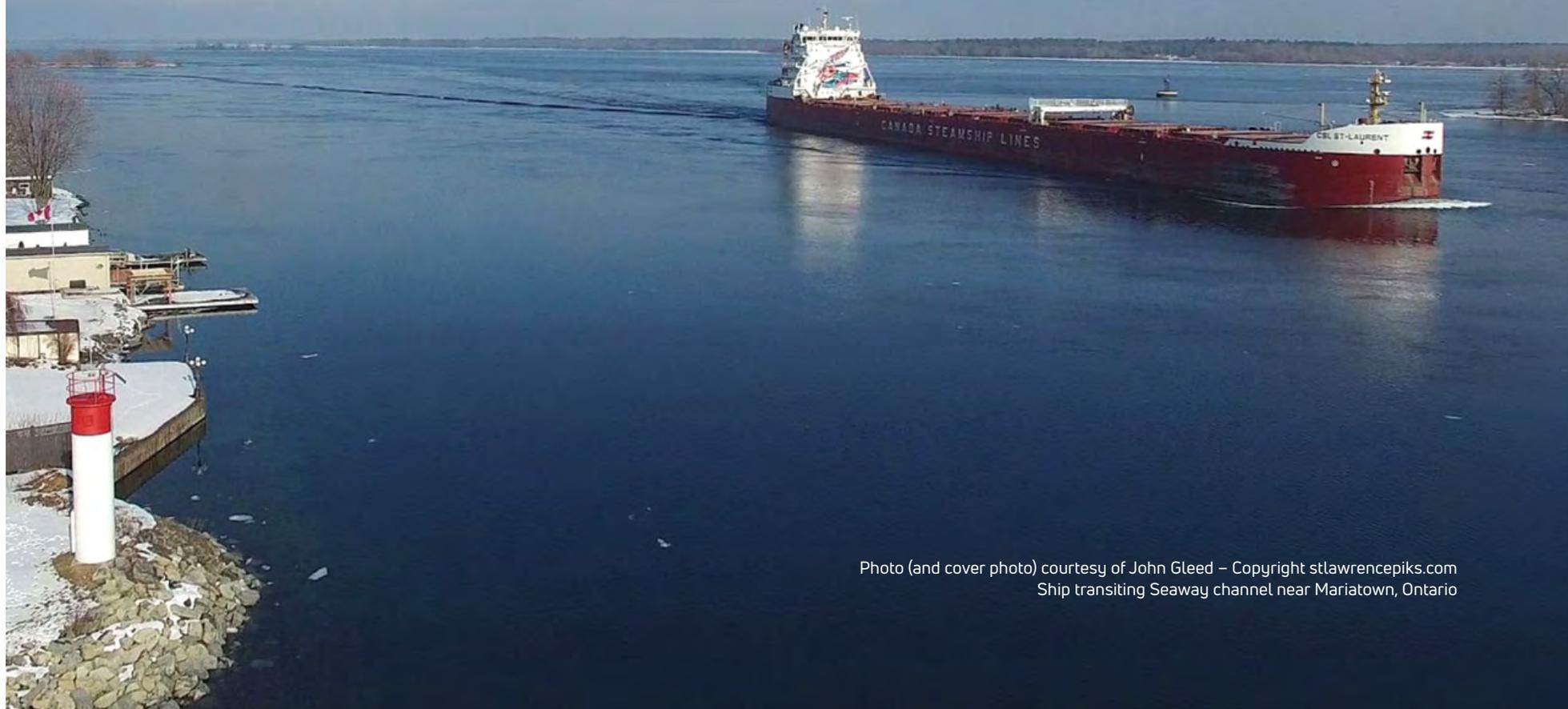


# Celebrating 20 Years of Progress



The St. Lawrence Seaway Management 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 an agreement with Transport Canada.



# Table of Contents

The St. Lawrence Seaway Management Corporation	2	President's Message	11	High Performance Workforce	29
<b>CORPORATE GOALS AND DESIRED OUTCOMES</b>	3	Business Growth	15	<b>BOB SWENOR AWARD</b>	30
Great Lakes/Seaway System	4	<b>TRAFFIC RESULTS</b>	16	<b>CONTINUOUS IMPROVEMENT</b>	30
The St. Lawrence Seaway—A Vital Waterway	5	<b>2017 NEW BUSINESS RESULTS</b>	17	<b>PRESIDENT'S SAFETY AWARD</b>	31
Ships Move Cargo Safely, Reliably and Efficiently	6	<b>SEAWAY TOLLS</b>	17	<b>REINFORCING HR PROGRAMS WITH TECHNOLOGY</b>	31
The Seaway's Locks Make it Possible	7	<b>SEAWAY TOLL INCENTIVES</b>	17	<b>SUPPORTING EMPLOYEE HEALTH AND WELLNESS</b>	31
<b>SEAWAY FACTS AND FIGURES</b>	7	<b>BI-NATIONAL MARKETING INITIATIVES</b>	17	<b>SUPPORTING EMPLOYMENT EQUITY</b>	32
The Seaway's Locks Move Cargo Efficiently	8	Operational Excellence	19	Stakeholder Engagement	33
Moving Cargo by Water is Smart	9	<b>NAVIGATION SEASON</b>	20	<b>GREEN MARINE</b>	34
A Waterway Ready for the Future	10	<b>EMERGENCY PREPAREDNESS</b>	20	<b>GREENHOUSE GAS EMISSIONS</b>	34
		<b>DRAFT INFORMATION SYSTEM</b>	21	<b>ENVIRONMENTAL MANAGEMENT SYSTEM</b>	35
		<b>MARINE SAFETY AND SECURITY</b>	21	<b>SUPPORTING OUR COMMUNITIES</b>	35
		<b>BALLAST WATER MANAGEMENT</b>	22	<b>SERVING AS AMBASSADOR FOR THE SEAWAY</b>	36
		<b>RELIABLE INFRASTRUCTURE AND ASSET RENEWAL</b>	23	Financial Sustainability	37
		<b>EXAMPLES OF MAJOR PROJECTS EXECUTED OVER THE COURSE OF THE 2017/18 FISCAL YEAR:</b>	25	Corporate Governance	39
		<b>HEALTH AND SAFETY</b>	28	<b>BOARD OF DIRECTORS</b>	40
				<b>CORPORATE GOVERNANCE</b>	41
				<b>INDUSTRY MEMBERS 2017/18</b>	41

# The St. Lawrence Seaway Management Corporation

## ACCOMPLISHMENTS (1998-2018)\*:

- \$1 billion invested in asset renewal
- Implementation of Automatic Identification System
- Creation of HWY H<sub>2</sub>O Market Development Program
- Implementation of Draft Information System
- Design and Implementation of Hands Free Mooring and Remote Lock Operation
- Optimization of Navigation Season

\*Refer to the President's Message for more details on these accomplishments



Photo: Francis Fontaine  
View of St. Lambert Lock

## MISSION

*We serve our customers by passing ships through a safe, secure and reliable waterway system in a cost effective, efficient, environmentally and socially responsible manner to deliver value to the North American economy.*

## VISION

*The SLSMC and its partners... an essential and responsive transportation system connecting the heartland of North America to the world.*

## 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

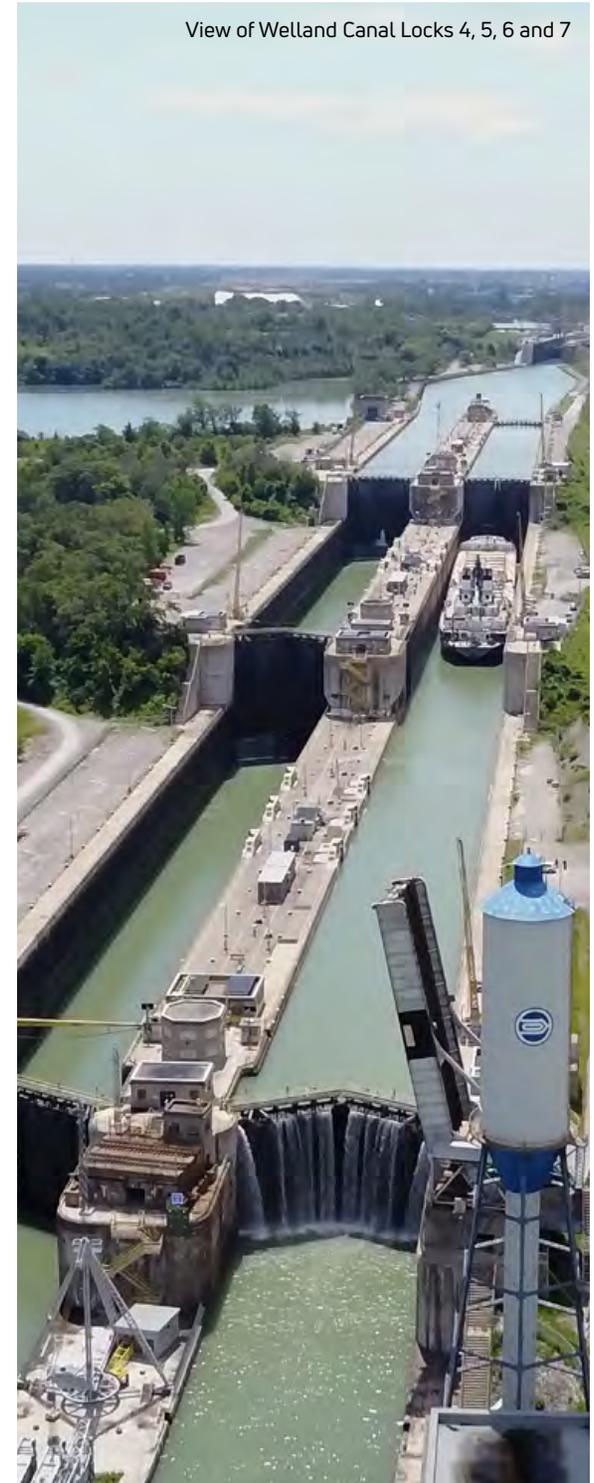
### STAKEHOLDER ENGAGEMENT

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

View of Welland Canal Locks 4, 5, 6 and 7



# Great Lakes/Seaway System



Key supply chain for the  
3<sup>rd</sup> Largest economy

The Great Lakes/Seaway System is a 3,700 km “marine highway” that extends from the Atlantic Ocean to the Great Lakes. Over 160 million tonnes of cargo travel on the waterway on an annual basis.

