

# ***MOVING CARGO EFFICIENTLY***

**2012–2013 Corporate Summary**



The St. Lawrence  
Seaway Management  
Corporation

Corporation de Gestion  
de la Voie Maritime  
du Saint-Laurent

# THE GREAT LAKES/ SEAWAY SYSTEM

- Supports 227,000 jobs and \$35 billion in economic activity<sup>1</sup>
- Saves shippers \$3.6 billion in transportation costs<sup>2</sup>

MINNESOTA

Lake Superior

WISCONSIN

Lake Michigan

MICHIGAN

ILLINOIS

INDIANA

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.

<sup>1</sup> The Economic Impacts of the Great Lakes – St. Lawrence Seaway System, Martin Associates (October, 2011)  
Full Study at: [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com)

<sup>2</sup> Great Lakes Navigation System: Economic Strength to the Nation, U.S. Army Corps of Engineers (January 2009)







# MOVING CARGO EFFICIENTLY

## A VITAL NORTH AMERICAN TRADE ROUTE

The 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 west to the Welland Canal, the Seaway's locks enable ships to climb a total of 174 metres from "sea level" up to Lake Erie. Thirteen of the St. Lawrence Seaway's 15 locks are located in Canada and the remaining two are in the United States.

## MARINE TRANSPORTATION'S ENVIRONMENTAL ADVANTAGE

For many shippers, marine transportation is the most economical mode of moving freight. The new era of Seaway-sized ships currently being introduced can carry 30,000 metric tons of cargo per voyage, which is the equivalent of about 301 rail carloads or 964 semi-trailer truckloads.



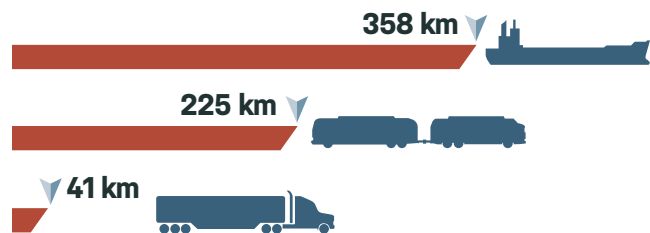
Based on the maximum carrying capacity of a Seaway-sized vessel

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

The marine industry has long championed its lead in energy efficiency. One enduring challenge in quantifying this lead was the lack of a study that compared state-of-the-art equipment across all of the transportation modes. To address this challenge, a coalition of industry stakeholders

sponsored a modal comparison study entitled "The Environmental and Social Impacts of Marine Transport".

The peer-reviewed study, which was released in February of 2013, confirms that marine transportation is the most fuel efficient means of moving cargo. Currently, marine is 14% more fuel efficient than rail. With \$1 billion of new Seaway purposed ships currently at various stages of delivery, the fleet is in the midst of expanding that lead substantially. Once fleet renewal has taken place, marine will enjoy a 59% advantage in fuel efficiency over rail.



Distance in kilometres one metric ton of cargo travels on 1 litre of fuel

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

Given their superior fuel efficiency, moving more cargo on ships provides an excellent means of lowering North America's greenhouse gas emissions. When compared to the state-of-the-art equipment employed by alternate modes of transportation, the new ships generate 38% less greenhouse gas emissions than rail and 88% less greenhouse gas emissions than trucks. The full text of the study can be found on [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com).

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# 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

### 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

### OPERATIONAL EXCELLENCE

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

### FINANCIAL SUSTAINABILITY

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

### HIGH PERFORMANCE WORKFORCE

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

# MISSION

We pass 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:

- 1** an excellent safety record;
- 2** a dedicated professional workforce that prides itself on providing excellent customer service;
- 3** high-quality traffic management, using automatic vessel identification and real-time tracking;
- 4** a reliable operation, with system availability consistently above 99.0%;
- 5** 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;
- 6** ISO 9001:2008 certification for the operation and maintenance of the Canadian sectors of the St. Lawrence Seaway;
- 7** 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;
- 8** 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***

*This year's annual report, entitled Moving Cargo Efficiently, serves to highlight that marine transportation is the most efficient means of moving cargo, in terms of both low fuel consumption and low greenhouse gas emissions. In concert with our carriers, who are investing over a billion dollars in new state-of-the-art ships, the Corporation is making excellent progress in becoming more efficient. The stage is being set for the St. Lawrence Seaway to grow and prosper for years to come.*

I am pleased to report that we continue to make good progress in building our business volume. Combined traffic in 2012 totalled 39 million tonnes, an increase of 4% or 1.5 million tonnes over 2011.

