

Maritime Information System

Quarterly newsletter

NO. 6, SEPTEMBER 2017

We are happy to be back with another Maritime Information System (MIS) newsletter. This issue focuses on grain transport by sea route and briefly reports on monitoring of cargo loading/unloading activities in Québec's main ports for the first half of 2017.

The MIS implementation phase will end in a few months...December to be exact. This means that, in addition to our newsletters, users will soon be able to access a wide range of marine industry-related data via a web interface that is nearing completion. Although SODES and Innovation maritime received government funding to develop this new system, as of January 2018, we will be relying on the involvement of industry players to ensure its long-term sustainability. As foreseen when the project was launched, we are proposing a [subscription system](#) to help generate the revenues needed to keep the system up and running. We have deliberately chosen to adopt a low-cost subscription approach in the hope of encouraging many of you to become subscribers. See the end of this newsletter for details.

Happy reading!

Nicole Trépanier
President-CEO
St. Lawrence Economic Development Council (SODES)

Sylvain Lafrance
Executive Director
Innovation maritime

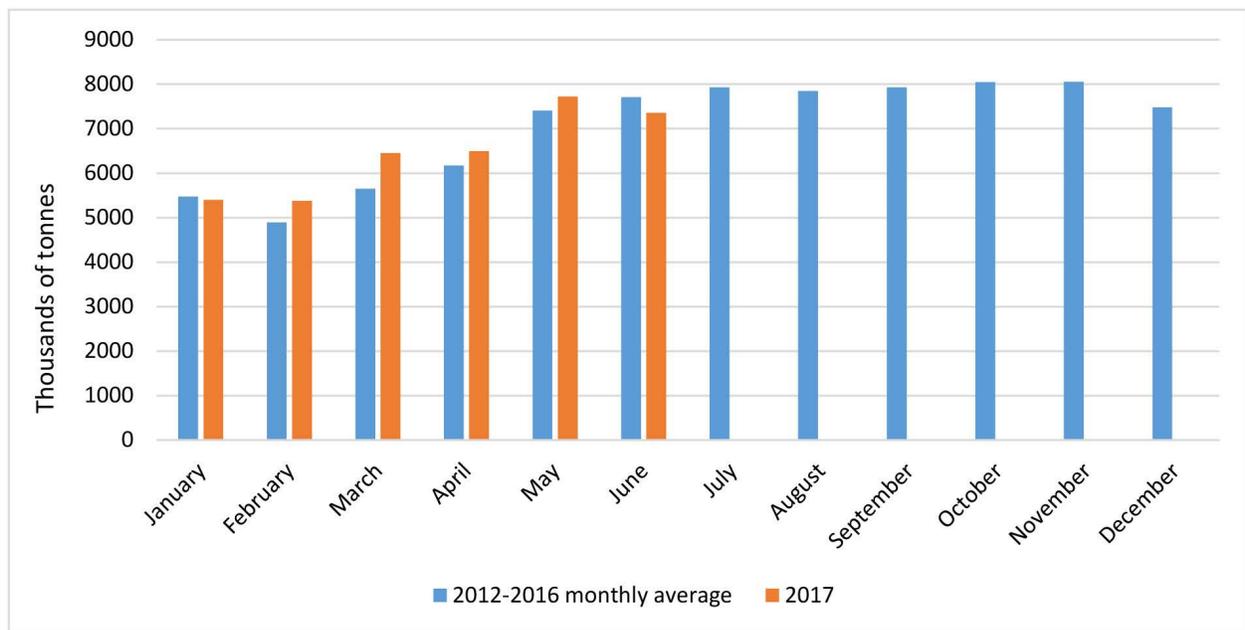
IN THIS ISSUE

[Monitoring Marine Activity](#)
[Grain Transport – Portrait of Activity on the St. Lawrence](#)
[Canadian Supply Chain](#)
[Overview of the St. Lawrence](#)
[Subscription plans](#)

MONITORING MARINE ACTIVITY

Based on data for the first half-year, 2017 promises to be more positive than 2016 for tonnage handled in the five Canadian port authorities (CPA) located in Québec, with a 3% increase from January to June (for this 6-month period: 2016 = 37 775 776 tonnes and 2017 = 38 804 508 tonnes). For the same reference period, the 2017 results are also higher than the five-year average (37 311 557 tonnes), up 4% on average. The Québec CPAs have benefitted from the upswing in the demand for bulk, an increase we can observe for the St. Lawrence Seaway as well as the Port of Vancouver.