The eight states and two provinces that border the Great Lakes/St. Lawrence Seaway System constitute the world’s 3<sup>rd</sup> largest economy.

- GDP of US \$6 trillion (2017 est)
- Population: 108 million (2017)
- 52 million jobs
- 30% of Canadian/U.S. workforce and economic activity
- More than half of Canada/U.S. cross-border trade

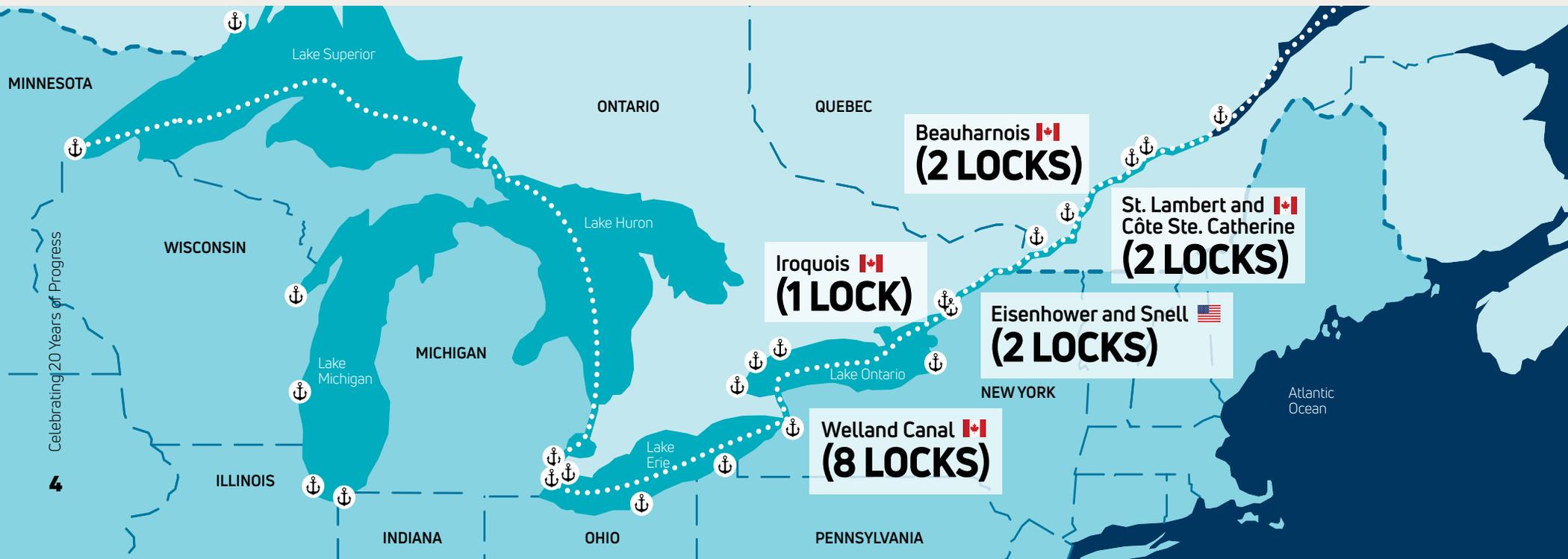
(Source: BMO Capital Markets, Spring 2018)

The Great Lakes/Seaway System extends 3,700 kilometres from the Atlantic Ocean to the head of Lake Superior.

Major Ports

Administered by The St. Lawrence Seaway Management Corporation

Administered by the Saint Lawrence Seaway Development Corporation



# The St. Lawrence Seaway—A Vital Waterway

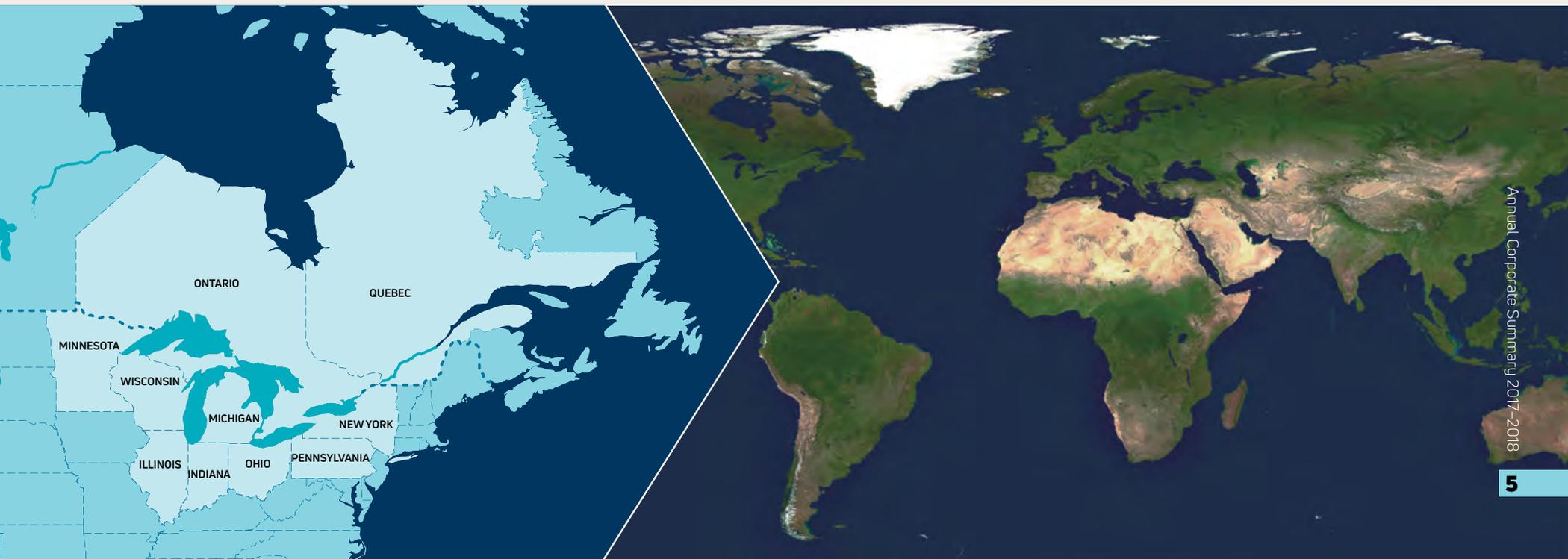
Connecting the heartland of  
North America to the World

**The binational St. Lawrence Seaway serves as the** linchpin within the broader waterway, connecting the lower St. Lawrence River to the Great Lakes.

The Great Lakes-St. Lawrence region is a **critically important North American trading hub**. The region's states were the origin of roughly a quarter of total U.S. merchandise exports in 2017, while Ontario and Quebec accounted for 60% of Canadian shipments. Transportation equipment and machinery are the major drivers, but agricultural and food products, metals and chemicals contribute to a diverse range of exports.

(Source: BMO Capital Markets, Spring 2018)

**The St. Lawrence Seaway enables trade with more than 50 nations overseas. Since the Seaway was completed in 1959, over 2.9 billion tonnes of cargo have moved through the waterway.**



# Ships Move Cargo Safely, Reliably and Efficiently

All sectors of the economy benefit



## GRAIN

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



## DRY BULK

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



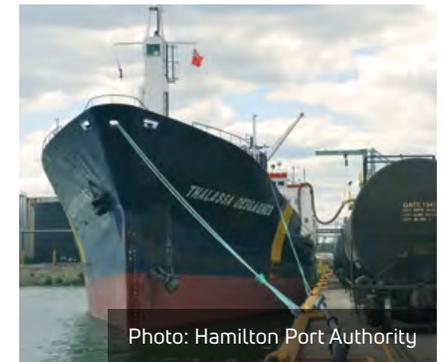
## IRON ORE

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.



## LIQUID BULK

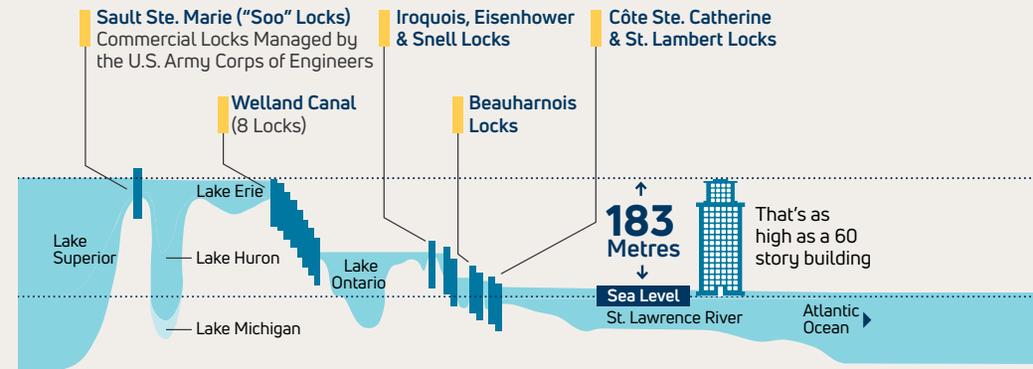
Liquid bulk products shipped include refined petroleum products (gasoline, diesel, kerosene, jet fuel) and alternate fuels (ethanol, biodiesel).

