

# A VITAL WATERWAY

THE ST. LAWRENCE SEAWAY  
MANAGEMENT CORPORATION

Annual Corporate Summary  
**2014–2015**



The St. Lawrence  
Seaway Management  
Corporation

Corporation de Gestion  
de la Voie Maritime  
du Saint-Laurent



# THE GREAT LAKES/ SEAWAY SYSTEM



The St. Lawrence Seaway Management Corporation (the "SLSMC" or the "Corporation"), the successor to the St. Lawrence Seaway Authority, was established in 1998 as a not-for-profit corporation by the Government of Canada, Seaway users and other key stakeholders. In accordance with provisions of the Canada Marine Act, the Corporation manages and operates the Canadian assets of the St. Lawrence Seaway, which remain the property of the Government of Canada, under a long-term agreement with Transport Canada.

- ..... The Great Lakes/Seaway System extends 3,700 kilometres from the Atlantic Ocean to the head of Lake Superior.
- The St. Lawrence Seaway's 15 locks connect the lower St. Lawrence River to the Great Lakes.
- 🇨🇦 Administered by the St. Lawrence Seaway Management Corporation
- 🇺🇸 Administered by the Saint Lawrence Seaway Development Corporation
- ⚓ Major Ports

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# A VITAL WATERWAY

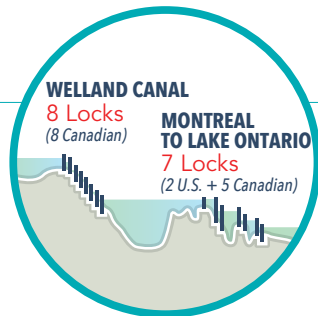
The Great Lakes/Seaway System is a “marine highway” that extends some 3,700 km from the Atlantic Ocean to the Great Lakes. Approximately 160 million tonnes of cargo travels over the combined Great Lakes/Seaway System on an annual basis, supporting over 227,000 jobs and \$35 billion in economic activity.

(Source: The Economic Impacts of the Great Lakes – St. Lawrence Seaway System, Martin Associates, October, 2011)

## SEAWAY FACTS AND FIGURES

**1959** Opened to deep draft navigation

The Great Lakes St. Lawrence Seaway System is the world's longest deep draft commercial waterway



**LOCK DIMENSIONS**  
**LENGTH**  
233.5 m (766 ft.)  
**WIDTH**  
24.4 m (80 ft.)  
**WATER DEPTH**  
9.1 m (30 ft.)

### MAXIMUM VESSEL SIZE

**MAXIMUM BEAM**  
23.77 m (78 ft.)

**MAXIMUM AIR DRAFT**  
35.5 m (116 ft., 6 in.)

**MAXIMUM DRAFT**  
8.08 m (26 ft., 6 in.)\*

**MAXIMUM LENGTH**  
225.5 m (740 ft.)

**CAPACITY**  
Carries up to 30,000 MT per voyage

\* Commercial vessels equipped with Draft Information System (DIS) technology are allowed to load to a maximum draft of 8.15 m (26 ft., 9 in.)

**DULUTH, MINNESOTA**  
on Lake Superior

Sailing Time = 8.5 sailing days

Distance = 2,038 nautical miles (2,342 statute miles or 3,700 kilometres)

*Includes approximately 245,750 square kilometres (95,000 square miles) of navigable waters*

**ATLANTIC OCEAN**

## PRINCIPAL SEAWAY CARGOES



### GRAIN

Wheat, corn, soybeans, barley, canola, and oats are among the top commodities shipped.

### IRON ORE

Iron ore is the principal ingredient in steel, an essential building block in hundreds of manufacturing industries.



### GENERAL CARGO

General cargo includes a wide range of products such as iron and steel slabs, machinery, and wind energy turbines.



### DRY BULK

Dry bulk cargoes are unpackaged commodities, such as stone/gravel, sand, salt, cement, potash, and gypsum.

### LIQUID BULK

Liquid bulk products shipped include refined petroleum products (gasoline, diesel, kerosene, jet fuel) and alternate fuels (ethanol, biodiesel).





The binational **St. Lawrence Seaway** serves as the linchpin within the Great Lakes/Seaway System, connecting the lower St. Lawrence River to the Great Lakes. Beginning in Montreal and extending to points west, the Seaway’s 15 locks (13 Canadian and 2 U.S.) enable ships to climb a total of 168 metres from “sea level” up to Lake Erie.

Since the waterway’s opening in 1959, nearly 3 billion metric tons of cargo has moved on the St. Lawrence Seaway valued at over \$400 billion.

The Seaway’s capacity to cost-effectively move tens of millions of tonnes of cargo, coupled with its outstanding reliability, makes the waterway an indispensable part of the North American logistics network. This viewpoint is shared by many stakeholders in both the public and private sectors, as evidenced by the record investments committed to the Great Lakes/Seaway System.



A recent investment survey, compiled by U.S. economic consultants Martin Associates, calculated that \$7.1 billion in capital spending is being committed on ships, ports, terminals and waterway infrastructure within the Great Lakes/Seaway System.

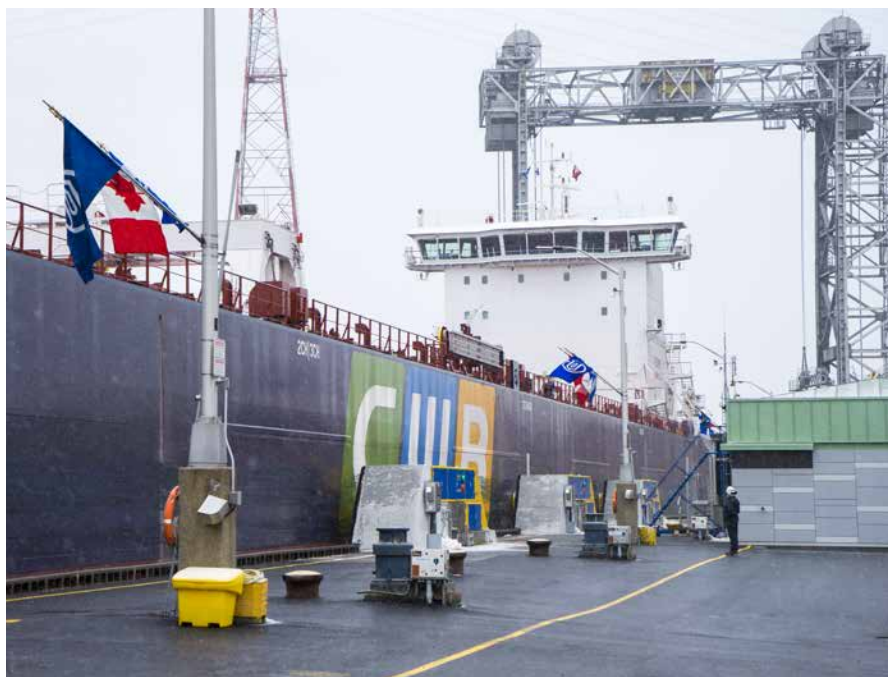
### CAPITAL INVESTMENTS — PRIVATE & PUBLIC SECTOR (2009–2018)

	CANADA	U.S.	INTERNATIONAL	TOTAL
Vessels	2,297,100,000	344,481,000	1,455,799,000	\$ 4,097,380,000
Ports & Terminals	1,290,620,000	463,703,000	—	\$ 1,754,323,000
Waterway Infrastructure	891,287,000	350,739,000	—	\$ 1,242,026,000
Total	\$ 4,479,007,000	\$ 1,158,923,000	\$ 1,455,799,000	\$ 7,093,729,000

Source: Infrastructure Investment Survey of the Great Lakes and St. Lawrence Seaway System, (Martin Associates, January 2015)

The survey reveals that more than \$4.8 billion has been invested in the navigation system during 2009 to 2013, with another \$2.3 billion committed for improvements in the period 2014 to 2018. Nearly 70 per cent of the capital originates from private companies, with the balance coming from various Canadian and U.S. government infrastructure funding programs.

With Canadian, American and international ship owners in the midst of spending \$4.1 billion on the biggest Great Lakes fleet renewal in 30 years, there is little doubt that carriers have a good deal of confidence in the future of the St. Lawrence Seaway. Coupled with a strong level of activity by other stakeholders, including ports and terminals that are expanding their docks, equipment, facilities and intermodal connections, the St. Lawrence Seaway's role as a vital waterway is reinforced.



## QUOTES SELECTED FROM THE JANUARY 2015 ISSUE OF MARINE DELIVERS MAGAZINE

"The St. Lawrence became a very important corridor because of its short distance [from the Prairies] to Thunder Bay where railcars could be turned around quickly."

— CARSTEN BREDIN, VICE-PRESIDENT,  
Grain Merchandising for Richardson International

"From a cost-efficiency perspective, shipping by water is about half the cost of rail and about one-fifth the cost of trucking."

— TARA HART, SPOKESPERSON FOR COMPASS MINERALS,  
Operator of the Goderich (Ontario) Salt Mine

"The Seaway is especially important for transporting our products from Port-Cartier to the Great Lakes."

— CATHERINE DE GRANDPRÉ, HEAD OF INTERNAL COMMUNICATIONS  
ArcelorMittal

"In the last five years, we have witnessed an unprecedented transformation in Great Lakes-Seaway shipping."