The increase in volume, combined with a shift in our cargo mix to goods charged a higher tariff per tonne, resulted in revenue increasing by 5.6% to reach \$70.2 million. Stringent cost control efforts resulted in total manageable costs of \$72.5 million. For 2013, we are forecasting a 2% increase in tonnage volume, which will bring us to about 40 million tonnes. Combined with a modest 3% increase in tolls, the first tariff increase since 2008, we anticipate that the higher volume of cargo will generate revenues that should enable the Corporation to cover all of its manageable costs in 2013 which, until the last few years, was the norm.



The St. Lawrence Seaway's existing locks and channels can comfortably handle 80 million tonnes of cargo volume per year. To ensure that Seaway assets are optimally put to use, we continue offering toll discounts for qualified cargo movements. Over the last five years, we have recorded 10.6 million tonnes of new cargo, thanks in part to these incentives. Given our ongoing market development efforts, we are optimistic of yet more to come.

To enable the executive team to maintain a sharper focus on our key objectives, the Seaway's senior management structure was realigned in January, 2013. Guy Yelle, previously Vice-President, Maisonneuve, was named Vice-President, Operations and has responsibility for operations in the Maisonneuve (Montreal/Lake Ontario) and Niagara Regions. Stephen Kwok, who was Vice-President, Niagara, is now Vice-President, Engineering and Technology, and has corporate-wide responsibilities in these areas. Finally, Jean Aubry-Morin who previously served as Vice-President, Corporate Sustainability, was named Vice-President, External Relations, granting him the opportunity to spend more time working with stakeholders.

To ensure that Seaway locks and structures remain a highly reliable and cost effective means of moving cargo, the Government of Canada is investing hundreds of millions of dollars in asset renewal. Over the last five years, \$265 million in Seaway asset renewal projects were carried out. Over the next five years, we will be making additional investments of almost \$400 million. These efforts are yielding tangible dividends. In 2012, the St. Lawrence Seaway posted a 99.7% system availability performance.

The Corporation remains steadfast in its commitment to safety in the workplace. During the period of April 1, 2012 to March 31, 2013, the Corporation reported a frequency of 0.4 accidents per 100 persons per year. These results show a significant improvement over the previous

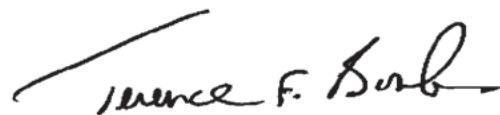
year's results of 1.7 accidents per 100 persons per year, and illustrates our staff's strong commitment to making safety a daily priority.

To bolster the Seaway's efficiency, and ultimately its competitiveness, hands-free mooring (HFM) technology was developed and tested in the Welland Canal over the last several years. The experience gained from this effort has contributed to the development of an enhanced design for the HFM units, which secure ships during a lock transit by means of vacuum pads. Testing of this new design will take place at Lock 4 (Beauharnois, Quebec) this year. Given a positive outcome, we will then be ready to start installing HFM technology at all high-lift locks.

The opening of the Seaway's 55<sup>th</sup> navigation season on March 22, 2013, ushered in a new era for domestic shipping, with Canada Steamship Lines' new *Baie St. Paul* serving as the opening vessel in the St. Lambert Lock. Canada Steamship Lines ranks prominently among a number of Canadian shipowners who are committing over a billion dollars to build new state-of-the-art ships, testifying to the confidence these firms have in the future of the Great Lakes/Seaway System.

This year, to enhance the Corporation's sustainability, we have adopted a Corporate Summary format for our annual report. This format provides a more concise report that addresses all of our stakeholders' key interests. A full copy of the St. Lawrence Seaway Management Corporation's audited financial statements is available upon request.

I trust that you will find this report both informative and interesting.



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



# ***BUSINESS GROWTH***

Credit: Fednav (Roger Mastroianni)

*Pronounced changes in economic conditions over the past few years have resulted in significant shifts in the movement of cargoes within the Seaway. Bulk cargoes, such as iron ore and grain, remain staples of Seaway tonnage. However, market conditions have proven to be volatile, triggering new patterns in trade movements, including the export of both coal and iron ore to overseas markets. In serving as a critical linchpin connecting the Great Lakes to the Atlantic Ocean and markets abroad, the St. Lawrence Seaway continues to play an essential role within the logistics chain for thousands of businesses.*

## **TRAFFIC RESULTS**

In 2012, combined Seaway traffic totalled 39 million tonnes, an increase of 4% or 1.5 million tonnes over 2011. This growth was largely attributable to new export trade patterns for both iron ore and coal.