# The Seaway's Locks Make it Possible

Lock system is a marvel of engineering efficiency

The binational St. Lawrence Seaway's 15 locks (13 Canadian and 2 American) allow ships to transit between Montreal and Lake Erie, a difference in elevation of 168 metres. The "Soo" Locks, managed by the U.S. Army Corps of Engineers, enable ships to reach Lake Superior, which is 183 metres above sea level.

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



**DULUTH, MINNESOTA** on Lake Superior      Sailing Time = 8.5 sailing days      **ATLANTIC OCEAN**

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

## SEAWAY FACTS AND FIGURES

### 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.)

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

**Maximum length**  
225.5 m (740 ft.)

**Maximum air draft**  
35.5 m (116 ft., 6 in.)

**Maximum draft**  
8.08 m (26 ft., 6 in.)\*

\*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.)

# The Seaway's Locks Move Cargo Efficiently

Modernization has increased marine's competitive advantage

**The St. Lawrence Seaway Management Corporation** (SLSMC) has modernized its lock operations through the development and implementation of a Hands-Free Mooring (HFM) system and the conversion of its locks to remote control operation.

The most significant change to operations since the Seaway's construction in the mid-1950s, modernization is generating increased operating efficiencies and enhanced safety, making the waterway yet more competitive.

For its role in introducing vacuum pad mooring technology to an inland waterway, the SLSMC was presented the Promising Innovation in Transport Award, sponsored by the International Transport Forum at the OECD, an intergovernmental organization for the transport sector.



Hands-Free Mooring Equipment at the Flight Locks (Welland Canal)

Seaway Operations Control Centre (St. Lambert, Québec)



# Moving Cargo by Water is Smart

A sustainable way to power economic growth

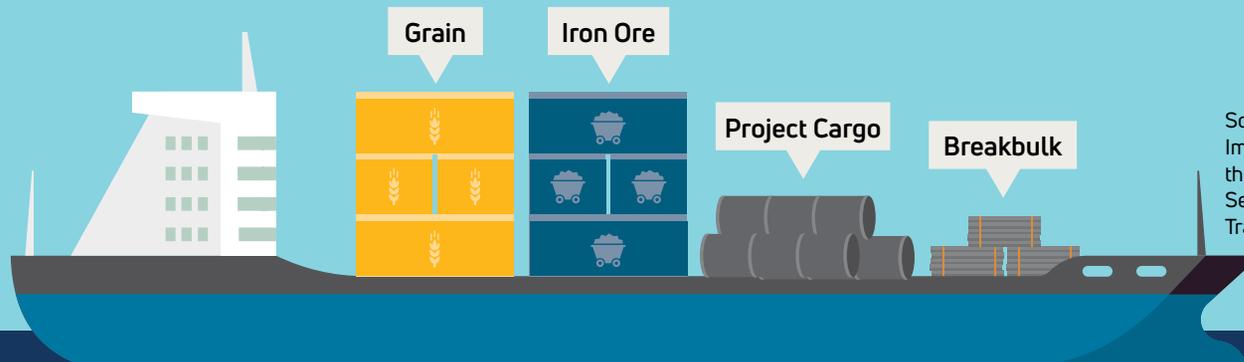
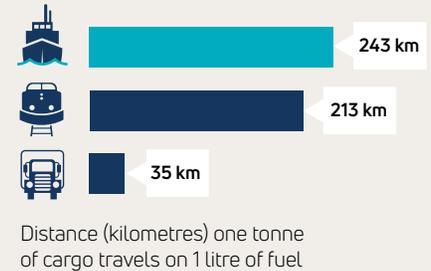
## Shifting Cargo from Land to Water

- **lowers** congestion on our highways and railways
- **raises** our overall fuel efficiency
- **lowers** total greenhouse gas emissions

SHIPS HAVE THE SMALLEST CARBON FOOTPRINT



SHIPS HAVE THE BEST FUEL EFFICIENCY



Source: Environmental and Social Impacts of Marine Transport in the Great Lakes–St. Lawrence Seaway Region (Research and Traffic Group, January 2013)

# A Waterway Ready for the Future



**As the most energy efficient transportation mode, with the lowest carbon footprint,** moving more cargo using the Great Lakes/Seaway System is an excellent way of supporting sustainable growth in the world's 3<sup>rd</sup> largest regional economy.



## HANDS FREE MOORING

*"I like how quickly it moors and how fast the cast off is."*

—Strategic Review Findings

# President's Message

**On March 29, 2018, shipping industry stakeholders gathered at the Welland Canals Centre to mark the opening of the Seaway's 60<sup>th</sup> navigation season, as the newly built *Algoma Niagara* transited Lock 3 which is located next to the facility.**



President and CEO Terence Bowles addressing the audience at the opening of the 2018 navigation season



*Algoma Niagara* in Lock 3 (next to the Welland Canals Centre)

State-of-the-art ships such as the *Algoma Niagara* are a key reminder that today's Seaway is very different from the waterway that opened in 1959. With ship owners in the process of spending over a billion dollars to renew their Seaway fleets, we know that confidence in our waterway's future is strong. And for good reason!

On the eve of the St. Lawrence Seaway's 60<sup>th</sup> anniversary which will be marked in 2019, we are celebrating the 20<sup>th</sup> anniversary of the creation of The St. Lawrence Seaway Management Corporation (SLSMC) as a not-for-profit corporation. As the successor to the St. Lawrence Seaway Authority, the SLSMC manages and operates the Canadian locks, structures, and channels on behalf of the Government of Canada, Seaway users and other key stakeholders. After 20 years of progress, we have much to celebrate.

Key to all the work accomplished is the excellent relationship we have with our U.S. counterpart, the Saint Lawrence Seaway Development Corporation. As joint stewards of a binational waterway, our respective teams work very closely together, and have brought about substantial advances in operations, infrastructure renewal, and technology, while upholding an excellent level of customer service.

The strong working relationship between the SLSMC and the SLSDC can be readily seen over the past year. When faced with record-breaking water flows during the summer of 2017, our operations teams devised and implemented special measures to support navigation, which continued without interruption even during the weeks when flows far exceeded historical levels. Again, at the close of the navigation season, we rallied together to face a sustained blast of

Arctic air that rapidly accelerated the formation of ice within the Seaway. Contending with a ship seized in ice, our teams worked together literally "shoulder-to-shoulder" to free the ship during brutally cold weather. I am very proud of the professionalism, dedication and sheer grit that Seaway employees put forward, enabling all ships to safely exit the Seaway system.

Over the last 20 years, the SLSMC has worked collectively with its industry partners to reinforce the Seaway's competitiveness and its role as a vital transportation artery. From being the first inland waterway to implement the Automatic Identification System in 2003, which enables the precise monitoring of ship locations by satellite, to the implementation of the Draft Information System which provides a 3D model of the channel and enables ships to safely carry up to 400 additional tonnes of cargo per voyage, the SLSMC has been at the forefront of progress within the marine industry.

The recent completion of our modernization program, which includes Hands Free Mooring and remote operation of locks from centralized operation control centres, represents the greatest advancement in Seaway operations since its inception in 1959. For its role in developing Hands Free Mooring for use in a lock system, the SLSMC was presented the Promising Innovation in Transport Award, sponsored by the International Transport Forum at the OECD, an intergovernmental organization composed of the world's 35 most advanced and emerging countries.

As a result of these advancements, the Seaway has become even more competitive. With the elimination of tie-up lines for most vessels, Seaway employees and vessel crews face fewer safety risks and vessels experience less "wear and tear" as they enter and exit locks. In essence, the Seaway is becoming easier to use. And, thanks to the long-standing support of the Government of Canada, the SLSMC has invested more than \$1 billion in asset renewal over the last 20 years. Our steadfast commitment to maintenance and asset renewal enables the St. Lawrence Seaway to uphold its excellent record of system reliability, which consistently registers above 99% year-after-year.

Revenue generation and cost controls are also important elements to competitiveness. In terms of increasing revenues, the SLSMC initiated the Highway H<sub>2</sub>O market development program in 2003, and later introduced various toll incentive programs to attract new cargo. On the cost side, we have consistently met our cost targets by carefully planning and monitoring manageable costs and asset renewal projects, enabling us to hold collective toll increases over the last 10 years to below the aggregate increase in CPI.



Construction underway to outfit the West Flight Locks with Hands Free Mooring equipment (Welland Canal)

We have also optimized the navigation window by incrementally adding days to the season, which today typically extends from the third week of March to December 31<sup>st</sup>. As a result, carriers have an additional 6 days of navigation (on average) each season, when compared to the late 1990s. We continue to examine opportunities to make further incremental gains as conditions permit.

These efforts are showing strong results, as can be seen in the fiscal year ended on March 31, 2018. We finished with toll revenues of \$75 million, thanks to increased tonnage and a favourable mix of higher value cargoes. Additional revenue of \$3.8 million from other sources brought the total to \$78.8 million. With operating costs of \$60 million, the end result was that revenues exceeded operating costs by \$18.8 million. With the exception of a few years during the Global Financial Crisis, we have always covered our operating costs and contributed significantly to asset renewal, as per our contractual obligations with the Government of Canada.

In terms of tonnage, robust economic growth during 2017 brought about strong gains in a number of cargo sectors, with Seaway tonnage rising 9% to over 38 million tonnes of cargo. From iron ore movements stoking both North American as well as Asian steel mills, to shipments of stone, cement and steel that enabled construction activity to keep moving at a brisk pace, and grain to feed our populations, the St. Lawrence Seaway once again demonstrated its role as a vital binational transportation gateway supporting virtually every sector of the North American economy.

