



Navigating the St. Lawrence River in Winter





Laurentian Pilotage Authority

Mission

The Authority's mission is to serve the public interest by operating, maintaining and managing, for the safety of navigation, an efficient pilotage service on the St. Lawrence and the Saguenay Rivers, while safeguarding its financial self-sufficiency.





Winter Period

December				January	Winter Period	March			April	
2 to 9	9 to 16	16 to 23	23 au 30	1 to 6	Double pilotage	9 to 16	16 to 23	23 to 30	1 to 7	7 to 14
Pre-winter period						Post-winter period				

Pre-winter	
Start	Lifting of the first priority buoy (variable)
Average duration	3 weeks
End	January 1 (variable)



Post-winter	
Start	March 16 (no leaving the river)
Average duration	3 weeks
End	Streaming of the last priority buoy (variable)

Winter Period 2019 -2020

Period	Sector	Date
Beginning of pre winter period	Escoumins - Québec	2019-12-16
Beginning of pre winter period	Québec - Montréal	2019-12-05
Beginning of winter period	Escoumins - Montréal	2020-01-01
Beginning of post winter	Escoumins - Québec	2020-03-16
Beginning of post winter	Québec Montréal	2020-03-20
End of post winter	Escoumins - Québec	2020-03-23
End of post winter	Québec - Montréal	2020-03-23



Pre-Winter Period

This period is before the winter period.

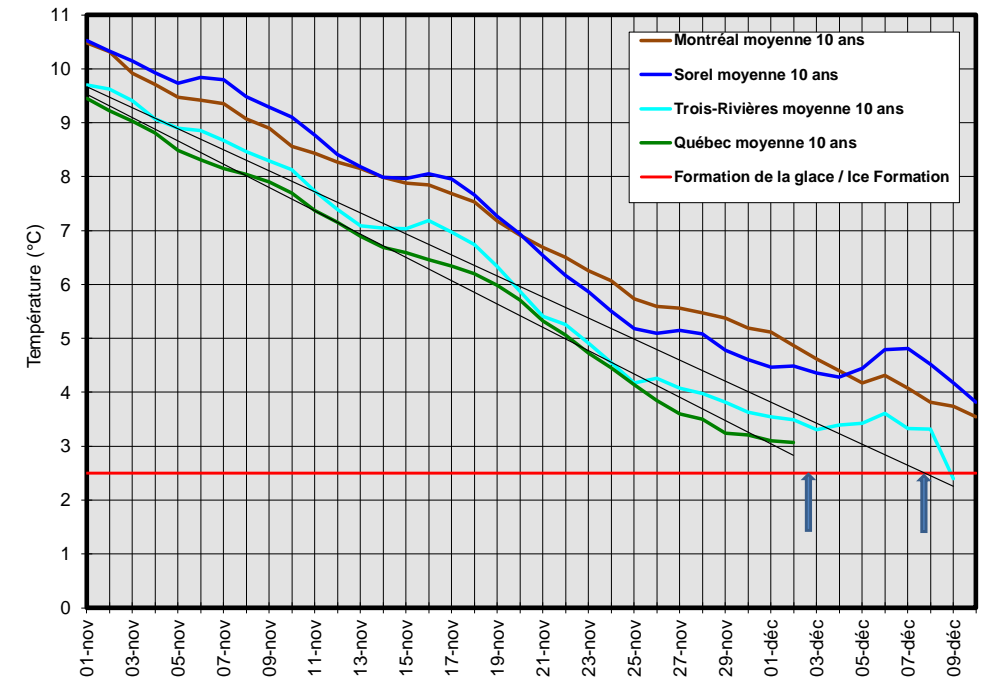
Lifting one light buoy (Pre-Pre-Winter)
Restrictions for long ships

Lifting all light non-priority buoys (Pre-Pre-Winter)
Double pilotage by night

Lifting one priority buoy (Pre-Winter)
Start of pre-winter period restrictions
Tankers more than 25 000 DWT
Ships more than 245 m LOA
Ships with draft more than 10.3 m
Containers with draft more than 10.5 m

Ice cover more than 3/10
No restrictions on compliant ships
Departure restrictions for all other ships

Variations annuelles moyennes des températures de l'eau





Winter Period Declaration

In the interests of the safety of navigation, the Authority shall determine the winter navigation period in each pilotage district in consultation with the Canadian Coast Guard, pilots who are members of a corporation, and interested groups of ship owners, on the basis of :

- (a) the status of navigational aids;
- (b) weather;
- (c) ice formation and ice conditions;
- (d) any other pertinent factors.



Grille de critères à considérer
CIRCONSCRIPTION 1
QUEBEC À MONTRÉAL

		Adéquat?		Norme / niveau à atteindre	Commentaires	Consensus?	
		OUI	NON			OUI	NON
1	État des aides à la navigation	X		Présence	Service : contrat à double sens	X	
2	Température de l'eau	X		2,5°C		X	
3	Température de l'air	X		-5°C	Lié à 2 et 9	X	
4	Limite de vitesse	X		Afin de favoriser le couvert de glace	Annoncé par la GCC	X	
5	Niveau d'eau	X			Valide à la fin	X	
6	Vitesse / direction des vents	X		25 nœuds	Vers la fin	X	
7	Formation et état des glaces	X			Glace = hiver	X	
8	Chauffage		X			X	
9	Météo court terme	X			Tendance 7 jours	X	
10	Équipement de navigation		X			X	



The Authority shall, as soon as practicable after determining the winter navigation period, inform all parties involved of the date of the beginning of winter.



Post-Winter Period

This period is the end of the winter period. The same conditions then during pre-winter apply. It starts and ends in function of different factors for each district of navigation.

Start of Post-Winter Period

District 1

Ice floes east of Québec bridge
When ice from Lake St. Pierre
breaks up and is flushed

Saguenay River

Ice floes flushed out of the Saguenay
When ice from the Saguenay River
breaks up and is flushed
Post-winter in the Saguenay River

District 2

Post- winter starts March 15

End of Post-Winter Period

District 1

When the last priority buoy is installed

District 2

Water temperature
No ice in the Saguenay River
Ice bridge on the Orleans Island is over
Opening of the Delta anchoring
No significant ice in the Traverse Nord
Air temperature





Winter 2017-2018

- Problems with ice under Québec Bridge
- Problems with ice breakers
- Problems with load control on ships
- Availability of ships for streaming of summer buoys

Winter 2018-2019

- Buoy tenders availability to retrieve summer aids to navigation
- Ice jams - traffic stopped twice
 - Crisis management cell
 - Meeting with Coast Guard regarding navigation aids
 - Coordinating of ships departure
- Adventurers attempting to drift on ice floe March 27, 2019

Winter 2019-2020

- No surprise, nice winter



Winter 2019-2020

????????????????



Thank you



© Environnement Canada et Changement Climatique, Jean-Christophe De Serres-Joanette, 2017