Figure 1 – Monthly tonnages handled in the 5 CPAs located in Québec¹

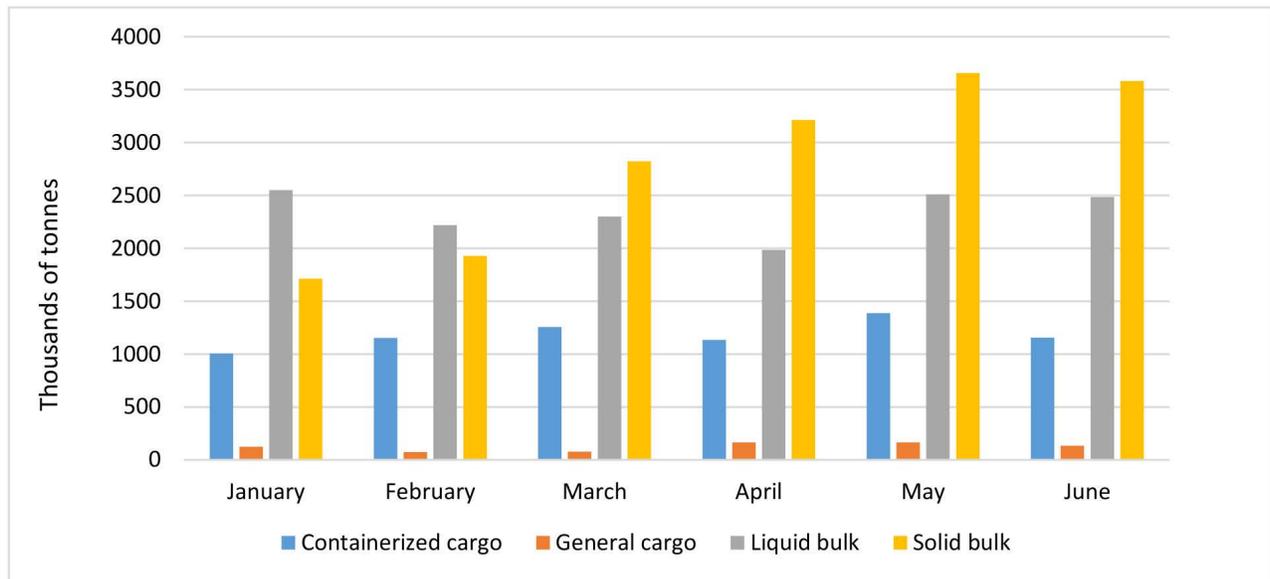


Sources: CPAs, Innovation maritime

More specific analysis of monthly distribution of cargo types handled in the first 6 months of 2017 shows a steady increase in solid bulk, with a definite upturn in March (46% more than February) (Figure 2). This upward trend culminates in May with a total of 3 658 000 tonnes. Despite a slight decline (2%) in June, solid bulk ranks high among tonnages transshipped (a total of 16 915 829 tonnes for the first half of 2017 compared to 16 282 695 tonnes for the same period in 2016).

¹ The five CPAs located in Québec are: Montréal, Québec City, Trois-Rivières, Saguenay, Sept-Îles.

Figure 2 – Distribution of total tonnage by cargo class for the 5 CPAs located in Québec (first half-year, 2017)



Sources: CPAs, Innovation maritime

Bulk’s upward trend reflects world market analysis experts’ predictions for 2017. The maritime and shipping industry consultant Drewry² anticipates an increase in solid bulk—primarily coal and iron ore—while the site OpenSea³ projects a 1% rise in solid bulk transport the world over for iron ore and grain.

This trend is also positive for containerized cargo, with total tonnage handled up for the first half of 2017 (7 094 003 tonnes)—11% higher than 2016 (6 389 174 tonnes). Compared to the first half-year average for the past five (5) years (2012-2016) (6 261 291 tonnes), the increase is 13%.

² Drewry, Dry Bulk Market to Recover from 2017 Onwards, from the World Maritime News website.