Beyond financial and traffic results, we know that corporate social responsibility is vital to any organization's future, and as a founding member of Green Marine, the SLSMC has demonstrated its commitment to environmental protection and sustainability. Working closely with Transport Canada, the U.S. Coast Guard, and the U.S. Saint Lawrence Seaway Development Corporation, we play an integral role in ensuring compliance with ballast water management regulations. Since 2006, incidences of invasive species coming into the waterway via ocean vessel ballast water have been virtually nil.

The stage has been set for a St. Lawrence Seaway that will effectively serve its stakeholders for decades to come, with strong advancements in efficiency, safety and flexibility. With an expanding economy putting pressure on various parts of the transportation network, encouraging more shippers to use the Seaway is an excellent way to promote both economic growth and a low carbon economy. After all, marine transportation is the most energy efficient means of moving cargo and emits the lowest level of greenhouse gasses per tonne-mile, while also reducing congestion on land and wear-and-tear on our roadways.

Wrapping up, I am pleased to say that The St. Lawrence Seaway Management Corporation is fulfilling its mission statement and its commitment to the Government of Canada.

*We serve our customers by passing ships through a safe, secure and reliable waterway system in a cost effective, efficient, environmentally and socially responsible manner to deliver value to the North American economy.*

As we celebrate the progress made during the last 20 years, we can truly say that we are ready for the future!



Seaway Operations Control Centre (St. Catharines, Ontario)

# Business Growth

The results for 2017/18 cover shipping activity between March 20, 2017 and January 11, 2018.

## Simple. Competitive. Connected.

**Simple.** The Corporation through HWY H<sub>2</sub>O is focused on creating an easy, streamlined approach to doing business on the Great Lakes/Seaway System.

**Competitive.** Continued toll incentives and the unique ability to bring transportation decision makers together create a System that is economical and competitive.

**Connected.** The network of contacts and connections via HWY H<sub>2</sub>O are vast and experienced.

The Corporation is focused, together with invested stakeholders, on diversifying cargo opportunities and growing tonnage on the System.



Photo: John Gleed. Ship transiting the Iroquois Lock

## TRAFFIC RESULTS

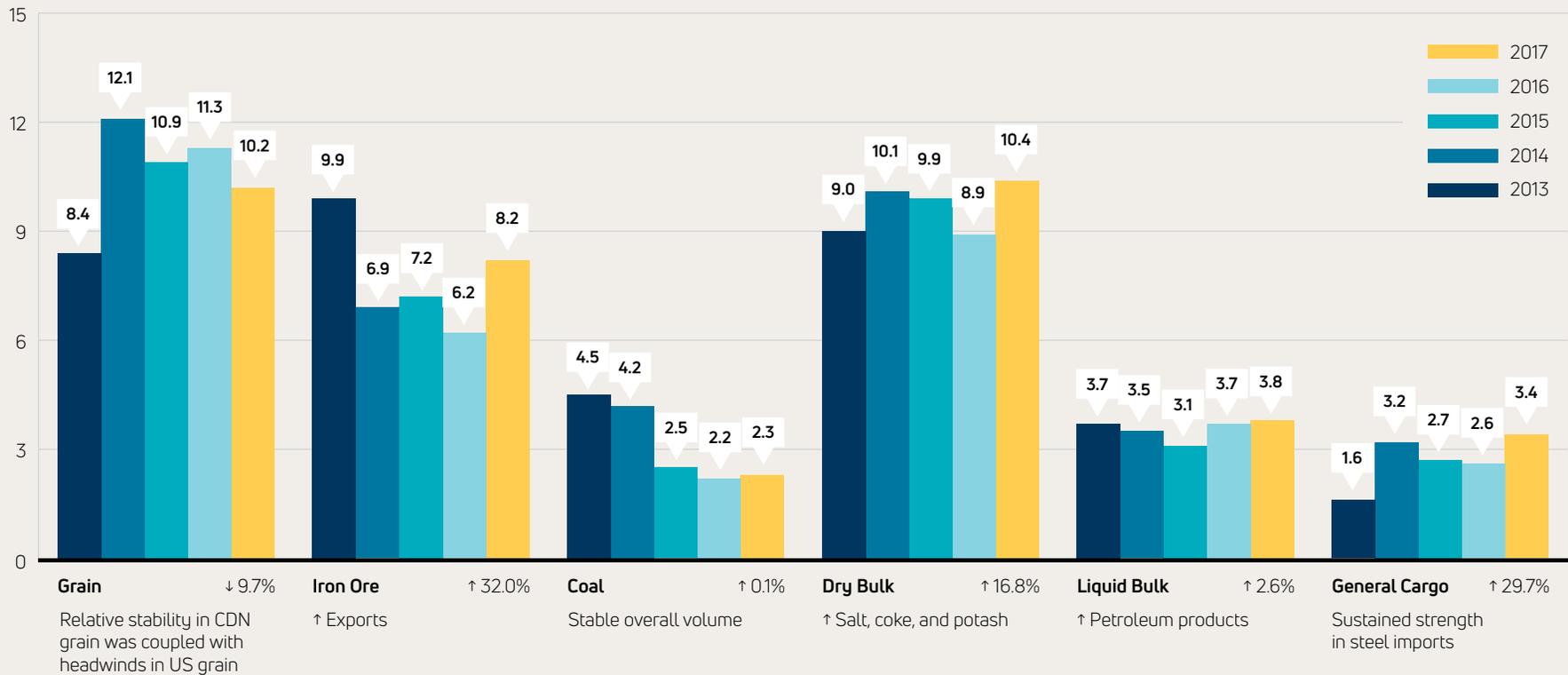
Seaway traffic in 2017 totaled 38.3 million tonnes, an increase of 9.3% or 3.3 million tonnes compared to 2016. International trade, including exports of dry bulk commodities such as iron ore, coke, and potash, and imports

of breakbulk commodities such as iron and steel products, aluminium, and manufactured equipment, have been major factors supporting the growth in tonnage. Vessel traffic increased in step with tonnage.

### TRAFFIC RESULTS

(total cargo in millions of tonnes)

**Total tonnage:** 38.3 MT ↑ 9.3%  
**Vessel traffic:** 4,127 ↑ 9.4%



## 2017 NEW BUSINESS RESULTS

The New Business Incentive program, which offers reduced tolls for eligible “new” cargo movements, attracted 91 applications in 2017, of which 80 were approved. A total of 382 movements of new business were recorded in 2017. This translated into 1.5 million tonnes of cargo, led by movements of outbound coke and inbound steel, generating revenues of \$3.5 million.

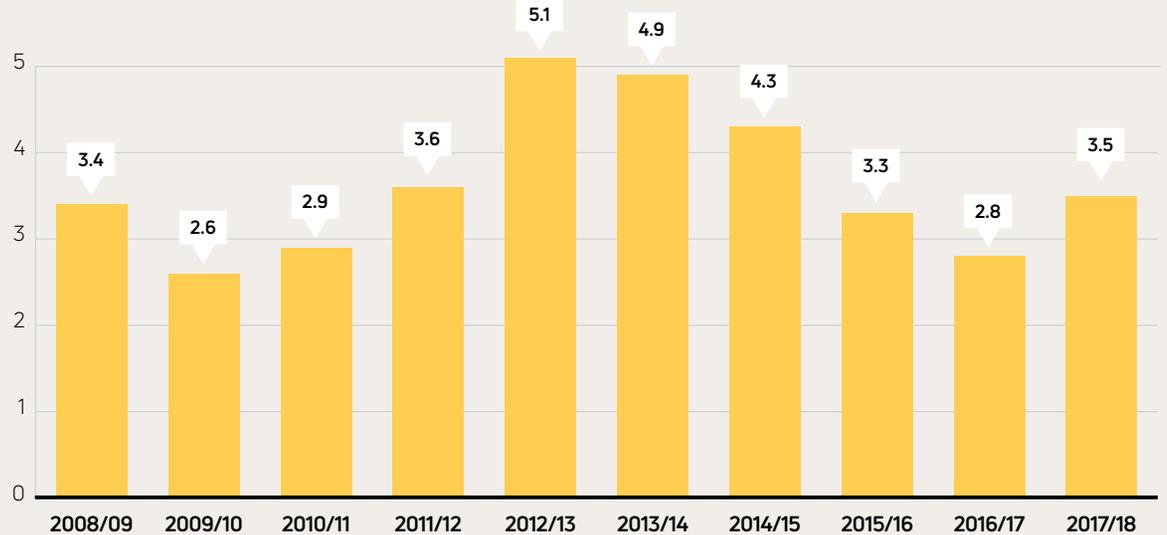
## SEAWAY TOLLS

Tolls increased by 2% for the 2017 navigation season, and have increased by an additional 1% in 2018.

## NEW BUSINESS REVENUE

(in millions of dollars)

Total tonnage: 1.5 MT  
Shipments: 382



HWYH2O.COM  
HWY H<sub>2</sub>O

# SWITCH AND SAVE

With our new Gateway Incentive, there has never been a better time to start shipping on the Great Lakes with HWY H<sub>2</sub>O.

For more information call us at:  
**1-905-641-0309**

## SEAWAY TOLL INCENTIVES

The Corporation’s various toll incentive programs remain in place for the 2018 navigation season. These programs consist of the New Business Incentive, the Volume Incentive, the Service Incentive, and the Gateway Incentive.

The newest addition, the Gateway Incentive, offers shippers a negotiated percentage reduction in cargo toll rates, in order to attract shipments to the Seaway that are currently moving via a competing gateway.

## BI-NATIONAL MARKETING INITIATIVES

Market Development Teams from The St. Lawrence Seaway Management Corporation and the U.S. Saint Lawrence Seaway Development Corporation continue to work together to create and implement joint strategic initiatives. These initiatives are anchored by the HWY H<sub>2</sub>O program, and include the sponsorship of various marketing campaigns, coordinating the HWY H<sub>2</sub>O Conference and participation in trade shows and workshops.