Total revenue in 2012 reached \$70.2 million, an increase of \$3.7 million (or 5.6%) over the 2011 results. The increase was due, in part, to new traffic patterns with cargoes transiting all Seaway locks in the Niagara and Montreal/Lake Ontario (MLO) Regions. These new cargo movements, principally exports of coal and iron ore, played a key role in driving toll revenue higher. As well, a shift in the cargo mix to commodities that are assessed at a higher tariff per tonne also contributed to the increase in revenue.

## **2012 NEW BUSINESS RESULTS**

The Corporation is continuing to develop new markets to spur growth in the volume of cargo transiting the Seaway's locks. Opportunities include attracting traditional cargoes that are currently moving via other gateways, and working within the logistics chain to forge new services that will result in the movement of unconventional cargoes within the Great Lakes/Seaway System.

The New Business Incentive program, which offers toll reductions 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 111 applications in 2012, of which 96 were approved.

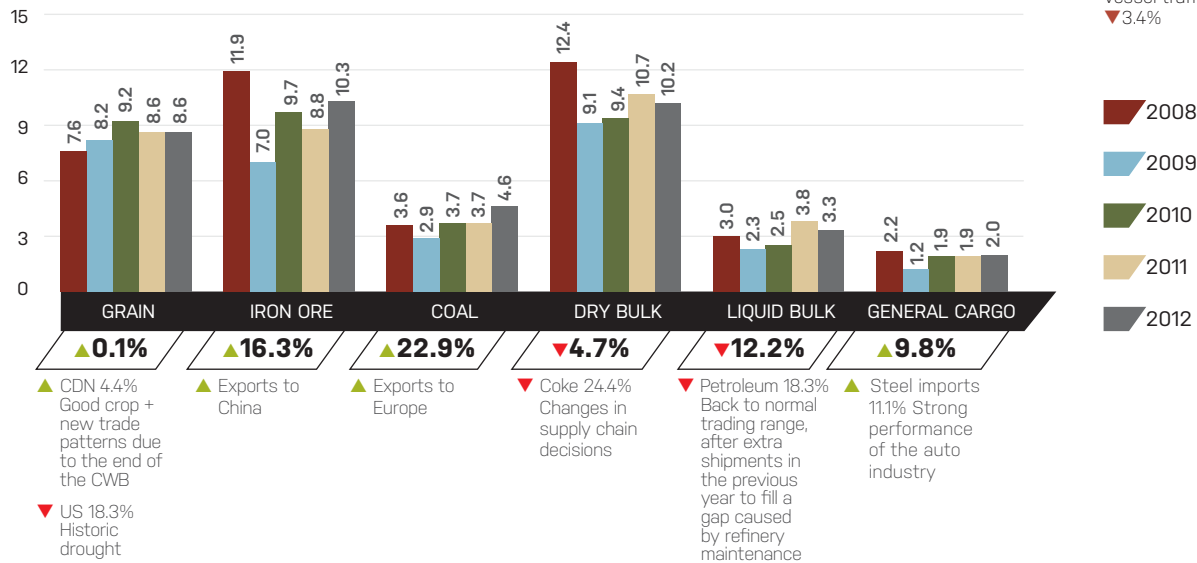
A total of 365 movements of new business were recorded in 2012, resulting in volumes of 3.2 million tonnes (led primarily by shipments of coal for export).

## TRAFFIC RESULTS COMBINED

(total cargo in millions of tonnes)