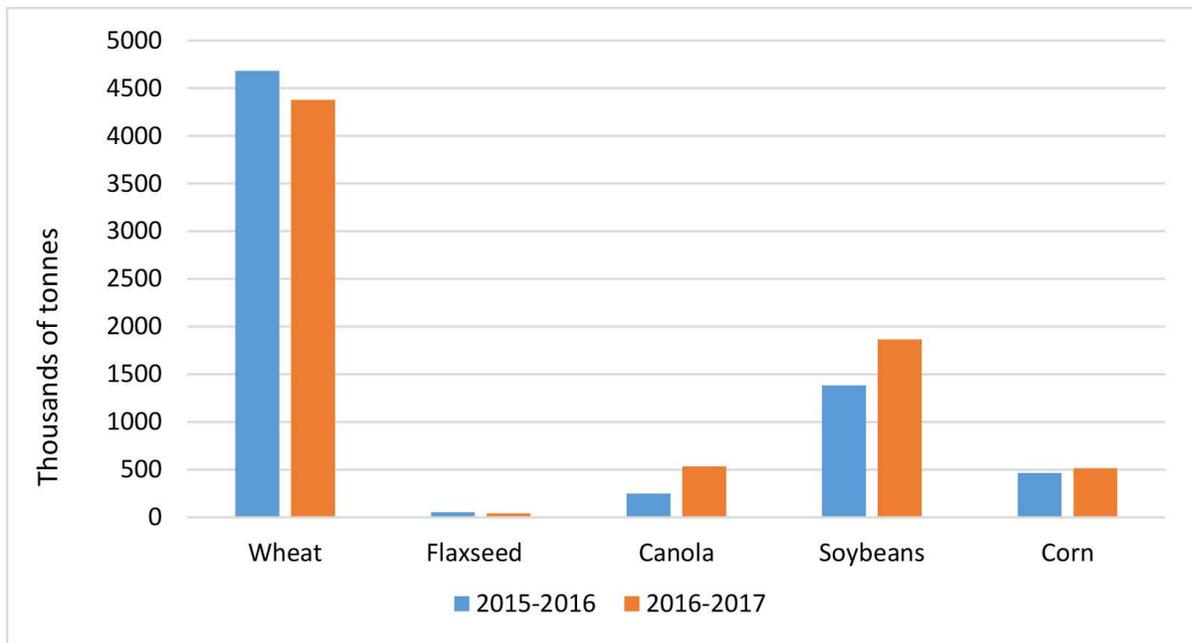
³ <https://opensea.pro/blog/dry-bulk-forecast-2017>

GRAIN TRANSPORT – PORTRAIT OF ACTIVITY ON THE ST. LAWRENCE

Canada is known to be a key wheat producer. Representing an average of 4% of world production over the past 10 years, it ranks 4th among producers worldwide⁴ and 3rd among wheat exporters for this same period, with 13% of the market.

Canada's grain supply is not restricted to wheat and products transhipped are diversified. According to the Canadian Grain Commission⁵, in addition to wheat, exports shipped from the St. Lawrence include soybeans, corn, canola and flaxseed (Figure 3).

Figure 3 – Comparison of grain exported via the St. Lawrence (2015-2016 and 2016-2017)



Source: Canadian Grain Commission

To promote the transport of these products, a network of silos is dispersed throughout Canada. This newsletter presents the national grain supply chain overall and then details the portrait for elevators located along the St. Lawrence.

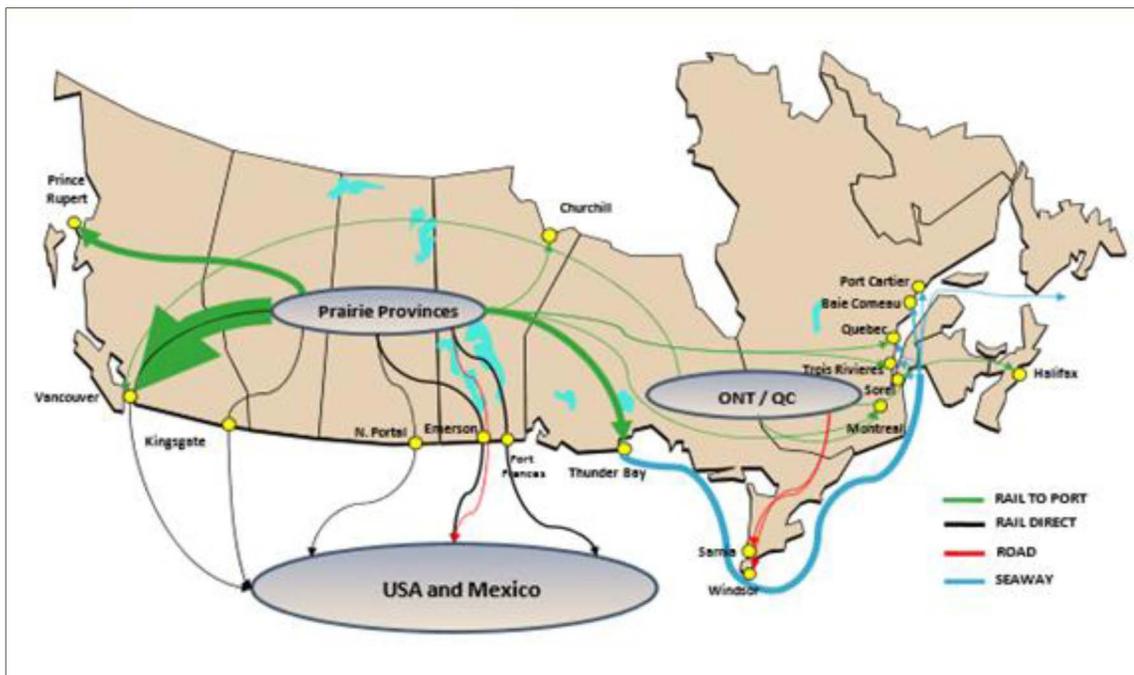
⁴ Grainwiz website: <http://www.grainwiz.com/analyse/supply-demand/4/1/1/charts/10>, consulted on August 11, 2017. Production: after the European Union (19%), China (15%) and the United States (8%). Exporting: After the United States (16%) and the European Union (15%).