— STEPHEN BROOKS, PRESIDENT,  
Chamber of Marine Commerce



## VISION

The SLSMC and its partners... an essential transportation system for the 21<sup>st</sup> century.

## CORPORATE GOALS AND DESIRED OUTCOMES

### BUSINESS GROWTH

Increase the benefits — economic, social and environmental — provided by marine transportation, by making optimal use of the Seaway's locks and channels

### OPERATIONAL EXCELLENCE

Ensure that all Seaway users enjoy safe and reliable service, enabling them to efficiently perform their transportation activity

### HIGH PERFORMANCE WORKFORCE

Create an environment leading to a skilled, engaged, and versatile workforce that is accountable for personal success and business results

### STAKEHOLDER ENGAGEMENT

As stewards of a shared resource, align all stakeholder views as to how the Seaway can effectively support economic, social, and environmental interests

### FINANCIAL SUSTAINABILITY

Manage resources for optimal use, while minimizing costs to the users and owners of the system



## MISSION

We serve our customers by passing ships through a safe and reliable waterway system in a cost effective, efficient and environmentally responsible manner for the benefit of all our stakeholders today and into the future.



## OUR VALUES

**SAFETY, RESPECT, OPENNESS,  
INTEGRITY AND INNOVATION**

### **The Corporation has:**

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An excellent safety record;

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A dedicated professional workforce that prides itself on providing excellent customer service;

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High-quality traffic management, using automatic vessel identification and real-time tracking;

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A reliable operation, with system availability consistently above 99.0%;

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The ability to handle large vessels measuring up to 225.5 metres in overall length, 23.8 metres in beam and 8.08 metres in draft

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ISO 9001:2008 certification for the operation and maintenance of the Canadian sectors of the St. Lawrence Seaway;

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Joint Canadian and U.S. government inspections at entry, thus eliminating duplication, including ballast water inspections which mitigate the spread of invasive species into the Great Lakes/ St. Lawrence Seaway System and;

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A bi-national [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com) website, serving as the most comprehensive single source of Great Lakes/ St. Lawrence Seaway information, with real-time navigation data, links to government and commercial marine transportation sites, pleasure craft resources, and a suite of e-business services.



# PRESIDENT'S MESSAGE

There is no doubt that the St. Lawrence Seaway once again proved its value as *A Vital Waterway* in 2014. The Seaway ended the year with some 40 million tonnes of cargo, a post 2009 financial crisis high. In response to farmers and grain merchants looking for ways to move the bumper crop that clogged rail lines, marine carriers moved over 12 million tonnes of grain through Seaway locks, the highest volume since the turn of the century.

The Seaway is a transportation artery with substantial capacity and flexibility to accommodate vessels transporting a diverse range of cargoes. The rebound to 40 million tonnes of cargo in 2014, an 8% increase over 2013, was principally due to increased grain shipments, as well as strong volumes of iron and steel products, and road salt required to replenish inventories following a harsh winter. While grain movements illustrated the Seaway's vital role in 2014, other examples exist over the past decade, including energy firms using the system to rebalance refined fuel stocks during refinery outages in 2013.

During 2014, the SLSMC commissioned three additional locks with Hands-Free Mooring (HFM) equipment, bringing the number of locks equipped with vacuum pads for mooring ships, to four. As part of its five-year, \$500 million investment in asset renewal, the modernization program will make the waterway safer and more efficient. By 2018, all Seaway high-lift locks will be equipped with this automated mooring equipment.

Despite harsh winter conditions in the first three months of 2015, civil construction work at the four locks scheduled to shift to HFM operation during 2015 was completed, as was the replacement tie-up wall at Lock 1 in the Welland Canal. In addition, groundwork for pilot projects to test remote operations at specific locks this year was carried out.

In terms of health and safety, during the 2014/15 fiscal year, eight lost-time accidents were reported, compared to nine the previous year. Four of the eight were related to slips, trips and same level falls, which clearly shows that we have more work to do to reach our goal of zero accidents. One area that received additional focus during the year was the increased rigor and frequency of safety interventions by supervisors and managers, and this resulted in more than 2,800 interventions, double the number in 2013. We believe awareness of potential risks plays a major role in reducing accidents.

Financially, 2014/15 ended with revenues of \$76.2 million, substantially better than anticipated. This was comprised of \$71.5 million in toll revenues, which was \$8.2 million or 13.0% above last year. "Other" revenues amounted to \$4.7 million.

Revenues exceeded manageable costs by \$10.4 million, the first time we have met this objective in six years, as we recovered from the global financial crisis. This is certainly good news for us and the next challenge will be to replicate these results on a more consistent basis. To achieve this, the Seaway's Market Development team continues in its efforts to increase tonnage.

I am also pleased to note that we reached a labour agreement that will ensure a stable work environment until at least March 31, 2018. This settlement with unionized staff ensures a sustainable future for the Corporation through a reduction of its operating costs while maintaining employment stability and a pension plan for its employees well into the future.



The Seaway is currently in the last five years of its initial 20-year management agreement with Transport Canada, which comes to an end on March 31, 2018. As we move into 2015/16, we are not only implementing elements of our five-year Business Plan, but are also reviewing and revising our strategies in preparation for negotiating another management agreement. We will continue monitoring the progress of the Canada Transportation Act to determine if the work they are doing might impact the Seaway.

As for the cargo outlook in 2015, continued global volatility makes forecasting difficult. It is fair to say the Seaway has seen many changes over the past 57 years, including facing a magnitude of changes in cargo makeup and flows. One thing that has not changed is the Seaway's role as a vital transportation artery, providing a cost-effective and reliable transportation route for shippers and carriers to and from the heartland of North America.

We have the capacity to move substantially more cargo to destinations throughout the world, and our challenge is to be ready when opportunities present themselves. We need only consider last year's grain boom and the role Seaway carriers played in bringing that grain to market, domestically and to more than 30 markets overseas, to understand the importance of the Great Lakes/Seaway System.

A handwritten signature in black ink that reads "Terence F. Bowles".

**Terence F. Bowles**  
President and C.E.O.





# BUSINESS GROWTH

Tonnage on the St. Lawrence Seaway in 2014 rebounded to pre-financial crisis levels, due to a surge in grain traffic. This resulted in total revenue for 2014-2015 of \$76.2 million, an increase of 14.2% or \$9.5 million compared to the previous period.



The Corporation continues to face challenges in terms of low commodity prices, which constrain export movements of commodities such as coal and iron ore, and the impacts of globalization on world trade patterns, especially within the steel industry. By collaborating with other Great Lakes/Seaway System stakeholders in efforts such as Highway H<sub>2</sub>O, the Corporation continues to actively pursue cargo diversification and growth by seeking out and developing new markets. In parallel, efforts continue to reinforce the Seaway's role within existing markets, and reinforce awareness of the Seaway's competitive advantage in various cargo segments.

## TRAFFIC RESULTS

Seaway traffic for 2014 totaled 39.9 million tonnes, an increase of 7.6% or 2.8 million tonnes compared to 2013. Increases in grain brought about by sizeable inventory carry-overs from the record-setting 2013 crop, as well as a surge in salt and steel, enabled the Seaway to achieve this volume despite a slow start to the season due to extensive ice coverage. Given that the increase in tonnage occurred with only a corresponding 1.0% increase in the number of vessel transits, carriers enjoyed greater fleet productivity as fewer vessels transited in ballast.

## 2014 NEW BUSINESS RESULTS

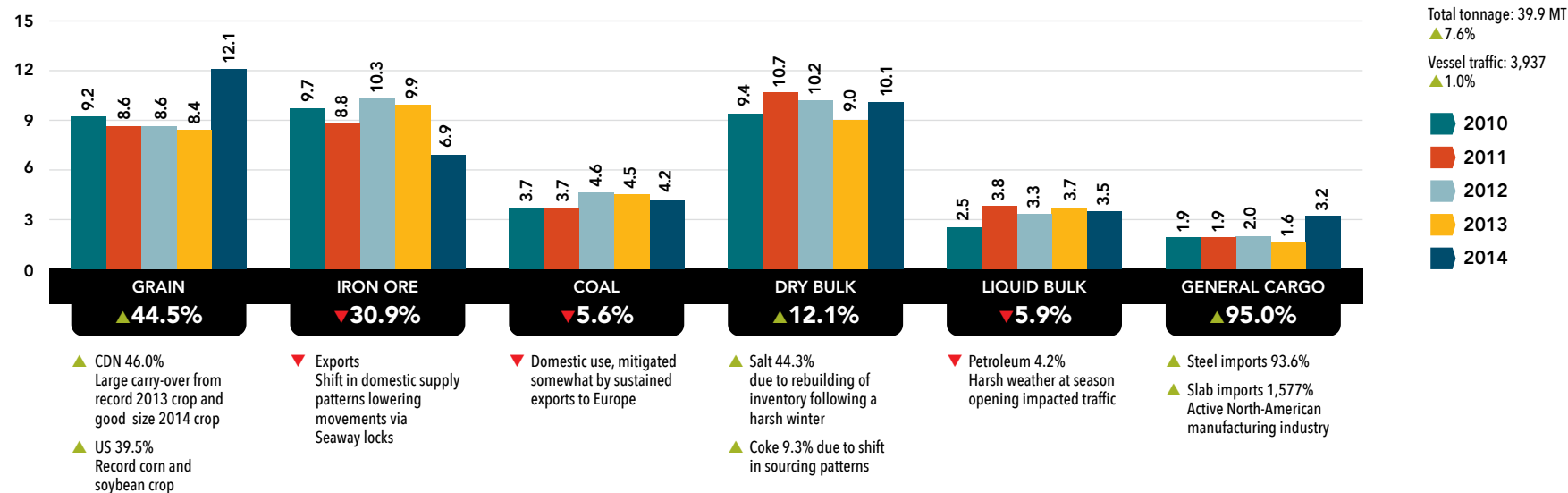
The New Business Incentive program, which offers rebates for “new” cargo movements (defined generally as new origin/destination combinations for existing cargo, or cargo that has not been shipped via the Seaway over a specified time period) attracted 133 applications in 2014, of which 119 were approved.