Total tonnage: 39.1 MT  
▲4.0%

Vessel traffic: 4,083  
▼3.4%

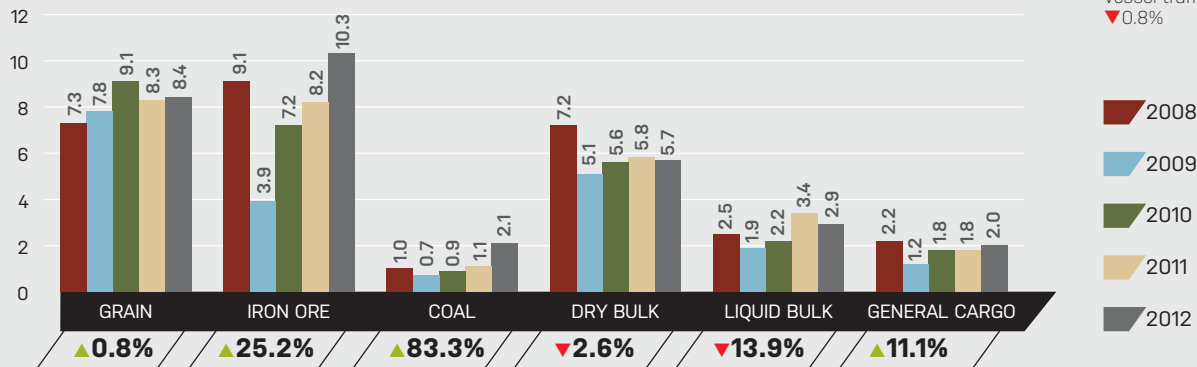


## TRAFFIC RESULTS MLO REGION

(total cargo in millions of tonnes)

Total tonnage: 31.4 MT  
▲9.3%

Vessel traffic: 2,975  
▼0.8%

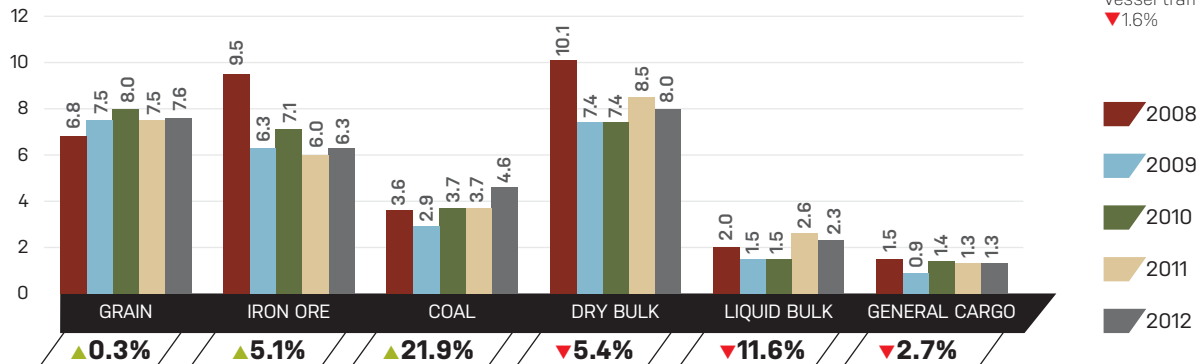


## TRAFFIC RESULTS NIAGARA REGION (WELLAND CANAL)

(total cargo in millions of tonnes)

Total tonnage: 30.0 MT  
▲1.2%

Vessel traffic: 3,243  
▼1.6%





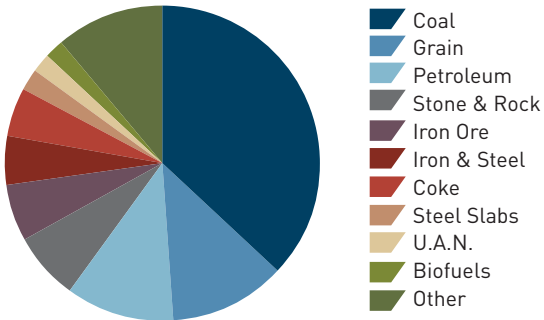
In 2012, revenue of \$5.1 million was associated to the New Business Incentive program, which represents 7.7% of the Corporation's toll revenue. Over the past five years, the Corporation gained \$17.6 million in revenue through this program, which represents 5.7% of the Corporation's cumulative toll revenue. The "New Business Revenue" chart provided below summarizes the Corporation's performance in attracting new cargo movements to the Seaway.

### SEAWAY TOLLS AND INCENTIVES

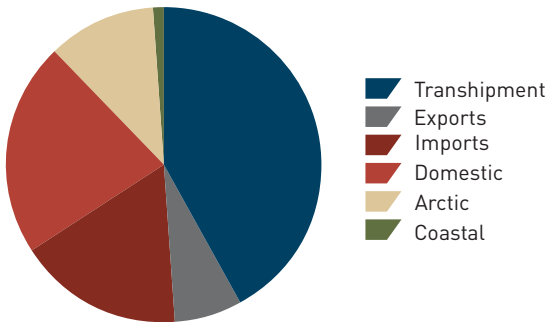
After freezing toll rates for five consecutive years, tariffs for the 2013 navigation season increased a modest 3%. To maintain the positive momentum generated by its market development initiatives, the Corporation continues to offer Seaway users a number of toll incentive programs. The New Business Incentive and the Service Incentive programs continue to generate interest from both current and potential new customers. Due to the difficult economic conditions, interest in the Volume Incentive Program has been very modest. However, inquiries concerning this program have recently increased, as the economic outlook continues to improve.

