point.



46 The **currents** are predominant along the entire length of the channel. Slack water is reported to be 1 hour in duration at both the high and low waters.

47 The channel is lined by low banks with mostly deciduous trees, and mud and grassy flats which dry. Houses are located near the banks along some of the stretches. Deep water is not always near the centre of the two shores, but if navigated at low water, the exposed flats will show the direction of the channel.



48 **Buoys** are placed to mark the channel entrance, which is used mostly by fishermen from the fish plant close within. Port hand light and bell **buoy U1 (790)** is moored 0.6 mile NNE of Alder Point. **Leading lights (792, 793)**, shown from white daymarks with red stripes, are situated on the west side of the entrance and bear 212° in the inner approach through **Spanish Bay**. A sector **light (794.4)** is situated on the east shore of Little Bras d'Or, 0.8 mile inside the entrance. The white sector marks the preferred channel at the entrance.



49 The Public wharf at the mouth of **Crawley Creek**, on the west side near the entrance, is L-shaped with an outer end 32 m long and depths of 2.7 m on the north face and 2.4 m on the south face. The Public wharf on the east side forms a U-shape, with alongside depths of 2.3 to 3 m. A Public wharf, with a face 9 m long and a depth of 2.4 m alongside, is situated on the east side, near **Arsenault Creek**, 1.2 miles inside the entrance.

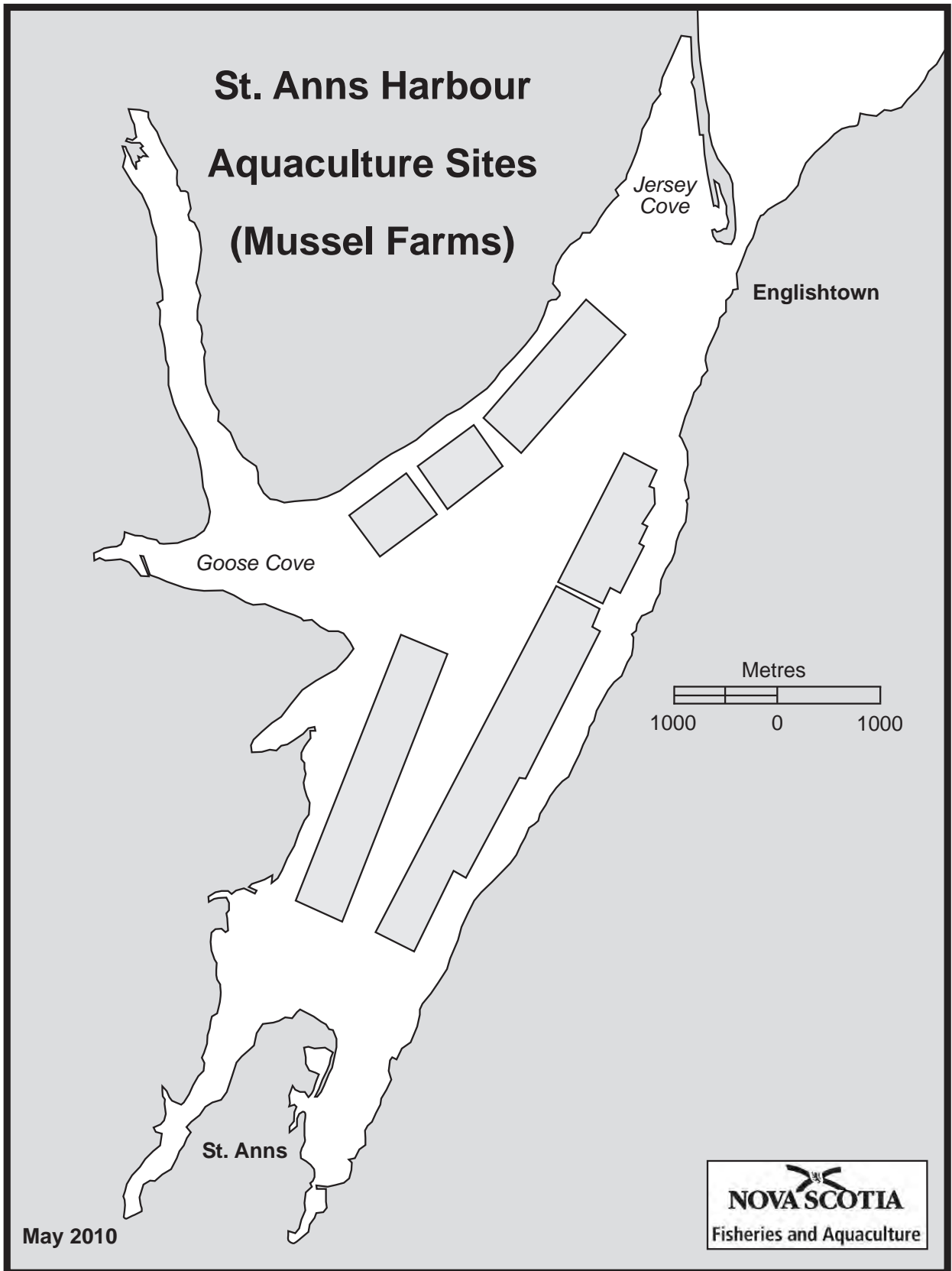


50 Overhead power **cables** cross Little Bras d'Or in three locations: at a clearance of 13 m, 2.2 miles from the entrance; clearance 17 m, 4 miles inside the entrance; and clearance 7.5 m, close north of the highway bridge at the south end.

51 The channel beneath the highway bridge is marked by **lights**. The north-bound channel is on the east side, the south-bound channel on the west side of the centre abutment.

Chart 4367

52 The coast between Alder Point and **Cranberry Point**, 4.3 miles further SSE, is fringed with shoal water, and depths of less than 5 fathoms (9 m) frequently extend nearly 1 mile offshore. **Shag Rock**, **Bonar Rock** and **Cran Rock** lie on this rocky shelf.



ENTRANCE TO LITTLE BRAS D'OR (Oct. 2008)




Sydney Harbour

Chart 4266

53 **Sydney Harbour** is entered between Cranberry Point and **Low Point**, 3.3 miles ENE. The harbour is an inlet running SW about 5 miles to **Point Edward**, where it divides into **North West Arm** and **South Arm**. The harbour has easy access and can accommodate a large number of vessels.

54 The greater Sydney area is the commercial and industrial centre of Cape Breton Island. There is a **Customs Office** in Sydney.

55 Sydney Harbour is a Public Harbour and is available for year round use. During spring, icebreaker support may be required.


 56 **Pilotage** is compulsory. Masters of vessels entering the harbour shall report their ETA to Pilots Cape Breton, 12 hours before arrival at the pilot boarding station, which is in position $46^{\circ}20'30''N$, $60^{\circ}07'W$. The master of a vessel that is to depart or move within the compulsory pilotage must report to Pilots Cape Breton 4 hours before the ETD.


 57 **Outer approach.** — A **light** (775) is shown from a white tower 21 m high on **Low Point** ($46^{\circ}16'N$, $60^{\circ}08'W$).

58 The outer **leading lights** (782, 783), in line bearing $213\frac{1}{2}^{\circ}$, are situated to the west of Point Edward. Each light is shown from a white tower.


59 Cranberry Point is low and flat, but it shows a steep cliff. A prominent turret is situated at **Petrie's Point**, 2 miles SW of Low Point. A church with twin spires, situated 0.2 mile south of **McGillivray Point**, is **conspicuous**.

60 **Inner approach.** — **Northwest Bar**, 3.3 miles SSW of Cranberry Point, is of sand and shingle partly above water. A breakwater close to the west provides some protection to the wharves at North Sydney. The hospital, a **conspicuous** brick building, is close north of Northwest Bar.

 61 On the opposite shore, **Southeast Bar** extends from **Daly Point** in a narrow strip above water and terminates in a dry sand and shingle bank. A **light** (778) is shown from a white square building at the west end of Southeast Bar. South cardinal light **buoy** SS (787.21) is moored 0.2 mile SSE of the light.

 62 A wharf, with an outer end 26 m long and a depth of 2.7 m along the inside face, provides shelter to small craft at **South Bar**, to the SE of Southeast Bar.


63 The Sydney Harbour inner **leading lights** (784, 785), in line bearing $162\frac{1}{2}^{\circ}$, are shown from white daymarks with red stripes, situated close east of the Iron Ore Pier.


 64 Good open **anchorage** is available off North Sydney. There is good **anchorage** off **Fishery Cove** in 11 to 13 m, mud, sheltered by Southwest Bar. Good

LOW POINT (Oct. 2008)



anchorage may be obtained anywhere in South Arm, except in the shoal areas south of **Dobsons Point**. Several **submarine cables** cross the harbour.

 64.1 A series of fish havens has been created in Sydney Harbour and North West Arm. Charted, these havens lie on both sides of the inner entrance to Sydney Harbour, and are located in the centre of North West Arm and along its shores. Each haven may contain artificial reefs, which are concrete structures that protrude 1–2 m from the bottom. **Caution** is advised.

 65 **Wharves.** — **Sydney.** — The *Sydney Marine Terminal* is owned and operated by the Sydney Ports Corporation, and is used to berth cruise ships, unload petroleum products and other miscellaneous products. The outer face is 275 m long with a least depth of 11.2 m alongside. The south berth, 50 m long, is used for tendering-in and pleasure craft. The *Cruise Pavilion* is a prominent building adjacent to the wharf.


66 The International Coal Pier is used for unloading coal and exporting bulk cargo. The berth is 180 m long with a least depth of 14.4 m alongside.

67 The Atlantic Canada Bulk Terminal, 0.4 mile further south, has a berth 275 m long with a least depth of 11 m alongside.

68 *Sydport* fronts an industrial park on the west side of the arm. The wharves total 1,160 m in length with depths of 5.1 to 11.8 m alongside.

69 Two piers, privately owned, lie on the east side of **Sydney River**. They were previously used for importing petroleum products.

70 An overhead power **cable**, clearance 4.6 m, crosses Sydney River close east of a road bridge at the head of navigation. Numerous small craft moorings are situated near the shore in this vicinity.

 71 The *Canadian Coast Guard College* is located inside of **Crawleys Creek**, close SW of Sydport. **Leading lights** (785.84, 785.85) are shown from white

SOUTH BAR (Oct. 2008)



daymarks with black stripes, and bear $235\frac{1}{2}^\circ$ into the creek where there are numerous moorings for training craft.



72 **Wharves.** — **North Sydney.** — Close inside the breakwater lies the M.V. Osprey Wharf (privately owned) and fish processing facility. Berths are 80 m long with a least depth of 7.6 m alongside.

73 The *Archibald's Wharf* complex is situated close SW of the *Marine Atlantic Ferry Terminal*. The wharf has an outer face 115 m long with depths of 2.5 to 3.2 m alongside, east to west. The deck of the wharf has an elevation of 2.5 m. The complex comprises a park and pavilion. The wharf is lighted and electricity is available.



74 *Ballast Grounds* is a Public small craft facility that is managed by the *Harbour Authority of North Sydney*. Situated 0.4 mile SW of the public wharf, there is

an enclosed basin with depths of 2 to 3.3 m. The facility is lighted and electricity is available. A **light** (780) is shown from a mast at the outer side of this facility.

75 **Repair facilities.** — North Sydney Marine Railway Inc. operate a shipyard in North Sydney. The marine slip has a capacity of 2,000 tonnes for vessels to 76 m in length.

76 **Supplies.** — Fuel, fresh water, general supplies and full air services are available in the Sydney area.



77 **Yacht clubs.** — *Dobson Yacht Club* operates from **Dobsons Point** on the west side of South Arm. There is a wharf, travelift, boat storage area and a clubhouse; gasoline is available. A basin, protected by rock breakwaters on the east and south sides, has been constructed from the south side of Dobsons Point. There are depths of 1.5 to 2.8 m

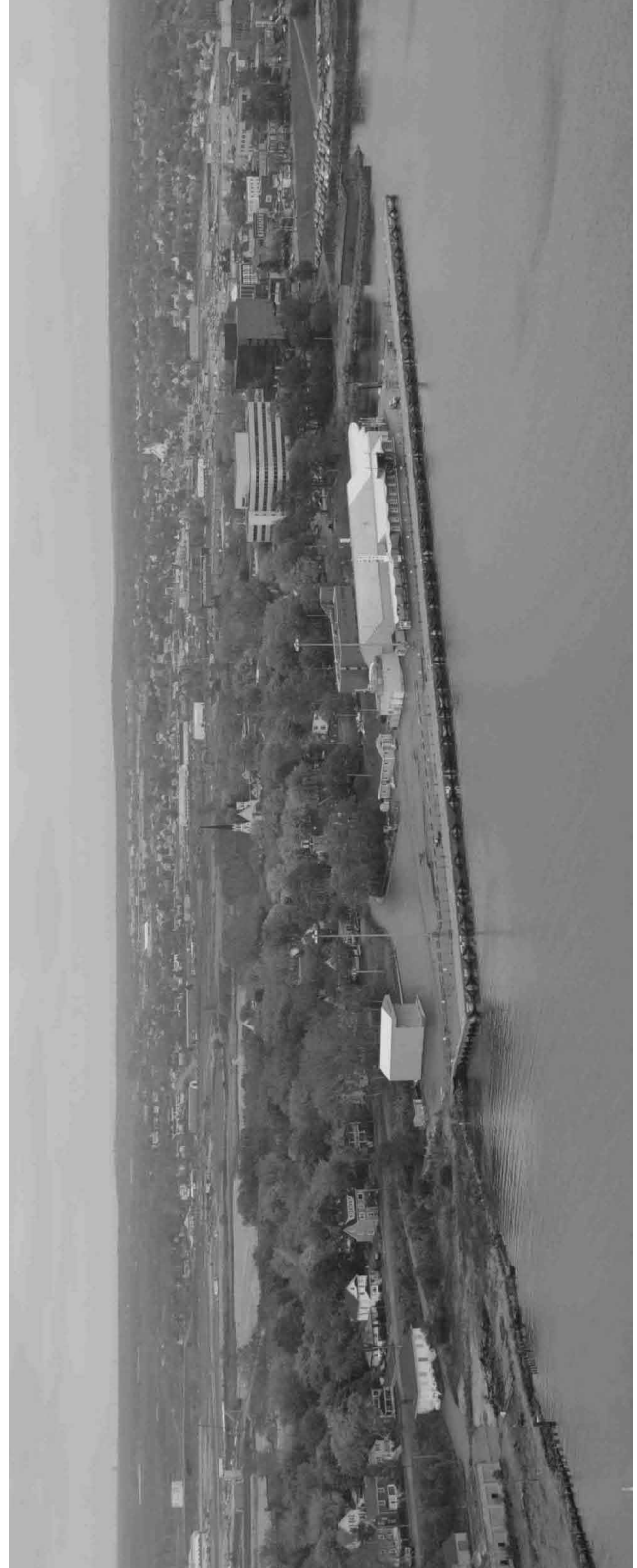
SYDNEY HARBOUR — PANORAMA (Oct. 2008)



SYDNEY HARBOUR — INTERNATIONAL PIERS (Oct. 2008)



SYDNEY MARINE TERMINAL (Oct. 2008)



alongside the floating piers. Near the centre of this basin is a shoal area that is marked by privately maintained buoys.

78 *Northern Yacht Club* is situated close west of the public beach at **Allen Point**, on the west side of North West Arm. A rock breakwater, about 120 m long, forms a mooring area. Lighted spar buoy SA8 (777.02) is situated close SE of Allen Pt.

79 A seawall has been constructed along the length of the Sydney business district opposite Dobsons Point. The *Royal Cape Breton Yacht Club* operates from a protected basin situated near the north end of the seawall.

SYDPORT (Oct. 2008)



Sydney Harbour to Scatarie Island

Chart 4367

80 From Low Point to **North Head**, a precipitous bluff 4.3 miles ESE, the 6 fathom (11 m) contour parallels the shore at a distance of 0.7 mile. **David Head Shoal**, at a depth of 16 feet (4.9 m), lies 0.7 mile NW of North Head.



81 The community of **New Waterford** is situated almost midway along this coast. Two breakwaters provide an entrance 60 feet (18 m) wide into a small boat harbour which is almost dry at low water. A Public wharf, 100 feet (30 m) long at the face, lies on the south side close within the entrance.



82 **Little Head** and the flat grassy **Lingan Beach** form the west shore of **Indian Bay** south of North Head. Safe anchorage is only available with offshore winds and fair weather. **Lingan**, a small community, is situated opposite the north extreme of Lingan Beach. **Leading lights** (774.6, 774.7), shown from white daymarks with red stripes, bear 270° into Lingan. The channel continues into **Bridgeport Basin**, a shallow pond, but it is obstructed by old bridge abutments that are visible at low water.

83 The *Lingan Power Generation Station*, a large concrete structure 0.6 mile SW of North Head, is **conspicuous**. White flashing lights are shown from two chimneys having elevations of 518 feet (158 m). Steel caisson gates are prominent close west of Little Head.

84 A coal colliery is **conspicuous** 2.5 miles SE of North Head at **O'Neils Point**.

Charts 4170, 4367

85 **Glace Bay** (46°12'N, 59°57'W), 4.5 miles ESE of Indian Bay, affords no safe anchorage. Reefs extend 0.5 mile from **Whelan Point** and **Macrae Point**, which form the

SYDNEY RIVER — 1 (Oct. 2008)



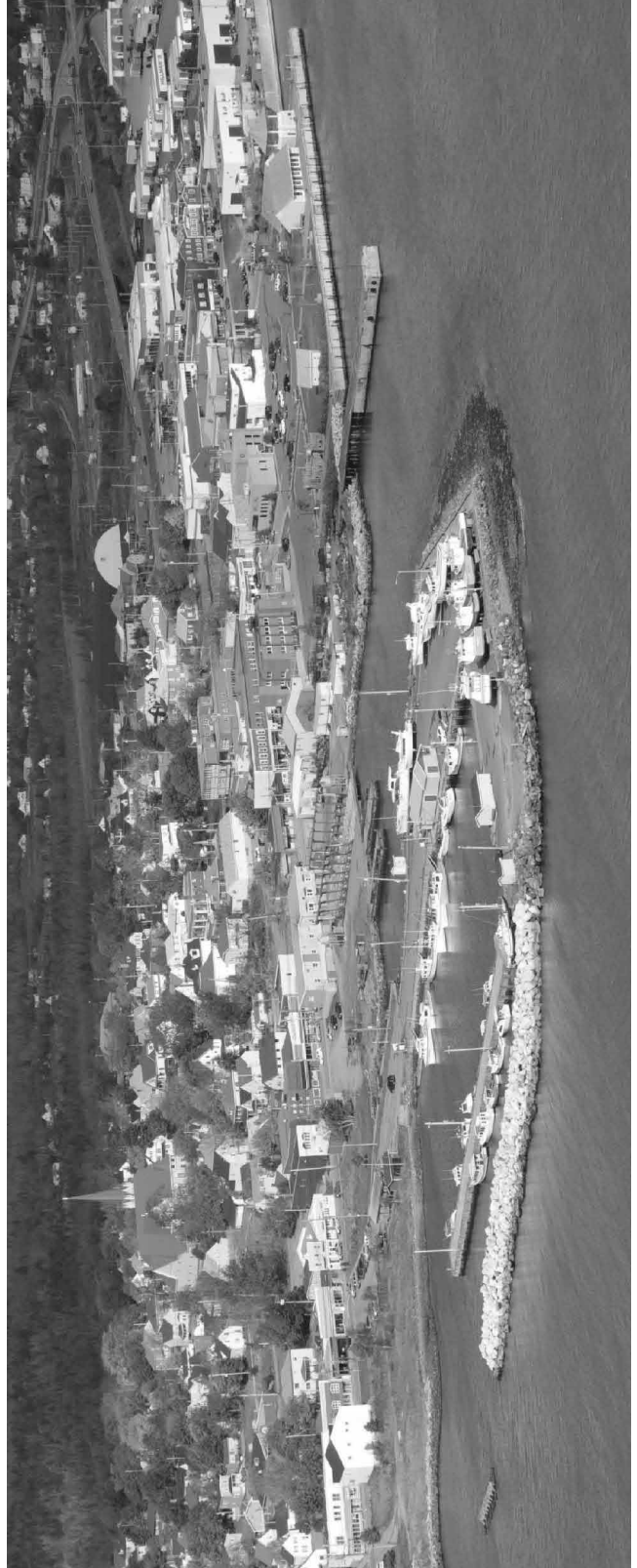
SYDNEY RIVER — 2 (Oct. 2008)



NORTH SYDNEY FERRY TERMINAL (Oct. 2008)



NORTH SYDNEY — BALLAST GROUNDS (Oct. 2008)



NORTH SYDNEY — PANORAMA (Oct. 2008)



SYDNEY — ROYAL CAPE BRETON YACHT CLUB (Oct. 2008)



SYDNEY HARBOUR — DOBSON YACHT CLUB (Oct. 2008)



east side of the bay. The channel into Glace Bay Harbour is only 30 m wide, favoring the north side. There are reported depths of 3.7 and 4 m, but owing to silting, depths may be less than charted.



86 **Leading lights** (772, 773) are shown from white daymarks with red stripes on the south side of the harbour, and bear $208\frac{1}{2}^\circ$ in the approach. Fairway light and bell **buoy KV** (771) is moored 2 miles NE of the harbour entrance.



87 Two rock breakwaters protect the entrance to Glace Bay Harbour. A **light** (773.5) having a green, white and black daymark, is shown from a mast on the outer end of the south breakwater. A second **light** (774) having a red and white daymark, is shown from a mast on the outer end of the north breakwater. Within the protected entrance on the north side of the harbour, is a third breakwater 85 m long, which leads to a Public **wharf** 385 m long. The south side of the harbour has a number of wharves of varying descriptions, as well as a **launching ramp**.

88 **Conspicuous objects**. — The power plant chimney, 1.5 miles south of the harbour entrance, is marked by red lights. A second chimney, elevation 109 m, 0.8 mile further south, is marked by white flashing lights. Five radio towers, marked by red lights, are situated close east of Whelan Point.

Chart 4375



89 **Flint Island** ($46^\circ 11'N$, $59^\circ 46'W$), 1.8 miles east of Cape Percé, is of broken sandstone, 55 feet (17 m) high, and precipitous. **Tide rips** frequently form over the uneven bottom to the SW of the island, and at times there is a heavy, breaking sea. In the channel between the island and the mainland, the irregular **tidal streams** attain a rate of 2 knots. A **light** (770) is shown from a white tower on the island.

90 **Ice**. — Drift ice with coverage greater than 3 tenths usually persists in this area from mid February to the end of April.

91 **Cape Percé** is a precipitous headland with cliffs of coal bearing sandstone, rising to a height of 100 feet (30 m). **Schooner Rock**, at a depth of 5 feet (1.5 m), is the shoalest part of a reef extending 0.4 mile from the north side of the headland.

92 **Morien Bay** opens to the SW of Flint Island. There are flats of sand and mud at the head of the bay. It is not a safe anchorage as it is open to the east. **Cow Reef** lies in the north side of the bay, 0.4 mile off Cape Percé; it is marked by starboard hand light **buoy JA2** (769).



93 A small craft harbour is located at **Port Morien** on the SW shore of the bay. Two rock breakwaters protect a double L-shaped wharf, enclosing a basin 230 feet (70.5 m) wide with a depth of 10 feet (3 m);



GLACE BAY (Oct. 2008)



electricity is available. A **light** (768) is shown from a mast on the outer end of the wharf.


