



## OUTLOOK FOR THE FORMATION OF ICE IN THE ST. LAWRENCE SEAWAY & LAKE ERIE ISSUED BY CANADIAN ICE SERVICE

prepared for  
**The Saint-Lawrence Seaway Management Corporation**

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For the month of November, mean surface air temperatures at select sites along the Saint-Lawrence Seaway and along the Great Lakes have been slightly below to near normal. The largest negative temperature anomaly was observed at Thunder Bay at  $-0.6^{\circ}\text{C}$ . Smaller below normal air temperature anomalies of  $-0.4^{\circ}\text{C}$  at Windsor,  $-0.3^{\circ}\text{C}$  at Montreal and  $-0.1^{\circ}\text{C}$  at Trenton were recorded during this period. The mean surface air temperature at Kingston was normal for the month of November. Mean air temperature was warmest in Windsor at  $4.2^{\circ}\text{C}$ , followed by Kingston at  $2.9^{\circ}\text{C}$ , Trenton at  $2.4^{\circ}\text{C}$ , Montreal at  $1.2^{\circ}\text{C}$  and Thunder Bay at  $-3.5^{\circ}\text{C}$ .

Surface water temperatures along the Seaway are highly variable as of 29 November. Below normal water temperatures were recorded at St. Lambert ( $-0.6^{\circ}\text{C}$  below normal), St. Louis Bridge ( $-0.4^{\circ}\text{C}$ ), Cornwall ( $-0.2^{\circ}\text{C}$ ) and Port Colborne ( $-0.2^{\circ}\text{C}$ ). Kingston and Port Weller remain above the 10 year observed average ( $0.2^{\circ}\text{C}$  and  $0.9^{\circ}\text{C}$  respectively), while the surface water temperature at Iroquois is at the normal value.

Station	Date	Temperature	Normal
St. Lambert Lock	29 Nov	$3.3^{\circ}\text{C}$	$3.9^{\circ}\text{C}$
St. Louis Bridge	29 Nov	$5.5^{\circ}\text{C}$	$5.9^{\circ}\text{C}$
Cornwall	29 Nov	$6.2^{\circ}\text{C}$	$6.4^{\circ}\text{C}$
Iroquois Lock	29 Nov	$6.6^{\circ}\text{C}$	$6.6^{\circ}\text{C}$
Kingston	29 Nov	$7.5^{\circ}\text{C}$	$7.3^{\circ}\text{C}$
Port Colborne	29 Nov	$6.5^{\circ}\text{C}$	$6.7^{\circ}\text{C}$
Port Weller	29 Nov	$7.3^{\circ}\text{C}$	$6.4^{\circ}\text{C}$

Above normal air temperatures are forecast for the St. Lawrence Seaway and over Lake Ontario and Lake Erie for December 2017 and January 2018.

The following table lists the average dates of occurrence of the first permanent ice and complete freeze-over (if available) with the forecast trend for 2017/18.

Station	First permanent ice	Complete Freeze Over	Forecast
St. Lambert Lock	07 Dec	18 Dec	5-7 days later
Upper Beauharnois	14 Dec	24 Dec	5-7 days later
Cornwall	29 Dec	N/A	5-7 days later
Iroquois Lock	26 Dec	02 Jan	5-7 days later
Welland Canal			5-7 days later

The forecast for the Seaway calls for the first permanent ice to form near Montreal after mid-December, approximately five to seven days slower than normal. Ice growth will continue to progress to the vicinity of Cornwall and Iroquois near the end of December, again five to seven days slower than the climate normal. Ice formation will be delayed by five to seven days as well for the Welland Canal. The Western Basin of Lake Erie will experience widespread ice growth near the end of December 2017.

**THIS IS THE LAST ST. LAWRENCE SEAWAY AND LAKE ERIE FORECAST.**

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