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## WEBINAR SERIES

Launched in December 2017, HWY H<sub>2</sub>O webinars provide members with an opportunity to gain new insights on a bi-monthly basis, free of charge. The first two webinars featured the U.S. Federal Funding Handbook for Maritime Transportation Infrastructure and the Canadian grain market. Future webinars will focus on various commodity markets and feature opportunities for growth (among other topics).

---

## HWY H<sub>2</sub>O CONFERENCE

With 160 delegates, the 2017 HWY H<sub>2</sub>O Conference once again attracted interest from a strong cross section of the marine industry. Hosted in Toronto, Ontario, the conference is a key HWY H<sub>2</sub>O initiative supporting networking, education and business growth for Great Lakes/Seaway System stakeholders.

---

## TRADE CONFERENCES

Over the past year, HWY H<sub>2</sub>O participated in both Breakbulk Europe and the Breakbulk Americas. Breakbulk Europe is the world's biggest trade show for project cargo and breakbulk, with over 400 exhibitors, while Breakbulk Americas is the largest event held in the western hemisphere.

The HWY H<sub>2</sub>O booth received great traffic at these events, providing new opportunities for growth in Seaway tonnage via networking opportunities and the development of sales leads.



HWY H<sub>2</sub>O booth at Breakbulk Americas (Houston, Texas)

Left to right: Joseph Cappel, Vice President, Business Development, Toledo-Lucas Port Authority; Chris Blessing, Marketing & Customer Service, Midwest Terminals of Toledo International; Erica Grilli, Marketing Specialist, Fednav; Adam Schlicht, Great Lakes Regional Representative, Saint Lawrence Seaway Development Corporation; David Gutheil, Chief Commercial Officer, Port of Cleveland

# Operational Excellence

With the installation of Hands Free Mooring at the “Flight Locks” on the Welland Canal, the modernization project is now complete, representing the greatest change to Seaway operations since its initial opening in 1959.

All Canadian high-lift locks are equipped with Hands Free Mooring and remotely operated from the Seaway’s Operations Control Centres, located in St. Lambert (Quebec) and St. Catharines (Ontario).

Vessels can now transit all high-lift locks without the need for mooring lines, enabling gains in safety for both lock and vessel crews, while also leading to gains in operational efficiency. Over the 2017 navigation season, nearly 90% of lock transits were processed without the use of mooring lines. Utilization rates will increase to even higher levels in the future, as a handful of vessels undergo modifications by fleet operators to ensure compatibility with Hands Free Mooring.

Ships transiting Welland Canal Lock 6 East and Lock 6 West secured by Hands Free Mooring (using vacuum pads)

## NAVIGATION SEASON

The St. Lawrence Seaway opened its 59<sup>th</sup> navigation season on March 20, 2017. The Welland Canal section remained open for 287 days, and closed on December 31<sup>st</sup>. In the MLO section, difficult weather conditions in the final two weeks of December led to a ship becoming immobilized in ice within the U.S. Snell Lock. While a bi-national team worked together to free the ship, the Corporation's employees worked diligently to ensure that all locks downstream from Snell remained functional, and ready to process the remaining ships queued behind the immobilized ship. Thanks to the dedication and unrelenting efforts of all involved, the ship at the Snell Lock was freed from ice on January 6, 2018. The St. Lawrence Seaway concluded its 59<sup>th</sup> navigation season successfully with the last ship in the queue exiting the St. Lambert Lock on January 11, 2018, some 298 days after the section's opening.

In terms of transit time performance, the Niagara section recorded an average delay of 30 minutes. A portion of the delay was due to one-way navigation in the twinned section of locks at the beginning of the season, to permit the final installation of Hands Free Mooring equipment. In the MLO section, the average delay per transit was 39 minutes. The difficult weather conditions encountered at closing, combined with high water levels and flows experienced earlier in the year which triggered the imposition of certain restrictions including reduced speed limits, all contributed to the delays.



Ship transiting the Welland Canal

## EMERGENCY PREPAREDNESS

Throughout 2017, the Corporation continued its emphasis on emergency preparedness by undertaking training and various exercises.

- In October, the Niagara Section conducted an exercise featuring a simulation in which foreign substances were released in Seaway waters. The exercise successfully tested the Corporation's employees in serving as the lead agency, in a scenario that brought in other supporting agencies and authorities.
- Training in the deployment of booms was conducted across the Corporation, including a practice session utilizing a newly acquired heavy boom in the Niagara Section.
- The Corporation also sent employees to participate in various exercises hosted by external agencies.



Niagara employees working with other agencies and authorities in emergency training exercise



Practice boom deployment in the Port Colborne area

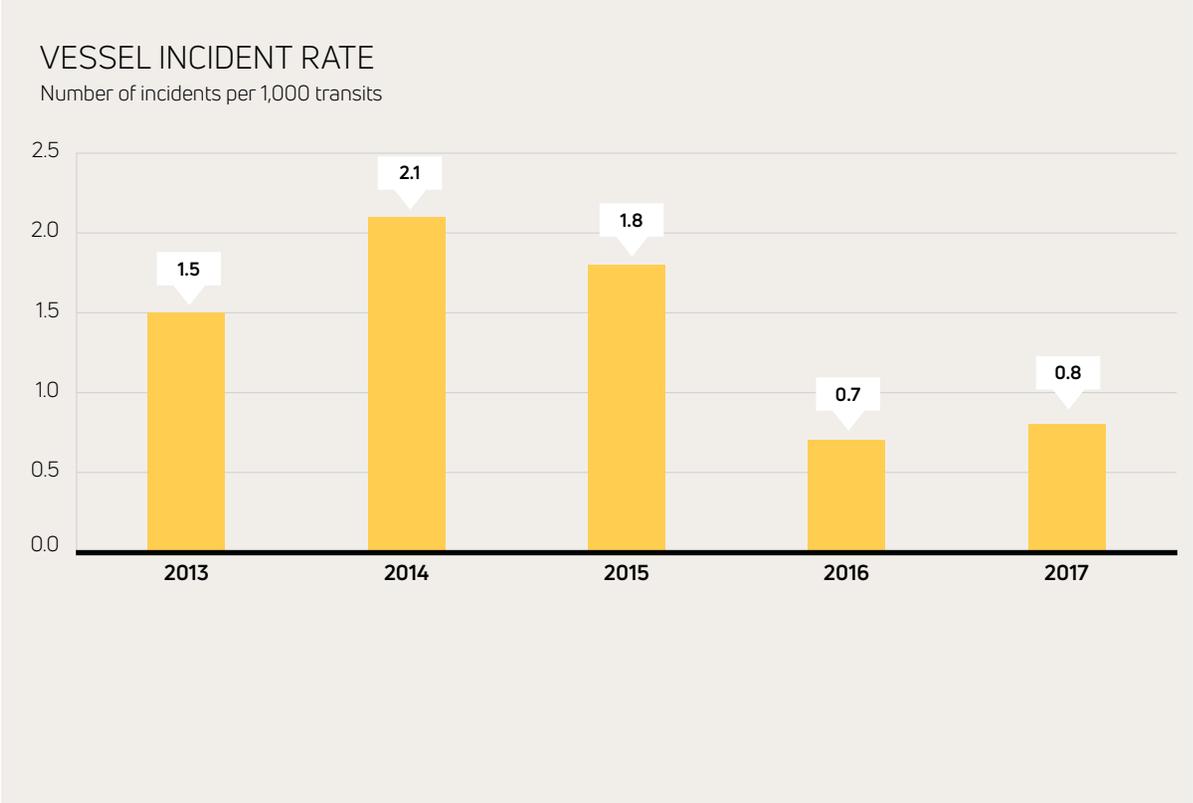
## DRAFT INFORMATION SYSTEM

Vessels equipped with an approved and operational Draft Information System continue to take advantage of the extra 7 cm of draft that is permissible, enabling the ships to carry up to 400 tonnes of additional cargo. This type of innovation highlights the Corporation’s progress in increasing both transit safety and productivity, enabling Seaway carriers to become even more competitive.

# OF DIS TRANSITS	2016	2017
MLO	297	313
Welland	245	421
<b>Total</b>	<b>542</b>	<b>734</b>



Photo: John Gleed. Ships transiting the Seaway channel near Morrisburg, Ontario



## MARINE SAFETY AND SECURITY

During the 2017 navigation season, there were six vessel incidents in which damage to a vessel occurred, translating to a rate of 0.8 incidents per 1,000 transits, a slight increase from 2016. The majority of these incidents involved vessels contacting a structure or another vessel. None of these incidents resulted in any pollution of Seaway waters.

## BALLAST WATER MANAGEMENT

The Great Lakes Seaway Ballast Water Working Group (BWWG), comprised of representatives from the United States Coast Guard (USCG), the U.S. Saint Lawrence Seaway Development Corporation (SLSDC), Transport Canada – Marine Safety and Security (TCMSS), and The St. Lawrence Seaway Management Corporation (SLSMC), compiled the 2017 Summary of Great Lakes Seaway Ballast Water Working Group report. The group's mandate is to develop, enhance, and coordinate binational compliance and enforcement efforts to reduce the introduction of aquatic invasive species via ballast water and residuals.

In 2017, 100% of vessels bound for the Great Lakes/Seaway System originating from outside the Exclusive Economic Zone (EEZ) received ballast water management tests. Verification efforts indicated that there was no non-compliant ballast water discharged in the Great Lakes/Seaway System. Of the 457 vessel transits, some 8,350 ballast tanks were assessed and 100% of ballast water reporting forms were screened for ballast water history, compliance, voyage information and proposed discharge location. Inspectors identified 54 non-compliant ballast water transits, representing 112 tanks, and these vessels were required to either retain the ballast water and residuals on board, treat it in an environmentally sound and approved manner, or return to sea to conduct a ballast water exchange.