94 **Mira Bay** ($46^{\circ}02'N$, $59^{\circ}57'W$), open to the east, is not a safe anchorage. **Mira River**, navigable by boats for 23 miles inland, flows into the head of the bay through a shallow mouth at **Mira Gut**.


95 Mira River is entered at the head of Mira Bay, through Mira Gut. The entrance is suitable only for small boats under power, with favorable sea and weather conditions. The approach is **buoyed**, but at low water there are depths of only 1 to 2 feet (0.3 to 0.6 m), and these are subject to silting. Sandy beaches extend along both shores at the entrance to the river. A rock **breakwater**, about 300 feet (91 m) long, extends from the shore close north of the entrance.


96   Currents are brisk, and continue 2 to 3 miles upstream; slack water is reported to be 1 to 2 hours before high water. A Public wharf 50 feet (15 m) long at the face with a depth of 3 feet (0.9 m) alongside, lies on the north side of the river close within its entrance.

97 **Coast.** — Mira Bay marks a change in the character of the coast and topography of the region. The undulating land and the long ranges of sandstone cliffs abounding in coal, which form the north side of the bay, give way to small

round, conical hills rising among swamps, shallow ponds and clumps of dwarf spruce trees.

98  The east side of **Scatarie Island** ($46^{\circ}01'N$, $59^{\circ}44'W$) is low and barren, but it rises gradually to the west, with trees, to give the same appearance as the adjacent mainland. The summit is 191 feet (58 m) high. A **light** (767) is shown at an elevation of 64 feet (19.5 m) from a skeleton tower, having red and white daymarks, on the NE point. **Cormorandière Rocks**, 0.7 mile NE of the light, are small, bold to seaward, and from 6 to 20 feet (1.8 to 6.1 m) high.

99  The island is not permanently inhabited, but is visited by fishermen in summer. The south and SE coasts are indented by many coves, but these are exposed to heavy and almost incessant swell, providing no shelter. **Northwest Cove**, on the north side of the island, provides reasonable **anchorage**, but the holding ground is poor and it is dangerous in onshore winds. A submarine power **cable** is landed in this cove. **Eastern Harbour** is a very insecure anchorage within reefs.

99.1  A **Marine Protected Area (MPA)** has been established which is centered on **St. Anns Bank**. The St. Anns Bank MPA is defined by an irregular boundary, which extends about 50 miles ENE from Scatarie Island. For further information and guidelines on the use of this area,

FLINT ISLAND (Oct. 2008)




PORT MORIEN (Oct. 2008)






please consult the *Fisheries and Oceans Canada* website at www.dfo-mpo.gc.ca.

Chart 4377

 100 **Main-à-Dieu Passage**, between Scatarie Island and the mainland, is made intricate by several shoals. Dense fogs are common and the passage is dangerous in bad weather. The holding ground is poor, and there is no shelter from heavy seas resulting from east and south winds. The passage is used by local fishermen, and should not be attempted except with very favorable conditions.

101 The dangers are mainly in **Main-à-Dieu Bay**, on the west side of the passage. **Helen Rock**, **The Bar**, **Mad Dick Rock**, and **Shag Rock** and **Great Shag Rock**, within 0.75 mile NE of **Moque Head**, lie closest to the deep water. **Little Shag Rock**, on the east side, lies close NNW of **Western Point**, Scatarie Island.

 102 A **light** (766), having red and white daymarks, is shown from a skeleton tower on Western Point. A **light** (765.4) having red and white daymarks is shown from a mast on Moque Head. A **fog signal** of one blast every 30 seconds is sounded from Moque Head; the horn points 070°.

  103 **Main-à-Dieu Harbour**, a cove on the NW side of Main-à-Dieu Bay, has depths of 8 to 14 feet (2.4 to 4.3 m), mud bottom. Breakwaters extend from the east and west sides of the harbour enclosing a cross-shaped Public wharf. The outer part, 100 feet (30 m) long, has two sides 50 feet (15 m) in length. There are depths of 8 to 11 feet (2.4 to 3.4 m) alongside. The approach to the harbour is **buoyed**. **Harbour Rock** lies in the middle of the entrance. **Lights** (765.1, 765.3) are shown from masts on the outer ends of the breakwaters.

Cape Breton Island — SE Coast

Charts 4374, 4375

104 Between Cape Breton and Cape Gabarus, 15 miles to the SW, the land is of moderate height, and the coast is indented with coves and small harbours. The hills in the background are about 200 feet (61 m) high. The north shore of Gabarus Bay is steep, with hills rising to 200 feet (61 m) abruptly from the sea. The south side is much lower.

105 From Cape Gabarus to Michaud Point, the 30 miles of coast is low, rocky and barren in appearance. There are many lakes and ponds near the shore, protected by gravel beaches and some rocky islands and ledges. Occasionally, there are reddish clay cliffs 70 to 90 feet (21 to 27 m) high, but from seaward, there are few distinguishable features. The only safe harbour on this stretch of the coast is **Louisbourg Harbour**.



 106 A **current** of up to 1 knot, running WSW, is often experienced about 3 miles off this coast. It is not so frequent closer to shore.

Chart 4375


107 **Cape Breton** (45°57'N, 59°47'W) is low, rocky, grass covered, and steep-to on the NE side. **Île aux Cannes**, north of the cape, is 62 feet (19 m) high. **Portnova Islands**, the highest being 45 feet (14 m) high and precipitous, lie 0.7 mile south of the cape. **Chameau Rock**, drying 2 feet (0.6 m), lies midway between these islands and the cape. Starboard hand light and whistle **buoy J10** (763) is moored 1.1 miles SE of the Portnova Islands.

108 **Baleine Cove**, **Little Lorraine** and **Big Lorraine** are three small and obstructed harbours that are used only by local fishermen. **Wildcove Shoal** and **White Rock** lie 0.7 mile east of Big Lorraine.

 109 A **light** (761) is shown from a white tower with a red band on the west headland of the entrance to Little Lorraine. A remotely operated **fog signal** of one blast every minute is sounded from a horn on the headland. To activate: depress radio microphone switch 5 times within 5 seconds, on VHF channel 65A (156.275 MHz). The fog signal will sound for 30 minutes, and if additional signal time is required this procedure can be repeated. Starboard hand light and bell **buoy JM2** (762) is moored 0.8 mile SE of this headland.

Louisbourg Harbour

Chart 4376

 110 Louisbourg **light** (756) is shown from a white octagonal tower, 55 feet (17 m) high, on **Lighthouse Point**. The light is visible from 250° through W, N and E to 100°. Fairway light and whistle **buoy JT** (754) is moored 3 miles SE of Lighthouse Point. **Pilotage** into Louisbourg Harbour is not compulsory, but local pilots can be arranged.

111 **Lorraine Head**, a rocky bluff 67 feet (20 m) high, obstructs the visibility of Louisbourg light, 1.5 miles to the ENE. **Lorraine Rock** lies 0.2 mile off Lorraine Head.

112 Lighthouse Point, **Nag Head** and **Nag Rock** form the north side of the main entrance channel. The south side is formed by **Green Island**, **Rocky Island** and **Battery Point**, which lie east of **Rochefort Point**, the NE extreme of land surrounding the restored **Fortress of Louisbourg**. The spire in the middle of the chateau, and a light blue water tank 1.8 miles to the NW are **conspicuous**.

113 **Harbour Shoal**, at a depth of 23 feet (7 m), 0.35 mile east of Rocky Island, opens a secondary channel from the south. The sea breaks heavily on this shoal in very heavy

MAIN-À-DIEU HARBOUR (Oct. 2008)



weather; port hand light and bell buoy *JT1* (755) is moored close east of Harbour Shoal.



114 The outer **leading lights** (757, 758) bear 268° in the main entrance channel and are shown from white daymarks with red stripes. **Battery Shoal**, at a depth of 17 feet (5.2 m), lies 0.3 mile east of **Battery Point**, off the west side of the entrance into **Northeast Arm**.

115 Louisbourg is a Public Harbour. Except as permitted by the harbourmaster, no person shall engage in any underwater exploration or salvage operations in Louisbourg Harbour.

116 Local **ice** formation in the harbour is of minor significance. From February to April, loose pack ice may occasionally drift across the approaches.



117 The Public wharf is T-shaped and 590 feet (180 m) long. The outer end, 200 feet (61 m) long, has a least depth of 25 feet (7.6 m) alongside. Close to the NE, there is another wharf 360 feet (110 m) long, with a least depth of 20 feet (6.1 m) along the outer 180 feet (55 m) length.



118 A pier, with a boardwalk along the adjacent shore, is situated 0.1 mile NE of the Public wharf. The pier is 230 feet (70 m) long and 20 feet (6 m) wide; a **light**, privately maintained, is shown from a mast at the outer end. For the outer 200 foot (61 m) length, there are depths of 5 to 20 feet (1.5 to 6 m). At the inner end of the east side is a floating wharf 50 feet (15 m) long with depths of 3 to 9 feet (0.3 to 2.7 m) alongside. Electricity is available. There is no berth alongside the boardwalk.

119 The fish plant wharf at the west side of the harbour is 300 feet (91 m) long and 61 feet (19 m) wide, with depths of 12 to 19 feet (3.7 to 5.8 m) alongside.



120 **Anchorage** is available in Northeast Arm in about 33 feet (10 m), mud. There is some swell and undertow after heavy easterly gales, but the holding ground is good and the sea usually smooth. **Southwest Arm** is not as well sheltered.

121 Local supplies are limited, but otherwise they may be obtained from Sydney. Fishing and tourism are the main activities in the town.

Chart 4375

122 **Gabarus Bay** (45°51'N, 60°05'W) is a spacious inlet entered between two low and rocky points: **White Point** on the north side, and **Cape Gabarus**, 5 miles to the SW. Except for some rocks near the shore, the bay is free of dangers. **Green Rock** lies 0.5 mile east of Cape Gabarus; port hand light and bell buoy *JX3* (752) is moored 0.6 mile NE of this rock. **Kennington Rocks**, of bare slate 28 feet (8.5 m) high, lie off **Kennington Cove** on the north shore. **Harbour Rock**, a low ledge above water, lies near the head of the bay. A gravel beach lies at the head of the bay.

123 A small fishing harbour lies between **Rouse Point** and **Harbour Point**, two peninsulas with slate cliffs on the

LOUISBOURG — LIGHTHOUSE POINT (Oct. 2008)




LOUISBOURG HARBOUR (Oct. 2008)




FORTRESS OF LOUISBOURG (Oct. 2008)



south side of the bay near the head. Rouse Point, to the east, is wooded, 50 feet (15 m) high and steep-to. Rocks surround Rouse Point, from which a long sand beach extends to the south.

 124 A **light** (752.6) is shown at an elevation of 30 feet (9.1 m) from a skeleton tower having red and white daymarks, situated on Rouse Point. A **light** (753) is shown at an elevation of 54 feet (16 m) from a white tower on Harbour Point.

 125 The narrow, **buoyed** channel leading into the harbour has depths of 3½ to 5 feet (1.1 to 1.5 m). A wharf extends 150 feet (46 m) from the west shore, close inside the harbour. There is a least depth of 5 feet (1.5 m) along the outer 100 foot (30 m) length on both sides. There are several fishing stages.

126 A breakwater in ruins extends 356 feet (108 m) SW from the west side of Harbour Point. Foul ground lies close off the north side of the structure.




 127 There is **anchorage** in fair weather in 4 fathoms (7.3 m), sand and mud, in **Gabarus Cove**, west of Harbour Point. It is not safe in east and NE gales.

Chart 4374

 128 **Guyon Island** (45°46'N, 60°07'W), low and bare, lies 3.5 miles SSW of Cape Gabarus in the approach to Fourchu Bay. Vessels should keep well seaward of this coast. A **light** (750) is shown from a white tower 42 feet (13 m) high on the island. Starboard hand light and whistle **buoy J12** (751) is moored 2.7 miles east of Guyon Island.

129 **Fourchu Bay** has many rocks and shoals and affords no shelter. A submarine power **cable** is laid across the bay from the west shore to Guyon Island.

 130 **Fourchu Head** lies at the south end of the bay; a boulder breakwater joins it to the mainland. A **light** (747) is shown at an elevation of 48 feet (15 m) from a white circular tower with two red bands on Fourchu Head.

GABARUS (Oct. 2008)



131 **Fourchu Rock**, narrow, covered with moss and **conspicuous**, lies 1.5 miles NE of Fourchu Head. **Pot Rock**, at a depth of 10 feet (3 m), lies 1 mile SE of Fourchu Head; it breaks only in heavy weather. Starboard hand light and whistle **buoy N14 (745)** is moored 0.4 mile south of Pot Rock.



132 A narrow, **buoyed** channel leads through **Fourchu Inlet**, on the north side of Fourchu Head, into **Fourchu Harbour**. The least depth in the channel at low tide is reported to be 3 feet (0.9 m), though there is deeper water in the harbour. Depths in the harbour are subject to change because of silting. The harbour provides sheltered **anchorage** for small vessels in good holding ground. An L-shaped Public wharf extends 170 feet (52 m) from the south shore of the harbour to an outer end 75 feet (28 m) long with a depth of 10 feet (3 m) alongside.

133 **Framboise Cove**, the bight west of Fourchu Head, affords no shelter. **Framboise Shoal** and **Outer Breaker Reef** lie across the entrance, 1 and 1.5 miles SE of **Red Cape**.



134 **St. Esprit Island** ($45^{\circ}37'N$, $60^{\circ}29'W$), 12 miles SW of Fourchu Head, is 30 feet (9.1 m) high, grass covered and joined to the mainland by a partly drying

rocky reef. A **light (743)** is shown from a mast, having red and white daymarks, on the island.

135 **Bad Neighbour Shoal**, at a depth of 4 feet (1.2 m), lies 1.5 miles SW of St. Esprit Island and only breaks in heavy weather. Starboard hand light **buoy N16 (742)** is moored 0.7 mile south of this shoal.

136 **Michaud Point**, 8.2 miles SW of St. Esprit Island, is a wooded peninsula 40 feet (12 m) high that is joined to the mainland by a sand beach. **Black Breaker Rock** lies midway along this coast which is encumbered with numerous rocks. South cardinal light **buoy NHA (739)** is moored close south of Black Breaker Rock.

137 **L'Archevêque Cove**, 3.5 miles west of St. Esprit Island, provides good shelter for small craft in all but SE winds. The approach is **buoyed**, and the entrance channel is often dredged to a depth of 4 feet (1.2 m). Fairway light **buoy NH (741)** is moored 0.7 mile SE of the entrance to the cove.



138 Breakwaters, in ruins, extend from the west entrance point of the cove, and from the shore close north of the east entrance point, which is a barren cape joined to the shore by a gravel spit. A breakwater-wharf, on the west side of the cove, is 404 feet (123 m) long with a depth of 2 feet (0.6 m) along the inside 240 foot (73 m) long face.



139 **Grand River** enters the sea between **Black Point** and **Red Head**, about 5 miles west of St. Esprit Island. Black Point is low, but Red Head, 70 feet (21 m) high, with a steep face, and wooded, is the highest feature along this part of the coast. The river mouth is narrow and obstructed by a sand bar with only 3 feet (0.9 m) over it. **Currents** in the river are rapid. The channel inside has a depth of 6 feet (1.8 m) to within 0.5 mile of a bridge 2.5 miles upstream.

140 The low-lying **Basque Islands** lie to the east of Michaud Point. **Basque Shoal**, almost 1 mile south of these

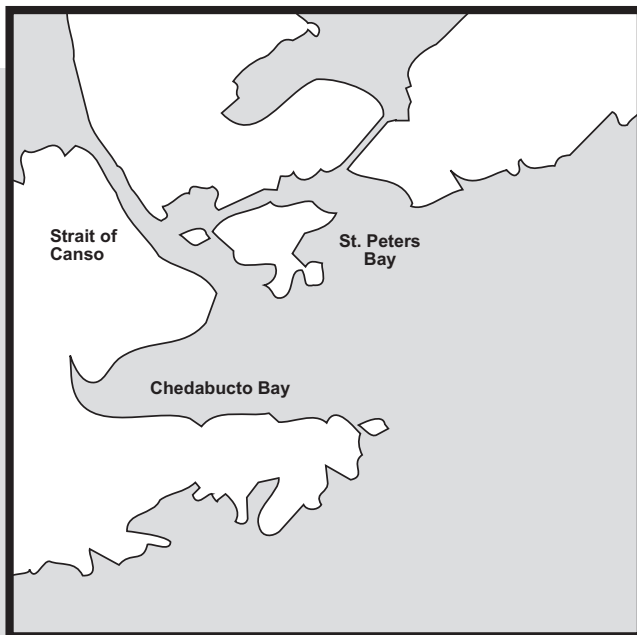
islands, breaks in heavy weather. **Michaud Cove**, on the north side of the Michaud Point, fronts a sand beach and provides good holding ground for small vessels in west winds. The anchorage is not safe during east and SE winds.

141 **Michaud Ledges** extend 1 mile offshore between Michaud Point and **Red Point**. These ledges dry in places and are usually marked by breakers. Starboard hand light and whistle **buoy N18 (738)** is moored 1.7 miles SSE of Red Point.

St. Peters Bay Chedabucto Bay Strait of Canso

St. Peters Bay

Chart 4308



1 **Green Island** ($45^{\circ}29'N$, $60^{\circ}54'W$), composed of slate and precipitous, lies 1 mile east of **Petit-de-Grat Island** and **Isle Madame** at the SW approach to **St. Peters Bay** and the NE approach to **Chedabucto Bay** and **Strait of Canso**. A **light** (722) is shown at an elevation of 112 feet (34 m) from a white tower on the peak of Green Island.

2 **Orpheus Rock**, awash, and on which the sea nearly always breaks, is situated 1.7 miles east of Green Island; it is marked by port hand light and bell **buoy** *NQ1* (723).

3 **Red Head**, the SE extreme of Petit-de-Grat Island, is a **conspicuous** cliff 70 feet (21 m) high. The channel between Green Island and Red Head is favored by small fishing craft and fishing gear may foul this passage.

4 **Petit Anse** is a small cove on the east side of Petit-de-Grat Island, 0.7 mile north of Red Head. A breakwater 600 feet (183 m) long extends from **Birch Island**, on the north side of the cove. A Public wharf 155 feet (47 m) long and 21 feet (6.4 m) wide, with a depth of 2 feet (0.6 m) at the outer end, is situated near the head of the cove. A submarine power **cable** is laid between Petit Anse and Green Island.

5 **Bay of Rocks**, north of Petit-de-Grat Island, is entirely open to the east and affords no safe anchorage. **Bewes Shoal**, at a depth of 13 feet (4 m), lies near the middle of the bay, and the **Rocky Islets** front a Public park near the head of the bay.

6 At the south end of the bay, a **buoyed** channel with a depth of 6 feet (1.8 m) leads into the inlet between Isle Madame and Petit-de-Grat Island. A low clearance bridge crosses the inlet 0.7 mile inside the entrance. A **light** (721) is situated near the outer end of the breakwater on the east side of the entrance.

Charts 4275, 4308

7 From **Petit Nez (Beak Point)**, the north point of Bay of Rocks, to **Cap Ronde**, the NE point of Isle Madame, the shore is fronted by shoal, rocky and irregular ground which occasionally breaks in heavy gales. Cap Ronde, a red cliff 19 m (62 ft) high, appears as an island, but is connected to Isle Madame by a low rocky beach.

8 **Petit Nez Shoal** is a large rocky area which breaks in heavy weather. It lies 1.9 miles east of Petit Nez and is marked by port hand light and whistle **buoy NQ3 (727)**.

Chart 4275

9 **Red Point** ($45^{\circ}34'N$, $60^{\circ}45'W$) lies at the extreme SE approach to St. Peters Bay. Fairway light and whistle **buoy NM (736)** is moored 0.85 mile NW of Red Point. Between Red Point and **St. Peters Island**, 2.8 miles to the NW, is a shallow bay having several coves with fishing villages.



10 A breakwater-wharf extends 177 m to a depth of 1.5 m at **Little Harbour**, 0.6 mile NNE of Red Point. Sunken rocks lie along the extreme outer face of this wharf. A **light (737)** is shown from a mast on the outer end of the wharf.



11

A breakwater-wharf extends 275 m to a depth of 2.4 m at **Chapel Cove** on the north side of the bay. There are depths of 0.9 to 1.5 m along the 91 m length inside the breakwater. A groyne, in disrepair, extends from the north side of the cove. A prominent church and spire is situated 0.2 mile north of the groyne.

12 Small craft shelter is available in a cove on the NW side of St. Peters Island. **Three Islands Cove** is a small sheltered cove used by local fishermen, 1 mile NW of the island. Starboard hand light and bell **buoy NP2 (735)** is moored 0.4 mile west of St. Peters Island.



13

St. Peters Bay lies in the approach to **St. Peters Canal**, the south entrance into **Bras d'Or Lake**. From the Strait of Canso, small craft usually enter the bay from Lennox Passage, a channel separating Cape Breton Island from Isle Madame. **Horsehead Shoals**, **Three Rocks** and **Samson Rocks**, all surrounded by shoal water, are the principal dangers in the approach to the bay from the SE. There is a **buoyed** channel with a least depth of 5.5 m NW of Samson Rocks. Starboard hand light **buoy NQ12 (733)** is moored 0.7 mile west of **Point Brulée**, the east entrance point to the bay. **Sutherlands Head**, on the west side, is a **conspicuous** wedge of red clay and trees. A **light (734)** is shown from a white tower 10.9 m high on **Jerome Point** near the head of the bay.



14

St. Peters Bay provides sheltered **anchorage**, especially in **Grande Greve Harbour**, on the east side. **River Tillard**, on the west side of the bay, is shallow with shifting sandbars, but permits navigation and anchorage for small craft. Small craft anchorage is also available in **Barachois Cove**, inside of **Jane Point** on the east side of the bay. This cove can only be entered by following the north shore opposite the bar extending from Jane Point.

St. Peters Canal

15 **St. Peters Canal**, about 0.5 mile long, consists of a single lock and swing bridge to allow entry into **St. Peters Inlet** in the Bras d'Or Lake. The tidal lock is 91.4 m long and 14.45 m wide with a limiting depth of 4.1 m. The swing bridge has a vertical clearance of 6.1 m when closed. Two overhead power **cables**, with a clearance of 32 m, cross the canal close north of the lock.

16 The canal is normally open from the middle of May to the middle of October. Typically, hours of operation are from (local time):

mid May – mid June	0800-1630
mid June – early August	0800-2030
early August – early September	0800-1930
early September – mid October	0800-1630

17 Small craft operators should arrive at least 30 minutes before the close of operating hours in order to allow time to transit the canal that day. Outside of regular operating hours and season, passage through the canal may be possible under special circumstances; advance arrangements are required.

18 All vessels must be registered at the Lock Office.

19 Control **lights** are situated 9.1 m from each entrance to the lock. No vessel shall enter the lock unless a green light is shown. A speed limit of 6 knots for the canal is posted.

20 Vessels should be prepared to handle their own lines while transiting the canal. Temporary securing alongside the approach walls is allowed provided the vessel does not interfere with the canal operation and sufficient crew is left onboard in order to move the vessel if required.

21 If approaching from the north, contact with the Lock Office can be made by shore telephone, located on a pole near the swing bridge.

22 St. Peters Canal is operated by Parks Canada. Vessels navigating the canal are subject to the *Heritage Canal Regulations*. Further information may be obtained by writing to Fortress of Louisbourg, P.O. Box 160, Louisbourg, Nova Scotia, B0A 1M0. St. Peters Canal can be reached by telephone (902-535-2118).