A total of 357 movements of new business was recorded in 2014, combining for volumes of 2.5 million tonnes and led primarily by imported salt and exported grain.

Revenues attributable to the New Business Incentive program amounted to \$4.3 million in 2014. Over the past seven years, the Corporation gained \$26.9 million in revenue through this program.

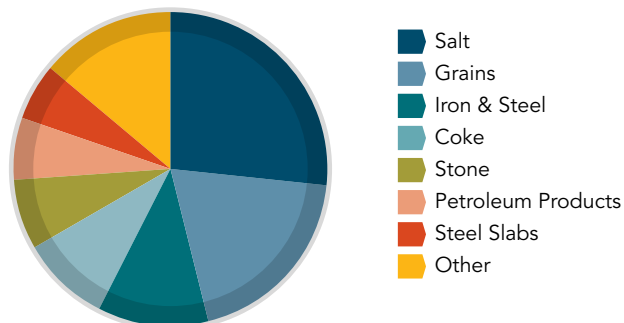
### TRAFFIC RESULTS (COMBINED)

(total cargo in millions of tonnes)

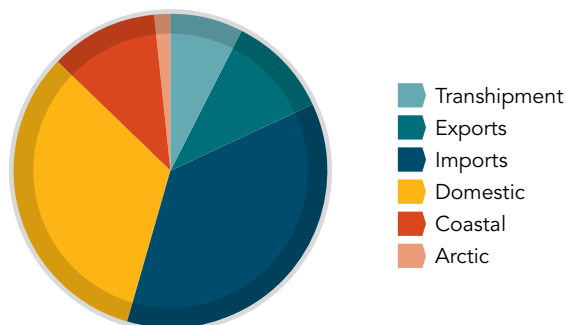


## NEW BUSINESS RESULTS

Total tonnage: 2.5 MT  
Shipments: 357



By Commodity (tonnes)



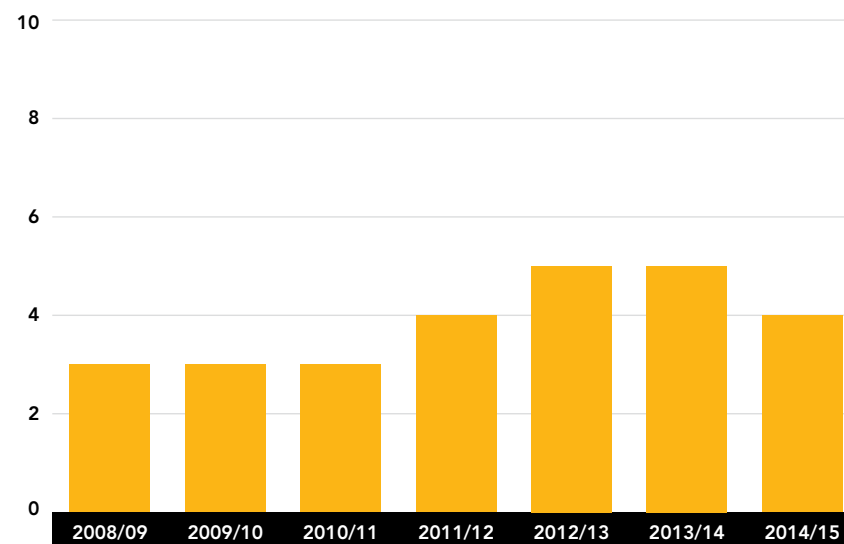
By Trade (tonnes)

## SEAWAY TOLLS

Tolls increased by 2.5% for the 2014 navigation season, and a 2% increase will apply to rates in 2015. The Corporation continues to offer shippers various toll incentive programs to attract new cargo movements. These programs currently consist of the New Business Incentive, the Volume Incentive, and the Service Incentive.

## NEW BUSINESS REVENUE

In millions of dollars



## BI-NATIONAL JOINT MARKETING PLAN

Market Development Teams from The St. Lawrence Seaway Management Corporation and the U.S. Saint Lawrence Seaway Development Corporation continue to work together to jointly create and implement strategic initiatives. These initiatives include developing ways of attracting new business to the Seaway, and strategies focused on maintaining and building market share for established cargo markets, such as grain.



## HIGHWAY H<sub>2</sub>O

The Highway H<sub>2</sub>O campaign continues to utilize the “GO H<sub>2</sub>O” theme, with advertisements aimed at attracting bulk and general cargoes to the Seaway. A new advertisement outlining how simple it is to ship cargo on the Great Lakes/Seaway System was created and will be added to the 2015 campaign.

The Highway H<sub>2</sub>O Twitter account (@hwyh2o) remains active and is used to share photos and engage in conversations focused on shipping within the Great Lakes/Seaway System. Using the hashtag #hwyh2o, followers are directed to the hwyh2o.com website where they can find more in-depth information on the Great Lakes/Seaway System.

The 10<sup>th</sup> annual Highway H<sub>2</sub>O Conference took place November 19–20, 2014 in Toronto, Ontario. The conference boasted 150 attendees — the best attendee record to date! The conference theme was “Building from a Strong Foundation” which served to both honour past efforts and provide inspiration for future endeavours. Commemorative plaques were presented to Highway H<sub>2</sub>O Port Partners and Members at the conference to celebrate the 10<sup>th</sup> anniversary of Highway H<sub>2</sub>O.

## CONFERENCES AND EXHIBITIONS

The Corporation participated in a number of transportation events in cooperation with other Highway H<sub>2</sub>O Port Partners and Members. Utilizing the Highway H<sub>2</sub>O trade show kiosk, participants raised awareness of the Great Lakes/Seaway System at break-bulk conferences and exhibitions in Antwerp, Belgium and Houston, as well as at the Cargo Logistics Canada Expo & Conference in Vancouver.



Terence Bowles (President and CEO, The St. Lawrence Seaway Management Corporation) and Betty Sutton (Administrator, Saint Lawrence Seaway Development Corporation) present Errol Francis (VP Operations, Canfornav Inc.) with a commemorative Highway H<sub>2</sub>O Plaque, celebrating the 10<sup>th</sup> anniversary of Highway H<sub>2</sub>O.



# OPERATIONAL EXCELLENCE

The Corporation and its employees ensure the waterway is operating efficiently and that ships transit safely and reliably, in a cost-effective manner. As the Corporation implements its modernization program, Seaway operations are undergoing a significant transformation. The introduction of Hands-Free Mooring provides gains in operating efficiency, safety, and vessel transit times, and will assist in ensuring the St. Lawrence Seaway's long-term competitiveness and sustainability.

## NAVIGATION SEASON

In 2014, the St. Lawrence Seaway opened its 56<sup>th</sup> navigation season March 28<sup>th</sup> in the Niagara Section and March 31<sup>st</sup> in the Montreal/Lake Ontario (MLO) Section. The MLO Section remained open 277 days, while the Niagara Section remained open for 279 days. The last vessel transit in the MLO Section occurred on January 1<sup>st</sup>, 2015, and the last transit within the Niagara Section occurred on December 31<sup>st</sup>, 2014.

The opening date for the MLO Section was originally planned for March 28<sup>th</sup>, 2014; however, ice conditions delayed the opening three days. In the first 10 operating days, total delays per transit amounted to 23 hours more than in the first 10 operating days in 2013.

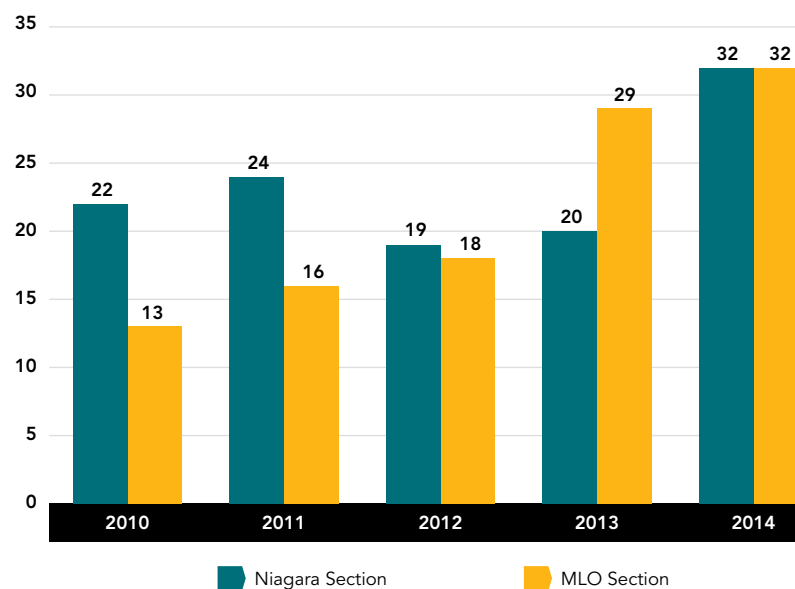
In terms of transit times, the average delay per transit for both the Niagara and MLO Sections was 32 minutes, which exceeds the 20 minute target. In the MLO Section, delays were principally attributable to the exceptionally heavy ice conditions during the Seaway's opening period.