### New Business Results

Total tonnage: 3.2 MT  
Shipments: 365

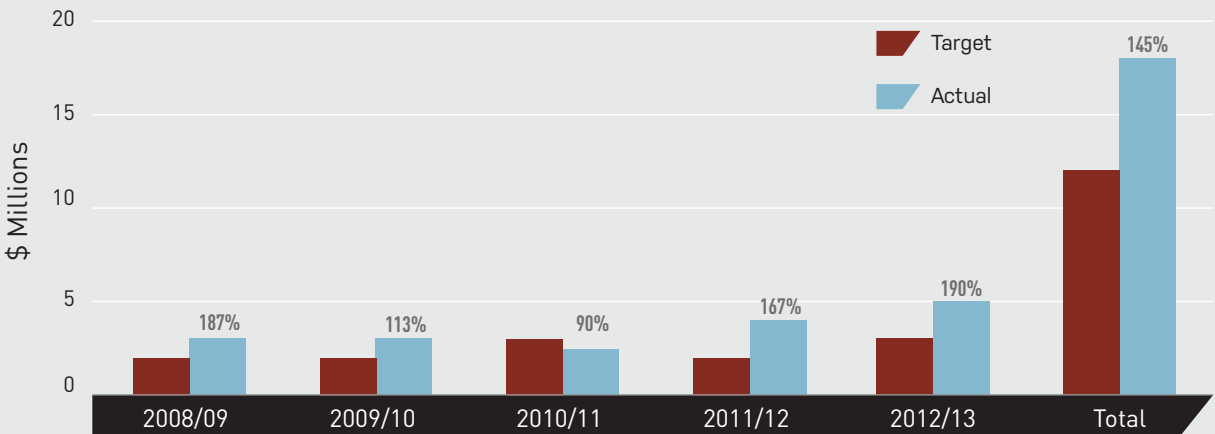


By Commodity (tonnes)



By Trade (%)

### New Business Revenue





Seaway Trade Mission delegates at the Port of Ghent.

(Left to right) Bruce Hodgson, Director, Market Development, The St. Lawrence Seaway Management Corporation; Hendrik Jan van Engelen, Commercial Manager, Port of Ghent; Craig Middlebrook, Acting Administrator, Saint Lawrence Seaway Development Corporation; Danny Vancoppenolle, Commercial Manager, Port of Ghent

## HIGHWAY H<sub>2</sub>O BUSINESS DEVELOPMENT ACTIVITIES

"Highway H<sub>2</sub>O" is a business development initiative undertaken by an alliance of Great Lakes/Seaway System transportation stakeholders. Within this alliance, the Corporation serves in a leadership role, working to create a greater awareness of the System's merits and generate new cargo movements.

Our advertising campaign continues to utilize the "GO H<sub>2</sub>O" theme. Advertisements employ specific cargo themes highlighting the Seaway's strengths in facilitating the movement of bulk and general cargoes. As well, advertisements featuring the Corporation's various toll incentive programs have been added to the promotional mix.

The Highway H<sub>2</sub>O Twitter account, @hwyh2o, has generated a considerable following. The Twitter account has proven to be an effective outreach tool to inform potential customers, the general public and Highway H<sub>2</sub>O members of market development activities. Tweets serve to direct followers to the Highway H<sub>2</sub>O website where more in-depth information can be found pertaining to the System. Adding Instagram, a photo enhancing application, has also provided a means of posting a variety of images promoting commercial shipping on the Great Lakes/Seaway System.

In May 2012, a Seaway Trade Mission visited Antwerp, Belgium, to attend the Breakbulk Europe Exhibition. The delegation consisted of 15 stakeholders from the Great Lakes/Seaway System. Delegates attended presentations from AEBIOM (European Biomass Association), EURACOAL, U.S. Wheat Associates and Spliethoff. The presentations offered insights into the challenges

and opportunities these organisations face when conducting business within the Great Lakes/Seaway System. Additionally, delegates toured the Port of Ghent and the Fednav Terminal at the Port of Antwerp.