23

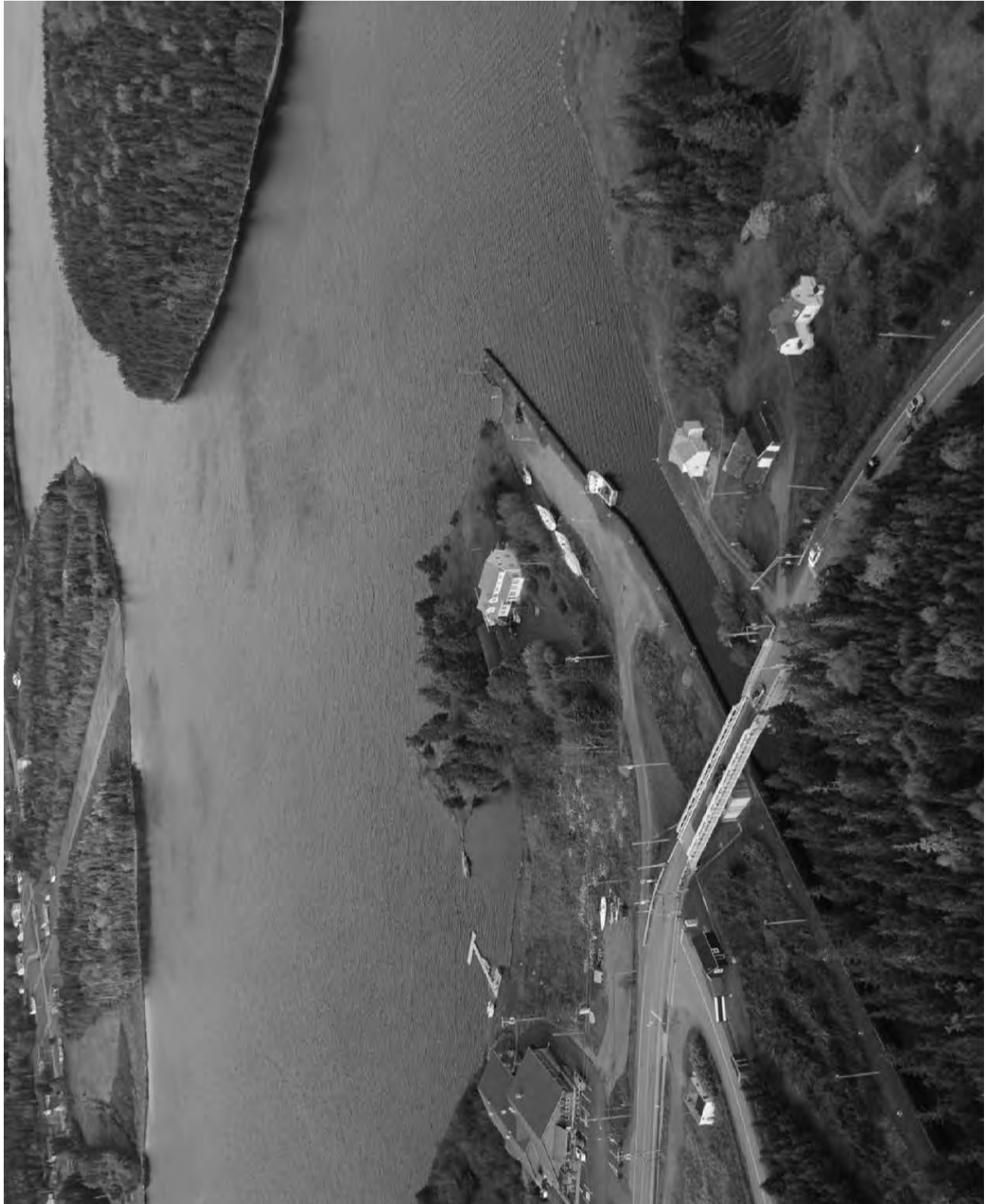
Pilotage is compulsory for vessels bound for St. Peters Canal. From the east approach the pilot boarding station is in position $45^{\circ}32'N$, $60^{\circ}46'W$. From the west, the pilot boarding station is in position $45^{\circ}29'30''N$, $61^{\circ}11'06''W$.

Chedabucto Bay

Chart 4335

24 The entrance to **Chedabucto Bay** lies between **Green Island** and **Cape Canso**, 10.5 miles to the south. The

ST. PETERS CANAL (NORTH SIDE) (Oct. 2008)



ST. PETERS CANAL (FROM THE SOUTH) (Oct. 2008)



main shipping channel through the bay leads into the Strait of Canso, a sheltered deep-water harbour. The **Strait of Canso** and the **Canso Canal** allow for shipping between the Atlantic coast of Nova Scotia and the Gulf of St. Lawrence.

25 For vessels entering or leaving Chedabucto Bay, a compulsory **traffic separation scheme** is in effect. A vessel traffic services system is in operation for the Strait of Canso and eastern approaches.



26 **Pilotage** is compulsory in the Strait of Canso area within a line drawn from Green Island to Fox Island in Chedabucto Bay, and from Cape Jack to Low Point in St. Georges Bay, north of the causeway.


27 Masters of vessels requesting a pilot must report via any coastal radio station their ETA to Pilots Cape Breton, 12 hours before arrival at the pilot boarding station.

28 The master of a vessel that is to depart or move within the compulsory pilotage area must report to Pilots Cape Breton 4 hours before the ETD.

29 The pilot boarding station for the approach from Chedabucto Bay for vessels over 223 m (730 ft) in length is in position $45^{\circ}24'N$, $61^{\circ}01'W$; for vessels not over 223 m (730 ft), the position is $45^{\circ}29'30''N$, $61^{\circ}11'06''W$.

Charts 4335, 4302, 4307

30 The ship channel into the Strait of Canso is marked with **leading lights** and **buoys**:

 31 **Port Malcolm leading lights** (689.7, 689.8), bearing 320°, are shown from the east side of **Inhabitants Bay** (45°35'N, 61°01'W) from white daymarks with red stripes.



 32 Fifteen lettered **anchorages** are established in Chedabucto and Inhabitants Bays.

Chart 4308


33 **Isle Madame. — South Side. — Petit-de-Grat Harbour** is a fishing harbour with a narrow **buoyed** entrance between many rocks and shoals. A low clearance bridge crosses the harbour joining the communities of **Petit-de-Grat** and **Boudreauville**.

34 Access to the harbour is difficult during strong southerly winds as the sea usually breaks across the entrance in the vicinity of **Mouse Island**. The inner harbour does provide good shelter, particularly on the east side in **Joe Bois Cove**. **Anchorage** is not recommended anywhere owing to foul bottom.

35 **Cape Hogan**, the south extreme of Isle Madame, lies close west of the outer approach to the harbour; it is the outer end of a bold headland with cliffs 30 m high. Fairway light and whistle **buoy CJ** (710) is moored 1.1 miles east of this headland.

 36 The outer **leading lights** (713, 714), bearing 356°, are shown from the west shore with white daymarks and red stripes. The inner range (718, 719), shown from white daymarks with red stripes, are situated on the east shore close south of Joe Bois Cove.


37 A **light** (719.1) is shown from a mast having green and white daymarks, situated on the outer end of a rock breakwater at **Cowley Point**.

 38 **Wharves.** — An L-shaped breakwater-wharf with an outer end 32 m long extends from **Arrow Point**, the SE entrance point. The outer face has depths of 1.8 to 2.7 m, the inner face dries at the inside corner.

39 There is a wharf adjacent to the north side of the Cowley Point breakwater that is used by local fishermen. The fish plant close to the west has been destroyed.


40 The L-shaped wharf at Boudreauville is situated close SW of the bridge. The outer end is 67 m long with a depth of 3.4 m alongside. A boat haulout and storage area is situated to the NE of this wharf.

41 The Public wharf in Joe Blois Cove is used mostly to land fish. The wharf, 52 m long, has a depth of 3.4 m along both sides of the outer 30 m length. The adjoining wharf, 37 m long, has a depth of 3.4 m alongside.

 42 **Arichat Harbour**, a fishing port, is situated at the head of a small bay between **Marache Point**, the west extreme of the headland extending to Cape Hogan, and **Crichton Island**, 2.6 miles to the NW. A **light** (708) is


shown at an elevation of 10 m from a white tower on Marache Point. **Arichat Head** is at the SW end of Crichton Island.


43 **Cerberus Rock**, awash, lies 2.4 miles south of Arichat Head. The wreck of the tanker *Arrow*, with masts visible, lies close to the rock. A second part of the wreck, at a depth of 2.1 m, lies 0.3 mile to the NNW. Starboard hand light and whistle **buoy CH4** (709) is moored 0.3 mile south of the rock. The wreck of the *Arrow* is popular for recreational diving.

 44 **Jerseyman Island** lies in the centre of the harbour and provides good shelter in the lee of SW winds. Arichat Harbour is entered by way of two channels on either side of Jerseyman Island. **Crid Passage**, though narrow, is deep and the preferred approach between **Beach Point**, the north point of Jerseyman Island, and a group of rocks extending south from the **Crid Islands**. A **light** (707) is shown at an elevation of 12 m from a white square building on Beach Point; a submarine **cable** is laid across Crid Passage.

45 The other channel, south and east of Jerseyman Island, is wider but encumbered with shoals, leading into **Cape Auguet Bay** before turning sharply into Arichat Harbour. **Hautfond Shoals** extend in a chain to 1.2 miles SW of Marache Point. **Henley Ledges**, rocks drying 1.5 m, are on the outer end of a bank extending south from Jerseyman Island. **Pilot Rock** lies off **East Cliff**, the east end of the island; on the NE side, **Poule Reef** lies 0.2 mile NE of **Poule Islet**. **Fiddle Shoal**, rock, lies opposite Poule Reef, 0.5 mile further NE.

46 The town of **Arichat** is the local commercial centre. Two spires of the Catholic church, with dome peaks, are **conspicuous**. The Public wharf is L-shaped with an outer end 37 m long and 15 m wide, with a least depth of 4.9 m alongside. Fresh water is available from the fish plant.

 47 Good **anchorage** is available in 22 m on the north side of Jerseyman Island. Cape Auguet Bay is open to west winds and heavy swell at times, but provides fairly good anchorage in 18 to 22 m, mud. Recommended anchorage for small craft is at the head of Arichat Harbour.

 48 The *Isle Madame Boat Club* operates from a small cove to the west of **Robins Point**, on the SE side of the harbour. There is a small wharf, a ramp, storage area, and several floating finger piers.

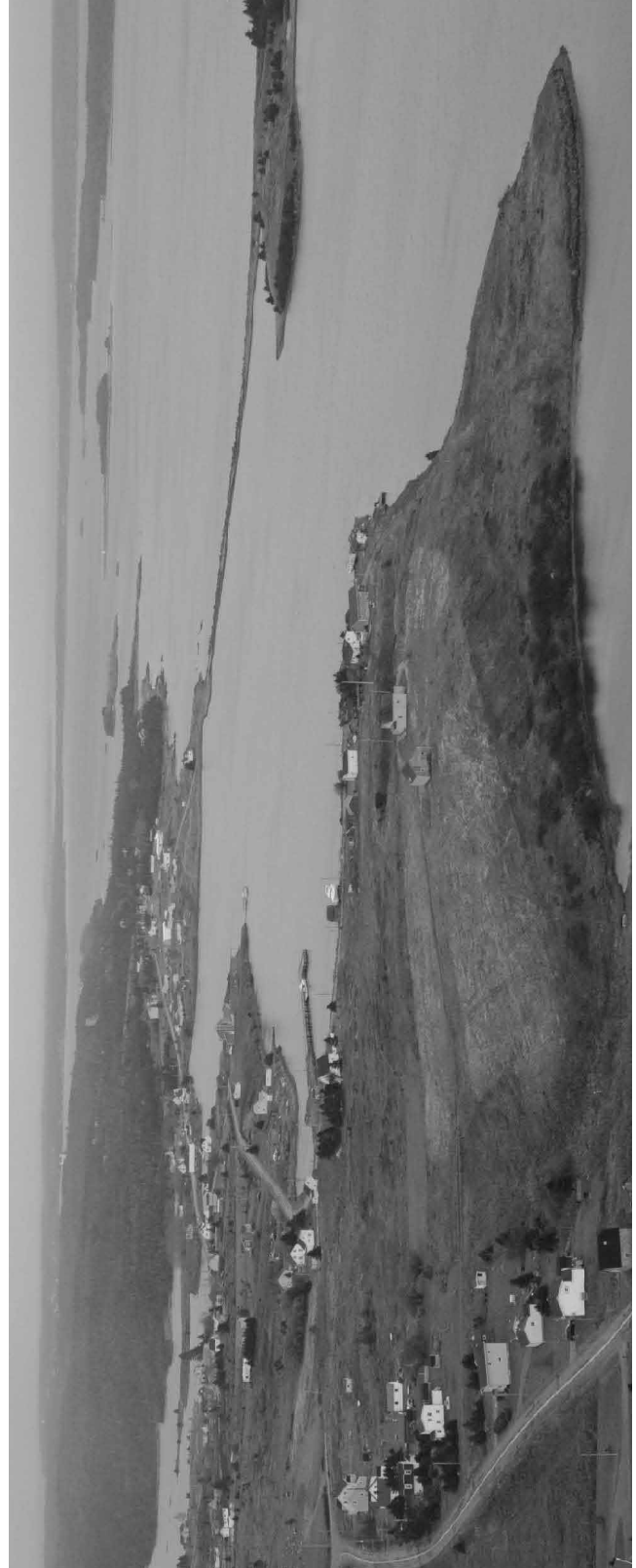
49 The coast between Crichton Island and **Peninsula Point**, 3.5 miles to the WNW, forms the approach to a number of shallow harbours. Peninsula Point, the south extreme of **Janvrin Island**, appears as an island with low red cliffs fronting the sea; a long shingle bar connects the point to the island. **Crichton Shoal**, at a depth of 2.4 m, lies 0.7 mile SW of Arichat Head.

50 **West Arichat Harbour**, on the north side of Crichton Island, lies in the fairway to **Le Blanc Harbour**

ARICHAT WHARF (Oct. 2008)



WEST ARICHAT HARBOUR (Oct. 2008)



ISLE MADAME BOAT CLUB (Oct. 2008)



and **Port Royal Harbour**. **Crichton Head** is the NW point of Crichton Island.

51 A narrow and shallow channel leads north of **Bosdet Point** and winds around a low pebble spit 0.3 mile long into the harbour. A T-shaped Public wharf on the north side of Port Royal Harbour, the north branch of this inlet, is in a state of disrepair.



52 A Public wharf, in the community of **West Arichat**, is situated near the head of the cove entered south of Bosdet Point. The L-shaped wharf extends 43 m to an outer end 15 m long with a depth of 1.5 m alongside. A **light** (706) is shown from a mast on the outer end of the wharf. This cove provides secure shelter for small craft.



53 **Janvrin Harbour**, on the south side of Janvrin Island, 2.7 miles WNW of Crichton Head, is suitable for small boats only. A Public wharf 47 m long extends to a depth of 1.2 m from the north shore.

Chedabucto Bay — South Side

Charts 4307, 4335



54 **Cranberry Islands** ($45^{\circ}19'N$, $60^{\circ}56'W$), low and rocky, lie at the SE entrance to **Chedabucto Bay** and in the approach to **Canso Harbour**. At high water, the islands are divided into several parts. A **light** (668) is shown from a white square tower on a building, 48 feet (15 m) high, with a dwelling nearby, near the south end of the islands. A **racon** (—•••) operates from this light. The lighthouse and buildings are **conspicuous**. A **fog signal** of two blasts every minute is sounded in unison from two horns on the lighthouse; point 066° and 141° .

55 Between the Cranberry Islands and the head of Chedabucto Bay at Guysborough, the shore is composed of rock, partially covered with drift sand, clay and boulders.

56 Canso Harbour, 2.5 miles WNW of the Cranberry Islands, is contained from the north by a number of islands, the largest being **Durell Island**, **Piscatiqui Island** and

ROOK ISLAND (Oct. 2008)



George Island. From Chedabucto Bay, entry is made between Piscatiqui and **Hart Islands**.

57 **Fox Island**, 40 feet (12 m) in elevation and 2.3 miles west of Durell Island, is connected to the mainland by a bar of sand and rock which nearly dries. Several abandoned submarine **cables** are laid into Chedabucto Bay from both sides of the bar. **Inner Fox** and **Outer Fox Rocks** lie 0.5 mile offshore between Durell and Fox Islands. A **tower** 253 feet (77 m) in elevation and marked with red **lights** is situated 1.6 miles SSE of Fox Island.



58 Small vessels **anchor** in **Fox Bay**, west of Fox Island, in 4 to 7 fathoms (7.3 to 12.8 m), sand. The anchorage is not secure as it is open to north winds and swell. A rock lies at 11 feet (3.3 m), close NW of the western point of Fox Island.



59 **Half Island**, rock covered in moss, lies on the west side of **Half Island Cove**, 4.5 miles west of Fox Bay; **anchorage** is insecure being open to NE winds and swell. A Public breakwater-wharf extends 340 feet (104 m) south from the east entrance point to the cove. Though the wharf was in ruins in 2011, the east face offers fair shelter to small craft. The SW corner is foul.

60 **Philip Cove**, 1.6 miles west of Half Island, affords shelter to boats, being protected by rocks across the entrance which dry soon after high water.



61 **Rook Island** lies near the middle of the entrance to **Queensport**, between **Brodie**

Point and **Lamb Point**. A **light** (683) is shown at an elevation of 54 feet (16 m) from a white dwelling with a red roof on the island. There is good holding ground in the harbour, but **anchorage** is limited and only partly protected from wind and swell. **Brodie Rocks** form part of a reef extending 0.2 mile west from Brodie Point; **Corveau Rocks** are part of a reef extending 0.4 mile east of Lamb Point.



62 A Public breakwater-wharf is situated in the NE side of the harbour, 0.3 mile SE of Brodie Point. The wharf extends 130 feet (40 m) east from the breakwater, with alongside depths of 7 to 18 feet (2.1 to 5.5 m) on the south face and 10 to 15 feet (3 to 4.6 m) on the north face. The wharf is reported to give good shelter.

HALF ISLAND COVE (Oct. 2008)



QUEENSPORT (Oct. 2008)



Chart 4335

63 **Crow Cliffs** are 3 high cliffs of clay 1.5 miles west of Rook Island. The coast from Crow Cliffs to the **Salmon River**, 7 miles west, is bold and rocky.

64 The entrance to the Salmon River, having a depth of only 3 feet (0.9 m), is marked by a shingle spit which extends from the south side.



65 **Bigby Head**, a remarkable cliff rising 109 feet (33 m) to a flat peak, separates the Salmon River from **Toby Cove**, a small boat harbour having a depth of 4 feet (1.2 m) over a bar at its entrance. **Toby Point**, the north entrance point, is low and cone shaped. An L-shaped wharf extends 70 feet (21 m) from the south side of the cove. The outer face, 36 feet (11 m) long, has a least depth of 12 feet (3.7 m) alongside.



66 **Guysborough Harbour**, at the head of Chedabucto Bay, is an inlet running 3.5 miles north to the mouth of the **Guysborough River**. There is deep water and good shelter inside the entrance. It is recommended that sailing vessels use motor power to enter the harbour. The rate of **tidal streams** in the entrance often reaches 4 to 5 knots. Slack water, only about 30 minutes in duration, is reported to be at high water.

67 The channel into the harbour is only 300 feet (91 m) wide. An outer sand bar stretches from Toby Point to **Hadley Beach** and at times may be impassible owing to heavy breakers, particularly when easterly swells meet the ebb tidal stream. The inner bar, between **Eliza Point (Fort Point)** and Hadley Beach, has a depth of 17 feet (5.2 m) over it.

68 A white circular tower, 30 feet (9 m) high, with two red bands, stands as a **daymark** on the west side of the entrance near **Peart Point**.

69 Steer with the beacon open slightly to starboard and then follow the west shore so to enter the harbour midway between Peart Point and **Stony Patch**, which is marked by lighted starboard hand **buoy CQ2 (683.1)**. Shallow water of the inner bar is marked by a **buoy** moored off Fort Point.

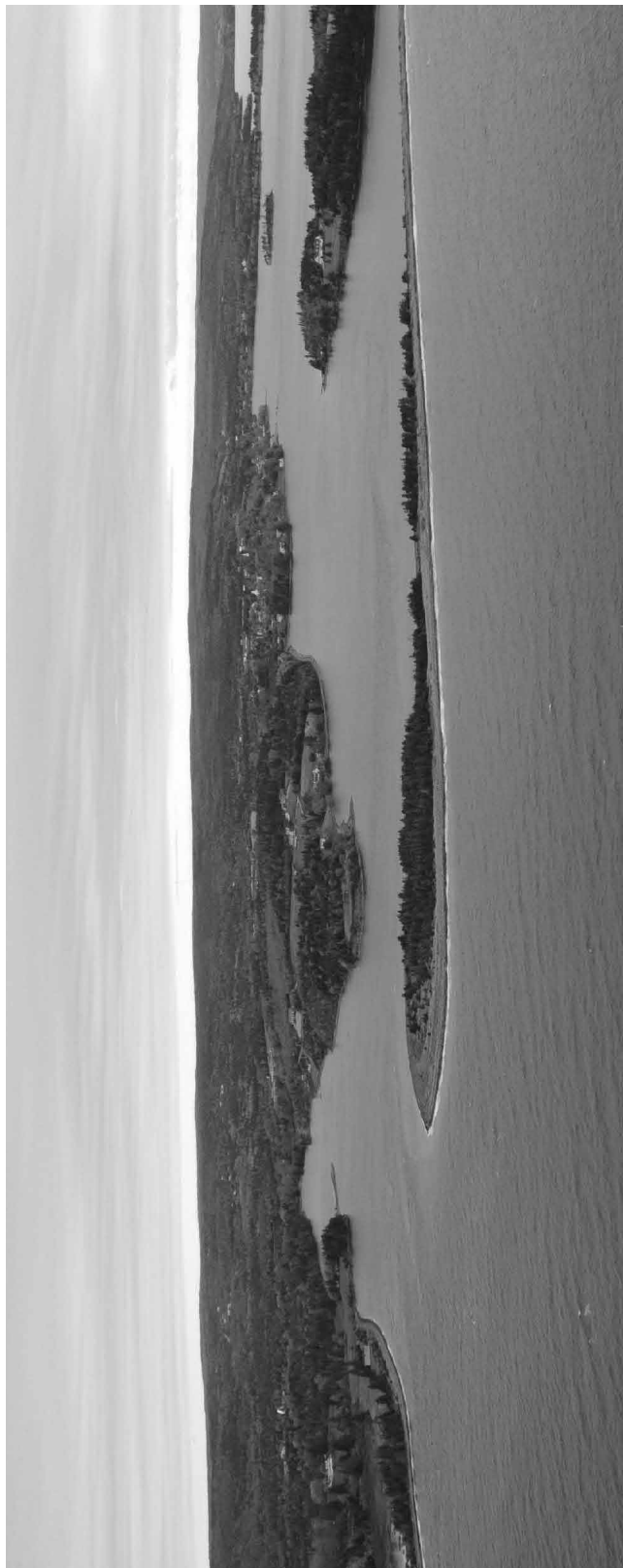
70 Inside Guysborough Harbour, shoal water extends 0.2 mile east and NE of **Byron Island (Little Island)**, the SW of two islands to the NE of Guysborough town. The SW side of **Birch Island (Big Island)** must be favored.