Within the Niagara Section, heavy ice on the Great Lakes during the initial months of the season caused carriers to delay transits, bringing about a surge in traffic later in the year. The surge triggered delays due to some congestion within the Welland Canal. Other factors contributing to delays consisted of a lock equipment malfunction, a lightning strike causing a loss of power to a portion of the flight locks, and a seepage of oil from a non-Seaway source on land into the Welland Canal which was contained and cleaned up.

In 2014, eleven more vessels were equipped with Draft Information System (DIS) technology. This equipment allows vessels to safely transit with an extra three inches of permissible draft, which translates to an additional 400 tonnes of cargo per trip. There was a significant increase in the number of vessel transits taking advantage of the additional draft, more than doubling the number of DIS transits recorded in 2013.

## SEAWAY DELAYS PER TRANSIT

Target: Less than 20 minutes per transit



Note: The five year statistical record has been restated due to a change in data sources, when compared to previous reports.

# OF DIS TRANSITS	2013	2014
MLO Section	123	253
Niagara Section	103	311
<b>Total</b>	<b>226</b>	<b>564</b>
# of vessels with DIS	28	39

## EMERGENCY PREPAREDNESS

The Corporation held various exercises throughout the 2014 navigation season in order to test its emergency response plan, train personnel, and improve communications and coordination with external agencies.

In September, Emergency Response Team members from the MLO Section participated in a full-scale emergency exercise which centered on a simulated oil spill in the Beauharnois Canal. A command centre was established at St. Lambert with representatives from several external agencies. A second command centre was setup onsite, above the upper Beauharnois Lock, to observe the deployment of containment booms.



Containment boom being deployed at the Beauharnois Locks during a simulated oil spill in 2014.



In November, the Niagara Section conducted a simulated oil spill exercise in Port Colborne that affected water quality and operations of the intake plant situated adjacent to the canal. As part of the exercise, discussions focused on boom anchor points, jurisdiction, and the alignment of various response plans proposed by external partners.

These exercises ensure that the Corporation's staff can identify and correct potential weaknesses in the Emergency Response Plan, and reinforces their skill sets such that, in the event of an actual emergency, an effective response can be quickly undertaken.



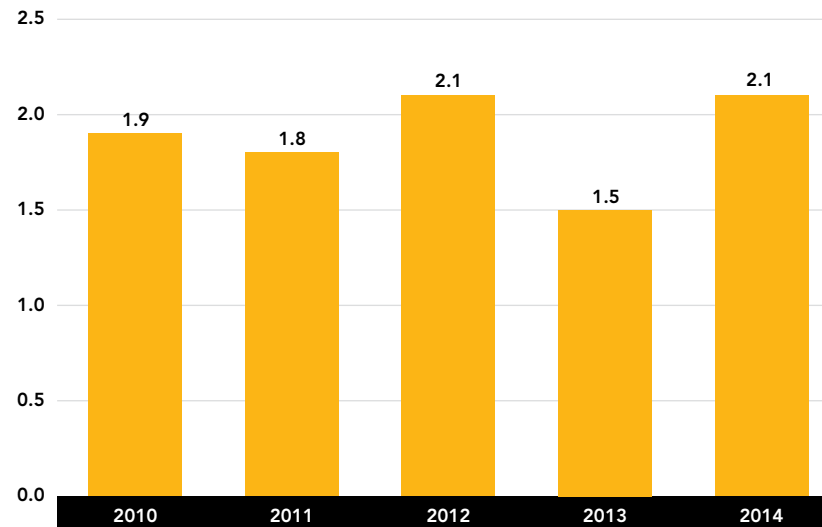
Participants at the Niagara Section's emergency response exercise.

## MARINE SAFETY

During the 2014 navigation season, there were 12 incidents where vessel damage occurred, translating into a rate of 2.1 incidents per 1,000 transits. They were comprised principally of vessels coming into contact with walls, wharfs and canal banks. None of the incidents resulted in any pollution or injuries. The marine mode of transportation continues to be the safest and most reliable means of moving cargo.

### VESSEL INCIDENT RATE

(Number of Incidents per 1,000 Transits)



## BALLAST WATER MANAGEMENT

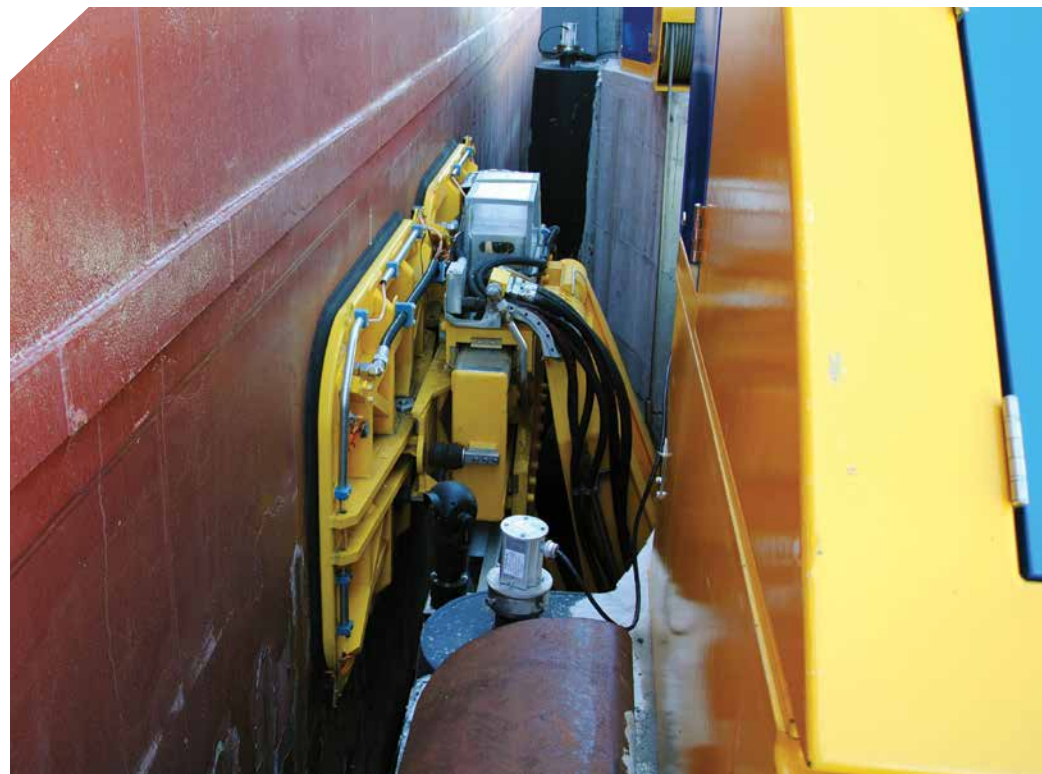
The Great Lakes Seaway Ballast Water Working Group (BWWG) is comprised of representatives from the United States Coast Guard (USCG), the U.S. Saint Lawrence Seaway Development Corporation (SLSDC), Transport Canada – Marine Safety & Security (TCMSS), and the Canadian St. Lawrence Seaway Management Corporation (SLSMC). The group's mandate is to develop, enhance, and coordinate bi-national compliance and enforcement efforts to reduce the introduction of aquatic invasive species via ballast water and residuals.

In 2014, 100% of vessels bound for the Great Lakes/Seaway and originating from outside the Exclusive Economic Zone (EEZ) received ballast water management tests. All 8,497 ballast tanks onboard the 454 vessel transits examined were assessed. In addition, 100% of ballast water reporting forms were screened to assess ballast water history, compliance, voyage information and proposed discharge locations.

Any vessels that had not exchanged ballast water or flushed ballast tanks were required to either retain the ballast water and residuals onboard, treat the ballast water in an environmentally sound and approved manner, or return to sea to conduct a ballast water exchange. All vessels required to retain ballast water onboard received a verification test during their outbound transit, prior to exiting the Seaway. There were no reports of non-compliant ballast water being discharged in the Great Lakes/Seaway System during 2014.

## MODERNIZATION PROJECT

The Corporation's modernization program centres on replacing mooring wires with Hands-Free Mooring (HFM) equipment which secures vessels in lock chambers using vacuum pads. This innovative technology has been installed at four locks, and all high-lift locks will be converted to HFM by March 2018. In 2014, new functionality was developed for the HFM units, which allows vessels to be optimally positioned at a predetermined distance in the lock before it is filled or emptied. In addition, improvements were identified and implemented to deal with the equipment's performance in cold weather conditions.



One of three sets of Hands-Free Mooring vacuum pads securing a ship in a lock.

The next phase of the modernization program, remote operation of locks, will soon start. The Corporation has been remotely operating movable bridges for many years, and the knowledge and infrastructure exists to transition to remote operation of the locks. As the transition proceeds, an exhaustive review of ancillary activities surrounding lock operations is taking place, to ensure that Seaway customers retain a strong level of service. The review encompasses the processing of vessel supplies, crew exchanges, and pilot exchanges. In addition, the processing of pleasure craft is being carefully assessed under the new operating model.