On September 12, 2012, a biomass workshop took place in Toronto, with approximately 30 attendees taking part. Backed by the support of the Ontario Ministry of Natural Resources, the workshop brought biomass suppliers, carriers, and ports together to explore what is needed in terms of port infrastructure on the Seaway to facilitate the movement of biomass cargoes.

The 8<sup>th</sup> annual Highway H<sub>2</sub>O Conference took place in Toronto from November 13–14, 2012. The theme of the conference was "System Diversification: Unlocking New Growth". The full two-day conference examined system diversification from three perspectives: cargo commodities and routes; vessel service opportunities; and operational development. The 136 delegates heard from a number of speakers who outlined some of the opportunities available within the Great Lakes/Seaway System.

The St. Lawrence Seaway Management Corporation and the U.S. Saint Lawrence Seaway Development Corporation Market Development teams continue to work together in executing a joint marketing plan to promote the System. The joint marketing plan acts as a tool to streamline and coordinate goals and objectives on an annual basis for the promotion of shipping on Highway H<sub>2</sub>O (Great Lakes/Seaway System).



Robert Lemm of Aerolift Technologies delivers a presentation on vacuum cargo handling at the Highway H<sub>2</sub>O conference. Mr. Lemm travelled from The Netherlands to share insights on how this innovative technology can benefit Great Lakes/Seaway System stakeholders.

## Location, Location, Location

**Highway H<sub>2</sub>O** - your gateway to the heartland of North America. Close proximity to manufacturers and their customer base makes **Highway H<sub>2</sub>O** the logical choice for moving raw materials and manufactured products in a timely and efficient manner. Over 150 million potential customers live within an 8 hour drive of the ports located along our marine highway. The Great Lakes St. Lawrence Seaway System continues to meet customer needs for reliable and cost-effective service. We have introduced a more competitive incentive program for new and existing cargo, demonstrating our commitment to offer our customers the best value for their transportation dollars. To learn how your company can benefit, please visit [www.hwyh2o.com](http://www.hwyh2o.com).



Strategic Location



Reliable



Cost Effective

***Water way to go!***

[www.hwyh2o.com](http://www.hwyh2o.com)



The St. Lawrence  
Seaway Management  
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Corporation de Gestion  
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du Saint-Laurent

GO





# OPERATIONAL EXCELLENCE

*The Seaway excels in moving cargo efficiently, by passing ships through a safe and reliable waterway, in a cost-effective manner. The Corporation continues to invest in asset renewal, and leverage technology, in order to enhance the competitiveness of marine transportation.*

## WORKPLACE HEALTH AND SAFETY

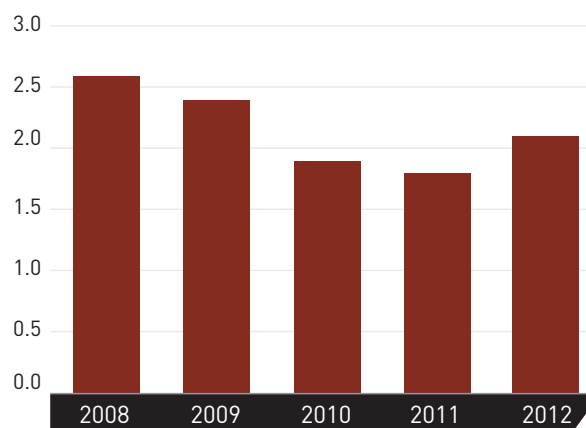
The Corporation is committed to safety in the workplace. During the period from April 1, 2012, to March 31, 2013, the Corporation reported a frequency of 0.4 accidents and 6.2 days of lost time per 100 persons per year. These results show a significant improvement over the 2012 results of 1.7 accidents and 31 days of time lost per 100 persons per year.

## MARINE SAFETY AND SECURITY

During the 2012 navigation season, there were 13 vessel incidents where vessel damage was incurred, equating to 2.1 incidents per 1000 transits. None of the incidents resulted in any pollution or injuries. Marine transportation continues to be the safest and most reliable mode of moving cargo.

## Vessel Incident Rate

(Number of Incidents per 1,000 Transits)



## EMERGENCY PREPAREDNESS

Throughout 2012, the Corporation continued its emphasis on emergency preparedness. Employees gained knowledge and insight by participating in a number of emergency training exercises.