71 **Guysborough**, a community of 428 in 2006, has a hospital.



72 The *Guysborough Marina* operates from the Public wharf, which is situated 0.7 mile NW of Eliza Point. Several floating piers are attached to the face of the wharf, which is 175 feet (53 m) long. There are depths of 9 to 17 feet (2.7 to 5.2 m) in this area. A ramp is situated at the north end of the wharf. Fuel, water, power, pump-out, wash-rooms and showers are available. The marina monitors VHF channels 12 and 68 (156.6 and 156.425 MHz). The marina

GUYSBOROUGH HARBOUR — ENTRANCE (Oct. 2008)



is operated by the Guysborough Waterfront Development Society.

73 **Mussel Cove**, on the west side of the Guysborough Harbour, has depths of 2 to 6 fathoms (3.7 to 11 m). It is entered north of **Lodge Point**, which is noticeable by its clearing. Two white **daymarks** with red stripes, in line bearing $224\frac{1}{2}^\circ$, lead into the cove. Mooring **buoys** are placed in Mussel Cove for small craft. A floating wharf has a depth of 8 feet (2.4 m) on the south side of the cove. Fresh water, laundry, showers and provisions are available.

74 North of Mussel Cove, the west side of Guysborough Harbour is encumbered by several fish farming operations.

Chedabucto Bay — North Side

75 **Moose Bay** forms a bight between **Moose Point**, 2.7 miles NE of Hadley Beach, and **Ragged Head**. The shingle beach fronting the bay is broken in places by shallow outlets from ponds. A sand flat extends 0.5 mile from the east side of the bay. Ragged Head, a peninsula, appears as an island from seaward; it forms the apex of a triangle, the sides being long shingle beaches.

76 There is **anchorage** in 5 to 7 fathoms (9 to 13 m), sand and mud, in the bay, but it is only safe in fine weather as there is usually a heavy swell present.

Charts 4307, 4308, 4335

77 The prevailing features of the coast between Ragged Head and **Red Head** ($45^\circ 29'N$, $61^\circ 14'W$), 7.5 miles NE, are several points of land showing low cliffs of sand, clay and boulders, and joined to the mainland by shingle beaches enclosing large ponds. The land side of these ponds is formed by the south slope of a ridge about 200 feet (61 m) in elevation.

78 Red Head is a small peninsula 57 feet (17 m) in elevation, bare of trees, with a red cliff fronting the sea; it is joined to the mainland by a low shingle isthmus. **Hydra Shoal**, rock, with 12 feet (3.7 m) over it, lies 3.7 miles SSW of Red Head. During heavy east swells, common in this bay, the shoal is marked by breakers. A **wreck**, with 27 feet (8.2 m) over it, lies 0.8 mile ESE of Red Head.

79 **Argos Shoal**, rock, extends 0.7 mile east of **Cape Argos**; it breaks heavily with a swell from the SE.

Strait of Canso

Chart 4302

80 The Public Harbours of **Port Hawkesbury** and **Mulgrave** are situated in the **Strait of Canso**. A causeway, with a navigation lock at the east end, crosses the strait at

GUYSBOROUGH MARINA (Oct. 2008)



Port Hastings, 3 miles NW of Port Hawkesbury. The town of Port Hawkesbury had a population of 3,517 in 2006. The town of Mulgrave, population 879 in 2006, is situated on the west side of the strait.

81 The shipping facilities and the port are locally operated as the *Strait of Canso Superport*. The port has very deep water, is ice free, and is capable of accommodating Ultra-Large Crude Carriers. Manufactured goods, petroleum products, forest products, bulk cargo and seafood are shipped from the port. More than 31.2 million metric tonnes of cargo was handled in the port in 2008. There were more than 1,326 vessel movements in the port in 2008. The Strait of Canso Superport Corporation owns and operates the Port Hawkesbury Pier and the Mulgrave Marine Terminal.

82 The land on the west side of the strait rises abruptly to high ridges, exceeding 600 feet (183 m) at **Cape Porcupine**, near the causeway. The east shore is not as high, except at the north end of the strait.

83 **Eddy Point**, of sand and gravel, is situated 2.2 miles NNW of Cape Argos. **Eddy Spit**, sand and stones, extends 0.2 mile NE of the point. A **tower**, 286 feet (87 m) in elevation, and marked by red **lights**, is situated on the summit of a small hill 0.5 mile SSW of the point.



84 At **Eddy Cove**, 0.6 mile west of Eddy Point, there is an L-shaped wharf and a breakwater. The useful part of the L-end is 80 feet (24 m) long with depths of 7 to 18 feet (2.1 to 5.5 m) along the inside face. The outer end is reported to cover at extreme high tides.

85 **Bear Head**, 2.3 miles NW of Eddy Point, is the NE entrance point to the Strait of Canso. **Bear Island** connects to Bear Head by a shingle spit. **Bear Reef**, with a rock awash, extends nearly 0.1 mile south of the island.

86 **Leading lights**. — **Middle Melford** range (690.3, 690.4), bearing 268°, and **Janvrin Island** range (704, 704.1), bearing 088°, are in coincidence in the entrance to the Strait of Canso. Middle Melford lights are situated on the south shore, 1.25 miles SW of Bear Point; Janvrin Island lights are situated on **Thomas Head**, the NW part of the island. These lights are shown from white daymarks with red stripes.


87 **Cahil Rock** range (694.4, 694.5), bearing 305°, and **Eddy Point** range (689.3, 689.4), bearing 125°, are in coincidence. These lights are shown from white daymarks with red stripes.


88 **Ship Rock** lies close to the shore, 0.2 mile NW of Ship Point, 2 miles NW of Bear Head.

STRAIT OF CANSO AT BEAR HEAD (Oct. 2008)



89 A **natural gas pipeline** crosses the Strait of Canso in a SW/NE direction. On the east side of the Strait, the pipeline is landed at a position 0.25 mile NW of Ship Point.


 90 **Park Point** range (692, 693), bearing $146\frac{1}{2}^\circ$, is shown from white daymarks with red stripes, 0.3 mile NW of the Middle Melford range.


 91 **Wharves.** — A deep water marine terminal is situated at **Wright Point**, 0.8 mile NW of Ship Point. The *NuStar Energy Terminal* has a total capacity of more than 1.2 million cubic metres for the storage and transshipment of crude oil and refined petroleum products. There are two berths.

92 The chimneys of the *Nova Scotia Power* coal generating power station at **Peebles Point**, 0.8 mile NW of Wright Point, are **conspicuous**. The stem of the wharf is 1,450 feet (442 m) long, leading to a wharf and dolphin at the outer end, which together provide a berthing length of 640 feet (195 m) with a least depth of 58 feet (17.8 m) alongside.

93 The *NewPage Corporation* mill and wharf are situated at **Madden Point**, 0.7 mile NW of Peebles Point. The wharf is 425 feet (129 m) long with a depth of 26 feet (7.9 m) alongside and off a mooring dolphin at each end. The eleva-

tion of the deck of the wharf is 7 feet (2.1 m). Two submerged pipelines and a pollution control boom extend from the shore close east of the wharf.

 94 The plant and wharf of the *Georgia Pacific Gypsum Company* are located at **Point Tupper**, 0.8 mile NW of Madden Point. The wharf consists of seven concrete piers, connected by catwalks, for a total length of 1,100 feet (335 m). The outer five dolphins, in line, provide for a berth 675 feet (205 m) in length with a least depth of 32 feet (9.8 m) alongside. The outer dolphins have a depth of 26 feet (8 m) alongside. The elevation of the deck of the wharf is 6 feet (1.8 m). Gypsum is loaded by conveyor. A **light** (969), privately maintained, is shown at an elevation of 97 feet (30 m) from a mast on a small shed on the wharf.

 95 Close to the south, the wharf of a former wallboard plant dock can accommodate a total length of 540 feet (164 m). There is a least depth of 18 feet (5.5 m) alongside. **Lights** are shown from four of the mooring dolphins.

96 The *Mulgrave Marine Terminal* lies on the west shore opposite Point Tupper. The quay wall has a total length of

STRAIT OF CANSO AT WRIGHT POINT (Oct. 2008)



STRAIT OF CANSO AT PEBBLES POINT (Oct. 2008)



STRAIT OF CANSO AT MADDEN POINT (Oct. 2008)



STRAIT OF CANSO AT POINT TUPPER (Oct. 2008)




Wright Point T-Shaped Jetty	Berth 1 feet (m)	Berth 2 feet (m)		
Draft (maximum allowable)	84 (25.6)	45 (13.7)	42 (12.8)	37.5 (11.4)*
Length Overall (maximum)	1,245 (380)	650 (191)	750 (229)	over 750 (229)
Length Overall (minimum)	550 (168)	N/A		
Beam (maximum)		105 (32)**	105 (32)**	
Deadweight Restrictions	Tons			
Maximum	400,000	80,000		
Minimum	25,000	4,000		


Source: Statia Terminals Canada

* 40 feet (12.2 m) one hour before high tide


** Draft restricted to 40 feet (12.2 m) if beam exceeds 105 feet (32 m)

1,425 feet (435 m) with depths of 17 to 34 feet (5.2 to 10.4 m) alongside. The elevation of the deck of the wharf is 3 feet (0.9 m). A shed is prominent at the south end of the wharf.


 97 Situated at **McNairs Cove**, 0.4 mile north of the Mulgrave Terminal, is the community operated **Venus Cove Marina Park**. A breakwater extends from the north side of the cove to protect a U-shaped wharf on its west side. A white beacon is situated on the west face of the breakwater. There are depths of 9 to 36 feet (2.7 to 11 m) along the sides of the wharf. A seawall opposite the wharf is 90 feet (27 m) long with a least depth of 6 feet (1.8 m) alongside, however, the extreme east end is foul. Water and electricity are available.


 98 **Pipeline and cable area.** — A submerged pipeline crosses the strait 0.3 mile south of Point Tupper. A cable area 0.2 mile wide crosses the strait at Point Tupper. There are two submarine cables that cross the Strait of Canso 0.7 mile NNW of Point Tupper; the northernmost one is charted as active, the southernmost inactive.

99 **Ship Harbour** is a large cove indenting the NE shore of the strait north of Point Tupper. **Premier Shoal**, with a least depth of 13 feet (4 m), soft mud, lies in the middle of the entrance to the harbour. Starboard hand light **buoy CL4 (696.5)** is moored close north of Premier Shoal. A submarine **cable** crosses Ship Harbour 0.4 mile east of Point Tupper.


 100 The **Port Hawkesbury Pier** lies at the north entrance to Ship Harbour. It is L-shaped, extending 400 feet (122 m) from the shore to an outer end 125 feet (38 m) long. The north side has depths of 8 to 20 feet (2.4 to 6 m) alongside. The outer face has a least depth of 20 feet

(6 m) alongside. The SE side has depths of 7 to 16 feet (2.1 to 4.9 m) alongside.

 101 The **Strait of Canso Yacht Club** operates from the SE side of inner end of the Public wharf at Port Hawkesbury. Floating breakwaters and piers create a boat basin with 45 berths. Depths alongside are reported to be 7 to 13 feet (2.1 to 4.3 m) in good shelter. Fuel, electricity, water, ice and showers are available, and provisions are nearby. The yacht club maintains a listening watch on VHF Channels 16 and 68 (156.8 and 156.425 MHz). The yacht club has a sewage pump-out facility.

 102 **Pirate Harbour** is formed by **Susies Island** on its east side and the west shore of the strait opposite Peebles Point. Two wharves extend from west side of the cove, separated by a berthing face. The northernmost wharf, 115 feet (35 m) long, was in disrepair in 2011, and should not be used. A berthing face runs southward from the inner end of the north wharf for 95 feet (29 m). There are depths ranging from 4 feet (1.4 m) at the northern end, to 7 feet (2.2 m) at the southern end of the berthing face. The southernmost wharf extends 70 feet (21 m), and has depths of 7 to 8 feet (2.2 to 2.4 m) alongside.

103 **Laceys Rocks** dry 4 feet (1.2 m) and lie close off the SW side of the strait, 0.7 mile SW of Peebles Point.

 104 Two **anchorages** in depths of 32 fathoms (59 m) are situated about 0.5 mile west and SW of the Newpage wharf. The entrance to Ship Harbour, outside Premier Shoal, has depths of 40 to 60 feet (12 to 18 m), sand, gravel and mud bottom. Except near the head of the harbour, where there is secure anchorage for small vessels in 20 feet (6 m), mud, anchorage is open to NNW winds which


MULGRAVE MARINE TERMINAL (Oct. 2008)



frequently blow directly through the strait and cause a heavy short sea.

105 There are open **anchorages** for small craft, exposed to some winds, and with poor holding ground, west of Eddy Point, and in **Crichett Cove** and **Byers Cove**, on the SW side of the strait 0.3 and 0.6 mile NW of the Park Point range. There are similar anchorages on the NE shore in **Bear Island Cove**, NW of Bear Island, and on a bank of mud and sand 1.3 miles NW of Bear Island. Anchorage, sheltered from north winds, is available in **McNairs Cove**.

106 **Port Hastings**, population 120 in 2006, is situated on the NE side of the strait at the Canso Causeway. **Dixon Rock**, at a depth of 16 feet (4.9 m), lies 400 feet (122 m) south of **McKeen Point**, which forms the west side of **Plaster Cove**. There are **conspicuous** gypsum cliffs on the NW side of the cove.

 107 The quarry from which rock was removed for the causeway is **conspicuous** below the summit of Cape Porcupine on the west side of the strait. Bulk aggregate and coal is shipped from a **wharf** operated by *Martin Marietta Materials*. The wharf has a berthing face 630 feet (192 m)

long. There is a depth of 39 feet (11.8 m) off the outer face of the wharf. Two small wharves, about 60 feet (18 m) long and 15 feet (4.6 m) wide, are located west of the quarry wharf. The east wharf extends to a depth of 19 feet (5.8 m) and the west wharf to a depth of 18 feet (5.5 m).

108 **Canso Causeway and navigation lock.** — The stone-fill causeway carries a highway, railway tracks and

A traffic light (700.5) on the bridge operates as follows:	
fixed red:	bridge is fully closed
flashing red:	preparation of bridge opening bridge is in motion
fixed white:	bridge is fully open


PORT HAWKESBURY PIER (Oct. 2008)



STRAIT OF CANSO — PIRATE HARBOUR (Oct. 2008)



overhead power cables. The overhead **cables** cross the lock with a clearance of 141 feet (43 m).

 109 The Canso lock, at the east end of the illuminated causeway, is 820 feet (250 m) long and 80 feet (24.4 m) wide. A swing bridge crosses the south approach to the lock. A mooring berth 700 feet (213 m) long extends from the outer end of the north approach wall, and a similar berth 650 feet (198 m) long joins the outer end of the south approach wall. A **light** is shown on a mast on the outer end of each mooring berth (700, 703).

110 Ships with a draft not greater than 28 feet (8.5 m) and not more than 735 feet (224 m) in length may proceed, in accordance with the *Canal Regulations*, through the lock 7 days a week, 24 hours a day, during the navigation season. Vessels with a draft greater than 28 feet (8.5 m) and not more than 30 feet (9.1 m) may proceed through the lock when tidal conditions are favorable, in the opinion of the Canal Superintendent.

111 The Canso lock is closed to navigation during the winter months. The lock usually closes in late December and opens in early April. The times of closing and opening are announced in *Notices to Mariners* or *Notices to Shipping*.

112 Vessels enter the lock on the green signal light or on the instructions from the lockmaster, and leave the lock on the lockmaster's instructions. The lockmaster shall be contacted on VHF channel 11 (156.55 MHz) when 0.5 mile from the lock. The signal lights are shown at each end of the lock.

113 Vessels over 100 feet (30.5 m) in length shall place an adequate number of linesmen ashore before the bow of the vessel enters the lock to ensure that the ship will be under control while entering and manoeuvring in the lock. At the discretion of the lockmaster, ships over 502 feet (153 m) in length may require three linesmen.

114 Canal linesmen are not provided. If a vessel is unable to place linesmen ashore, experienced linesmen will be provided on request to the lockmaster at least 6 hours prior to arrival at the canal approach. This service will be provided at the vessel's expense, payable in Canadian or U.S. currency before the vessel leaves the dock. These linesmen are not canal employees, and the responsibility for their safety and the service provided lies with the vessel.


115 North of the causeway, the Strait of Canso is deep and without dangers.

Inhabitants Bay and Lennox Passage

Chart 4308


116 **Inhabitants Bay** ($45^{\circ}34'N$, $61^{\circ}15'W$) opens to the north of the Strait of Canso approach, between **Flat Head**, 0.5 mile NE of Bear Head, and **Turbalton Head**, the west

point of **Rabbit Island**, 2.4 miles ENE. The high cliffs of **Caribou Head** are **conspicuous** to the east of the Port Malcolm range. The bay provides good protection from north winds which are common in the area.


 117 Several designated **anchorages** for shipping in the Strait of Canso are situated in Inhabitants Bay and the west entrance to Lennox Passage. **Seacoal Bay** is reported to have good small craft **anchorage** in 4 to 6 m, mud, close to shore along the line of the Port Malcolm range.

118 **MacNamaras Island**, well forested and **conspicuous** by three hills, one on each end and one in the centre, lies on the NE side of the bay, on the SE side of a channel leading to **River Inhabitants**, **The Big Basin** and **The Little Basin**.

119 **Boudreaus Island** lies on the south side of The Big Basin, separating it from The Little Basin. **Bumbo Islet**, though small, is remarkable at 17 m in height. It is connected to the NW side of Boudreaus Island by a sunken sandbar.


 120 Secure small craft **anchorages** are reported in the east and south end of The Big Basin, SE of Boudreaus Island, in 4 to 6 m, mud. The Little Basin, entered between **Round Island** and Boudreaus Island, has good **anchorage** in its SW side in 3 to 4 m, mud.

Charts 4308, 4279


 121 **Lennox Passage**, between Isle Madame and Cape Breton Island, is frequently used by small craft in transit between the Strait of Canso and St. Peters Canal. A great part of the passage is narrow, crooked and full of shoals; *the direction of buoyage is from east to west*. The passage is not recommended for vessels with drafts greater than 3.7 m.

122 Lennox Passage provides shelter from sea conditions outside of Isle Madame. Weather conditions are reported to be similar, with winds tending to become east-west in direction. If there is coastal fog, there will likely be fog in the passage.

123 A bascule **bridge** crosses the passage at **Burnt Point** ($45^{\circ}35'N$, $61^{\circ}05'W$), 5.5 miles from the west entrance. A depth of 4.6 m is located in the channel beneath the bridge, which narrows to 18 m in width.

 124 The bridge is a single piece lift, hinged and counterweighted from the control tower on the north side. When open, it rises 58° from the horizontal to produce a clearance of about 31 m beneath the outer end. Traffic **lights** are shown from each side of the bridge; vessels are not to approach the bridge unless a **green light** is shown. Owing to currents, motor use is recommended.

125 The bridge is operated from mid May to mid October, beginning each day at 0830 hrs., closing hours are consistent with those at St. Peters Canal. *During operating hours, Lennox Passage Bridge can be contacted on VHF Ch. 16 (156.8 MHz).*

 126 **Currents**. — The flood tidal stream sets west and reaches its maximum rate about 1 hour after the time of high water at Point Tupper. The ebb tidal stream sets

CANSO CANAL (FROM THE NORTH) (Oct. 2008)



THE LITTLE BASIN (Oct. 2008)



LENNOX PASSAGE (FROM THE WEST) (Oct. 2008)



LENNOX PASSAGE BRIDGE (Oct. 2008)



east, with the maximum flow occurring about 1¼ hours after the time of low water at Point Tupper. Slack waters occur between 1¼ and 1½ hours before the time of high and low water at Point Tupper. The maximum rate of flow is estimated to reach 2.5 to 3 knots at the site of the bascule bridge.

Chart 4308



127 From the Strait of Canso, Lennox Passage is entered between **Turbalton Head** and **Thomas Head**, the NW part of Janvrin Island. A pair of **leading lights** (704, 704.1), bearing 088°, are situated on Thomas Head.



128 **Macdonald Shoal**, at a depth of 0.6 m, extends to nearly one-third the distance across the passage north of Thomas Head. **Fish Shoal**, 1.5 miles further NE, lies off the north side opposite the entrance to **Haddock Harbour**. The many coves in the harbour and off its entrance provide good small craft **anchorages**. The church spire at

West Arichat is reported to be a good landmark for the harbour entrance.

Chart 4279

129 **Dog Island** lies off the north side of Lennox Passage, 0.7 mile ENE of the bridge at Burnt Point. A **buoyed** channel leads NE and east around **Middle Ground**, a shoal lying midway between Dog Island and **Berry Island**, an island situated off the south shore. From Burnt Point to Berry Island, the south shore is reported to be obstructed by aquaculture nets.

130 The entrance to **Seal Cove**, shallow and narrow, lies opposite to Middle Ground on the north shore. Drying flats extend from all sides of the cove.





131 Lennox Passage is narrowed by **Grandique Point**, on the south side, and **Grandique Ferry** and **Birch Island** on the north side, 2.8 miles east of Burnt Point. A **light** (729) is shown at an elevation of 8.8 m from a white

RIVER BOURGEOIS — ENTRANCE (Oct. 2008)




square tower on the beach at Grandique Point. A picnic park is situated nearby. **Ferry Reef** extends towards the middle of the passage to a depth of 0.9 m from Grandique Ferry. A submarine communications **cable** is laid between Grandique Point and Grandique Ferry.

 132 **Poulamon Bay**, east and south of Grandique Point, has three entrances formed by **Crow Island** and **Eagle Island**. **Hawk Island** is an islet joined to the north side of Eagle Island by a drying spit. A **light** (730) is shown at an elevation of 10.4 m from a red and white daymark on Hawk Island; it is visible from 240½° to 265½°.


 133 **Anchorage** is available in Poulamon Bay in 6 m, mud, to the SE of Eagle Island. A bar, at a depth of 4 m, restricts the anchorage. There is safe anchorage in 9 to 13 m to the NE of Hawk Island.



134 **Goillon Reef**, above water, lies near the middle of Lennox Passage about 0.5 mile east of Birch Island. It is marked by starboard hand light **buoy NT12** (730.5). The approach to **Grande Anse** and **False Bay** opens to the NW of the Goillon Reef.


 135 Good small craft **anchorage** is reported in a small cove to the west of **Knife Island**, at the entrance to Grande Anse, 1.7 miles NW of Goillon Reef. Good anchorage is reported off the north side of **Indian Island** at

the entrance to False Bay, north of Birch Island. The west side of Indian Island should be closely followed in the approach.

136 **Cascarette Island**, 0.9 mile ENE of Birch Island, is 27 m high and wooded, with low cliffs at the east end and a sandy point on the SW side.

 137 **Ouetique Island**, 0.5 mile further east, is a bluff with grass cover. A **light** (731) is shown from a skeleton tower having red and white daymarks, on the south point of the island. **Philip Rocks**, 0.3 mile NE of Ouetique Island, dry 1.2 and 0.9 m.

  138 **Bissett Island** lies off the north shore 1 mile NE of Ouetique Island. **River Bourgeois**, an inlet, is entered by a narrow **buoyed** channel having a depth of 2.1 m, running NW of Bissett Island. The white spire of the church is **conspicuous**. A **light** (732) is shown at an elevation of 7.3 m from a tower with a red and white daymark on the bar extending from the east side of the entrance. A Public wharf, 20 m long and 5 m wide, extends to a depth of 4.3 m from the east side close inside the inlet; the outer end is difficult to secure to at high water.