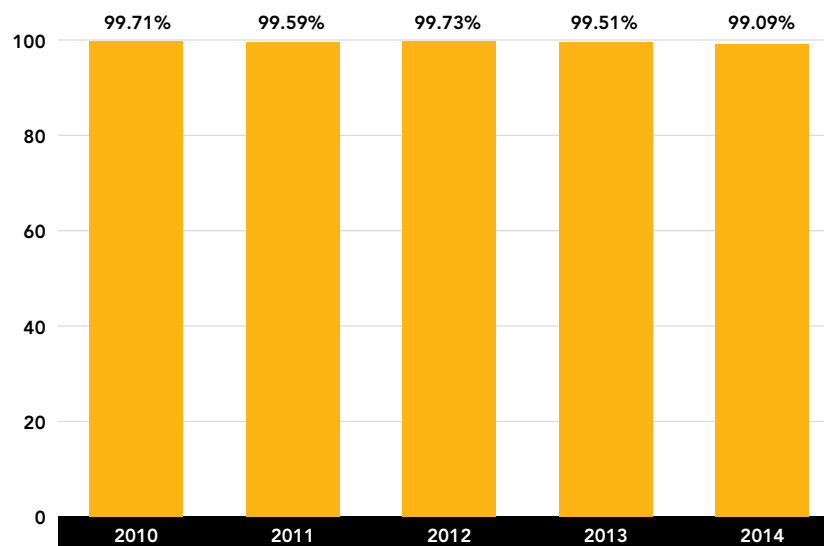
When the idea of using vacuum technology to moor vessels in locks was first considered in the mid-2000s, many thought it couldn't be done. Thanks to the diligent work of Seaway employees, the Corporation is now at the stage where the benefits from this technology are being realized. As with all new technology, some issues do arise, and the Corporation's HFM team is making appropriate adjustments to further enhance the equipment's functionality and reliability. With the strong level of cooperation received from ship owners/operators and other suppliers, the end result will be a thoroughly modern lock operating system, providing world class performance, service and reliability.

## RELIABLE INFRASTRUCTURE AND ASSET RENEWAL

Maintaining a safe, reliable and cost-effective transportation system is vital to the Seaway's competitive position. Over the course of the 2014 navigation season, the system availability rate (which incorporates system reliability, as well as delays due to other factors such as railway activity, water levels, etc.) was 99.1%, slightly lower than the 2013 result due to heavy ice conditions at the opening of the season. The Seaway's reputation as a highly dependable transportation artery is enhanced by its consistent system availability performance, which regularly exceeds the targeted 99%.

### SYSTEM AVAILABILITY

Target 99.00%



Ship secured by Hands-Free Mooring  
(no tie-up lines required).





The reliability and long-term sustainability of Seaway assets rests upon the Corporation's proven Infrastructure Management System (IMS). IMS provides a systematic and rigorous approach to support the cost-effective maintenance of Seaway assets.

The specific goals supported by IMS include: ensuring that the infrastructure delivers consistent levels of service to Seaway customers; optimizing life cycle costs without compromising health, safety and environmental performance; managing risks and preventing potential crisis (such as major failures); and supporting financial planning and the optimal allocation of resources. Over the past 20 years, this approach has provided significant benefits, including the achievement of consistently high levels of system availability and reliability.

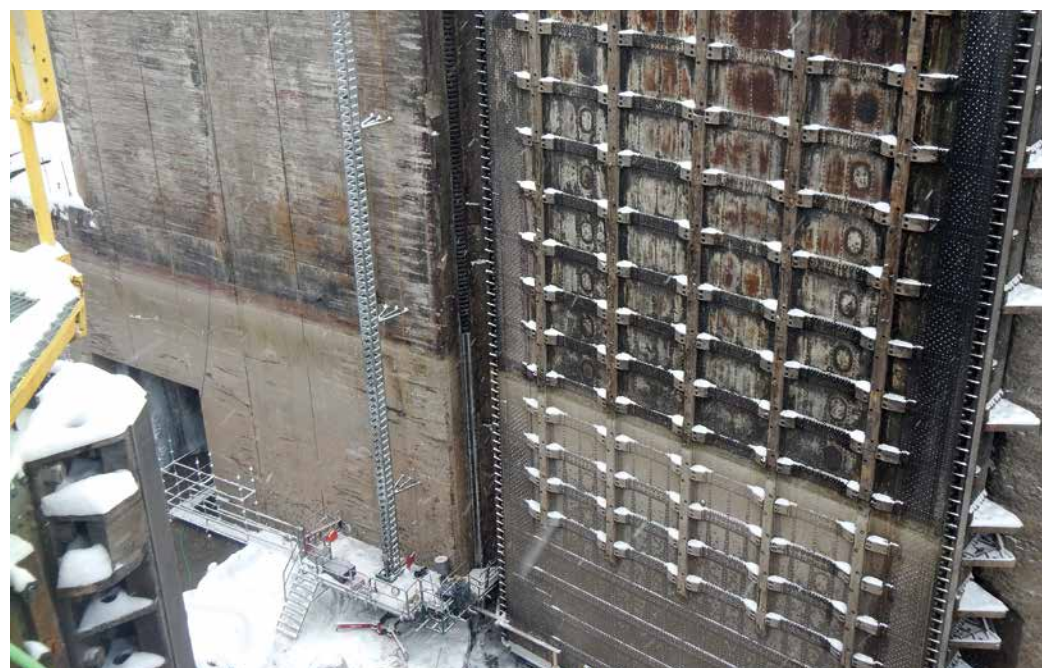
One of the outputs of the IMS process is an optimized annual project portfolio for major maintenance and asset renewal. In the 2014/15 fiscal year, the project portfolio totaled nearly \$78 million for asset renewal and major maintenance, excluding modernization.

The biggest single asset renewal project currently underway is the replacement of 1.88 kilometers of open quay structures in the Welland Canal. Originally built using timber piles, the structures were historically referred to as Timber Tie-Up Walls. The replacement project for the Timber Tie-Up Walls at Upper Locks 1, 2 and 3 and Lower Lock 3 was approached as a single Design-Bid-Build contract starting in the fall of 2013, with completion slated for the spring of 2017.

In 2013/14, the first phase (the replacement of the tie-up wall at Upper Lock 2) was completed, while in 2014/15, work was carried out at Upper Lock 1 at a cost of nearly \$20 million. The entire four-year project is valued at \$95 million.

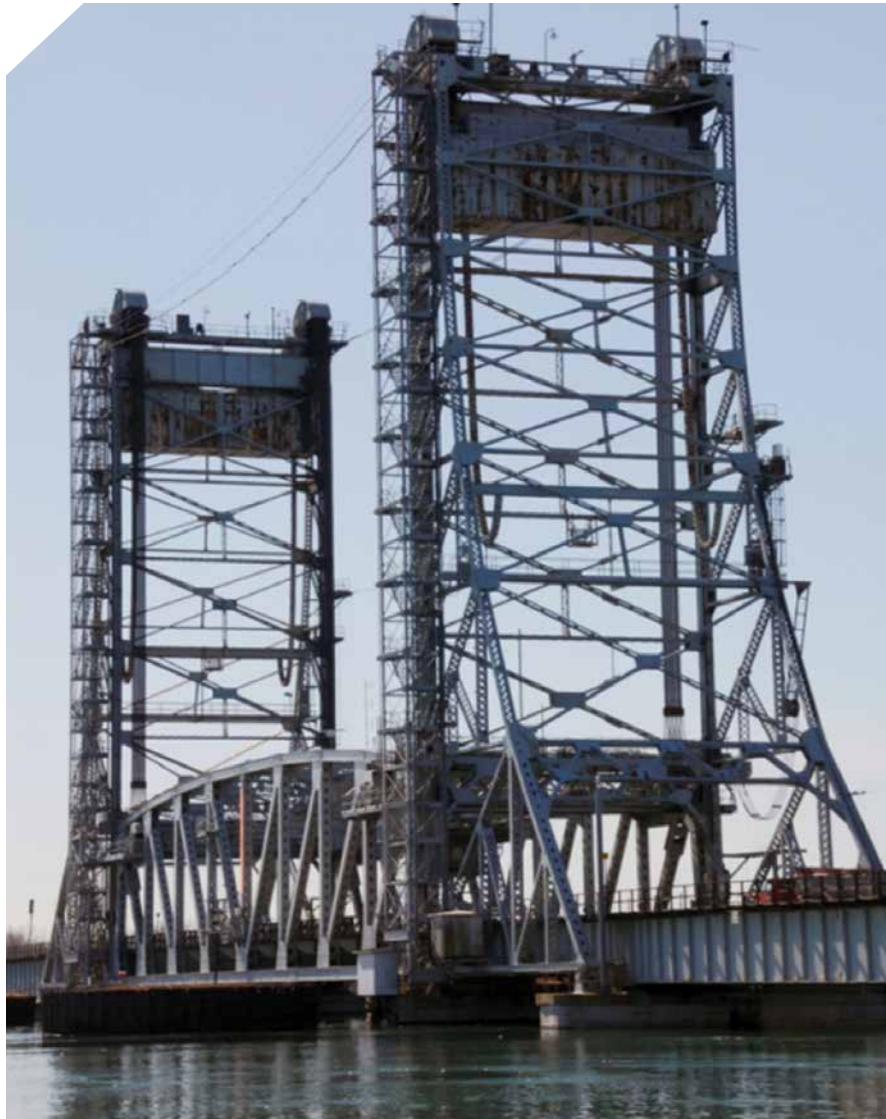


View of Upper Lock 1 approach wall under construction (Winter 2015).