Photo: John Gleed

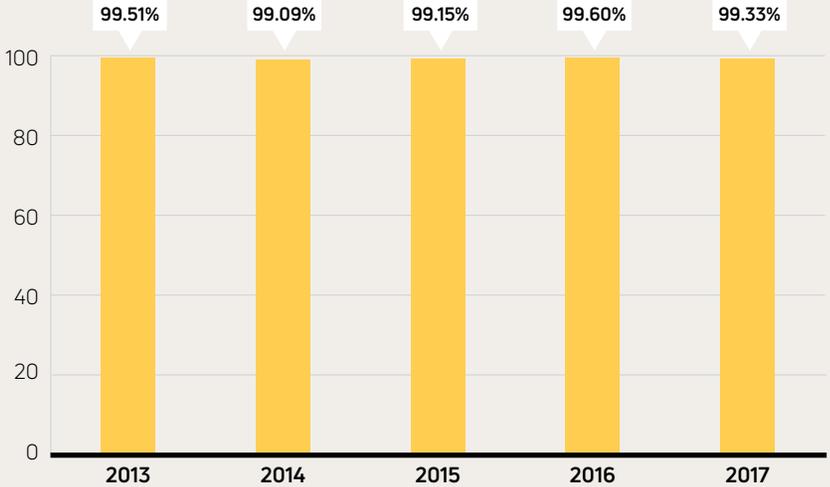
Since 2006, ballast water management requirements in the Great Lakes/Seaway System have been the most stringent in the world. USCG, TCMSS, and Seaway ballast regulations that include saltwater flushing, detailed documentation requirements, increased inspections, and civil penalties provide a comprehensive regulatory enforcement regime to protect the Great Lakes/Seaway System. Independent research by Fisheries and Oceans Canada (Science) indicates that the risk of a ballast water mediated introduction of aquatic invasive species into the Great Lakes is extremely low.

# RELIABLE INFRASTRUCTURE AND ASSET RENEWAL

Over the course of the 2017 navigation season, the system availability rate, which incorporates delays attributable to the Seaway, was 99.33%, exceeding the 99.00% target.

## SYSTEM AVAILABILITY

Target 99.00%



Maintaining a safe, reliable and cost-effective transportation system is vital to the Seaway’s competitive position. The Corporation uses a well-established Asset Management System to optimize value from its assets and contribute to the long term planning process, ensuring that capital expenditures meet operational objectives and lead to consistently high levels of system availability.



Photo of a portion of the 1.9 km of tie-up walls in the Welland Canal during the reconstruction process

The Corporation was the recipient of the “Infrastructure Award” at the Ontario Concrete Association’s 2017 Banquet, recognizing the completion of the Welland Canal Tie-Up Walls Reconstruction Program. Undertaken as a single Design-Bid-Build contract valued at \$95 million, the Corporation replaced 1.9 kilometers of timber pile tie-up walls in the Welland Canal with concrete walls. Best in class planning skills and rigorous monitoring were key factors in ensuring that the project remained on budget and on schedule throughout its four-year execution plan.



Niagara engineering team at the Ontario Concrete Association's 2017 Awards Banquet

The Corporation's Asset Management System is based on a cycle of inspection and assessment activities and a risk-based decision-making process for planning remedial works. One of the outputs is an annual project portfolio, which for 2017/18 amounted to \$44 million in asset renewal ("major maintenance") activities and \$11 million to complete the modernization effort.

The late closing in January 2018 posed some challenges to the execution of scheduled inspections and the delivery of all scheduled projects within a compressed schedule. Thanks to the use of some innovative approaches, close collaboration between all stakeholders, all projects were delivered on time and on budget.



Ship at the Beauharnois Locks

# Examples of major projects executed over the course of the 2017/18 fiscal year:

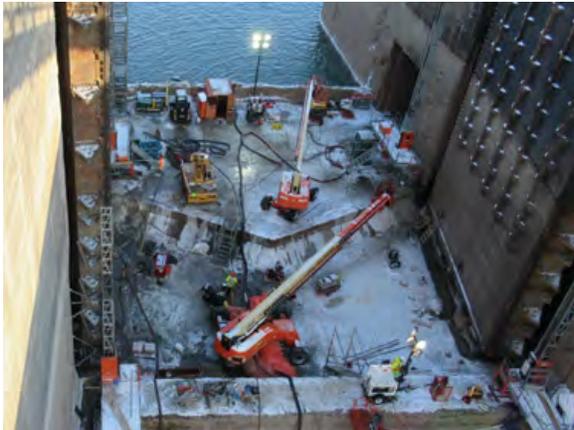
## NIAGARA SECTION (WELLAND CANAL)

### INSTALLATION OF HANDS FREE MOORING IN THE WEST FLIGHT LOCKS (LOCKS 4, 5 AND 6)

With the completion of this section, the deployment of Hands Free Mooring is now complete.



### LOCK 3: REHABILITATION OF MITRE GATE QUOINS, MITRES AND HINGES



This project included the replacement of gate quoins, mitre bearing plates, upper and lower hinges, and rubber seals.

## LOCK 8: REPLACEMENT OF UNWATERING PUMPS



The existing centrifugal pumps (photo at right) were removed from the well, followed by the installation of four new vertical turbine pumps (photo above).



## LOCK 8: REPAIRS TO EAST WALL CABLE GALLERY ROOF



This project consisted of removing the existing cable gallery roof and replacing it with a more heavily reinforced roof. Two hatches with ladders were installed at each end of the cable gallery along with a double door access hatch and stairway near the centre of the gallery.

## MLO SECTION (MONTREAL/LAKE ONTARIO)

### CÔTE STE. CATHERINE LOCK: REPLACE AND RELOCATE ELECTRICAL EQUIPMENT AND WIRING



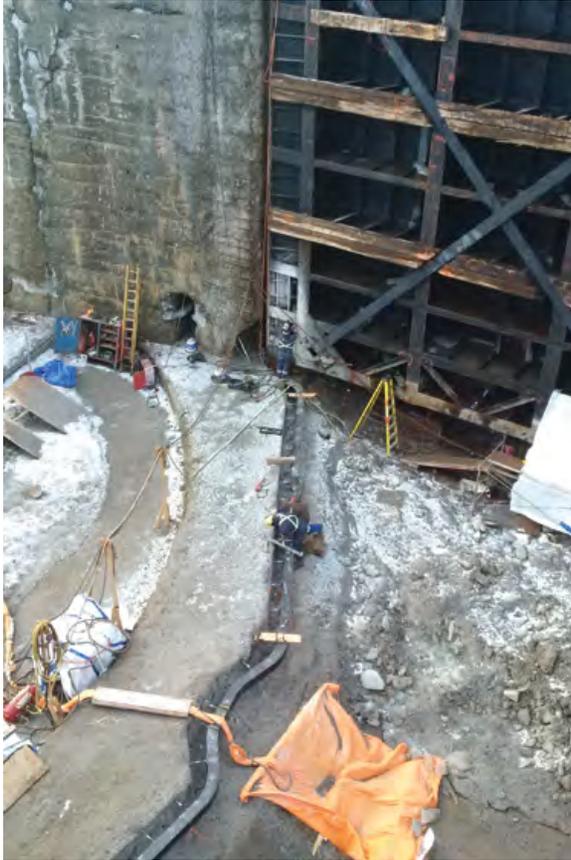
This purpose of this project was to enhance reliability by constructing four new buildings to house all electrical equipment. This work included the complete replacement of electrical and telecommunications wiring, design and installation of a new wiring management system, and the replacement and relocation of electrical distribution, automation, and telecommunications control panels.

### CÔTE STE. CATHERINE LOCK: REPLACEMENT OF CHARIOT ROLLER BEARINGS AND RECONDITIONING OF HINGES FOR LOCK GATES



This project integrated a novel approach for the roller track system to improve its performance and extend its useful life. To recondition elements after almost 60 years of use, new and sturdier rails were designed and installed to accommodate the bearings, followed by the reconditioning of the lock gate hinges.

## CÔTE STE. CATHERINE LOCK: REPLACEMENT OF POSTS FOR MITER GATES



This project involved replacing the posts on miter gates 3 and 4 which had been in use since 1959 and adjusting the sill underlying the gates.

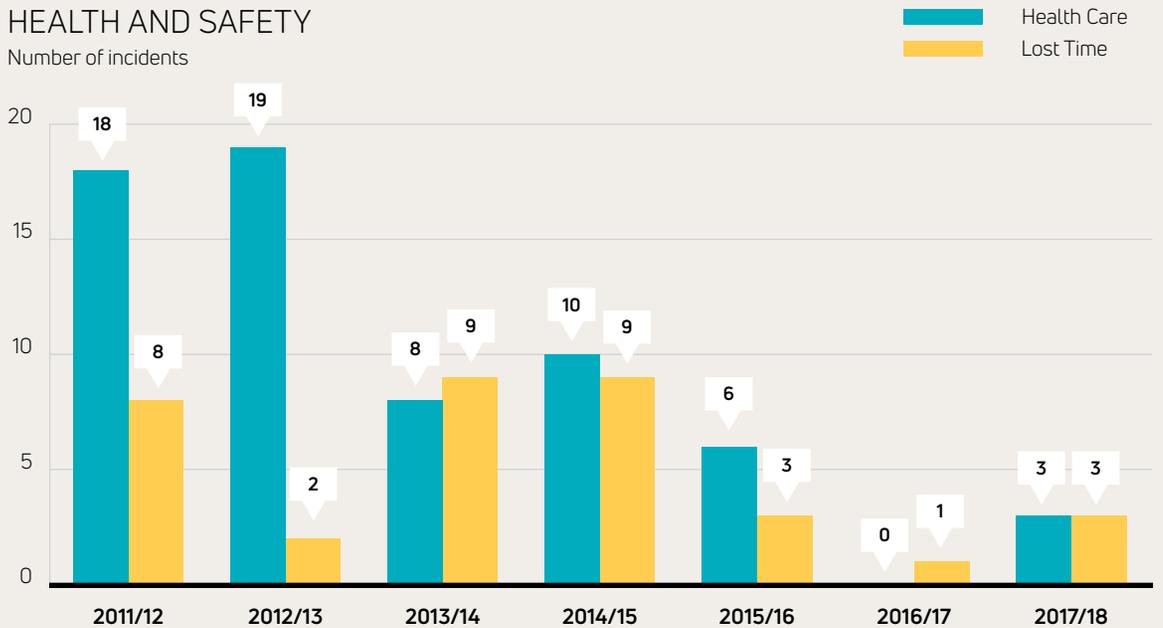
## HEALTH AND SAFETY

From April 1, 2017 to March 31, 2018, the Corporation reported three lost time injuries which resulted in a Lost Time Incident rate of 0.7 and only 16 days lost. These excellent results were enabled by the Corporation's personnel who carried out 3,520 safety interventions including "toolbox meetings", safety inspections targeting various locks, structures and equipment, as well as observations focusing on work habits.