 139 River Bourgeois affords good shelter except during WNW winds. The inlet is usually free of fog. The entrance is complicated by strong **tidal currents**, with the greater flow on the flood tide.

RIVER BOURGEOIS (Oct. 2008)



LENNOX PASSAGE — POIRIERVILLE (Oct. 2008)



140 Between Bissett Island and **Sutherlands Head**, 1.8 miles to the NE and at the entrance to St. Peters Bay, there are several noticeable cliffs of red clay.



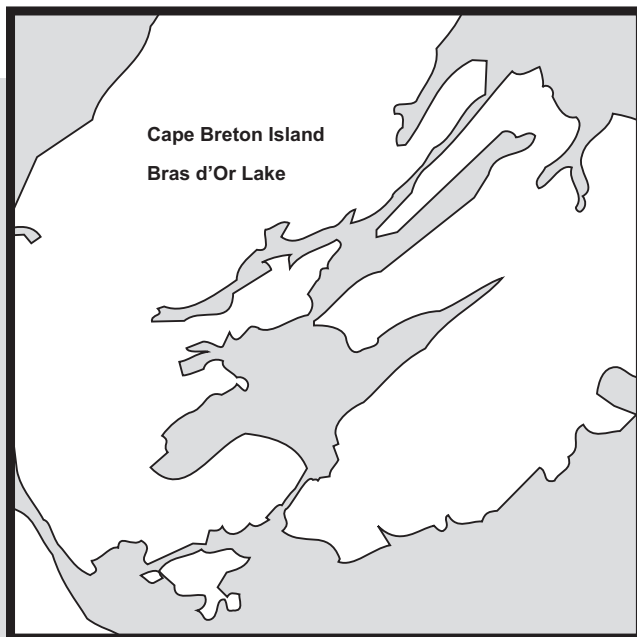
141 **Bernard Island** lies across the entrance to **D'Escousse Harbour**, 0.9 mile south of Ouetique Island. The entrance channel is shallow, narrow and **buoyed**. The harbour is used by local fishermen and yachtsmen. Small craft **anchorage** is available in the centre of the harbour. The Public wharf is L-shaped, 70 m long, with an outer end 29 m long and depths of 2.4 to 4 m alongside. The wharf is owned by the *Lennox Passage Yacht Club*. Numerous mooring buoys are placed off the wharf.



142 **The Goulet**, a shallow bay, opens to the SE of D'Escousse Harbour. **Morris Rock**, at a depth of 0.9 m, is the west extreme and the least depth over **Gabion Shoal**, which lies outside of the bay. The Goulet can be entered following a bearing SE from the light on Ouetique Island. There is an L-shaped wharf at **Poirierville** on the SW side of the bay. The wharf extends 72 m to an outer end 46 m long, with a depth of 2.9 m along the outer face and 1.8 m along the inner face.

143 Shoal water extends 0.5 mile off the coast from The Goulet to **Cap Ronde**, 1.7 miles to the SE.

Cape Breton Island Bras d'Or Lake



1 **Bras d'Or Lake**, entered from the NE by Great Bras d'Or and Little Bras d'Or, and from the SW by a canal leading from St. Peters Bay, is navigable throughout. The limiting depth is 4.1 m in St. Peters Canal.

2 During navigation season, May to December, the various passages are **lighted** and **buoyed**. *In proceeding towards the SW, red buoys are left on the starboard side.*

3 Fish cultures are established in various coves throughout the lake system. These cultures are suspended from rafts and may be moved without prior notice.

4 The tide range at the NE entrances is from 0.9 to 1.5 m, but inside the entrance it decreases to 0.5 m, and to 0.2 m during spring tides at Baddeck. Independent of the tide, the level of the lake and arms fluctuates 0.3 m or more with varying weather conditions.



5 **Pilotage** is compulsory. Masters of vessels requesting a pilot shall report via any coastal radio station their ETA to Pilots Cape Breton, 12 hours before arrival at the pilot boarding station.

6 The pilot boarding station for Great Bras d'Or is in position $46^{\circ}20'00''N$, $60^{\circ}17'30''W$. Vessels bound for St. Peters Canal can embark pilots at the Strait of Canso inner approach pilot boarding station in position $45^{\circ}29'30''N$, $61^{\circ}11'06''W$.

7 The master of a ship that is to depart or move within the compulsory pilotage area must report to Pilots Cape Breton 4 hours before the ETD.

Great Bras d'Or

Chart 4277

8 **Great Bras d'Or** is the principal channel leading to Bras d'Or Lake. The **buoyed** approach to the channel is 2.4 miles wide between **Cape Dauphin** ($46^{\circ}20'N$, $60^{\circ}25'W$) and **Table Head**, and narrows to 0.2 mile at the entrance between **Carey Point** and **Noir Point**. A bar with irregular shallow depths extends NE from Carey Point and constricts the navigable channel to a width of 0.1 mile. A **bridge** and **causeway** cross Great Bras d'Or close NE of **Seal Island**, 4.7 miles SW of Carey Point. There is a clearance of 36 m under the bridge.

9 **Tidal streams.** — The normal rate of the tidal stream in the entrance is 4 to 5 knots. In the spring, or after lengthy NE gales, the level of Bras d'Or Lake may rise considerably, increasing the rate to 6 knots. During continued fine weather, the stream flows outward for most of the rising tide, and inward for most of the falling tide. Strong winds cause irregularities in this pattern.

10 Tidal streams in the entrance do not set straight through. The out-going stream sets to the north after passing Carey Point, and the in-going stream sets to the east side of the channel. Strong tidal streams run on both the rising and falling tides in the vicinity of the Seal Island bridge. Refer to the *Tide and Current Tables* for times of slack water at the entrance.

11 Within the entrance, Great Bras d'Or runs in almost a straight line to the SW and is generally deep throughout with depths exceeding 10 m in the fairway. The long reaches allow considerable swell, and with deep water in many places, anchorage is insecure.

12 An unbroken range of hills, in places 300 m high, continues along the NW side from Cape Dauphin to Big Harbour, 15 miles to the SW. On the SE side, **Boularderie Island** is thickly wooded in the interior, and rises to an elevation of 150 m.

13 **Lights.** — Great Bras d'Or leading lights (803, 804), in line bearing $212\frac{1}{2}^\circ$, are shown from Noir Point. Both lights are shown from white square towers with red stripes.

14 **Black Rock Point light** (799) is shown from a white square tower 10.4 m high, 1.3 miles NE of Carey Point. A **fog signal** of one blast every 30 seconds is sounded from the light-tower; the horn points 353° .

15 Black Rock Point sector light (800) is shown at an elevation of 16.5 m from a tower 3 m high, situated near Black Rock Point light. The white sector indicates the preferred sector out of Great Bras d'Or.

16 A Public wharf is situated at **Big Bras d'Or** on the south side of Great Bras d'Or, 0.7 mile from the entrance. It is made of two L-shaped ends, together having an outer face 86 m long, with depths of 3.4 to 4.6 m, north to south along the face. The inside face of the north section is 25 m long with depths of 1.4 to 2.7 m. The L-end of the south section of the wharf is 27 m long with a depth of 3.7 m alongside. Along the inside faces of this section, there is a least depth of 3.7 m. A floating wavebreak is moored close to the north side of the wharf. A **light** (804.5) is shown from a mast on the south corner of the outer face.

17 **Kellys Cove** opens on the opposite shore, west of **Kellys Point**, and is sheltered from all but SW winds. There is good **anchorage** in about 9 m, sand, out of the main tidal streams. **New Campbellton**, a small community at the head of the cove, has a Public wharf

ENTRANCE TO GREAT BRAS D'OR (Oct. 2008)



SEAL ISLAND BRIDGE (Oct. 2008)



with an outer end 20 m long and a depth of 4.3 m alongside. A **light** (804.6) is shown from the outer end of the wharf.

18 **Seal Island** is a low wooded islet adjacent to the west end of the bridge and causeway. **Seal Reefs**, with a least depth of 0.7 m, lie east of Seal Island and extend under the bridge on the west side of the ship channel. The passage beneath the bridge is marked by **lights** and **buoys**. An abandoned lighthouse stands on the outer point of **McNeil Beach**, on the SE shore close south of the bridge.

19 A narrow cove, too deep for small craft anchorage, is formed between Seal Island, the hilly NW shore and the causeway.

20 **Otter Island**, 6 m high and wooded, lies on the NW side of the channel, 1.1 miles SW of **Seal Point**. A cluster of small islands lie close to the shore NE of Otter Island. **Otter Harbour**, north of the island, provides good **anchorage** in 9 m, mud, in an area only 0.2 mile wide. The best **anchorage** is to the south of a peninsula named **Harbour Point**. Small craft **anchorage** is available on the north side of Harbour Point, however, owing to numerous shoals and rocks, caution is required. Numerous sunken barges are reported to lie at the head of the cove that extends to the NW.

21 **Man of War Point leading lights** (809.7, 809.8) are shown from white daymarks with red stripes, and bear 223° through Great Bras d'Or opposite Otter Island.

22 An overhead power **cable** crosses Great Bras d'Or from Munro Point, 1 mile SW of Man of War Point.

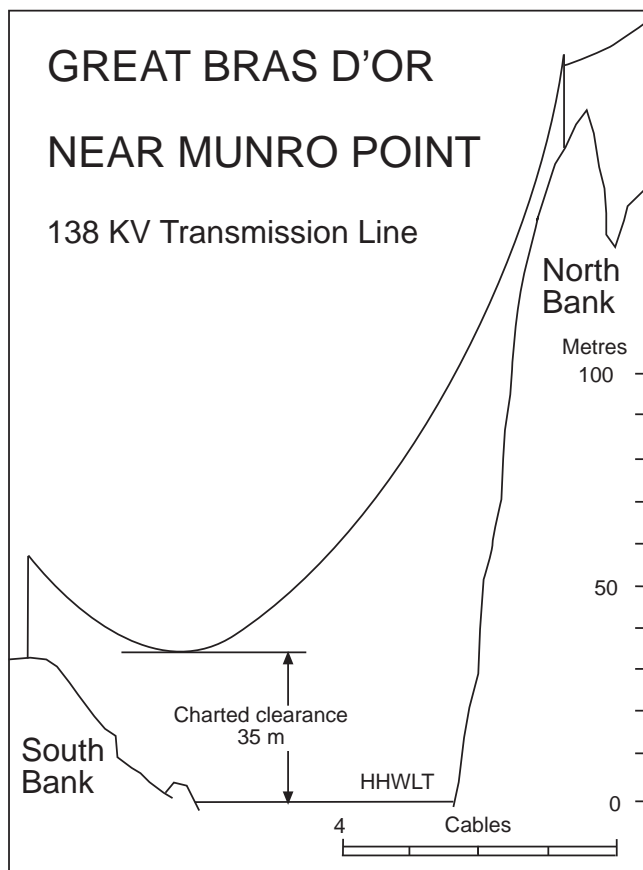
23 The former cable ferry wharf and the land surrounding it have been developed into the *Ross Ferry Marine Park*. The wharf has been reconstructed for recreational boating use. Water, electricity, showers and sewage pumpout are available. The Park features picnic shelters and walking trails for public use, and is operated by the *Ross Ferry Stewardship Society*.

24 The former ferry wharf near Big Harbour is in ruins.

Chart 4278

25 **Big Harbour**, on the NW shore, is a cove penetrating into the hills. Gypsum is shown on the south side of Big Harbour, and along the NW shore of Great Bras d'Or from **Bevis Point** to **Red Head**, a further 5 miles. The **anchorage** near the north shore of Big Harbour is secure, in 11 m, decreasing to 7 m, 0.3 mile within, where the cove divides into two shallow arms.

26 A **light** (811) is shown at an elevation of 23.8 m from a mast 10 m high at **Mackenzie Point**,



BIG HARBOUR (Oct. 2008)



on the north shore of Great Bras d'Or, 1.8 miles SW of Bevis Point.

27 **Macfarlane Point leading lights** (810.7, 810.8), on the SE shore opposite Bevis Point, are shown from white daymarks with red stripes. The lights in line lead $065\frac{1}{2}^\circ$ out of Great Bras d'Or.

28 **Coffin Shoal**, with a small rock awash, is situated 0.7 mile NNW of **Kempt Head**, the SW extremity of Boularderie Island. **St. Andrews Channel**, the deepest part of the Bras d'Or Lake system, opens to the NE of Kempt Head.

29 **Spectacle Island**, 0.5 mile north of **MacKay Point**, lies on the west side of Great Bras d'Or at the entrance to St. Patricks Channel. The island appears in two bare parts, each 6 m high, that are connected by a bar. **Burnt Shoal** has a least depth of 6.1 m, 0.6 mile SE of MacKay Point.

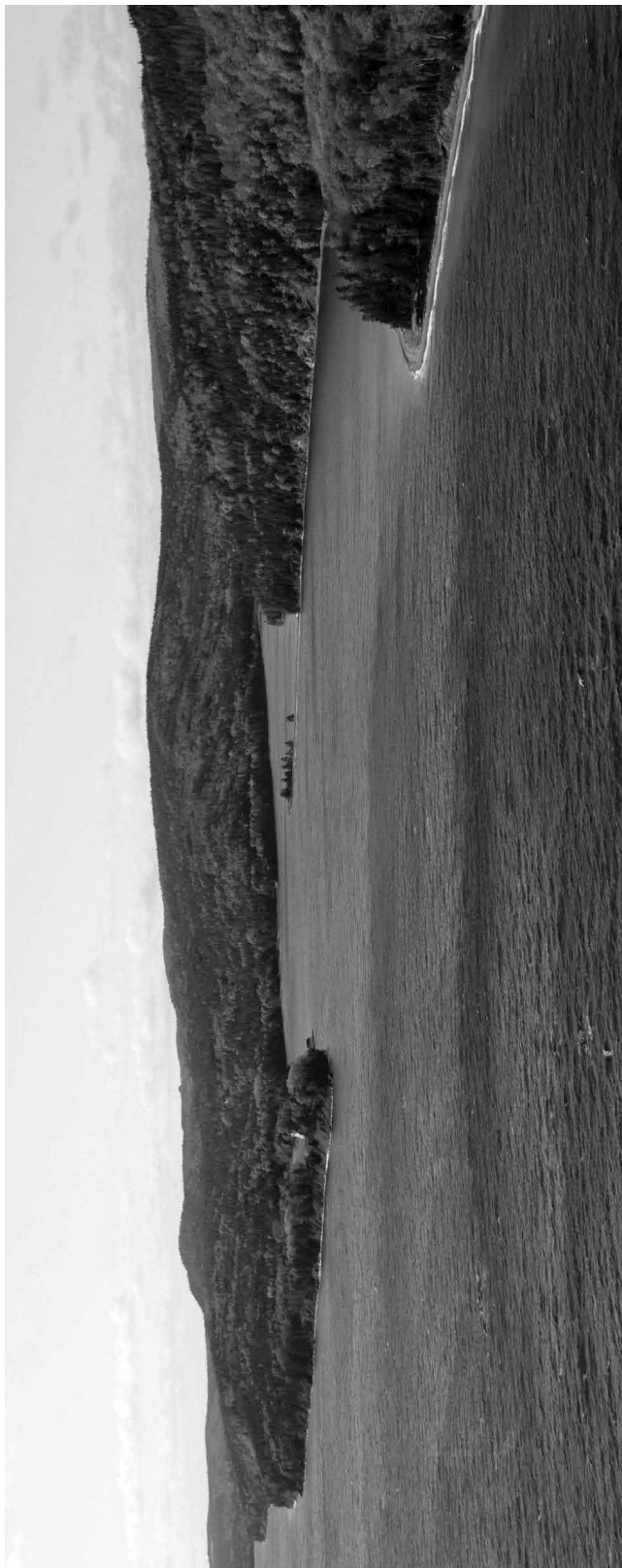


30 **Maskells Harbour** is entered 3 miles SSW of MacKay Point, and close NE of **Gillis**

Point. The shores of the harbour are steep and thickly wooded. A long sand spit extends from the north side, close within the entrance. Good small craft **anchorage** is reported off the north shore inside the spit.

31 The coast SW of Gillis Point is steep-to for 2 miles, but beyond, shoals extend offshore at **John Alex Pond** and

MASKELLS HARBOUR (Oct. 2008)



0.2 mile off **MacPherson Point**. **Plaster Cove**, close NW of Barra Strait, has **conspicuous** gypsum deposits.

32 **East side of Great Bras d'Or. — MacPhee Shoal**, with 5.5 m over it, lies 1 mile north of **Black Point** ($46^{\circ}01'N$, $60^{\circ}40'W$). **Big Shoal** is an extensive rocky bank with a least depth of 1.2 m, 1.1 miles off the shore near **Longbeach Point**.



33 **Christmas Island**, with trees, is connected to the shore by grassy spits to enclose a pond. A sandbar extends from the NE end of the island. There is good **anchorage**, except with NE winds, in about 15 m, mud, 0.5 mile SW of Christmas Island, in the bight between it and **Neilban Cove**.



34 A **conspicuous** brick church with a spire is situated close NW of **Uniacke Point**, on the west side of **Barra Strait** at **Iona**. **Barra Shoal**, rock, with a least depth of 4.6 m, lies across the north entrance to the strait. Shoal water extends nearly 0.3 mile NE of **Kelly Point**, on the west side, necessitating an indirect approach. The channel SE of Barra Shoal has a least depth of 14 m. The Public wharf at Iona has an outer face 87 m long with a least depth of 4.8 m alongside. This wharf is owned and operated by *Central Cape Breton Ventures Inc.*

35 **Bridges.** — Two bridges span Barra Strait between Iona and Grand Narrows. The south bridge is a railway bridge with a swing span. The north bridge is a highway bridge with a bascule opening. Both openings are in line and allow for passage through a ship channel on the east side of Barra Strait near Kelly Point. The width of the ship channel is 31.7 m with unlimited overhead clearance. There is a depth of 8 m in the centre of the channel beneath the railway bridge. The corners of the ship channel are marked by red and green lights from the north and the south.

36 The ship channel of the railway bridge is on the west side of the pivot pier. A white **light** (834) is shown from the centre of the swing span, beneath this, a **light** shows green when the bridge is open and red when closed. The swing is usually maintained in an open status and closed only for the passage of rail traffic.

37 The centre of the bascule opening of the highway bridge is marked by a white light. The bascule opens on pivots on both sides of the ship channel. Both bascules open 90° . The bridge opens when approaching vessels are observed from the control tower on the east side of the ship channel. *During operating hours, Barra Strait Bridge can be contacted on VHF Ch. 16 (156.8 MHz).*

38 A telephone submarine **cable** crosses Barra Strait about 0.1 mile south of the railway bridge.



39 **Tidal streams** through Barra Strait run strongest at mid-flood and mid-ebb, and attain a rate of 3 knots. The streams set $010^{\circ}/190^{\circ}$ through the strait, except for the vicinity of the swing span where they are deflected NW and SW by Kelly Point.

BARRA STRAIT (Oct. 2008)



BARRA STRAIT CHANNEL (Oct. 2008)



BARRA STRAIT — IONA WHARF (Oct. 2008)



BARRA STRAIT MARINA (Oct. 2008)**Barra Strait Bridge Operation Hours:**

July and August: **continuous/24 hours per day**

Remainder of Navigation Season:

0700 – 2300 (local time)



40 The *Barra Strait Marina* operates from the former cable ferry wharf at **Grand Narrows**. A floating breakwater is moored at the outer end of the north portion of the wharf; it is marked by a privately maintained **light**. Fuel (gas and diesel), laundromat, showers, provisions in small quantities, and water are available. Recreational diving activity is common in the area to the west of the railway bridge on its south side.

St. Patricks Channel

41 **St. Patricks Channel** is navigable throughout for vessels of moderate size, however, it is subject to heavy squalls

in rough weather. The channel is entered between **Red Head** ($46^{\circ}06'N$, $60^{\circ}43'W$) and **MacKay Point**, on the west side of Great Bras d'Or, and trends to the WSW for 19 miles. The shores are moderately high and rise to hills of considerable elevation a short distance inland. Depths in the channel are generally over 11 m, except in the narrows, bays and at the extreme SW end.

42 There are no tidal streams or noticeable rise of tide, but the water level is affected by prevailing winds, being highest during NE winds and lowest during SW winds. The difference of level is seldom more than 0.3 m.



43 There are good **anchorages** in Baddeck Bay, Cow Bay, and Nyanza Bay on the north side, and in Washabuck River on the south side. The channel throughout provides fair anchorage with good holding ground.

44 **Baddeck Bay**, entered between Red Head and **Kidston Island**, is moderately deep towards its head. Good small craft **anchorages** are available within the long shingle beaches of the bay.



45 The favoured entrance into **Baddeck Harbour** is the channel NE of Kidston Island from Baddeck Bay. **Lights** are situated on both ends of Kidston Island. The NE light (815) is a white square tower at an elevation of 13.3 m. The SW light (815.1) is a white circular tower with two red

BADDECK HARBOUR (FROM THE EAST) (Oct. 2008)



BADDECK HARBOUR (FROM THE SW) (Oct. 2008)



BADDECK WHARF (Oct. 2008)



bands. Baddeck Harbour has good holding ground of mud and sand.



46 The Public wharf at **Baddeck** has a least depth of 7.2 m off the outer face. A concrete ramp, 5 m wide, and the yacht club wharf, 20 m long with depths of 0.2 to 2.2 m along the face, are situated at the inner end of the wharf on the east side. The Public wharf is owned and managed by the *Baddeck Area Business and Tourism Association*.



47 A small craft facility is situated close west of the Public wharf. Gasoline, fresh water, electricity and sewage pumping are available. A boat yard is situated in the cove at the SW end of the harbour. With a small marine railway, the yard repairs, maintains and provides storage to pleasure craft up to 17 m long. A wharf 40 m long has a reported depth of 2.4 m alongside; numerous moorings lie off the face of the wharf.

48 The Village of Baddeck, population 873 in 2006, is a popular resort. A white church steeple, about 0.3 mile WNW of the Public wharf, is **conspicuous**.

49 A sandbar extends from **Crow Point**, on the south side of the channel 1.7 miles SW of Kidston Island, to a group of islands which appear three in number.