Rehabilitation of lock gate.

SOME OF THE OTHER MAJOR PROJECTS EXECUTED OVER THE COURSE OF THE YEAR INCLUDE:



Valleyfield Bridge

## MONTREAL/LAKE ONTARIO SECTION

- ▲ Upgrade of ventilation system in all lock cable galleries
- ▲ Beauharnois Locks 3 and 4: Upgrade of surface lighting system
- ▲ Valleyfield Bridge: Painting of one tower of the vertical lift bridge
- ▲ Beauharnois Lock 3: Rehabilitation and re-alignment of lower miter gates
- ▲ Kahnawake Bridges 7A and 7B: Replacement of CP Rail signals
- ▲ Iroquois Lock: Replacement and relocation of electrical equipment and cabling



View of misalignment of the lower gates at Beauharnois Lock 3 prior to rehabilitation.



## NIAGARA SECTION (WELLAND CANAL)

- ▲ Rehabilitation and upgrade of electrical cabling and lead abatement in all lock cable galleries
- ▲ Lock 3: Final phase of lock wall refacing program
- ▲ Locks 4 and 8: Repairs to lower approach walls
- ▲ Lock 1: Rehabilitation of gates 1 and 2
- ▲ Lock 6 and Weir 3: Rehabilitation of valves



View of typical gate quoin repairs in the Welland Canal.



View of lock valve being re-installed after rehabilitation.



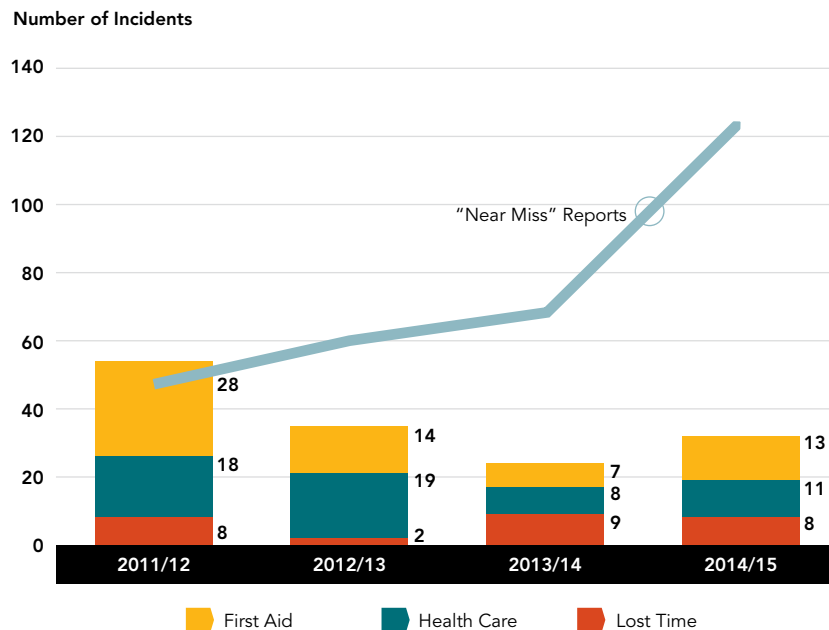
View showing weir valves in operation.



## HEALTH AND SAFETY

From April 1, 2014 to March 31, 2015, the Corporation reported eight lost time injuries, an improvement from the nine reported the previous year, but still exceeding the goal of zero harm. There were also 11 health care and 13 first aid reports. "Near miss" reports increased to 125, which is encouraging as they allow hazards to be identified and proactively dealt with, in an effort to avoid future injuries.

### HEALTH AND SAFETY



Of the eight lost time accidents reported during the fiscal year, four were related to slips, trips and same level falls. In order to address this type of risk, a Slips, Trips and Falls Program was developed and implemented.

In addition to providing guidelines to mitigate the risks associated with these types of accidents, a review of all snow clearing procedures was carried out as these types of occurrences are more frequent during the winter. The Corporation's Hazards Prevention Process was also reviewed, to ensure that all hazards in the workplace are identified on a continual basis, and that appropriate measures are put in place to mitigate any risks of injury.

Another safety initiative in 2014 was the establishment of a working group to design a risk assessment tool. This led to pilot projects with the maintenance and inspection groups in the MLO Section and the mechanical maintenance group in the Niagara Section. These efforts culminated in the production of a booklet, entitled "My Lifeline", which serves as a risk assessment and accident prevention tool. It provides a standardized approach for employees to identify and evaluate risks, prior to beginning a task, and is an integral part of the plan to achieve the goal of zero accidents.

The Iroquois Lock team was the recipient of the President's Safety Award for 2014. The award aims to raise awareness of workplace health and safety requirements and encourage, recognize and celebrate work teams who make significant contributions to improve the Corporation's safety performance.

The Iroquois team's efforts were commendable as they completed 215 safety interventions during the year. As well, 2014 marked 21 consecutive years without a lost time injury for Iroquois employees.

During the 2014 Health and Safety week, May 4<sup>th</sup> to 10<sup>th</sup>, a series of activities took place throughout the Seaway, including a simulated emergency rescue, local school presentations and BBQ lunches. During a simulation, the St. Catharines Fire Department practiced high-angle rope rescue techniques, by lowering an injured 'victim' who was unable

to climb down the staircase on the surge tank tower located at Lock 4 in the Welland Canal. A rescue of this nature could be required, given that the Corporation manages a number of towers and bridges. By engaging local rescue services to practice these skills periodically, it ensures they are familiar with Seaway assets, and are well prepared to respond should a need arise.



The Iroquois Lock Team, recipient of the 2014 President's Safety Award.



St. Catharine's Fire Department Undertaking a High Angle Rescue Exercise in May 2014 (Water Tower at Lock 4, Welland Canal).





# HIGH PERFORMANCE WORKFORCE

By developing and maintaining a skilled, versatile, engaged and accountable workforce, the Corporation is able to achieve its Mission: *"We serve our customers by passing ships through a safe and reliable waterway system in a cost effective, efficient and environmentally responsible manner for the benefit of all our stakeholders today and into the future."*

## REINFORCING PERFORMANCE MANAGEMENT AND LEVERAGING TECHNOLOGY

In 2014, the Corporation introduced "Connexions", powered by Success Factors. This new online tool is designed to help streamline human resource processes, and ensure consistency throughout the Corporation. This is done by integrating workflows, streamlining manual processes, and enhancing access to employee data. The first module on objectives and performance was launched in 2014 and subsequent modules will be coming on-line as they are developed.

## SUPPORTING EMPLOYEE WELLNESS

Studies demonstrate that wellness programs reduce absenteeism, increase productivity, improve morale, attract new employees and help retain current ones. Consequently, maintaining a corporate employee wellness program is a win-win for both the Corporation and its employees.

The Corporation continued to encourage employee participation in fitness programs by offering its Physical Fitness Reimbursement program. During the year, employees took advantage of this incentive by signing up for a number of activities including karate, yoga, hockey, soccer and more.

During Corporate Wellness Month, the Corporate Wellness Committee launched the Highway H<sub>2</sub>O for Health campaign. The campaign solicited employees to virtually walk the distance of Highway H<sub>2</sub>O. The campaign was a great success, as a total of 110 participants completed the equivalent of 5,704 km. Local wellness committee members also coordinated a variety of other initiatives such as 'take the stairs' challenge, educational sessions, and provided a mental health toolkit.



In recognition of its wellness efforts, the Cornwall Head Office received, for the eighth consecutive year, the Gold Level Workplace Health Award from the Eastern Ontario Health Unit. This award recognizes workplaces that encourage healthy lifestyles for their employees.

## RECOGNIZING EMPLOYEE ENGAGEMENT

Since the release of the 2009 and 2013 employee engagement survey results, the Corporation has placed considerable effort in increasing senior management visibility, enhancing employee recognition, and improving performance management. Actions taken in 2014 included several town hall meetings, the launch of a Continuous Improvement Lean Six Sigma belt program, and the release of the Objectives and Performance Management module through Connexions.

The annual Bob Swenor 'Living the Values' award was presented in 2014 to Jason Rodgers, Canal Services Supervisor. The Swenor Award recognizes a Seaway employee whose life reflects corporate values, demonstrates continuous personal development, shows commitment to both the workplace and the local community, and holds a strong belief that people can make a difference. Jason was recognized for his instrumental role in establishing the backup emergency control centre at the Côte Ste. Catherine Lock, devising emergency simulations, and helping to create a safety booklet for pleasure craft operators.



Jason Rodgers  
Canal Services Supervisor

Terence F. Bowles  
President and CEO

## SUPPORTING EMPLOYMENT EQUITY

As a federally-regulated employer, the Corporation is subject to the *Employment Equity Act* and must report on the representation of the designated groups in its workforce. Over the past several years, the Corporation has consistently been awarded a score of 5 out of 5 for reporting compliance.

