



**OUTLOOK FOR BREAK-UP OF ICE
ON THE ST. LAWRENCE SEAWAY
ISSUED AT 1200 EST – 6 MARCH 2012
BY CANADIAN ICE SERVICE**

prepared for
The Saint-Lawrence Seaway Management Corporation

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BY ENVIRONMENT CANADA**

1. Temperatures in the last half of November were above normal along the Seaway and in the Western Basin. Temperatures dove to below normal only for very brief periods from then on to the rest of the winter; above normal temperatures were recorded for all the bi-monthly periods from mid-November to the end of February in Windsor, Kingston and Montreal. In the first half of December, ranged from 2.1°C above normal in Windsor to 4.8°C above normal in Kingston and 5.7°C above normal in Montreal. Temperatures for the second half of December were 4.6°C above normal in Windsor, 2.5°C above normal in Kingston and 1.8°C above normal in Montreal. As stated above, temperatures in the first half of January remained above normal; 4.3°C above normal in Windsor, 3.4°C above normal in Kingston and 2.0°C above normal in Montreal. The second half of January and first half of February saw mild temperatures as well; 3.5°C above normal in Windsor, 5.6°C above normal in Kingston and 3.9°C above normal in Montreal for the second half of January and 3.6°C above normal in Windsor, 5.0°C above normal in Kingston and 3.2°C above normal in Montreal for the first half of February. The mild temperatures persisted in the second half of February with 3.9°C above normal registered in Windsor, 4.7°C above normal in Kingston and 4.0°C above normal in Montreal.

2. The period from about January 13 to January 23 saw the coldest temperatures of the winter from the Western Basin of Lake Erie to Montreal; ice developed in the Western Basin and the Western Basin became ice covered during that time and some new lake ice was analyzed in the western portion of the seaway on the January 16 weekly Great Lakes chart. The maximum ice coverage of the winter for not only Lake Erie but all the Great Lakes was for

January 23 2012. After that, mild weather and average daily temperatures rising frequently above zero limited ice growth. In the Seaway, ice formed mostly on the shallower waters of different channel and locks. The eastern portion of the Seaway, including Montreal, was the least mild and more ice developed in that area. Here is a description of the ice at the end of January:

“Very close pack medium lake ice was present in the Seaway Channel from Jacques Cartier Bridge to the Beauharnois Locks, while open water was observed in the river. Open drift medium lake ice was found in the Beauharnois Canal from the Beauharnois Lock westward past the Saint-Louis Bridge, where the channel became open water. Elsewhere, from Île Perrot to Pointe Beaudette, close pack medium lake ice covered the river. From Pointe Beaudette to Lake Ontario open water was observed on the river except for very close pack medium lake ice on the Wiley-Dondero Canal”.

This may have been close to the peak ice coverage for the Seaway; at the end of February, the ice in Beauharnois canal was gone. As temperatures dipped to below normal in early March, new lake ice formed over the western portion of the Seaway.

3.

	December		January		February		Departure
	Ave. Temp.	Departure	Ave. Temp.	Departure	Ave. Temp.	Departure	Ave. Temp. Dec to Feb
Montreal	-2.5	3.7	-7.2	3.0	-4.5	3.6	3.4
Kingston	0	3.5	-3.1	4.5	-1.6	4.8	4.3
Windsor	2.1	3.4	-0.6	3.9	0.9	3.8	3.7

Table 1: Average and departure from normal temperatures (°C).

4. In early March, freezing degree days were 88 percent less than normal in Windsor. There was 58 percent less than normal in Kingston and 40 percent less than normal in Montreal. Freezing degree days (FDD) accumulations on March 5th were 497 in Montreal, 251 in Kingston and 41 in Windsor. Normal values for these same cities are 827, 604 and 336 respectively.

5. The following description of ice conditions along the Seaway is based on an ice survey conducted on February 26/28 RADARSAT and MODIS and a flight on February 28: Open water is found from Lake Ontario to Cornwall except for some ice near Massena including in (Wiley-Dondero Canal). From Cornwall to Montreal; mostly open water. Ice is present in the Seaway Channel near Montreal and east and west of Île Perrot. There is no ice in Beauharnois Canal.

A few days of below zero average daily temperatures occurred along the Seaway in early March and one more day of below zero average daily temperatures is expected early in the second week of March. As temperatures dipped to below normal in early March, new lake ice formed over the western portion of the Seaway (and possibly elsewhere along the Seaway). For the rest of March, temperatures will be much warmer than normal.

GENERAL OUTLOOK:

- 7. Lake Ontario to Cornwall** – Patches of new lake ice which will melt rapidly over the next few days.
- 8. Cornwall to Montreal** – Patches of new lake ice which will melt rapidly over the next few days. Also, average daily temperatures will move to above the zero mark about 2 weeks ahead of normal so any ice that formed this winter should melt two weeks ahead of normal or even a little faster.
- 9. Lake Erie** – Open water to ice free.

FORECAST MAY BE UPDATED AS REQUIRED

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