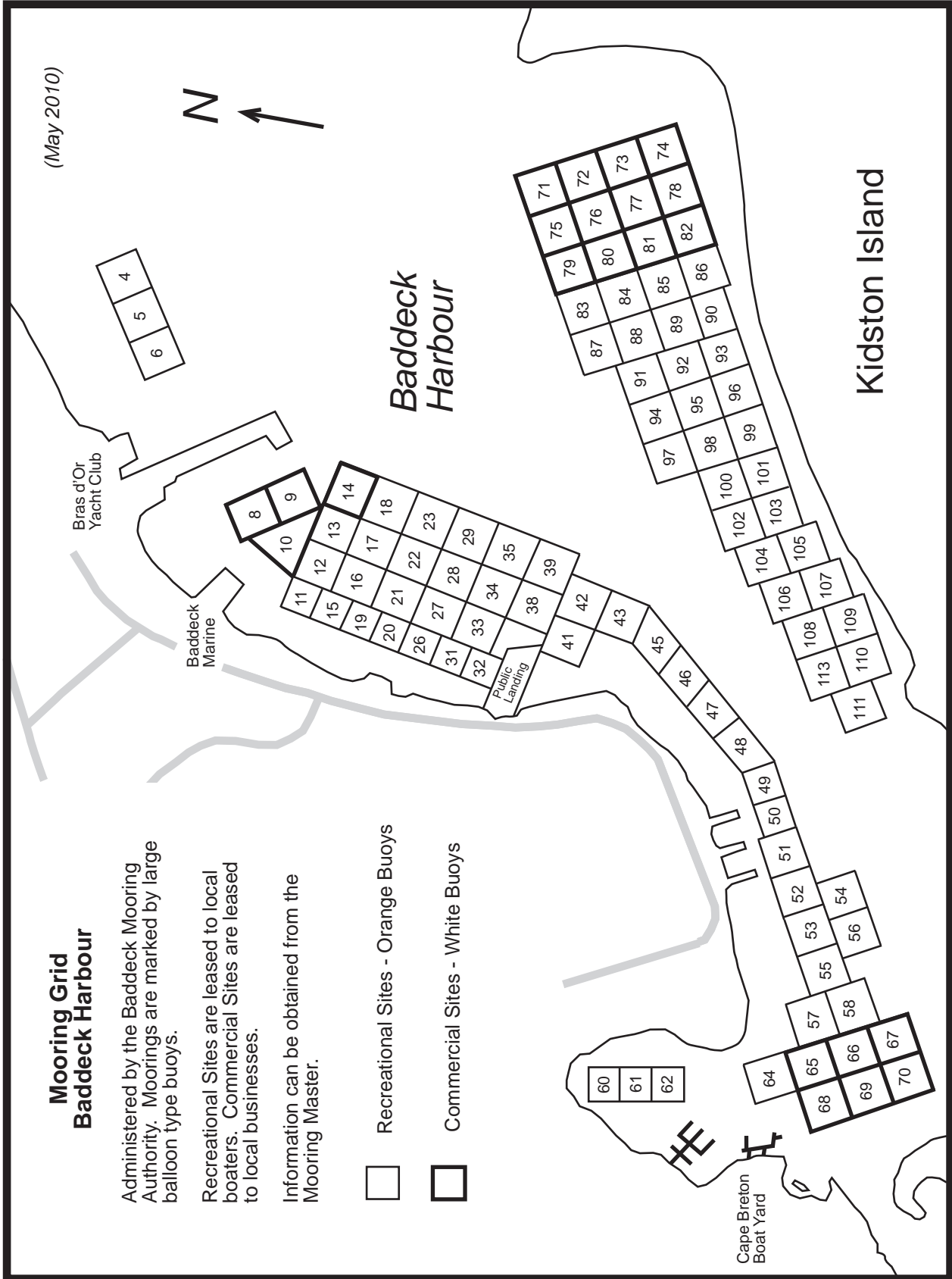
50 Small craft **anchorages** are reported on either side of Crow Point. Good anchorage is reported in **MacIvers Cove**, 2.5 miles further SW; on entry, the south shore opposite **Murphy Point** should be favoured.

51 A rock, least depth 1.8 m, lies 0.3 mile NE of Murphy Point in the outer approach to the **Washabuck River**. Two **buoys** mark a narrow channel between pinnacle rocks and a submerged reef at the entrance; once inside, the river deepens considerably. There are good small craft **anchorages** in **Indian Cove** and **Deep Cove** off the west side of the channel.

52 **Cow Bay**, on the north side 5 miles west of Baddeck, has a gravel shoal at a depth of 6.7 m across the mouth. There is good **anchorage** in about 12 m, mud, in the bay.



53 **Nyanza Bay** opens to the north 1.3 miles west of Cow Bay. Though it is shallow near the mouths of two rivers that enter it, there is good **anchorage** south of the village of **Nyanza**. There is an L-shaped wharf 79 m long,



BADDECK BAY (Oct. 2008)**MacIVERS COVE** (Oct. 2008)

having an outer end 19.5 m wide with a least depth of 4.6 m alongside.

54 The wharf at the *Wagmatcook Fisheries Centre* lies on the west side of Nyanza Bay, 0.7 mile north of **Cranberry Point**. The wharf, concrete decked, has four sides. The wharf is available for Public use.



55 **MacNaughtons Cove**, close west of Nyanza Bay, is almost landlocked. Enter midway between the two shores and continue to the centre of the cove before proceeding to the SW arm, where there is good small craft anchorage in 2 to 3 m.

56 **Approach to Little Narrows.** — At **MacIvers Point**, the west end of a peninsula on the south side,


COVES BETWEEN PLASTER POINT AND BIRCH POINT (WASHABUCK RIVER APPROACH) (Oct. 2008)




Wagmatcook Fisheries Centre Wharf

	Outside Face	Inside Face	Outer end
North Side	69 m	45 m	
Depths	1.6 – 2 m	1.6 – 2.2 m	
East Side	78.5 m	59 m	
Depths	2 – 2.7 m	2.1 – 2.5 m	
SE Side	39 m	29.5 m	
Depths	2.6 – 3 m	2.6 – 2.9 m	
South Side	29.5 m	14.5 m	10 m
Depths	2.6 – 2.9 m	2.7 – 2.9 m	2.7 m


St. Patricks Channel narrows and becomes constricted by shoals. **Leading lights** and **buoys** are used to navigate the shipping channels between **Bell Rock**, MacIvers Point and **MacIvers Bank**.

57  **Morrisons Cove** range (825, 826), bearing 195½°, is shown from white daymarks with red stripes. MacIvers Point range (820, 821), bearing 066½°, is shown on the point from white daymarks with red stripes.

58 **Eel Shoal**, at a depth of 1.2 m, divides the entrance to Little Narrows into two channels, with the deeper channel passing NW of the shoal. **Leading lights** (829.5, 829.6), shown from white daymarks with red stripes, lead 206½° NW of Eel Shoal.

59  The *Little Narrows Gypsum Co.* wharf is situated on the shore SW of Eel Shoal. The wharf, 135 m long, and a dolphin, situated 70 m from the outer end, give a berth 205 m long on the north side with depths of 11 to 7.5 m alongside. The elevation of the deck is 1.2 m. An overhead conveyor runs onto the wharf. The Little Narrows Gypsum Company reports that vessels can be loaded to a maximum draft of 9.7 m when positioned properly during loading (app. 23 m from the inner end of the wharf). Vessels less than 195 m in length can be loaded without turning the vessel. The maximum length of a vessel that can be accommodated is about 225 m, and this requires the turning of the vessel to complete loading. Larger ships that do not have sufficient powered bow thrusters will require the assistance of a tug. There is no fresh water, garbage disposal, provisions or fuel supply at this facility.

60 A white circular **beacon** having two red bands lies on the SE shore of Little Narrows. A white church with twin square towers on the opposite shore is **conspicuous**. An underwater water pipeline crosses Little Narrows 0.15 mile NE of this light. *No anchorage* signs are shown from each shore end.

61  A cable **ferry** crosses Little Narrows. When operating, the cable will lie near the surface. Operators of vessels drawing more than 3.7 m are advised to contact the ferry service prior to proceeding through the narrows. An

LITTLE NARROWS GYPSUM TERMINAL (Oct. 2008)



overhead power **cable** with a clearance of 36 m crosses the narrows near the south entrance.



62 There is a Public wharf on the east shore at **Little Narrows** close south of the ferry landing. It is a T-shaped floating wharf operated by the *Little Narrows Community Development Association*. The outer face is 15 m long, 2.4 m wide, with depths of 1.5 to 3.5 m alongside, south to north. The inside face is foul. Gasoline and provisions are available nearby. A submerged **cable** is laid across the narrows close south of the public wharf.



63 Small craft **anchorage** is available in two coves on the north side of the channel leading into **Denas Pond**, entered opposite light at Little Narrows.



64 **Whycocomagh Bay** lies on the west side of Little Narrows. **Salt Mountain** rises **conspicuously** in a dome 240 m in elevation on the north side. **Indian Island**, at the head of the bay, is wooded with a rounded peak. **Sheep Island** and **MacInnis Island**, off the south shore opposite Salt Mountain, appear flat with heights to tops of trees. A **light** (831) is shown at an elevation of 7 m from a mast on **Lovett Point**, to the SE of Salt Mountain.



65 A wharf is situated at **Whycocomagh** on the east side north of Indian Island. It is L-shaped, 21 m long at the outer face, with depths of 3.5 to 4.5 m alongside. Fresh water is available at the wharf, and provisions and gasoline are available nearby. A sewage pump-out service is in operation at the wharf. The wharf is owned and maintained by the *SS Marion Sailing Society*.



66 There is sheltered deep water **anchorage** on the SW side of Indian Island. Small craft anchorage is available on the south side of MacInnis Island.

St. Andrews Channel

Chart 4277

67 **St. Andrews Channel** is entered between **Kempt Head** ($46^{\circ}04'N$, $60^{\circ}40'W$), the SE point of Boularderie Island, and **Black Point**, on the opposite shore to the south. The channel extends 20 miles to the NE and ends at **Little Bras d'Or**, a narrow and winding channel leading to the Atlantic Ocean.

68 The north shore of the channel shows bluffs of gypsum and sandstone, and wooded cliffs backed in places by open fields. The south shore, in contrast, has gentle slopes which shape a number of sandbars containing open fields. **Point Clear** is on the north shore, 3 miles above Kempt Head.



69 **Island Point** is the NE point of a narrow peninsula joining to Boularderie Island, 4 miles above Point Clear. The peninsula shows **conspicuous** gypsum deposits at its SE end and midway along its length to Island

LITTLE NARROWS (FROM THE NE) (Oct. 2008)



WHYCOCOMAGH — SS MARION SAILING SOCIETY WHARF (Oct. 2008)



**WHYCOCOMAGH — APPROACH ABREAST
INDIAN ISLAND** (Oct. 2008)

Point. **Island Point Harbour**, inside the point, provides secure **anchorage**. Small craft anchorage is available near the head of the harbour where depths shoal quickly in sand and mud, and in a small cove on the east side, midway towards the head.

70 **Long Island**, with **Mouse Island** off its north end, are two prominent islands that are separated from the east shore of St. Andrews Channel by a narrow passage. A microwave **tower** on **Mount Cameron**, about 1 mile east of the south end of Long Island, is **conspicuous**. Small craft **anchorage** is available on the inside of a low grassy spit, on the east side of the passage at the south entrance. A shoal at a depth of 4.3 m is reported in a position 0.9 mile NE of Mouse Island.

Chart 4276


71 The head of St. Andrews Channel narrows and shoals considerably in the approaches to Little Bras d'Or. Shoreline changes are notable, becoming low-lying with rocky beaches in places.

72 Small craft shelter, in depths of 2 to 3 m, is available in the lee of **Burchells Point**, a long curving spit on the east shore. A church with white square towers is prominent, 0.4 mile east of Burchells Point. Several moorings, operated by a local development committee, are placed in depths of 1 to 3 m at the head of the channel on the west side.


St. Peters Inlet

Chart 4275

73 Navigation of **St. Peters Inlet**, the passage joining **St. Peters Canal** ($45^{\circ}39'N$, $60^{\circ}52'W$) to **Bras d'Or Lake**, is not too difficult, but it is narrow with many sharp turns. The channel is **buoyed** during the navigation season and *the direction of buoyage is to the SW*; when entering from St. Peters Canal, *green buoys are kept on a vessel's starboard side and red buoys on the port side*.

 74 High voltage power **cables**, with a clearance of 24 m, cross the inlet at **Beaver Narrows**. A safety clearance of 5 m is recommended beneath these cables to avoid possible electrical discharge.

75 From St. Peters Canal, the channel turns sharply to pass on the south side of **Handleys Island**.

 76 **St. Peter's Marina** is situated on the south shore of **Strachans Cove**, 0.4 mile west of St. Peters Canal. Small craft are accommodated at a wharf with finger piers in depths of 2.4 m. Electricity, gasoline, diesel, showers, laundry, fresh water are available. The marina operates a sewage pump-out. VHF Channel 68 (156.425 MHz) is monitored.

ISLAND POINT HARBOUR (Oct. 2008)



LONG ISLAND (FROM THE SOUTH) (Oct. 2008)



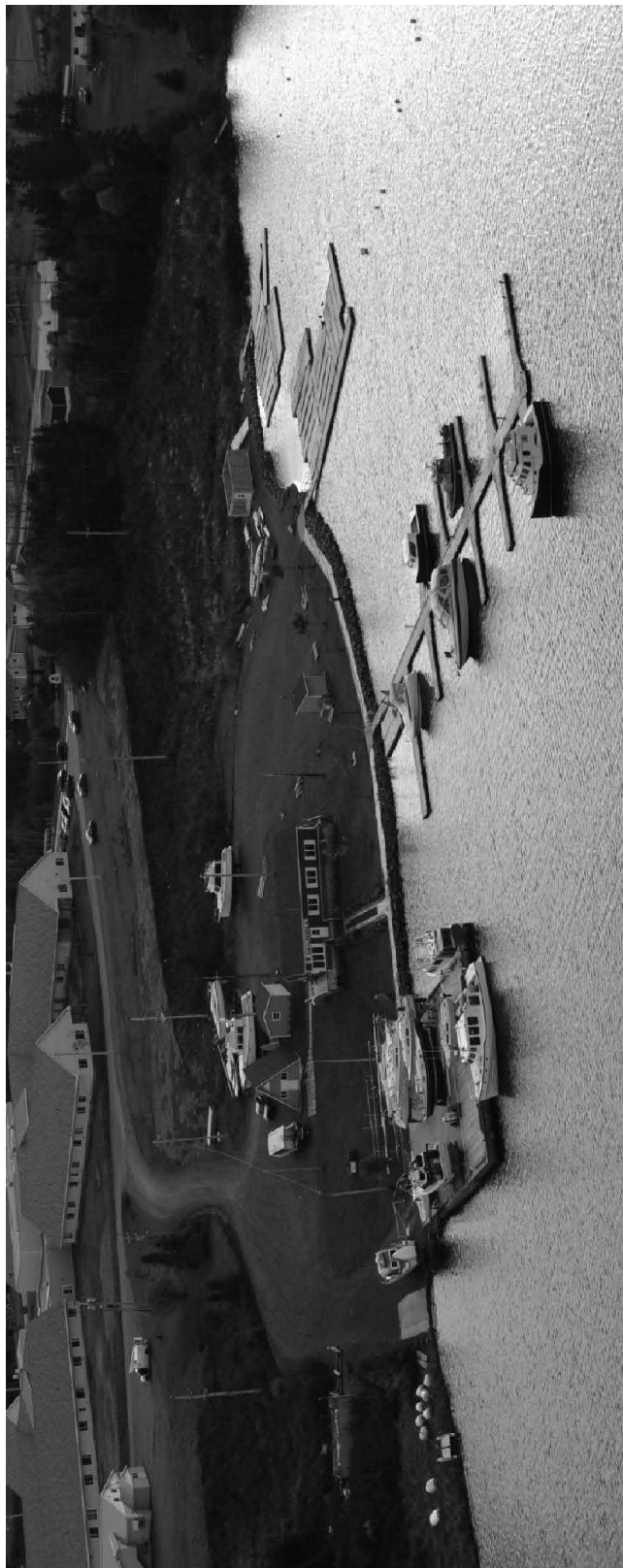
ST. ANDREWS CHANNEL — MOUSE AND LONG ISLANDS (Oct. 2008)




LITTLE BRAS D'OR (Oct. 2008)




ST. PETER'S MARINA (Oct. 2008)




 77 **Helens Island** is an islet on the east side of the channel in the approach to Beaver Narrows. A **light** (843) is shown at an elevation of 7.5 m from a mast on the islet.


78 **Beaver Island** lies across the north approach to Beaver Narrows, narrowing the **buoyed** channel passing south of it. A **light** (842) is shown at an elevation of 9.9 m from a mast on the SE point of the island.

 79 There is small craft **anchorage** off the north side of Beaver Island in 3 to 4 m, mud. This anchorage can only be approached using the channel west of Beaver Island. Anchorage is also available at the head of **Corbetts Cove**, opposite the east end of Beaver Island, in 3 to 5 m, mud. An overhead **cable** with a vertical clearance of 14 m is situated at the head of Corbetts Cove.

80 North of Corbetts Cove, St. Peters Inlet opens into a basin with numerous coves and islands. The channel trends NE for almost 2 miles, to where it turns abruptly to the NW, between **Doctor Island** and **MacNabs Point**. **Damions Cove**, entered to the NW between MacNabs Point and **MacNabs Island**, has **anchorage** in 5 to 10 m near its head.

 81 **Gregory Island**, a low sand spit on the east side of the channel, extends from the NW side of Doctor Island. A **light** (841) is shown at an elevation of 11 m from a white circular tower with red bands on the west side of the island. Shoal water extends from **Dock Point**, on the west side of the channel NW of Gregory Island.

82 **Bras d'Or Lake** opens between **Chapel Island**, on the east side, and **Cape George**, which rises to a wooded cliff from grassy sides, to the NW. A **light** (840) is shown from a mast having red and white daymarks, on Cape George. It is visible from 317° through west and south to 126°. A white church with a steeple stands on the SE point of Chapel Island.

 83 **Cape George Harbour** is entered 0.7 mile NW of Dock Point. Small craft **anchorage** is available in 2.4 to 4 m close inside the sand spit to starboard on entry, or in a small arm which opens to the north.

84 **Soldiers Cove** and **MacNabs Cove** lie on the east side of St. Peters Inlet outside the channel from St. Peters Canal. The best approach to these coves is north and east of Chapel Island. Soldiers Cove has **anchorage** in 7 to 13 m, but there are shoals of 5.8 and 4.1 m in the centre of its approach, NE of Chapel Island. MacNabs Cove provides good **anchorage** in 2 to 7 m. For small craft, anchorage is in a small bight in the NW part of the cove, or south of a small island off the south shore.

CAPE GEORGE (Oct. 2008)



CAPE GEORGE HARBOUR (Oct. 2008)



MacNABS COVE (Oct. 2008)



Bras d'Or Lake

Chart 4279

85 **Bras d'Or Lake** is very irregular in depth and there are many shoals. The central part is mostly clear and deep with a maximum charted depth of 157 m.

86 **Barra Strait**, the passage to Great Bras d'Or, is entered 12.5 miles north of Cape George between Hectors Point and Derby Point.

87 East Bay stretches 19 miles NE from a line joining Benacadie Point to the Red Islands. The long fetch of the bay, the irregular depths and the nature of the bottom make anchorage unsafe, however, along the north shore, small craft may find good protection in a few coves.

88 West Bay, with many islands and shoals, extends 11.5 miles to the SW from a line joining Militia Island to Morrison Head. **North Mountain** is a range of steep, wooded hills 180 to 270 m high that runs along the whole length of the north shore. **Marble Mountain**, a scar midway along the range, is visible from all parts of the bay. The dominant

features of the south shore are cliffs of red sand and clay, with some sandstone, alternating with shingle beaches that enclose ponds or join peninsulas with the mainland. Inland 0.5 to 1 mile, **South Mountain**, a range of wooded hills, rises to an elevation of 180 m. A number of settlements are situated on the slopes of the hills or between them and the shore.

89 A number of low islands and headlands contain small basins and coves on the extreme NW side of Bras d'Or Lake above North Mountain.


90 **Conspicuous and prominent landmarks.** — **Derby Point**, rising to 160 m, and a conical peak 180 m in elevation 1 mile to the east, show red clay and sandstone, and are visible across the lake. A white bluff of gypsum is shown 0.5 mile west of **Hectors Point**, on the west side of **Barra Strait**.


91 **Benacadie Point**, 3.6 miles SE of Derby Point, shows a red cliff with trees. The west side of the point shows red perpendicular cliffs on **Pipers Cove**. **Red Islands**, 4.4 miles NNE of Cape George, consist of one large and one very small island. Treeless, with no distinguishing features, they show good contrast against the wooded hills.

92 **Militia Island**, about halfway across the lake, is rounded and wooded, and is the most prominent feature on the west side of the lake. **Morrison Head**, 4.1 miles to the SSW, is a small peninsula 11 m high with red cliffs.

93 **Buoys** in East Bay, West Bay, and the basins and coves on the NW side of the lake, are laid in the direction of sailing towards their heads (*red to starboard, green to port*).


94 **Kelly Shoals**, with a least depth of 1.6 m, cover a large area at the south entrance to Bras d'Or Lake, 1.5 to 2.5 miles NNE of Cape George. Deep water surrounds the shoals. The passage on the SW side is preferable to the channel on the east side.

 95 **Cod Shoals** have a least depth of 6.2 m, 1.9 miles SSW of Derby Point in the approach to Barra Strait. Hectors Point and Uniacke Point, in line bearing 026°, lead west of these shoals. A **light** (835) is shown at an elevation of 15.9 m from a tower 6.1 m high with a red and white daymark on Derby Point.


 96 **Bras d'Or Lake. — East side.** — The entrance to **Johnstown Harbour** is made by rounding the north side of **Campbells Island**, which lies 0.8 mile east of Kelly Shoals. **Caution** is necessary to avoid wharf ruins at the NE entrance point. Good small craft **anchorage** is available in 5 m, mud, at the SW head of the harbour. A disused **light** tower stands on **Murdocks Point**, 0.7 mile NNE of Campbells Island. Shingle beaches connect the south part of Campbells Island to **Sheep Island**, **Evans Island**, and the mainland to form **Hay Cove**.


97 A church with a black spire is situated at **Johnstown**, 1.4 miles east of the Red Islands.

98 **East Bay. — Benacadie Pond**, a narrow indentation close east of Benacadie Point (*45°54'N, 60°44'W*), is shallow with a drying bar across its entrance; access is restricted to small boats only.

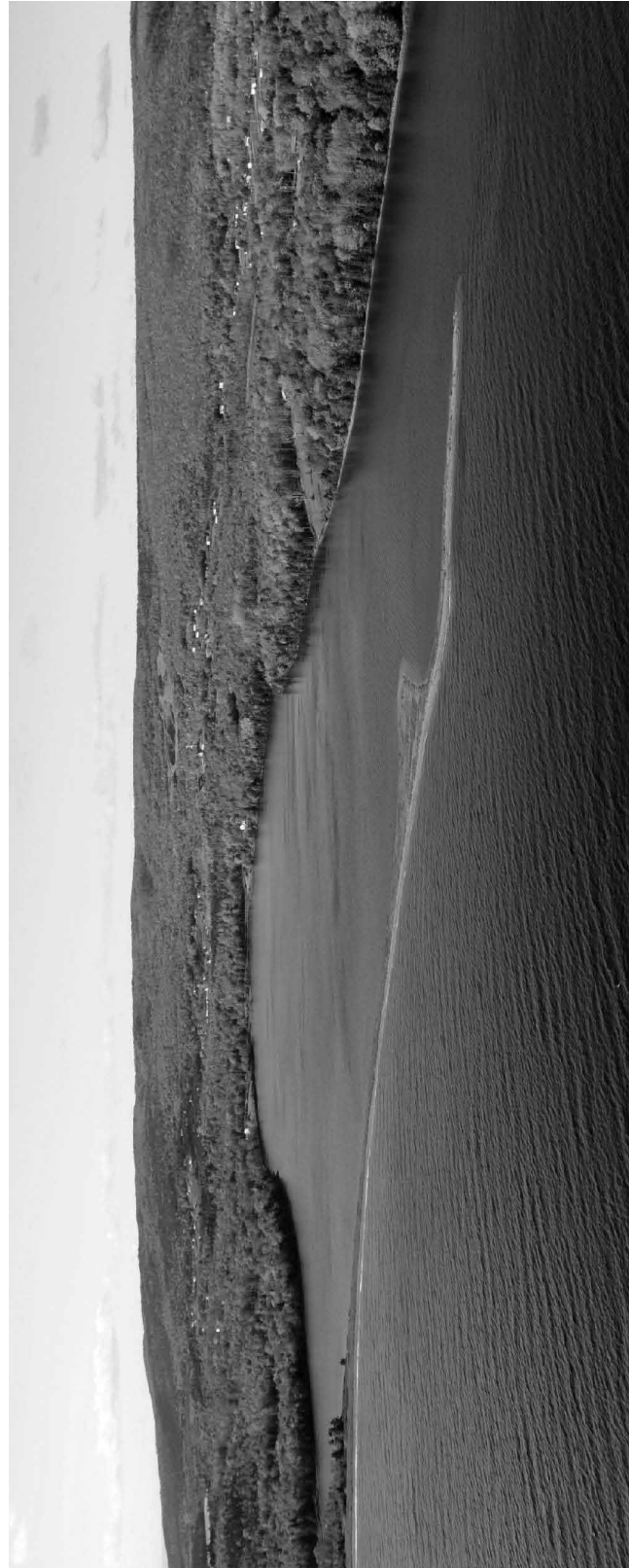
 99 **Christmas Pond**, 4.3 miles NE of Benacadie Point, is a small harbour enclosed by a sand and shingle beach extending NE from **Dhu Point**. The approach is north or south of **Christmas Island**, and then SW to the entrance, which has a limiting depth of 1.5 m. There is small craft **anchorage** at the head of the pond.