To improve the accident investigation process, stakeholders were trained in a new and more robust investigation methodology. Training was also provided to all leaders who are assigned safety observation objectives, in order to gain a better understanding of the intent of the observation system, how to achieve maximal efficiency, and how to avoid common pitfalls.

### HEALTH AND SAFETY

Number of incidents



\*restated from the previous year's report

# High Performance Workforce

The Corporation's vision for its people is driven by leaders at all levels, who actively develop and maintain a skilled, versatile, engaged and accountable workforce.



Bob Swenor Award recipient Michael Guindon with President and CEO Terence Bowles

## BOB SWENOR AWARD

The annual Bob Swenor Living the Values Award is given to a Seaway Employee who lives the corporate values, demonstrates continuous personal development, shows commitment to the Corporation and the community, and holds a strong belief that people make a difference. In 2017, the recipient was Michael Guindon, Head Office Financial Accounting Supervisor.

Michael has worked 16 years with the Corporation, and is responsible for many financial functions, including budgeting and financial audits. He provides sound advice and guidance on financial matters to employees throughout the organization, and was selected to receive training on continuous improvement at the green belt level. Using this training, Michael completed a project on improving the employee reimbursement forms, bringing about a single form that replaced five separate expense reimbursement forms. The end result is a streamlined process that saves time for employees submitting claims and accounts payable staff processing claims.

## CONTINUOUS IMPROVEMENT

The Corporation's continuous improvement program incorporates Lean-6-Sigma methodology through yellow, green and black belt certifications for employees enrolled in the training program. With several employees completing their certification over the past year, the Corporation now has a total of 10 yellow belts and 6 green belts. An employee-driven innovation idea platform (iGen) hosted on the Corporate intranet provides a stream of ideas for continuous improvement, which departments evaluate and selectively implement. In the past year, the value of gains from continuous improvement projects has been estimated to exceed \$1.7 million.

The 2017 Continuous Improvement Most Valuable Project/Person award was presented to Jean-Sébastien Drolet during at the annual President's Meeting held in June, recognizing his unrelenting focus on continuous improvement during his day-to-day activities. Jean-Sébastien serves as Coordinator in Iroquois, and is well known for encouraging and supporting his team in implementing new ideas that bring about meaningful change.



Jean-Sébastien Drolet receiving the Continuous Improvement MVP Award from President and CEO Terence Bowles and Vice President of Engineering and Technology Jim Athanasiou

## PRESIDENT'S SAFETY AWARD

The President's Safety Award was presented to the maintenance team at the MLO Section's Beauharnois Locks. Their accomplishments span a wide variety of work activities and disciplines, and have helped to make many tasks safer. The award was presented during the Corporation's annual Safety Week activities, which provide employees with opportunities to discuss safety-oriented topics and celebrate their achievements.



Beauharnois maintenance team receiving the President's Safety Award

## REINFORCING HR PROGRAMS WITH TECHNOLOGY

In 2014, the Corporation introduced "Connexions", a software application designed to help streamline human resource processes, integrate workflows, eliminate manual processes, and enhance employee access to HR Programs. During the past year of this multi-year project, the Corporation launched the Recruitment and Onboarding modules making it easier for candidates to move through the hiring process and ultimately into their first day at work.

## SUPPORTING EMPLOYEE HEALTH AND WELLNESS

The Corporation continues to support and enhance its health strategy, with the principal goal of supporting employee wellness and prevention in order to minimize employee absences and disabilities. Over the past year, enhancements were made to the Physical Fitness Reimbursement Program and the provision of voluntary health screening assessments. The reimbursement program was expanded to include more wellness based programs such as cooking classes, music lessons and weight management programs. Employees engaged in these initiatives report a better sense of health and wellbeing, along with a decreased need for medications related to blood pressure and cholesterol.



Staff from the Cornwall Head Office participating in Earth Day by cleaning up a local park

In addition to efforts focused on improving employee health during the annual “Wellness Month”, the Corporation also continues to support many other initiatives such as mental health awareness, notably through the Not Myself Today campaign and Bell’s “Let’s Talk” campaign.

## SUPPORTING EMPLOYMENT EQUITY

In 2017, the Corporation continued to apply industry best practices in shaping its recruitment and hiring processes, in order to enhance its ability to meet employment equity goals. These efforts in recruitment and hiring served to enhance the Corporation’s efficiency in finding the right talent to fill its diverse range of employment opportunities. Also in 2017, the Employment Equity Management Consultation Committee initiated the renewal of the Corporation’s Three Year Employment Equity Action Plan by partnering with a trusted consultant, Employment Matters. Articles on the Corporation’s intranet and newsletter also served to raise awareness among its employees to the importance of workplace diversity.

**Career Opportunities**  
 Search for Openings

Keywords:

Exact Match

In job title

In job title or description

Distance is within:  miles of

Select one

postal code:

job Category:

7 Jobs match the selections

Save this search

7 Jobs matched your search

Items per page:  Page  of 1

Sort by:  ↑

<b>Network Specialist</b> Req ID 2441 - Posted 06/21/2018 - Professional	<input type="button" value="Select Action"/>
<b>Canal Services Technician - Electrical (Internship)</b> Req ID 841 - Posted 05/31/2018 - Skilled trades/Semi-Skilled Trades	<input type="button" value="Select Action"/>
<b>Project Leader-Time &amp; Attendance Improvement</b> Req ID 2301 - Posted 05/25/2018 - Professional	<input type="button" value="Select Action"/>
<b>Technician - Electronics</b> Req ID 2002 - Posted 05/16/2018 - Skilled trades/Semi-Skilled Trades	<input type="button" value="Select Action"/>
<b>Electrical - Maintenance Planner</b> Req ID 1881 - Posted 05/11/2018 - Professional	<input type="button" value="Select Action"/>
<b>Welder</b> Req ID 2022 - Posted 05/01/2018 - Skilled trades/Semi-Skilled Trades	<input type="button" value="Select Action"/>
<b>Fleet Vehicles and Equipment Advisor / Conseiller(ère), flotte automobile et équipements</b> Req ID 2221 - Posted 04/17/2018 - Skilled trades/Semi-Skilled Trades	<input type="button" value="Select Action"/>

# Stakeholder Engagement

As a steward of the St. Lawrence Seaway, the Corporation recognizes that 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.



Ship in Seaway channel near Summerstown, Ontario

## GREEN MARINE

The Corporation is an active member and proponent of Green Marine, a world leading environmental performance measurement program for the marine industry. The program encourages ports, terminals and carriers across North America to adopt best practices in terms of managing their environmental footprint. Subject to independent audit, 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, dry bulk handling and storage, stewardship of community issues, environmental leadership, waste management, and underwater noise.

The Corporation aligns its scores with those of its U.S. counterpart, the Saint Lawrence Seaway Development Corporation (SLSDC), and provides results on an aggregated basis. The joint Green Marine assessment for 2017 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, and in the management of waste. Overall for 2017, the Seaway entities achieved an aggregated score of 4.5 out of a maximum of 5, an increase from the 4.3 score achieved in 2016.

During 2017, the Corporation saw an increase in the volumes of organic waste collected by the community waste bins in its offices, with the objective of taking a lead in this activity, well in advance of the mandatory requirement established by the Province of Quebec for the year 2020.

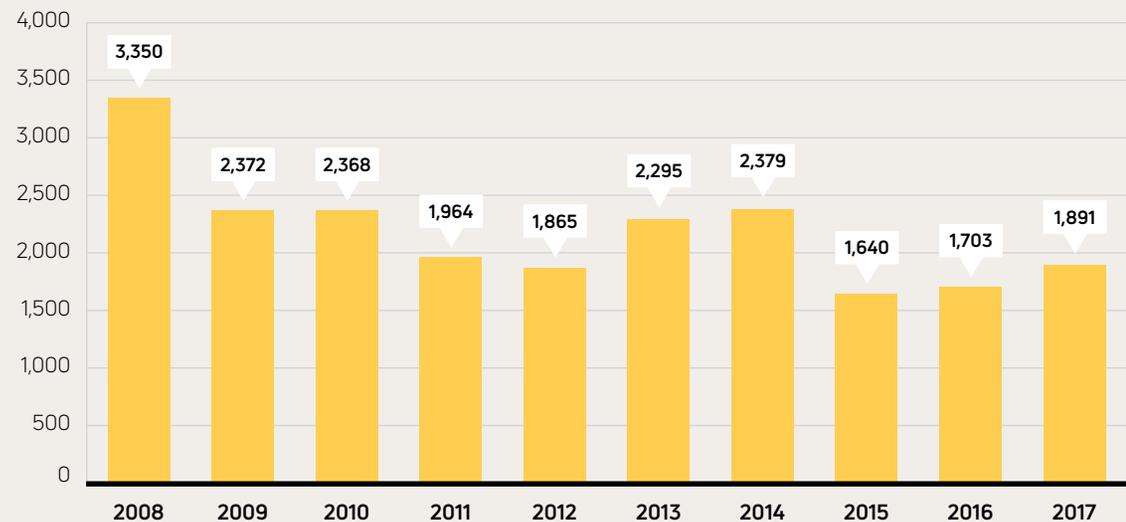
## GREENHOUSE GAS EMISSIONS

Over the last three years, the Corporation achieved a 45% reduction in its overall level of GHG emissions, when measured against emissions generated during the 2003–2005 baseline period. Even though the Corporation's 1,891 metric tonnes of emissions make up a minuscule portion of the Canadian transportation sector's total of 173,000,000 metric tonnes equivalent CO<sub>2</sub>, the Corporation remains committed to continuing to lower its emissions. As part of its GHG reduction plan, the Corporation has provided three charging stations for electric vehicles located at its offices in St. Lambert, Brossard, and Beauharnois, which can be used to recharge private vehicles owned by its employees.