⁵ Methodology note: The Commission reports on silo activities by growing season, i.e. from the beginning of August in a given year to the end of July the following year.

CANADIAN SUPPLY CHAIN

Figure 4 shows the different transportation networks used by Canadian grain destined for exporting. Trade with our partners to the south occurs primarily by road or rail. In using the road and rail network to reach grain elevators located in port facilities, Canadian shippers are able to access foreign markets. From the Great Lakes on, bulk grain travels the St. Lawrence Seaway network. Ships play a role that complements rail transport to distribute grain to Eastern ports, via Thunder Bay (Figure 4).

Figure 4 – Map of the grain transport chain

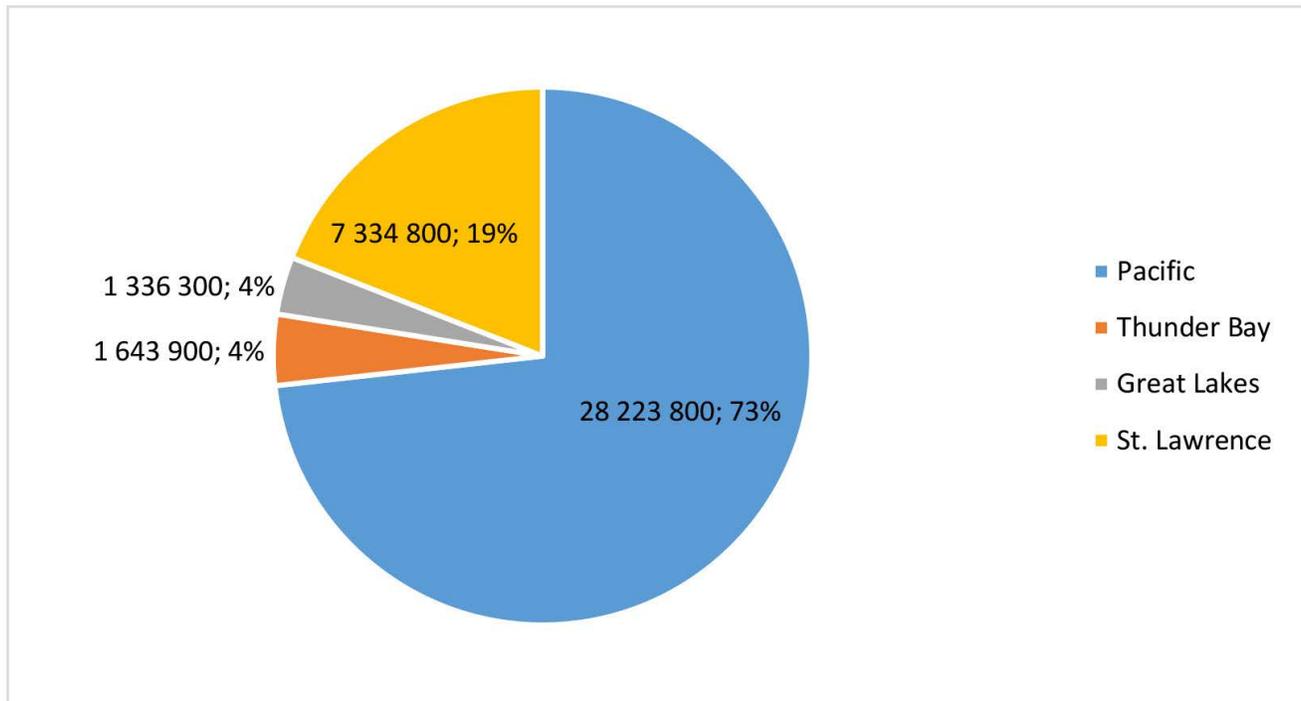


Source: Quorum Corporation, 2012

The changes in production and export markets observed since the 1990s have forced carriers and producers to adapt, primarily following the emergence of new trade with Asia and a downturn in trade with Europe. To-day, these transfers are reflected in port activities throughout Canada.

Note that in 2016, 19% of grain harvested in Canada and exported—7 334 800 tonnes (Figure 5)—was handled in St. Lawrence ports. Only 4% of exports were shipped directly from Thunder Bay without stopovers on the St. Lawrence.

Figure 5 – 2016 harvest exports – all grain types, from main exit points (in tonnes)



Source: Canadian Grain Commission

Grain shipped overseas is loaded in bulk or in containers. Each of these options meets a specific need: bulk transport allows large quantities to be shipped while benefitting from certain economies of scale, made possible by the ability to negotiate freight rates. Containers, which are better adapted to small batches, are more expensive but attract buyers with a smaller storage capacity. Although it has become more popular over the past 10 years or so, this option remains marginal compared to bulk grain shipments.