100 A **conspicuous** white church and spire is situated 0.6 mile north of Christmas Island. Another white church and steeple is situated at the community of **Big Pond**, 3.5 miles to the SE on the opposite shore.

 101 **McPhee Island**, 2.5 miles east of Christmas Island, is joined to the mainland at Eskasoni by a long shingle beach. A Public wharf at **Crane Cove**, inside the **Indian Islands**, is 37 m long at the face with a depth of 1.2 m alongside. The population of **Eskasoni** was 2,952 in 2006.

 102 Fair small craft **anchorage**, in good holding ground, is found in the centre of a small harbour formed by **Cossitt Point**, a sand and shingle bar 3.5 miles NE


CHRISTMAS POND (Oct. 2008)



PRINGLE HARBOUR (Oct. 2008)




of McPhee Island. Entry is made when the white church on the north shore bears NW, clearing shoal water that extends 0.6 mile from the point. Microwave **towers**, marked with red **lights**, are shown from both shores NW and SE of Cossitt Point.

 102.1 The *Ben Eoin Yacht Club and Marina* is located on the east shore of East Bay, 1.7 miles east of Cossitt Point. It is the largest marina on the Bras d'Or Lake, and there are 75 berths, including seven visitor berths. The marina offers full services, with the exception of repair.

103 The head of East Bay is closed by a causeway. A **conspicuous** church and spire is situated on the east side. To the SW, **Campbell Point** extends to a hooked bar, forming a small, shallow, but protected cove to small craft. **Anchorage** is available close within, in 2 to 3 m.


104 **West Bay. — South side. — Morrison Head** ($45^{\circ}46'N$, $60^{\circ}54'W$), a small peninsula 11 m high with red cliffs, slopes towards the mainland to which it is joined by a shingle bar. **Morrison Harbour**, on the SE side, provides shelter from SW winds in depths of 5.5 m.

 105 **Pringle Island**, 3.8 miles west of Morrison Head, forms **Pringle Harbour** on its south side. Good **anchorage** is available, except during strong east winds, in the centre of the harbour in depths to 5.5 m.


106 **Pringle Shoal**, at a depth of 2.6 m, rock, lies 0.5 mile north of Pringle Island. **Ross Shoal**, at 5 m, lies 0.7 mile WNW of Pringle Shoal, and **MacLeods Shoal**, at 6.8 m, lies 0.7 mile NE of Pringle Shoal.

107 A very small grassy islet, wedge shaped, lies close off **MacKenzie Point**, 3 miles SW of Pringle Island. **McInnes**

Shoals, rock, at a depth of 5 m, stretch 0.9 mile west of the islet. **Leonards Island**, a low ridge of grass, joins the shore 1 mile SW of the islet.

 108 **Dundee Marine** operates from the SW side of **Ballams Point**, 1.5 miles SW of Leonards Island. Shoal water extends west from **MacRae Island**, the north entrance point which is low and treeless. A submerged bar prohibits passage east of MacRae Island.

109 The marina has several moorings and berths to accommodate vessels up to 12.5 m in length. A wharf at the south tip of Ballams Points is 9 m long at the face with a depth of 3.7 m alongside. Water, sewage pump-out, electricity, gas, diesel, laundry, showers and supplies are available. A submerged **pipeline** is laid to the opposite shore, where Dundee Resort operates a golf course and housekeeping facilities.

 110 **West Bay. — North side. — Little Harbour** is entered at the head of **MacKenzie Cove**, 1.5 miles west of Militia Island ($45^{\circ}50'N$, $60^{\circ}56'W$). The entrance is narrow, and is made mid channel between sandbars extending from each shore. Good small craft **anchorage** is available in two coves that open to the south on the east and on the west side of the harbour in 2 to 5 m. A rock, at a depth of 5 m, lies 0.5 mile south of the harbour entrance.

111 A group of wooded islets, about 15 m high, with cliffs of sand, clay and boulders, and connected by shingle beaches or separated by narrow channels, lies off the shore in the approaches to **Clarke Cove**. There is good **anchorage** between these islands and the north shore. The scar of **Marble Mountain** rises from behind Clarke Cove, and a **conspicuous**


DUNDEE (Oct. 2008)






MALAGAWATCH — LITTLE HARBOUR (Oct. 2008)



microwave **tower**, 266 m in elevation and marked by red **lights**, is situated 1 mile west of the cove.

 112 Clarke Cove is entered by a narrow, **buoyed** channel passing north of **Cameron Island**. An alternate channel, not marked, leads between Cameron Island and **Green Island**, 0.6 mile to the south. It is constricted at the entrance by a reef extending 0.3 mile south from Cameron Island, but widens beyond. A **light** (838) is shown from a white tower on the NE side of Cameron Island. **Paddle Shoal**, **Nameless Shoal** and **George Shoal**, separated from each other by deep water, and marked by **buoys**, lie in the outer approach to Clarke Cove. **Outer Shoal** bears 125°, 2.2 miles

from Cameron Island light. **Middle Shoal** is situated 0.9 mile west of Outer Shoal.

   113 A Public wharf is situated on the west side of Clarke Cove. It is 23 m long and 6 m wide with a depth of 3 m at the outer face. A **light** (838.4) is shown from a mast at the outer end of the wharf. A **buoy** placed off the beach east of the wharf marks the outer end of a gravity fed spring water supply. Good small craft shelter is available in a landlocked cove, which is entered mid channel and parallel to the shore NE of Clarke Cove. There is **anchorage** in 2 to 3 m in the SW part of the cove. The south side of the cove should be favored in the approach

CHANNEL BETWEEN CAMERON ISLAND AND MacKENZIE POINT (Oct. 2008)



to the anchorage. A rock crib, at depth of 1.8 m, is reported to lie between 46 and 61 m off the north side opposite the sandy point.

114 To the SW of Cameron Island, there is confined but safe **anchorage** midway between the north end of **MacRaes Island** and the south part of **Cow Island**, in 12 m, mud. Cow Island appears in two parts connected by a low grassy neck. **Ronald Island**, small, grassy and with little elevation, lies at the end of this group of islands, 0.5 mile SW of MacRaes Island. **Tailor Shoal**, at a depth of 5.2 m, lies 0.6 mile SE of MacRaes Island.



115 **Crammond Islands**, including **Floda Island**, form a separate group 1.5 miles SW of MacRaes Island. These islands present cliffs of red sand and clay to seaward, and are 15 to 20 m high to the tops of the trees. A sand spit extends from the west side of Floda Island. Anchorage is poor around these islands, but the channel separating the two Crammond Islands leads to a secure small craft basin that is protected by a bold sandbar on the SE side. The preferred entrance is from the north, and in mid channel after allowing for a rocky bar extending NE from the west island. Good **anchorage** is close inside, in 5 m. **Smith Shoal**, at a depth of 1.6 m, is close SE of the east Crammond Island. **Mid Shoal**, at 4.2 m, is nearly 1 mile NW of the north end of the Crammond Islands.

116 **Dumpling Island**, 0.7 mile NW of the Crammond Islands, is surrounded by a reef which extends 0.2 mile west towards **MacKenzies Point**. **North Cove** is bound by the NW shore of West Bay and **Ross Point**. **Ross Pond** is entered between Ross Point and MacKenzies Point. Both have small craft **anchorage** in 5 m close inside Ross Point.

117 The head of West Bay, between **Spruce Point**, 0.9 mile SW of the Crammond Islands, and **MacIntosh Point**, 1.8 miles south on the opposite shore, provides reasonable shelter for boats. **Magnus Island**, 0.9 mile SW of Spruce Point, is connected to the north shore by a partly drying reef. There is small craft **anchorage** off the east side of a lengthy sandbar at the entrance to **Head of West Bay Cove**, and off the north shore of the cove opposite the sandbar.

118 **Militia Island** ($45^{\circ}50'N$, $60^{\circ}56'W$), in the approach to **Pellier Harbour**, can be passed on either side, but the channel north of the island is preferred. Shoal water extends 0.2 mile NW of the island, and also 0.25 mile south from **Militia Point**, the headland to the west. Pellier Harbour, with **Pellier Island** on its east side, has depths to 8.8 m.



119 **Malagawatch Harbour**, a good small craft harbour, is entered between **Sheep Island**, which lies close NE of Pellier Island, and **MacRaes Island**, a small island with a clump of trees 0.4 mile further north. **Pellier Point Reef** extends 0.4 mile east of Pellier Island; **Gillis Shoal**, at a depth of 3 m, is situated 0.5 mile ESE of MacRaes Island. **Campbell Point** is the outer end of a peninsula on the west

CRAMMOND ISLANDS (Oct. 2008)



APPROACH TO ROSS POND (Oct. 2008)



McKINNONS HARBOUR (Oct. 2008)



PELLIER HARBOUR (Oct. 2008)



ORANGEDALE AND NORTH BASIN (Oct. 2008)



side of the harbour, 2 miles inside the entrance. Small craft **anchorage** is available 0.6 mile SW of Campbell Point, opposite **Nills Point**, and at the head of **Cribwork Cove**, to the NW of Campbell Point.

120 Northwest of **Malagawatch Point**, the outermost point NE of MacRaes Island, the shore is cluttered with numerous small coves and islands. **McKinnons Point** is situated on the north shore of the lake, 2.9 miles north of Malagawatch Point. **McKinnons Shoal**, a rocky bank with a least depth of 5.4 m, extends 1.5 miles SE of McKinnons Point.

121 The natural entrance to **McKinnons Harbour**, at Red Point West, 1.3 miles west of McKinnons Point, has filled and is closed by a narrow pebble beach. A channel has been constructed into McKinnons Harbour at a position 1.5 miles west of McKinnons Point. The channel is 30 m long, and 14 m

wide between parallel breakwaters, and with a reported depth of 1.8 m.

122 West of McKinnons Harbour, a narrow but deep channel leads to **North Basin** and **Denys Basin**, two land-locked inlets. The part of the channel north of **Boom Island** is known locally as **The Boom**. A shoal, at a depth of 0.4 m, extends 0.3 mile west of **Martins Point**, the west end of Boom Island at the entrance to North Basin. **Martins Island**, low with a few trees, is situated 2.1 miles west of Martins Point.



123 Good shelter is available in **Blues Cove**, the west extreme of North Basin. A wharf extends 37 m from the south side to an outer end 10 m long, with depths of 2.1 m on either side. Provisions are available nearby in the community of **Orangedale**.



124 **Anchorage** is available in North Basin, 0.3 mile ESE of Martins Island, in 7 m, and in Denys Basin, 0.5 mile south of Martins Point, in 6 m, mud.

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 and PFD's (include number): _____
 Liferrafts (include type and colour): _____ 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
 Stopover Points (include date and time): _____ Time of Arrival: _____
 _____ 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 (Great Lakes and Arctic) 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 (Newfoundland and Labrador Region) 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.*

SEARCH AND RESCUE

In eastern Canada, **Search and Rescue (SAR)** operations are conducted from the **Joint Rescue Coordination Centre** at Halifax (**JRCC Halifax**). The Canadian Forces and the Canadian Coast Guard maintain a continuous watch at JRCC Halifax with all agencies involved in Search and Rescue operations. JRCC Halifax has direct communication with the United States Rescue Centres in Boston and Norfolk, and functions with these centres to provide Search and Rescue coverage to the entire eastern seaboard of North America.

A Marine Rescue Sub-Centre (MRSC) is located in Québec City. The centre initiates the necessary response measure during SAR incidents in their surrounding waters.

All distress situations and requests for assistance should be directed to JRCC Halifax via the nearest Canadian Coast Guard Marine Communications and Traffic Services Centre (MCTS) or by any other available means.

All Canadian Government ships and aircraft are available for Search and Rescue duties when required, as are all Canadian registered ships in accordance with the Canada Shipping Act.

Along the east coast of Nova Scotia, and the Bay of Fundy, the Canadian Coast Guard operates six **lifeboat stations**. These multi-tasked, high endurance lifeboats are 16 m in length, 5.2 m in breadth, and carry a draft of 1.25 m. They are manned from 0800 to 1600 hrs daily, with the crew on standby from 1600 to 0800 hrs. These lifeboats operate within a 100 mile radius from their base. During the summer months, 5.8 m Coast Guard Inshore Rescue Boats are based in Halifax Harbour and Mahone Bay, in Nova Scotia, and at Hardings Point on the Saint John River, in New Brunswick.

The **Canadian Coast Guard Auxiliary** is a volunteer organization of fishermen and recreational boaters that assists in SAR operations, and also in the promotion of boating safety. Members display a Coast Guard Auxiliary pennant from their vessels.

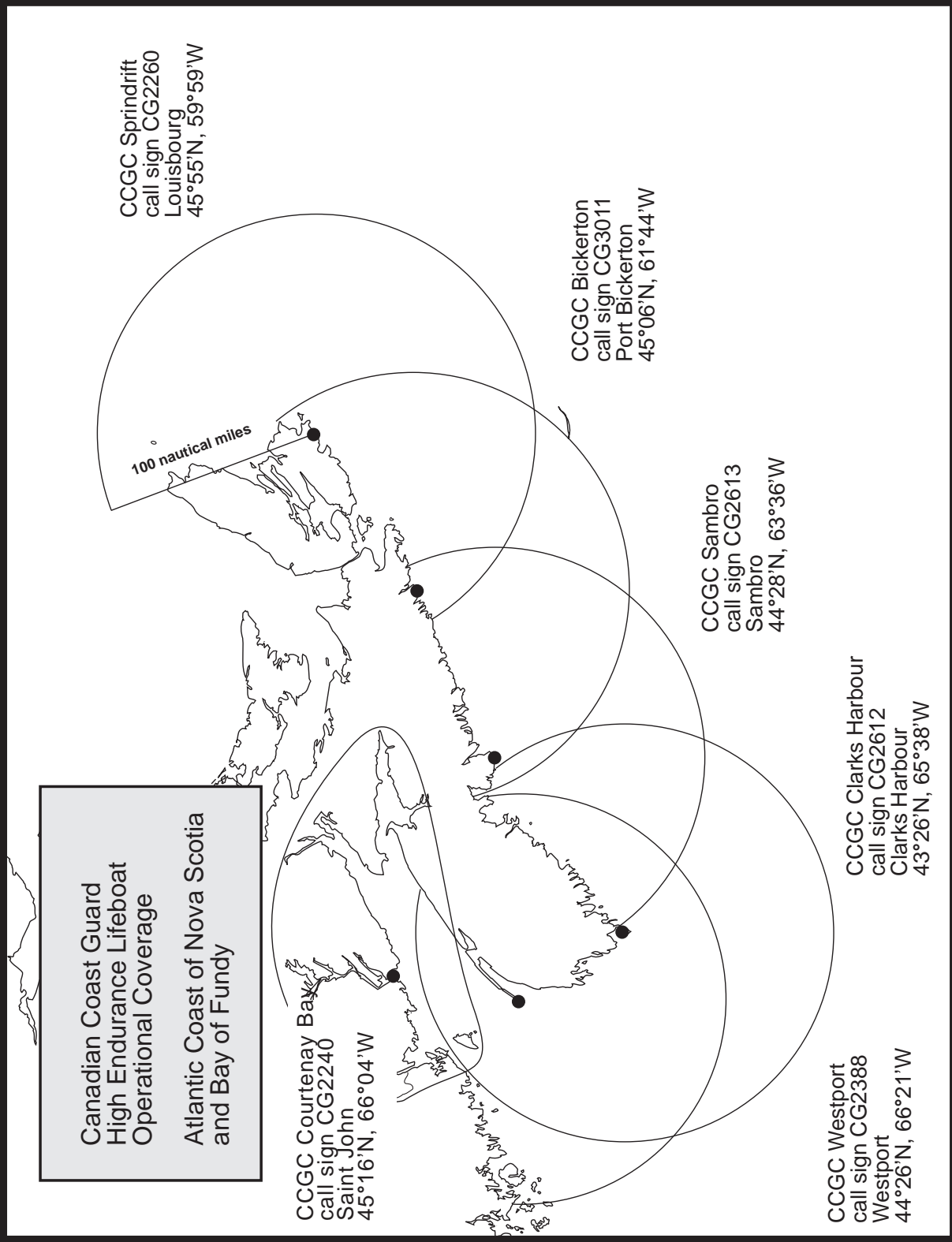
When necessary, **SAR Helicopters** and **Fixed Wing Aircraft** are deployed to assist in SAR operations. These are capable of dropping inflatable liferafts, survival equipment and pumps, and helicopters are equipped with a rescue hoist and can deploy rescue specialist personnel and metal stretchers for evacuation operations.

When a helicopter is deployed, all instructions from JRCC Halifax and/or the pilot should be carefully obeyed. SAR helicopters have effectively carried out airlift rescues in winds of up to 60 knots. A surface visibility of at least ½ mile is required to conduct an effective search by helicopter, and 1 mile by fixed wing aircraft.

When evacuation of personnel by helicopter is planned, prepare a suitable hoisting area, preferably aft, with a minimum radius of 15 m if possible. Booms, flagstays, stays, running rigging, antenna wires, etc., must be removed and stowed. At night, light the pick-up area, but shade the lights so as not to blind the pilot. When the helicopter arrives, turn the vessel 30 – 40 degrees to the right of the wind (wind on the port bow) and maintain a slow speed forward. Allow the basket or stretcher from the helicopter to touch the deck before handling to avoid static shock. Do not secure any line from the helicopter to your vessel. Attempt to contact the aircraft on channel 16 VHF (156.8 MHz), 2182 kHz, or on channel 9 GRS (citizen's band).

AMVER (the Automated Mutual Vessel Rescue System) is operated by the United States Coast Guard. It is an international program which provides important aid to SAR efforts in offshore areas of the world. On the east coast of Canada, merchant vessels that wish to report to AMVER may address their message to **AMVER HALIFAX** through any Canadian Coast Guard Marine Communications and Traffic Services Centre (MCTS) free of charge.

It is wise for small craft operators to prepare a **sailing plan** before starting on a trip and to leave it with a responsible adult, or to advise any Canadian Coast Guard Marine Communications and Traffic Services Centre (MCTS). A checking-in procedure by telephone or radiotelephone for each point specifically identified in the plan is highly recommended. This could prevent a needless alert that could initiate a comprehensive air and marine search.



Canadian Climate Normals 1971 – 2000 (source: Environment Canada)
 Baddeck, Nova Scotia, 46°06'N, 60°45'W

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Temperature (°C)													
daily average	-5.3	-6.1	-2.2	3.0	8.8	14.0	18.1	18.3	14.3	8.7	3.8	-1.7	6.2
daily maximum	-1.2	-1.5	2.2	7.1	13.7	19.1	22.9	23.0	18.9	12.7	7.1	1.8	10.5
daily minimum	-9.4	-10.7	-6.6	-1.0	3.9	8.8	13.3	13.7	9.8	4.6	0.4	-5.2	1.8
extreme maximum	17.0	12.2	17.0	25.6	30.6	33.9	35.0	36.7	32.0	28.9	22.8	17.2	
extreme minimum	-29.0	-32.2	-31.1	-15.6	-7.2	-5.6	-1.1	1.7	-2.2	-5.6	-14.0	-22.2	
Precipitation													
rainfall (mm)	74.9	56.5	77.6	94.8	103.3	104.0	95.6	106.3	116.4	139.7	133.1	100.3	1202.3
extreme daily rainfall	61.0	51.0	68.6	80.6	77.5	88.4	58.7	115.8	96.5	95.6	66.0	89.6	
snowfall (cm)	73.1	62.6	46.4	19.7	1.7	0.0	0.0	0.0	0.0	1.8	21.4	71.9	298.6
days with	19.3	13.7	14.4	13.8	13.0	12.3	12.0	12.1	13.3	16.1	18.2	20.1	178.2

Port Hastings (Strait of Canso), Nova Scotia, 45°38'N, 61°24'W

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Temperature (°C)													
daily average	-4.9	-5.6	-1.9	3.2	8.7	13.9	18.2	18.5	14.5	9.2	4.1	-1.4	6.4
daily maximum	-0.9	-1.6	2.1	7.0	13.4	18.7	23.0	23.0	18.8	13.1	7.3	2.2	10.5
daily minimum	-9.0	-9.6	-5.8	-0.7	4.0	9.0	13.4	13.9	10.1	5.2	0.8	-5.0	2.2
extreme maximum	18.3	16.7	17.8	26.7	31.7	36.1	37.2	32.8	31.0	29.4	30.0	20.6	
extreme minimum	-26.7	-26.1	-26.7	-13.3	-6.7	-2.2	0.6	-17.8	-5.6	-7.2	-12.2	-22.8	
Precipitation													
rainfall (mm)	99.4	61.1	103.1	128.6	105.5	114.2	90.8	111.7	113.6	142.5	158.6	128.0	1357.0
extreme daily rainfall	111.3	127.0	88.2	61.8	80.5	91.4	78.8	127.8	127.0	83.8	83.2	66.0	
snowfall (cm)	48.0	46.7	29.3	13.5	0.9	0.0	0.0	0.0	0.0	0.8	4.7	38.2	182.1
days with	13.2	10.7	12.0	15.3	16.0	14.5	13.7	14.3	14.5	16.2	17.4	16.0	173.6

Canadian Climate Normals 1971 – 2000 (source: Environment Canada)
Ingonish Beach, Nova Scotia, 46°39'N, 60°24'W