As part of its recruitment strategy, the Corporation worked on enhancing its recruitment outreach to increase representation for all four designated groups in the workplace. For example, the SLSMC subscribed to "Indeed", a search engine similar to Google, which is used by job seekers to search for a specific job by geographic area. "Indeed" promotes career opportunities by connecting to a network of designated group associations. To increase reach and visibility in this format, the SLSMC sponsored key jobs which were prominently displayed at the top of the list for every search, thereby increasing the Corporation's visibility to potential job seekers. From April 2014 to March 2015, "Indeed" produced 774 applicants, which represents 30% of total candidate sourcing.

# STAKEHOLDER ENGAGEMENT

The Corporation recognizes that, as stewards of the St. Lawrence Seaway, the task of managing the waterway must take into account the interests of a wide range of stakeholders, including business and industry, local communities, and recreational users.



## GREEN MARINE

The Corporation is an active member and proponent of Green Marine, a joint Canada-U.S. initiative. Green Marine is a world leading environmental performance measurement program for the marine industry, which is subject to independent audit. The program's goal is to encourage ports, terminals and carriers across North America to adopt best practices in terms of managing their environmental footprint. Participants have their respective performance measured via a series of criteria, including management of aquatic invasive species, emissions of greenhouse gases and air pollutants, prevention of environmental impacts within waterways and lands, stewardship of community issues, and environmental leadership.

In 2013, a decision was taken to align the Corporation's scores with those of its U.S. counterpart, the Saint Lawrence Seaway Development Corporation (SLSDC), and provide joint results. The joint Green Marine assessment for 2014 revealed that the Seaway entities made notable improvements on a number of fronts, including the enhancement of measures to prevent environmental impacts to waterways and lands.

Overall, for 2014, the Seaway entities achieved a score of 4.3 out of a maximum of 5.



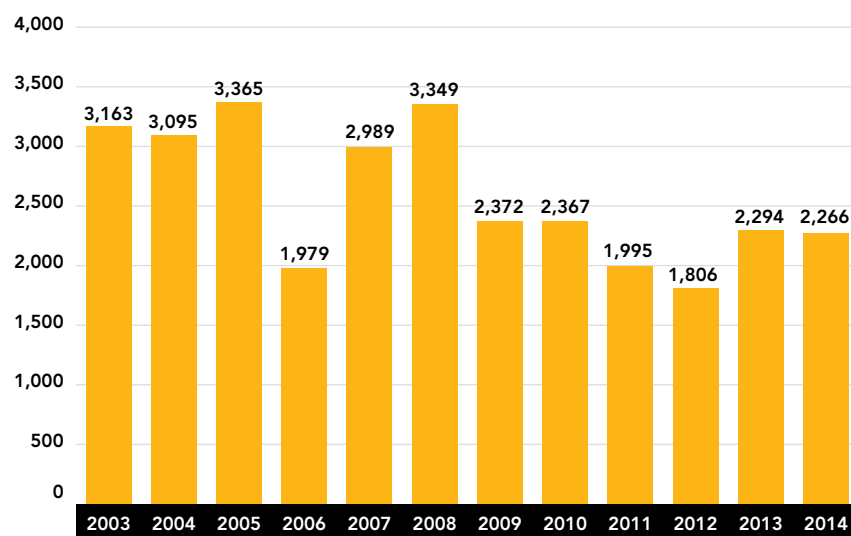
## GREEN HOUSE GAS EMISSIONS

In 2014, the Corporation's greenhouse gas (GHG) emissions were the equivalent of 2,266 tonnes of CO<sub>2</sub>, slightly lower than the levels generated in 2013.

The GHG emissions produced in 2014 and 2013 can be attributed to cold temperatures experienced during the opening periods of the last two navigation seasons, which resulted in more energy being used for equipment designed to prevent ice formation in the locks.

### GHG EMISSIONS

Metric Ton Equivalent in CO<sub>2</sub>



The Corporation's overall level of GHG emissions over the last two years represents a reduction of approximately 30% when measured against output levels for the 2003–2005 timespan. As part of ongoing efforts to reduce GHG emissions, the Corporation purchased its first fully electric vehicle for use by personnel in the St. Lambert and Brossard offices.

## ENVIRONMENTAL MANAGEMENT SYSTEM

As part of its continuous improvement process, the Corporation completed a review of its Environmental Management System (EMS) to align the existing system with the ISO 14001 Standard. Implementation of the ISO 14001 Standard will begin in 2015, with the objective of implementing 50% of the requirements of the Standard by 2017.



## SUPPORTING OUR COMMUNITIES

During 2014, the Corporation's employees contributed to a number of charitable fund-raising efforts. Including matching funds from the Corporation, employees raised approximately \$100,000 for the United Way campaign.

The Corporation continues to strengthen its relationships with residents in communities bordering the Seaway. Last summer, Niagara Section employees participated in Port Colborne's annual Canal Days festival, welcoming visitors to the Corporation's tent, where staff handed out Seaway literature and answered questions.

In the Niagara Section, Seaway staff supported a number of other events, including:

- ▲ Rankin Cancer Run – May 2014
- ▲ The 20<sup>th</sup> Annual Safety Awareness Day & Bike Rodeo – May 2014
- ▲ The 5<sup>th</sup> Annual Wainfleet Safety Awareness Day/  
Bicycle Rodeo – June 2014
- ▲ 6<sup>th</sup> Annual Big Move Cancer Ride – September 2014
- ▲ Take Our Kids to Work Day – November 2014
- ▲ YWCA's "Light the Night Against Violence" – December 2014

In Montreal, MLO Section employees once again attended the Salon Nautique trade show, at which pleasure craft owners were briefed on Seaway operations and on safe boating practices.

In the MLO Section, the following events were also supported:

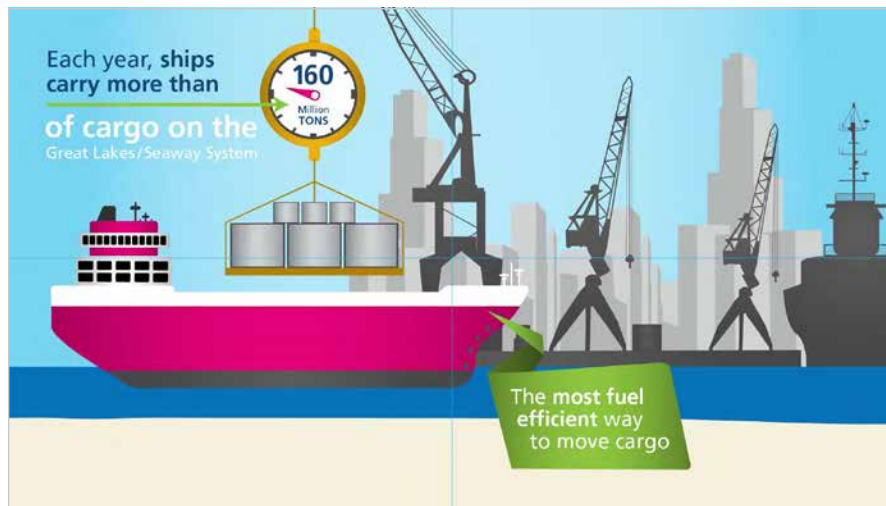
- ▲ The 11<sup>th</sup> annual kite flying festival entitled "BeauVENTois" in Beauharnois
- ▲ Comité ZIP du Haut St-Laurent, as they pursue their mandate to protect, rehabilitate, and demonstrate the value of the St. Lawrence River
- ▲ The Canadian Coast Guard Auxiliary as it works to promote safe recreational boating practices and raise awareness of Seaway regulations governing recreational boating

As part of the Corporation's commitment to its role as a steward of the waterway, the SLSMC served as a sponsor of the St. Lawrence River Institute's 2014 Conference, held in Cornwall, Ontario. At the conference, which takes place annually, a wide range of issues are examined, pertaining to the St. Lawrence River and its ecosystem.

## SERVING AS AN AMBASSADOR FOR THE MARINE MODE

The Corporation continually seeks opportunities to support various community functions and initiatives, where the role and value of marine transportation can be effectively conveyed to various groups.