The Canadian port terminal network that handles bulk grain comprises 18 ports dedicated to exporting (4 on the West Coast⁶ and 14 in Eastern Canada⁷) for a total of 31 terminal elevators (Table 1). Containerized shipments leave from Vancouver or Montréal.

⁶ Manitoba and British Columbia

⁷ Nova Scotia, Québec and Ontario

Table 1 – Distribution of terminal silo storage capacity, by port, in 2017

Ports	Storage capacity (in metric tonnes)	Elevators
Nova Scotia		
HALIFAX	135 810	1
	135 810	1
Québec		
BAIE-COMEAU	441 780	1
MONTRÉAL	262 000	1
PORT-CARTIER	292 950	1
QUÉBEC CITY	224 030	1
SOREL	146 460	1
TROIS-RIVIÈRES	109 000	1
	1 476 220	6
Ontario		
GODERICH	105 000	1
HAMILTON	1 438 000	3
OWEN SOUND	106 420	1
PRESCOTT	184 020	1
SARNIA	151 000	1
THUNDER BAY	1 157 470	7
WINDSOR	12 410	1
	1 971 720	15
Manitoba		
CHURCHILL	140 020	1
	140 020	1
British Columbia		
PRINCE RUPERT	209 510	1
SURREY	15 000	1
VANCOUVER	962 960	6
	1 187 470	8
TOTAL:	4 911 240	31

Source: Canadian Grain Commission

Receiving close to three-quarters of all Prairie production (73% for the 2016-2017 harvest), West Coast terminals show the highest turnover rate (quantity shipped vs. storage capacity).



OVERVIEW OF THE ST. LAWRENCE

St. Lawrence elevators receive grain shipped by sea, road or rail. They are also used to identify, separate and store grain by type and grade, clean it, if need be, and mix and load it according to sellers' instructions and sales contracts' terms and conditions.

This network has six facilities along the St. Lawrence between Montréal and Port-Cartier (three in CPAs and three others owned by private companies).

Table 2 – Grain transshipments in St. Lawrence terminal silos

Terminals with silos	Storage capacity in metric tonnes	Tonnes unloaded in 2016	Tonnes loaded (shipped) in 2016
Baie-Comeau	441 780	N/A	N/A
Port-Cartier	292 950	N/A	N/A
Sorel	146 460	N/A	N/A
Montréal	262 000	3 464 756	4 144 357
Québec City	224 030		
Trois-Rivières	109 000		