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Temperature (°C)													
daily average	-5.1	-5.7	-1.9	2.6	8.0	13.8	18.5	18.4	14.3	8.7	3.8	-1.5	6.2
daily maximum	-0.8	-1.2	2.2	6.3	12.8	19.0	23.4	23.2	18.9	12.7	7.2	2.0	10.5
daily minimum	-9.3	-10.0	-6.1	-1.2	3.2	8.6	13.5	13.6	9.6	4.6	-0.3	-5.0	1.8
extreme maximum	17.0	19.0	19.4	24.0	31.1	34.4	36.0	34.5	31.5	27.2	25.5	17.5	
extreme minimum	-28.0	-27.5	-24.0	-15.0	-7.0	-1.7	3.9	1.0	-6.7	-6.5	-12.5	-20.0	
Precipitation													
rainfall (mm)	78.6	53.5	82.2	124.7	102.3	91.5	88.5	106.1	126.0	183.9	166.9	120.2	1324.4
extreme daily rainfall	108.7	82.0	96.0	140.4	107.7	79.8	88.4	143.8	107.2	104.0	140.0	107.4	
snowfall (cm)	97.3	72.6	67.8	36.6	3.6	0.0	0.0	0.0	0.0	1.0	21.2	75.2	375.2
days with	19.6	13.8	15.2	14.7	14.7	11.6	11.6	13.0	14.9	18.6	20.1	20.2	187.9

Louisbourg, Nova Scotia, 45°54'N, 60°00'W

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Temperature (°C)													
daily average	-4.9	-5.5	-2.2	2.0	6.7	11.6	15.9	17.3	14.0	8.5	3.7	-1.5	5.5
daily maximum	-0.9	-1.4	1.4	5.3	10.7	16.0	19.8	21.0	17.8	12.1	6.8	2.1	9.2
daily minimum	-8.8	-9.5	-5.8	-1.3	2.6	7.2	11.9	13.6	10.1	4.9	0.5	-5.1	1.7
extreme maximum	14.0	13.0	17.0	19.0	29.0	31.7	31.0	32.0	31.5	24.0	20.0	13.5	
extreme minimum	-26.0	-25.0	-23.0	-13.5	-7.0	-1.5	4.0	3.5	-1.7	-4.5	-12.0	-20.6	
Precipitation													
rainfall (mm)	90.2	71.1	97.6	113.2	120.1	115.5	109.8	107.9	128.0	154.9	150.1	117.3	1375.7
extreme daily rainfall	73.0	57.2	83.0	67.0	105.0	100.5	58.4	84.0	87.2	112.8	106.5	62.0	
snowfall (cm)	52.0	56.3	40.4	19.1	1.1	0.0	0.0	0.0	0.0	0.2	9.1	42.3	220.4
days with	15.0	12.5	13.6	14.8	15.8	14.0	14.5	14.6	15.2	16.7	18.1	17.2	182.1

Canadian Climate Normals 1971 – 2000 (source: Environment Canada) Sydney, Nova Scotia, 46°10'N, 60°03'W

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Temperature (°C)													
daily average	-5.7	-6.5	-2.7	2.1	7.8	13.3	17.7	17.7	13.4	8.0	3.3	-2.1	5.5
daily maximum	-1.3	-1.9	1.5	6.1	12.9	18.9	23.0	22.7	18.3	12.2	6.8	1.6	10.1
daily minimum	-10.0	-11.1	-6.9	-1.9	2.6	7.6	12.3	12.6	8.5	3.8	-0.2	-5.8	1.0
extreme maximum	16.9	18.0	17.8	27.2	31.1	34.4	33.9	35.5	32.3	25.0	22.2	16.7	
extreme minimum	-26.2	-27.3	-25.6	-14.6	-7.8	-3.9	2.2	2.8	-1.7	-5.6	-12.0	-22.2	
extreme wind chill	-42.6	-41.1	-34.3	-21.4	-11.3	-6.1	0.2	0.7	-5.1	-10.5	-19.3	-31.3	
extreme humidex	18.2	19.0	19.3	26.0	36.8	43.4	41.8	41.9	38.9	30.4	25.5	18.0	
Precipitation													
rainfall (mm)	82.4	66.7	88.4	103.7	100.1	92.6	86.8	93.1	113.4	143.8	134.4	107.6	1212.1
extreme daily rainfall	57.2	62.2	73.0	73.4	93.5	84.0	68.2	128.8	90.9	96.2	97.3	94.0	
snowfall (cm)	70.8	66.8	51.4	26.1	2.7	0.0	0.0	0.0	0.0	2.0	15.7	62.8	298.3
days with ppt.	20.3	16.3	16.9	15.7	13.8	13.3	11.9	12.7	13.7	15.6	18.3	21.8	190.1
days with fog	4	5	6	9	11	10	11	7	6	5	5	4	83
mn sea lvl pres kPa	101.2	101.2	101.2	101.2	101.5	101.4	101.3	101.5	101.5	101.6	101.3	101.2	101.3
Average Relative Humidity													
0600 hrs. LST %	81.2	81.2	84.0	86.7	86.6	86.8	89.1	89.9	90.1	86.6	83.3	82.7	85.7
1500 hrs. LST %	72.7	70.4	71.0	70.8	66.5	64.9	65.4	65.8	68.1	69.9	73.9	75.4	69.6
Wind (km/hr)													
mean speed	21.3	20.6	20.8	19.5	17.9	16.9	15.8	15.1	16.2	18.2	19.8	21.0	18.6
prevailing direction	W	W	SW	N	S	S	S	S	SW	SW	W	W	S
maximum gust	121	124	129	115	109	114	87	89	129	138	129	161	
direction of gust	S	S	E	E	E	N	W	S	S	N	S	E	S
Cloud Amount (hours with)													
0 to 2 tenths	121.0	151.0	161.2	133.7	152.6	137.9	141.7	160.4	155.2	129.1	77.9	86.5	
3 to 7 tenths	169.8	143.7	138.8	121.8	146.1	178.3	211.4	212.7	196.9	180.1	149.9	156.5	
8 to 10 tenths	453.2	382.8	444.0	464.6	445.3	403.9	391.0	370.9	368.0	434.8	492.2	501.0	

Distances from Port Hawkesbury, Nova Scotia, to:

Boston, Massachusetts	501
Bristol, England	2,321
Cape Town, South Africa	6,417
Charleston, South Carolina	1,192
Charlottetown, Prince Edward Island	104
Cherbourg, France	2,387
Churchill, Manitoba	2,075
Colon, Panama	2,388
Dalhousie, New Brunswick	286
Digby, Nova Scotia	395
Gaspé, Québec	244
Gibraltar	2,558
Grassy Bay, Bermuda	821
Habana, Cuba	1,718
Halifax, Nova Scotia	160
Jacksonville, Florida	1,354
Key West, Florida	1,657
Kingston, Jamaica	1,888
Lewisporte, Newfoundland (east of Cape Race)	650
Lisbon, Portugal	2,314
Liverpool, England	2,347
London, England	2,603
Miramichi, New Brunswick	225
Montréal, Québec	717
Nassau, Bahamas	1,465
New London, Connecticut (via Nantucket Sound)	581
Newport, Rhode Island, (via Nantucket Sound)	546
New York, New York (south of Nantucket Shoals)	708
Philadelphia, Pennsylvania (south of Nantucket Shoals)	857
Pictou, Nova Scotia	70
Ponta Delgada, Azores	1,645
Port of Spain, Trinidad	2,106
Portland, Maine	461
Reykavik, Iceland (south of Cape Race)	1,825
St. George's Harbour, Newfoundland	257
Saint John, New Brunswick	420
St. John's, Newfoundland	421
Saint-Pierre, Saint-Pierre and Miquelon	235
San Juan, Puerto Rico	1,646
Savannah, Georgia	1,268
Southampton, England	2,422
Sydney, Nova Scotia	125
Yarmouth, Nova Scotia	320

All distances are in nautical miles and by the most direct route unless otherwise noted

Distances from Sydney, Nova Scotia, to:

Boston, Massachusetts	600
Bristol, England	2,278
Cape Town, South Africa	6,423
Charleston, South Carolina	1,291
Charlottetown, Prince Edward Island (via Cabot Strait)	216
Cherbourg, France	2,344
Churchill, Manitoba	2,001
Colon, Panama	2,481
Dalhousie, New Brunswick	323
Digby, Nova Scotia	494
Gaspé, Québec	260
Gibraltar	2,519
Grassy Bay, Bermuda	908
Habana, Cuba	1,817
Halifax, Nova Scotia	249
Jacksonville, Florida	1,453
Key West, Florida	1,756
Kingston, Jamaica	1,981
Lewisporte, Newfoundland and Labrador (via Strait of Belle Isle)	556
Lisbon, Portugal	2,275
Liverpool, England	2,311
Liverpool, Nova Scotia	293
London, England	2,560
Miramichi, New Brunswick	273
Nassau, Bahamas	1,562
New London, Connecticut (via Nantucket Sound)	680
Newport, Rhode Island (via Nantucket Sound)	645
New York, New York (south of Nantucket Shoals)	807
Norfolk, Virginia	996
Philadelphia, Pennsylvania (south of Nantucket Shoals)	956
Pictou, Nova Scotia (via Cabot Strait)	216
Ponta Delgada, Azores	1,616
Port Hawkesbury, Nova Scotia	125
Port of Spain, Trinidad	2,189
Portland, Maine	560
Reykjavik, Iceland (via Strait of Belle Isle)	1,684
St. George's Harbour, Newfoundland and Labrador	169
Saint John, New Brunswick	511
St. John's, Newfoundland and Labrador	378
Saint-Pierre, Saint-Pierre and Miquelon	183
San Juan, Puerto Rico	1,733
Savannah, Georgia	1,367
Southampton, England	2,379
Yarmouth, Nova Scotia	419

All distances are in nautical miles and by the most direct route unless otherwise noted.

COMPULSORY PILOTAGE AREAS

3. The areas described in the schedule are hereby established as compulsory pilotage areas within the region of the Authority.

SHIPS SUBJECT TO COMPULSORY PILOTAGE

4. (1) The following ships and classes of ships are subject to compulsory pilotage within the areas referred to in section 3:

- (a) Canadian-registered ships over 1,500 gross tons;
- (b) ships not registered in Canada, including floating cranes;
- (c) oil rigs;
- (d) any combination of tug and tow, if more than one unit is being towed, without regard to gross tons;
- (e) pleasure craft over 500 gross tons; and
- (f) ferries that are entering or leaving a port that is not one of their regularly scheduled terminals.

(2) Despite subsection (1), the following ships and classes of ships are not subject to compulsory pilotage within the areas referred to in section 3:

- (a) Canadian-government ships;
- (b) Canadian-registered ships that are employed in catching or processing fish or other living resources of the sea;
- (c) Canadian-registered offshore supply vessels of 5,000 gross tons or less that have an operations base in a port located within one of the areas;
- (d) ferries operating on a regular schedule between two terminals that are crewed by masters and officers in charge of the deck watch who
 - (i) are regular members of their ferry's complement, and
 - (ii) hold certificates of competency under the *Marine Certification Regulations*;
- (e) pleasure craft of 500 gross tons or less not registered in Canada; and
- (f) tugs of 500 gross tons or less not registered in Canada that are crewed by masters and officers in charge of the deck watch who
 - (i) are regular members of their tug's complement, and
 - (ii) hold certificates of competency under the *Marine Certification Regulations*.

source : *Atlantic Pilotage Authority Regulations*

CUSTOMS INFORMATION FOR PLEASURE CRAFT

CANPASS - Pleasure craft entering Canada must report to the **Canadian Border Services Agency** by telephone at designated reporting sites.

The telephone service is toll free **1-888-CANPASS** (1-888-226-7277) and is operated 24 hours a day. The Canadian Border Services Agency will issue instructions following a telephone interview, and on-site inspections may be carried out to ensure compliance with the law.

Further information is available from the Canadian Border Services Agency, (1-800-461-9999). www.cbsa.gc.ca

Designated Reporting Sites for Pleasure Craft:

Nova Scotia:

Yarmouth	Killam Brothers Wharf (marina), Lobster Rock Wharf Yarmouth Marginal Wharf, Yarmouth Ferry Terminal
Shelburne	Shelburne Harbour Yacht Club
Liverpool	Brooklyn Marina/Public Wharf
Lunenburg	Fisheries Museum of the Atlantic, Lunenburg Public Wharf Lunenburg Yacht Club
St. Margarets Bay	Shining Waters Marine Ltd.
Halifax/Dartmouth	Armdale Yacht Club, Bedford Basin Yacht Club Dartmouth Yacht Club, Halifax Marine and Enforcement Maritime Museum of the Atlantic, Royal Nova Scotia Yacht Squadron Shearwater Yacht Club
Port Bickerton	Port Bickerton Wharf
Canso	Cape Canso Marina
Port Hawkesbury	Port Hawkesbury Wharf
St. Peters	St. Peter's Lions Club Marina
Louisbourg	Louisbourg Wharf
Sydney	Royal Cape Breton Yacht Club

About the Baddeck Mooring Authority

Baddeck, Nova Scotia has a long and auspicious yachting history. Since before the founding of the Bras d'Or Yacht Club in 1904, Baddeck has been a favorite both with local sailors and cruising yachtsmen.

The growing popularity of Baddeck as a yachting center has resulted in a great proliferation of moorings within the harbour. There continues to be a growing number of people wishing to gain access to the harbour for both commercial and recreational pursuits. The ability to accommodate an ever growing demand has been a difficult struggle. In 1995 the province of Nova Scotia, through the Department of Natural Resources entered into discussions with the public concerning the future management of the harbour at Baddeck. The result of those meetings has been the formation of the Baddeck Mooring Authority (BMA).

The BMA has been mandated to ensure the efficient use of the harbour to the benefit of all interested user groups including those without boats who wish to use the harbour for passive and active recreation. The BMA is comprised of representatives from the commercial marine interests in the area, the recreational boating community, the Village of Baddeck, the Municipality of the County of Victoria, the Nova Scotia Department of Natural Resources, the Bras d'Or Yacht Club and the Federal Department of Transport. (The Federal representation has not been active since the Government of Canada divested itself of the former Government Wharf to the community). The diversity of the committee ensures that any interested individual or organization has a representative to speak on their behalf.

The initial subdivision of the harbour resulted in the allocation of 111 mooring spaces sized 100' x 100'. A maximum of 20% of the spaces being designated as commercial. Commercial sites are permitted to be rented or leased by the permit holder, recreational sites must be used only by the permit holder. In addition, some of the sites have been designated as "riparian" being assigned without cost to the upland land owner. The distribution of sites made way for a substantial navigational channel through the harbour and has complied with the Provincial Governments requirement for a two hundred foot buffer zone between the mooring "Grid" and the shoreline.

In the period since the initial allocation of sites the committee has been forced to make several changes to the grid. The requirements of riparian owners, a commitment to ensure the safe and efficient operation of the Lion's Club Ferry running to Kidston Island, obligations to commercial operators and the development of "Public Access" areas have resulted in the grid being lessened to the present ninety-four sites.

The BMA charges an annual fee for a recreational mooring permit. This money is used to fund operations including the services of a mooring master and secretary as well as occasional surveys of the grid (above and below water) the purchase of information buoys and payment of annual government licensing fees. Accountability is ensured by the presentation of complete financial statements to the general public during the Annual General meeting held in the spring each year.

The implementation of this committee has resulted in the local community having direct control over an important area resource. It has served to ensure that everyone is represented at the table and has provided a tool to ensure that Baddeck continues to be a first class yachting destination.

BRAS D'OR LAKE AQUACULTURE

The Nova Scotia Department of Fisheries and Aquaculture is the licensing authority for aquaculture sites in the waters off Nova Scotia. Aquaculture leases are issued to operators through a rigorous application process. Throughout the Bras d'Or Lake system, most aquaculture leases are for the farming of oysters. The leased sites are located close to the shore, typically at the heads of coves and harbours, and in depths of less than 5 metres. Many of the leased sites are seasonally or intermittently active.

Oyster cultivation has many phases. Seed (or spat) is collected using temporary floating gear under a D.F.O permit. The seed then may be placed onto the seabed, and the maturing animals are at times placed in mesh bags on the bottom.

For the most part, oyster aquaculture is little threat to surface navigation, but damage to oyster beds will occur with anchorage over them. Caution is necessary. Maturing oysters, held in meshed bags, can be suspended from the surface, from rafts, or buoyed by floats. In these cases, the corners of the leased site are marked by yellow cautionary buoys.

Locations of leased sites in the Bras d'Or Lake System include:

St. Patricks Channel: MacIvers Cove, Nyanza Bay, MacRitchies Cove, Denas Pond (Little Narrows)

Whycocomagh Bay: head of West Cove, SW end of MacInnis Island, MacKenzies Point, south side of Sheep Island, south side of Indian Island

Bras d'Or Lake: northwest side of McKinnons Harbour, entrance to McKinnons Harbour

Malagawatch Area: most of the shore north of Cranberry Island

Boom Island: south shore, shore opposite north side

North Basin (Approach to Orangedale): south shore, MacDonalds Cove, Gillis Cove

Denys Basin: Eagle Point, MacLeans Cove

Big Harbour and Big HarbourIsland: north shore of Cribwork Cove, River Cove, south shore of MacRaes Cove, small cove north of Nielys Point

St. Peters Inlet: west shore of Damions Cove, SW side of Indian Island, east side of Chapel Island, Indian Point, south side of Langley Island, south side of Evans Island, Peggy Point (east of Canso Canal)

LENNOX PASSAGE, ISLE MADAME, AND STRAIT OF CANSO AQUACULTURE

Aquaculture in these waters mainly consists of blue mussel farming.

Mussels are cultured in mesh socks that are suspended from long floating lines that are buoyed by black spherical floats. As with oyster farms, the corners of leased sites are marked with yellow cautionary buoys. Typical mussel farms are anchored in depths of 10 metres and less. But on occasion mussel farmers may suspend their mussel lines sub-surface. Some do this as winter approaches to avoid drift ice.

In Lennox Passage, leased aquaculture sites are scattered among islands on both sides, and outside of the main channel east of the bascule bridge at Burnt Point.

Lennox Passage sites:

Grand Anse: NE side of Birch Island, SW side of Indian Island, east side of Knife Island

False Bay: south of Savage Point

River Bourgeois: NW of Ouetique Island

Poulamon Bay: between Crow and Eagle Islands, west and NW of Poulamon Point, SW of Bernard Island

South side of Ilse Madame:

Arichat: south of Kavanagh Point

Le Blanc Harbour: SW of Le Blanc Point

Strait of Canso: west of Eddy Point

Metric Conversion Table

metres	feet	fathoms
0.1		
0.2		
0.3	1	
0.4		
0.5		
0.6	2	
0.7		
0.8		
0.9	3	
1.0	3.28	
1.1		
1.2	4	
1.3		
1.4		
1.5	5	
1.6		
1.7		
1.8	6	1
1.9		
2.0		
2.1	7	
2.2		
2.3		
2.4	8	
2.5		
2.6		
2.7	9	
2.8		
2.9		
3.0	10	
3.1		
3.2		
3.3		
3.4	11	
3.5		
3.6		
3.7	12	2
3.8		
3.9		
4.0	13	
4.1		
4.2		
4.3	14	
4.4		
4.5		
4.6	15	
4.7		
4.8		
4.9	16	
5.0		

metres	feet	fathoms
5.1		
5.2	17	
5.3		
5.4		
5.5	18	3
5.6		
5.7		
5.8	19	
5.9		
6.0		
6.1	20	
6.4	21	
6.7	22	
7.0	23	
7.3	24	4
7.6	25	
7.9	26	
8.2	27	
8.5	28	
8.8	29	
9.1	30	5
9.8	32	
10.4	34	
11.0	36	6
11.6	38	
12.2	40	
13.4	44	
14.6	48	8
15.8	52	
17.1	56	
18.3	60	10
21.3	70	
24.4	80	
27.4	90	15
36.6	120	20
45.7	150	25
50	164	
55	180	30
64	210	35
73	240	40
91	300	50
100	328	
110	360	75
150	492	82
183	600	100
200	656	
250	820	
274	900	150
366	1200	200
549	1800	300

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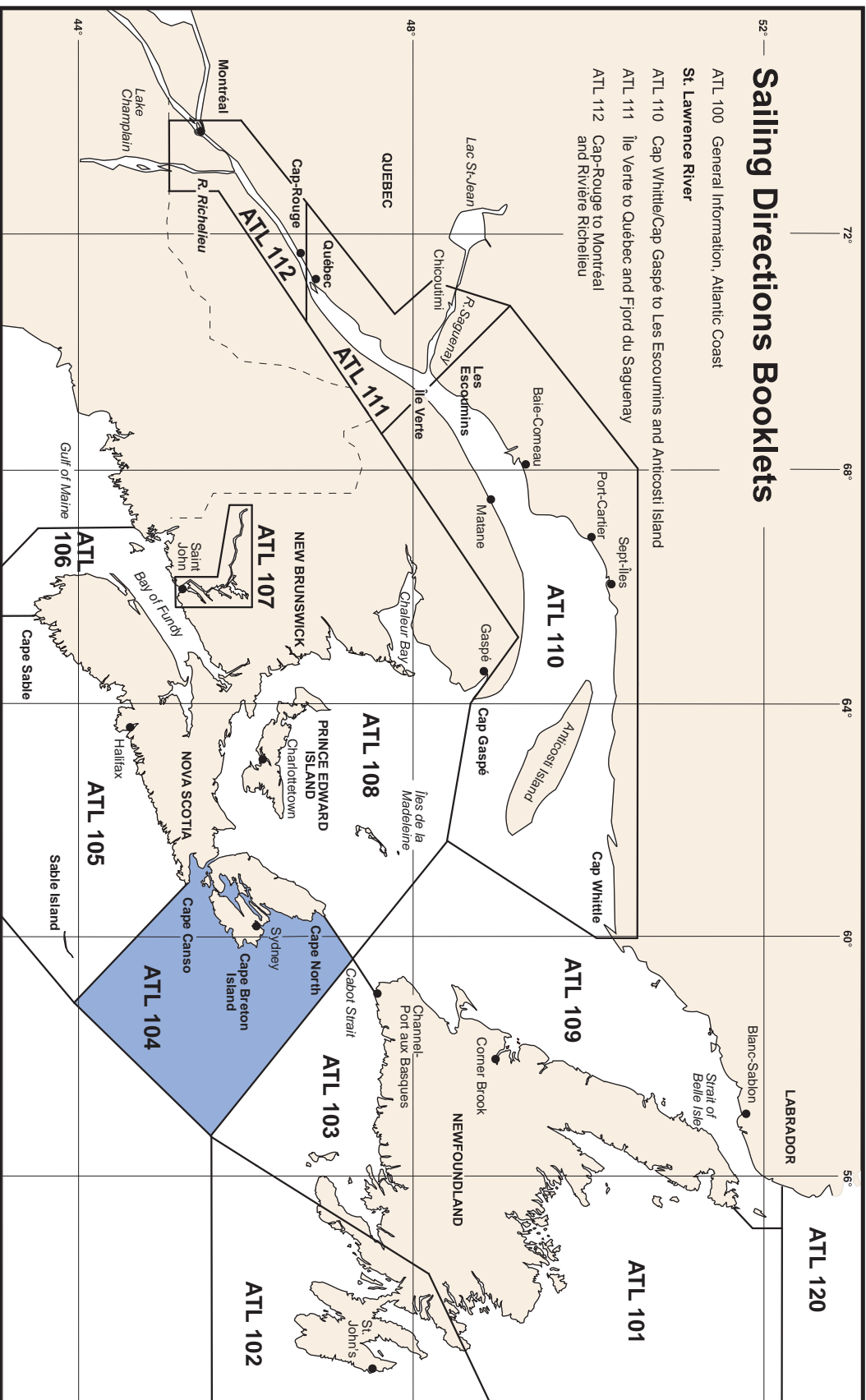
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ATL 111 Île Verte to Québec and Fjord du Saguenay

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

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- ATL 104 Cape North to Cape Canso (including Bras d'Or Lake)
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- ATL 106 Gulf of Maine and Bay of Fundy
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