In 2017, the Corporation's greenhouse gas (GHG) emissions were the equivalent of 1,891 tonnes of CO<sub>2</sub>, an 11% increase when compared to the 1,703 tonnes of CO<sub>2</sub> generated in 2016. This increase is principally due to colder weather conditions encountered during the closing of the 2017 navigation season, which forced heavier use of equipment designed to prevent the formation of ice in Seaway locks, resulting in more energy being consumed.

### SLSMC GREENHOUSE GAS EMISSIONS

Tonne equivalent CO<sub>2</sub>



## ENVIRONMENTAL MANAGEMENT SYSTEM

As part of its continuous improvement process, the Corporation continued aligning its Environmental Management System (EMS) with the ISO 14001:2015 Standard, and has now implemented 75% of its EMS work methods and forms. The objective remains to deploy 100% of the EMS by the end of fiscal 2019/20. Internal and external audits of the EMS are scheduled to begin in 2018/19.

## SUPPORTING OUR COMMUNITIES

In 2017, a total of almost \$130,000 was pledged to various United Way campaigns in Quebec and Ontario, through donations from employees matched by funds by the Corporation.

Niagara Section employees once again participated in Port Colborne's annual Canal Days Marine Heritage Festival. Employees welcomed visitors to the Corporation's tent, handing out Seaway literature and answering questions.

Niagara Section employees were also active in a number of other events, including:

- Port Colborne Safety Awareness Day and Bicycle Rodeo
- Take Our Kids to Work Day
- Port Colborne's Top Hat Ceremony/Canal Opening at Lock 8

Within the Seaway's MLO Section, the Corporation's employees continued to strengthen their relationship with local residents along the Seaway. Employees once again staffed a booth at the 2018 Montreal Boat and Water Sports Show, a major annual event for boating enthusiasts in Quebec. Employees answered visitors' questions about boating within the Seaway, including questions concerning best safety practices and lock schedules for pleasure craft.



Seaway tent at Port Colborne Canal Days Marine Heritage Festival

Other events within the MLO Section included:

- Working with the community of Iroquois, Ontario, to facilitate various events at the Iroquois Lock's publicly accessible grounds and viewing area, including the "Ride for Dad," the "Golden Gears Car Show," and Canada Day festivities.
- The Corporation supported the Canadian Coast Guard Auxiliary, whose purpose is to promote boating safety and take part in water search and rescue activities. This relationship serves to ensure compliance with Seaway regulations by raising awareness and educating recreational boaters as they travel on the South Shore Canal. Part of the support consisted of \$3,000 in donated gasoline to the Auxiliary.

On July 2, 2017, the Corporation assisted some 6,000 cyclists in crossing the Côte Ste. Catherine Lock bridge. The cyclists were riding La Boucle (the loop), a 135-kilometre segment that forms an integral part of the Grand Défi Pierre Lavoie health and fitness challenge.

## SERVING AS AMBASSADOR FOR THE SEAWAY

Within its mandate to foster strong relations with external stakeholders, the Corporation continually seeks opportunities to reinforce the value of the Seaway and the marine mode of transportation.

Over the course of the year, the Corporation continued to engage stakeholders by participating in a wide range of activities, including the sponsorship of the St. Lawrence River Institute's Annual Conference held in Cornwall (Ontario) in cooperation with its U.S. counterpart, the Saint Lawrence Seaway Development Corporation. At the conference, a wide range of issues were examined, pertaining to the St. Lawrence River and its ecosystem.

In addition, the Corporation provided support to the Quebec-based "Comité ZIP du Haut St-Laurent" as part of their 12<sup>th</sup> annual round of summer activities. This organization works for the protection, rehabilitation, and enhancement of the St. Lawrence River. The Corporation also continues to work closely with the Quebec City based SODES (St. Lawrence Economic Development Council) in supporting a number of public information initiatives concerning the benefits of marine transportation on the St. Lawrence River.

At the Iroquois Lock, a display was installed to explain to the public the purpose of a nesting platform that the Corporation erected for ospreys. This initiative underscores the Corporation's commitment to sustainable development, and serves to give visitors some insight into the practical steps that are undertaken on an annual basis to ensure that marine transportation can co-exist within the wildlife habitat that is prevalent along the waterway.



Osprey nesting platform high above the Iroquois Lock



Display board explaining the purpose of the nesting platform

# Financial Sustainability

The results for 2017/18 cover  
the period April 1, 2017  
to March 31, 2018

The comparative numbers reflect  
the same time span for the  
preceding fiscal years.



Ship transiting Welland Canal Lock 8 in Port Colborne

FINANCIAL HIGHLIGHTS	2017/2018	2016/2017	2015/2016
Full-time equivalents (FTE)	524	543	564
	('000s)		
<b>Revenue</b>			
Tolls	\$ 75,073	\$ 65,382	\$ 66,377
Other	3,757	3,617	3,868
<b>Total revenue</b>	<b>78,830</b>	<b>68,999</b>	<b>70,245</b>
<b>Manageable expenses</b>			
Salaries and benefits*	65,137	68,024	73,208
Other**	15,074	12,276	13,216
Employee Future Benefits (Non-cash)	(20,180)	(20,780)	(23,324)
<b>Total manageable expenses</b>	<b>60,031</b>	<b>59,520</b>	<b>63,100</b>
<b>Excess of Revenue Over Manageable Expenses</b>	<b>\$ 18,799</b>	<b>\$ 9,479</b>	<b>\$ 7,145</b>
<b>Asset renewal expenses</b> ( <i>Investments in government owned assets</i> )			
Regular maintenance	\$ 10,641	\$ 9,664	\$ 8,681
Major maintenance***	55,295	92,697	105,888
Capital acquisitions	1,886	1,811	2,092
<b>Total asset renewal expenses</b>	<b>\$ 67,822</b>	<b>\$ 104,172</b>	<b>\$ 116,661</b>

\* Includes pension solvency deficit payments of \$9,803 (17/18), \$10,741 (16/17) and \$15,665 (15/16).

\*\* 2017/18 includes incremental costs of \$3,478 due to extraordinary closing costs and high water flows.

\*\*\* 2017/18 returned to more normal levels due to the completion of the tie-up wall and wind-down of the modernization projects.

# Corporate Governance

(As of March 31, 2018)

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;

steel and iron ore; 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 Armstrong**

Ontario Provincial Government

**Raymond Johnston**

Other Members

**Terence Bowles**

President and  
Chief Executive Officer

**Gerald Carter**

Québec Provincial Government

**Patrick Bushby**

Grain

**Tim Dool (Chair)**

Domestic Carriers

**David Muir**

Federal Government

**Georges Robichon**

International Carriers

**Bronko Jazvac**

Steel and Iron Ore



Seated (left to right): Robert Armstrong, Tim Dool, Terence Bowles, Gerald Carter  
Standing (left to right): Georges Robichon, Patrick Bushby, Raymond Johnston, Bronko Jazvac, David Muir

## CORPORATE GOVERNANCE

### OFFICERS

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

**Karen Dumoulin**  
Chief Financial Officer

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

## INDUSTRY MEMBERS 2017/18

### 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 Inc. (Canada)**  
Toronto, Ontario

### GRAIN

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

**G3 Canada Limited**  
Winnipeg, Manitoba

**Cargill Limited**  
Winnipeg, Manitoba

**Louis Dreyfus Company  
Canada ULC**  
Calgary, Alberta

**Richardson International Limited**  
Winnipeg, Manitoba

**Viterra Inc.**  
Regina, Saskatchewan

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## INTERNATIONAL CARRIERS

**Colley Motorships Ltd.**

Montréal, Québec

**Fednav International Ltd.**

Montréal, Québec

**Gresco Ltée**

Montréal, Québec

**Inchcape Shipping Services**

Dorval, Québec

**Lower St. Lawrence Ocean  
Agencies Ltd.**

Québec, Québec

**McLean Kennedy Inc.**

Halifax, Nova Scotia

**Montreal Marine Services Inc.**

Longueuil, Québec

**Navitrans Shipping Agencies  
(East) Inc.**

Laval, Québec

**Ramsey Greig & Co. Ltd.**

Québec, Québec

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

Montréal, Québec

## OTHER MEMBERS

**Lehigh Hanson Canada ULC**

Edmonton, Alberta

**K & S Windsor Salt Ltd.**

Pointe-Claire, Québec

**Lafarge Canada Inc.**

Mississauga, Ontario

**Redpath Sugar Ltd.**

Toronto, Ontario

**Suncor Energy Inc.**

Calgary, Alberta

## STEEL AND IRON ORE

**ArcelorMittal Dofasco Inc.**

Hamilton, Ontario

**Iron Ore Company of Canada**

Montréal, Québec

**Stelco Inc.**

Hamilton, Ontario