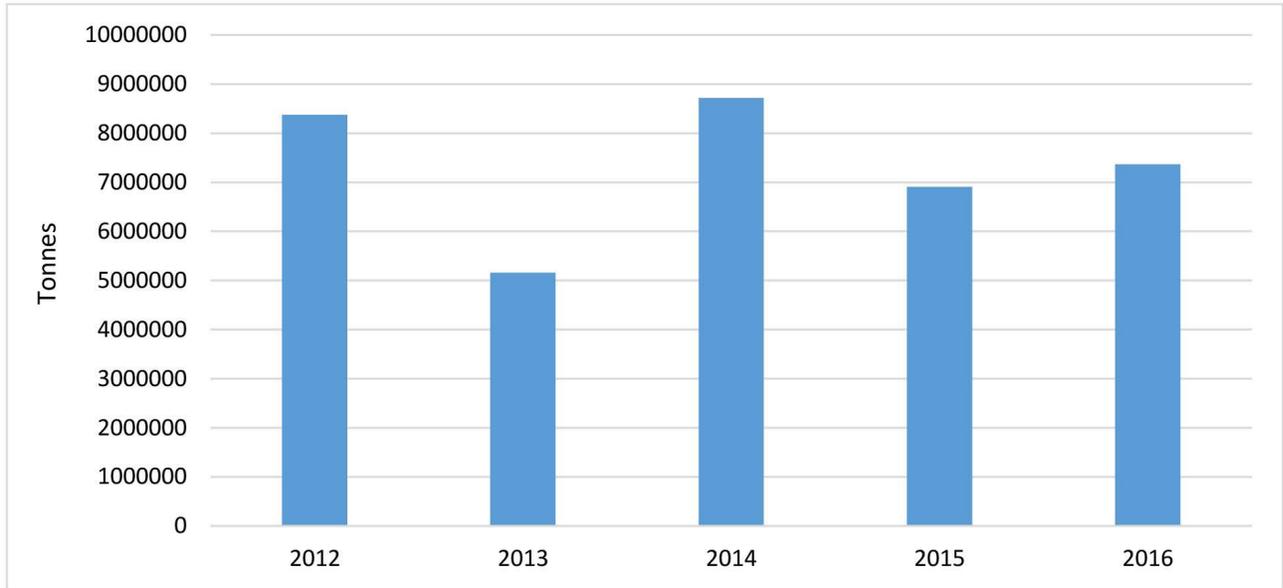
Sources: CPAs, TC, Innovation maritime

The differences in tonnages loaded and unloaded stem from the fact that the silos are not refilled exclusively by sea, but also by rail and road networks. This is true for Québec's and Ontario's production during the navigation season and for Western Canada's in the winter.

An analysis of the data available for the past five years (2012-2016) shows significant fluctuations in grain tonnages handled in Québec's three CPAs involved in grain handling. On average, the total annual tonnage handled in these three CPAs was 7 304 139 tonnes for 2012-2016, peaking in 2014 (8.7 million tonnes). In 2016, grain accounted for 38% of total solid bulk handled in the three CPAs located in Québec whose facilities include silos (17% if we take consider the five CPAs on the St. Lawrence and Saguenay).



Figure 6 – Tonnages handled in three CPAs located in Québec – bulk grain



Sources: CPAs, Innovation maritime

Containerized transport:

While grain is transported mainly in bulk, containers offer an interesting alternative when the amount shipped is small or the grain’s value is high enough to justify this type of transport. Today, through the availability of containers of differing levels of specialization, batches of grain can be shipped in bulk, intermediate containers or bags. The percentage of grain transported in containers remains low for both Vancouver and Montréal. Although it represented only 5% of the grain handled in Montréal in 2016, containerized transport accounted for a greater variety of products transiting through this CPA (wheat, mustard seed, sunflower seed, corn, barley, millet, rice, etc.).

NEXT ISSUE

- Update on Shipping Traffic in 2017





SUBSCRIPTION PLANS

As of January 2018, MIS newsletters will no longer be distributed free of charge. And, very soon it will be possible to access various databases that can be queried 24/7 via an MIS web interface. The subscription costs will be as follows:

PLAN 1: \$500

12-month subscription to quarterly newsletters (4) in PDF format.

PLAN 2: \$1500

12-month subscription, includes newsletters and access to databases and website features.

Valid for 3 users.

PLAN 3: \$3000

12-month subscription, includes newsletters and access to databases and website features.

Valid for 4 to 10 users.

Subscriptions will run 12 months (as of the payment date).

Those who subscribe before November 30, 2017 will get both a 10% discount and extended access (until December 31, 2018, or 13 months).

To subscribe, please contact Isabelle Durette at idurette@imar.ca or 418-725-3525, ext. 4600.

Note that the December 2017 MIS newsletter will be the last one distributed free of charge. Access to MIS data via web interface will be possible as of December 1, 2017 for subscribers only.