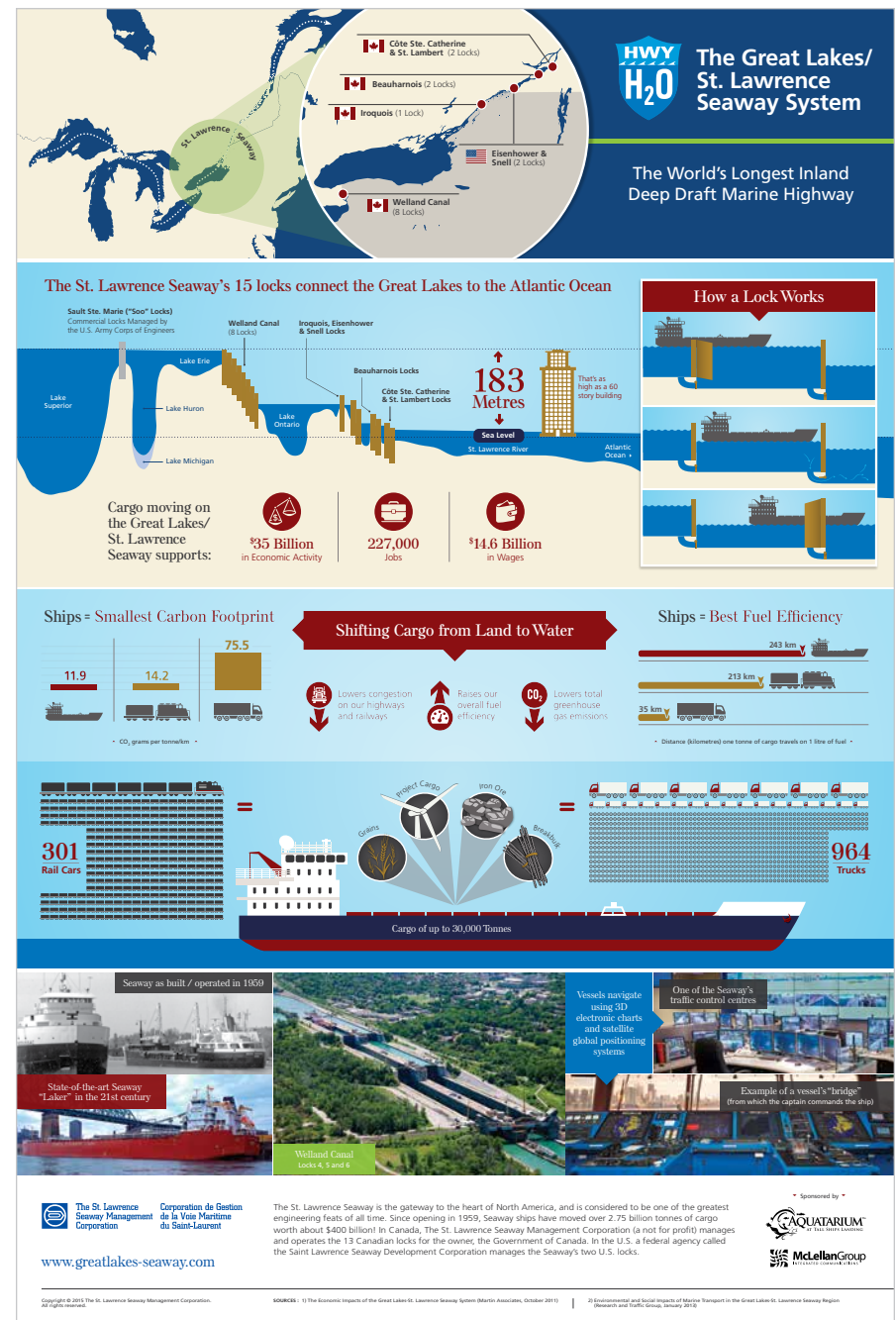
In 2014, the Corporation's External Relations team worked with McLellan Group Integrated Communications to support the creation of a new video exhibit entitled the "Power of Water". This exhibit provides an excellent overview of why marine transportation is the most energy efficient means of moving cargo, supporting North America's economy in a highly sustainable manner.



Screen captured from the *Power of Water* video.

As a complement to the exhibit, the Corporation engaged the McLellan Group to produce a poster that illustrates the many ways in which the Great Lakes/Seaway System supports a high quality of life for residents of Canada and the United States. This poster will provide a new means of advocacy, as members of the Corporation interact with stakeholders.

In addition to the work undertaken with the McLellan Group, the External Relations team is continuing to strengthen its relationships with a variety of interest groups, to engage in dialogues that span economic, environmental, and general policy setting. Speeches and presentations were made over the course of 2014 to audiences in Quebec and Ontario, expounding the value that the St. Lawrence Seaway brings to all members of the community.



Poster produced by the McLellan Group.



# FINANCIAL SUSTAINABILITY

The results for 2014/2015 cover the period from April 1, 2014, to March 31, 2015. The comparative numbers reflect the same time span for the preceding fiscal years.



## FINANCIAL HIGHLIGHTS

	2014/2015	2013/2014	2012/2013
<b>FULL-TIME EQUIVALENTS (FTE)</b>	583	584	584
	<b>(‘000s)</b>		
<b>TONNAGE</b>	39,887	37,055	39,055
<b>REVENUE</b>			
Tolls	\$ 71,489	\$ 63,252	\$ 66,555
Other	4,746	3,507	3,673
<b>Total revenue</b>	<b>76,235</b>	<b>66,759</b>	<b>70,228</b>
<b>MANAGEABLE EXPENSES</b>			
Salaries and benefits*	73,111	74,181	71,555
Other	12,772	12,509	11,734
Employee Future Benefits (Non-cash)	(20,082)	(16,202)	(10,817)
<b>Total manageable expenses</b>	<b>65,801</b>	<b>70,488</b>	<b>72,472</b>
<b>EXCESS (DEFICIENCY) OF REVENUE OVER MANAGEABLE EXPENSES</b>	<b>\$ 10,434</b>	<b>\$ (3,729)</b>	<b>\$ (2,244)</b>
<b>ASSET RENEWAL EXPENSES</b>			
Regular maintenance	\$ 6,293	\$ 5,683	\$ 4,657
Major maintenance	95,901	82,847	54,643
Capital acquisitions	2,372	1,721	1,987
<b>Total asset renewal expenses</b>	<b>\$ 104,566</b>	<b>\$ 90,251</b>	<b>\$ 61,287</b>

\* Includes pension solvency deficit payments of \$16,358 (14/15), \$17,611 (13/14) and \$15,553 (12/13).



# CORPORATE GOVERNANCE

(AS OF MARCH 31, 2015)

The St. Lawrence Seaway Management Corporation is governed by a nine-member board that is responsible for ensuring the long-term viability of the Seaway as an integral part of Canada's transportation infrastructure. The Board is composed of the Corporation's President and CEO, representatives from grain; iron ore and steel; other industry members; the domestic and international carriers; as well as one each from the federal government and the provincial governments of Québec and Ontario. Individual Board Committees oversee governance, human resources, audit and asset renewal.

## BOARD OF DIRECTORS

**Robert J. Armstrong**  
Ontario Provincial Government

**Jonathan Bamberger**  
Other Members

**Terence F. Bowles**  
President and Chief Executive  
Officer

**Gerald Carter**  
Québec Provincial Government

**Wayne Devlin**  
Grain

**Tim Dool (Chair)**  
Domestic Carriers

**David Muir**  
Federal Government

**Georges Robichon**  
International Carriers

**James Wilson**  
Steel and Iron Ore

## OFFICERS

**Terence F. Bowles**  
President and Chief Executive  
Officer

**Stephen Kwok**  
Vice-President, Engineering and  
Technology

**Jean Aubry-Morin**  
Vice-President, External Relations  
Corporate Environment Officer

**Guy Yelle**  
Vice-President, Operations  
Corporate Health and Safety  
Officer

**Karen Dumoulin**  
Chief Financial Officer

**Mark MacKeigan**  
Chief Legal Officer and Corporate  
Secretary



Seated, left to right: Tim Dool, Jonathan Bamberger, Terence F. Bowles, Wayne Devlin  
Standing, left to right: James Wilson, Georges Robichon, Gerald Carter, Robert J. Armstrong, David Muir





## INDUSTRY MEMBERS 2014/15

### DOMESTIC CARRIERS

**Algoma Central Corporation**  
St. Catharines, Ontario

**Canada Steamship Lines,  
A Division of The CSL Group Inc.**  
Montréal, Québec

**Groupe Desgagnés Inc.**  
Québec, Québec

**Lower Lakes Towing Ltd.**  
Port Dover, Ontario

**McAsphalt Marine  
Transportation Ltd.**  
Toronto, Ontario

**McKeil Marine Limited**  
Hamilton, Ontario

**St. Marys Cement Co.**  
Toronto, Ontario

### GRAIN

**ADM Agri-Industries Company**  
Windsor, Ontario

**Alfred C. Toepfer (Canada) Ltd.**  
Winnipeg, Manitoba

**Bunge du Canada Ltée**  
Québec, Québec

**Cargill Limited**  
Winnipeg, Manitoba

**Louis Dreyfus Commodities  
Canada Ltd.**  
Calgary, Alberta

**Richardson International Limited**  
Winnipeg, Manitoba

**The Canadian Wheat Board**  
Winnipeg, Manitoba

**Viterra Inc.**  
Regina, Saskatchewan

### INTERNATIONAL CARRIERS

**Colley Motorships Ltd.**  
Montréal, Québec

**Fednav International Ltd.**  
Montréal, Québec

**Gresco Ltée**  
Montréal, Québec

**Inchcape Shipping Services**  
Dorval, Québec

**McLean Kennedy Inc.**  
Halifax, Nova Scotia

**Montréal Marine Services Inc.**  
Longueuil, Québec

**Navitrans Shipping Agencies Inc.**  
Laval, Québec

**Robert Reford, A Division of  
MRRM (Canada) Inc.**  
Montréal, Québec

### OTHER MEMBERS

**Columbia Grain, Inc.**  
Minneapolis, Minnesota

**Essroc Italcementi Group**  
Orillia, Ontario

**K & S Windsor Salt Ltd.**  
Pointe-Claire, Québec

**Lafarge Canada Inc.**  
Concord, Ontario

**Redpath Sugar Ltd.**  
Toronto, Ontario

**Suncor Energy**  
Mississauga, Ontario

### STEEL AND IRON ORE

**ArcelorMittal Dofasco Inc.**  
Hamilton, Ontario

**Iron Ore Company of Canada**  
Montréal, Québec

**U.S. Steel Canada Inc.**  
Hamilton, Ontario



The St. Lawrence  
Seaway Management  
Corporation

Corporation de Gestion  
de la Voie Maritime  
du Saint-Laurent

[www.greatlakes-seaway.com](http://www.greatlakes-seaway.com)