- On September 14, 2012, MLO Region emergency response team members participated in a training session. Each member had to review his/her role and responsibilities in terms of responding to the challenges that the scenario brought to light.
- On October 31, 2012, the Niagara Region conducted an internal "table top" exercise which featured a scenario under which a vessel made contact with the lower end

gates in a lock, resulting in extensive damage to the vessel and to Seaway infrastructure. Under this scenario, the exercise explored what may occur if navigation was to be suspended for an extensive period of time. The exercise concluded with a debriefing focusing on the lessons learned.

- In March, 2013, operations personnel from the MLO Region participated in various emergency scenarios at the traffic control centre in preparation for the opening of the navigation season.

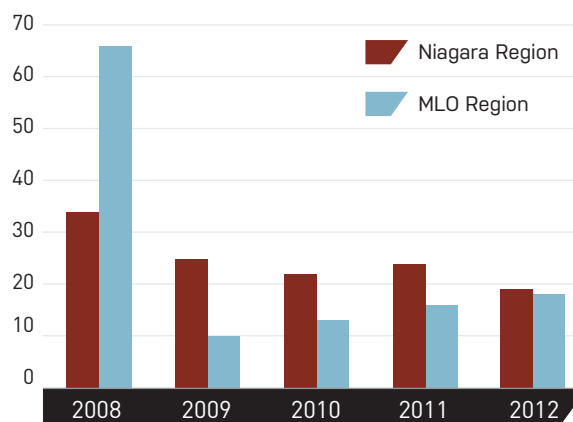
As part of ongoing improvements to its emergency management program, the Corporation conducted an emergency preparedness status review in December. Recommendations arising from the review will be addressed in 2013.

## RELIABLE INFRASTRUCTURE

Maintaining a safe, reliable and cost-effective transportation system is vital to the Seaway's ability to facilitate the efficient movement of cargo. The 2012 navigation season demonstrated once again the Seaway's outstanding reliability. Both system availability and system reliability exceeded their target levels.

## Seaway Delays per Transit

(Target since 2007: less than 20 minutes per transit)



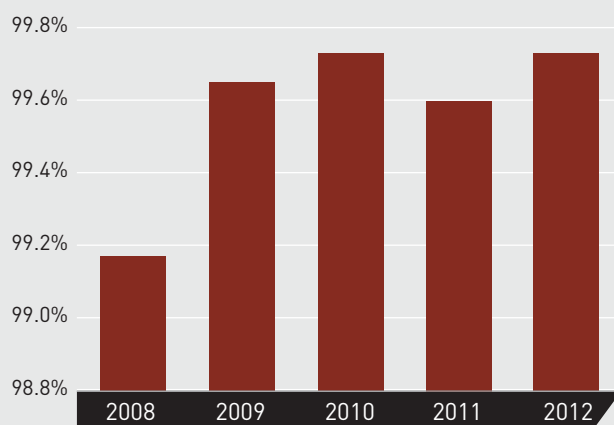
The Corporation kept average delays attributable to its operations under the target of 20 minutes per vessel transit, in both Regions.

## ASSET RENEWAL

The Corporation completed various asset renewal projects over the past year, marking the final year of its 2008–2013 Asset Renewal Plan which encompassed a total of \$265 million in investments.

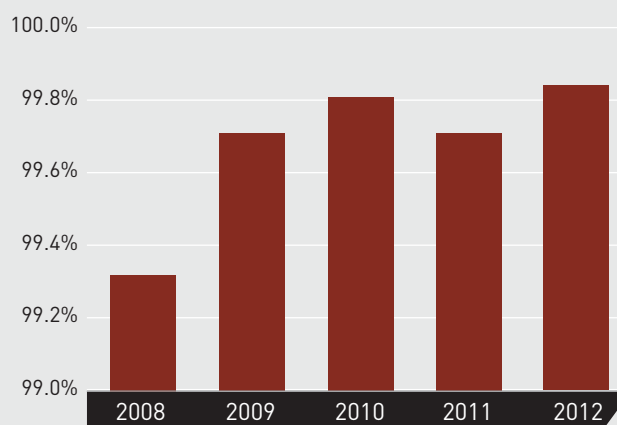
## System Availability

(Target 99.00%)



## System Reliability

(Target 99.75%)





Cutting of slots in the lock wall at the upper Beauharnois Lock, in preparation for the installation of hands-free mooring units



Repair of sector gates at Lock 7 (Welland Canal)

Major projects over the past year included:

#### MONTREAL/LAKE ONTARIO REGION

- Replacement of fender anchors and concrete repairs on the approach wall above the St. Lambert Lock
- Replacement of drives and motors at the St. Lambert Lock
- Reconditioning of the de-watering pumps at the Côte St. Catherine Lock
- Replacement of motors and starters at Bridge 10
- Replacement of valve and upper gate machinery covers at the lower Beauharnois Lock
- Refurbishment of valve 1 at the upper Beauharnois Lock and repairs to the concrete in the culvert
- Refurbishment of valve 3 sliding guides at the upper Beauharnois Lock and repairs to the concrete
- Cutting of slots in the lock wall at the upper Beauharnois Lock, in preparation for the installation of hands-free mooring units
- Replacement of the generator and power supply cables at the Iroquois Lock

- Installation of panels in preparation for the future replacement of drives and motors at the Iroquois Lock

#### NIAGARA REGION (WELLAND CANAL)

- Rehabilitation of Lock 1 dewatering pump #3 and sump
- Replacement of the Lock 2 lower west timber tie-up wall
- Repair of tie-up wall piles in Reaches 1, 2 and 3
- Stabilization of the retaining wall at Weir 3
- Rehabilitation of mitre gate quoins, mitres and hinges at Lock 4 (gates 1 and 2)
- Rehabilitation of valves 3 to 6, side seals and trunnions at Lock 5
- Rehabilitation of mechanical drive machinery at Weir 7
- Repair of sector gates at Lock 7
- Replacement of concrete deck at Bridge 11
- Replacement of intake valve bulkheads at Lock 8
- Repair of wharves 12, 16 and 18.1



## AGGREGATE ALKALI REACTION (AAR)

Alkali-Aggregate Reaction (AAR) is a chemical process that causes swelling in concrete over an extended period of time. The concrete at the St. Lambert, Côte St. Catherine, Lower Beauharnois and Upper Beauharnois Locks is affected by AAR. The swelling leads to two main types of problems: progressive loss of lateral clearance in the locks; and progressive misalignment of heavy mechanical equipment such as lock valves and lock gates.

To correct misalignment of mechanical equipment due to swelling of the concrete, remedial programs have been in place for the past decade. In 2012, repairs were completed to concrete in the culverts at the Côte St. Catherine Lock and at the Lower Beauharnois Lock to ensure that valves can continue operating reliably. The sliding guides for some valves have also been replaced with a new design, which permits a greater range in adjustments, in order to compensate for concrete swelling. This type of innovation will extend the interval of time before any subsequent intervention is required.

The Corporation also conducted mock tests in order to model two monoliths at the Côte St. Catherine Lock. The tests served to gather information on what construction techniques can be used to rehabilitate lock structures that are subject to swelling. In addition to routine surveys of the lock walls to monitor progression in the swelling of the concrete, a new three-dimensional scanning technique was used over the past year. The enhanced insight provided by this technique will provide engineers with a means of making critical decisions concerning the type, scope and timing of required rehabilitation work.

## STRATEGIC INITIATIVES

### DRAFT INFORMATION SYSTEM

On May 14, 2012, Canada Steamship Lines' *MV Atlantic Huron* transited the Seaway at a draft of 26'9" (3" above the published maximum draft) thanks to the use of a Draft Information System (DIS) on-board. This achievement represented the culmination of six years of research, development and testing.

DIS represents a significant technological breakthrough, and provides vessels with a means to safely make optimal use of the available water column. During the 2012 navigation season, 34 transits in the MLO Region and 26 transits in the Niagara Region took place by vessels benefitting from the extra 3" of draft permitted for vessels with DIS on-board.

Implementation of DIS has been well publicized in several marine industry magazines and journals. Presentations on DIS were also made to the national e-navigation committee and at the Mariner's Workshop in Vancouver.

### WATER LEVEL AND DRAFT MANAGEMENT

Due to low water levels triggered by minimal precipitation in 2012, the Corporation carefully monitored conditions, and implemented various strategies to optimize the use of the available water column.

- On June 25<sup>th</sup>, low water levels on Lake St. Louis triggered a reduction in the maximum permissible draft in the MLO Region to 26'3" for certain types of vessels, which remained in effect until closing.
- In September, the water level on Lake Ontario reached its lowest recorded point since 1964, for that stage in the season. Consequently, transit restrictions were imposed in October on vessels having a draft exceeding 25'7", for vessels in Port Weller Harbour.

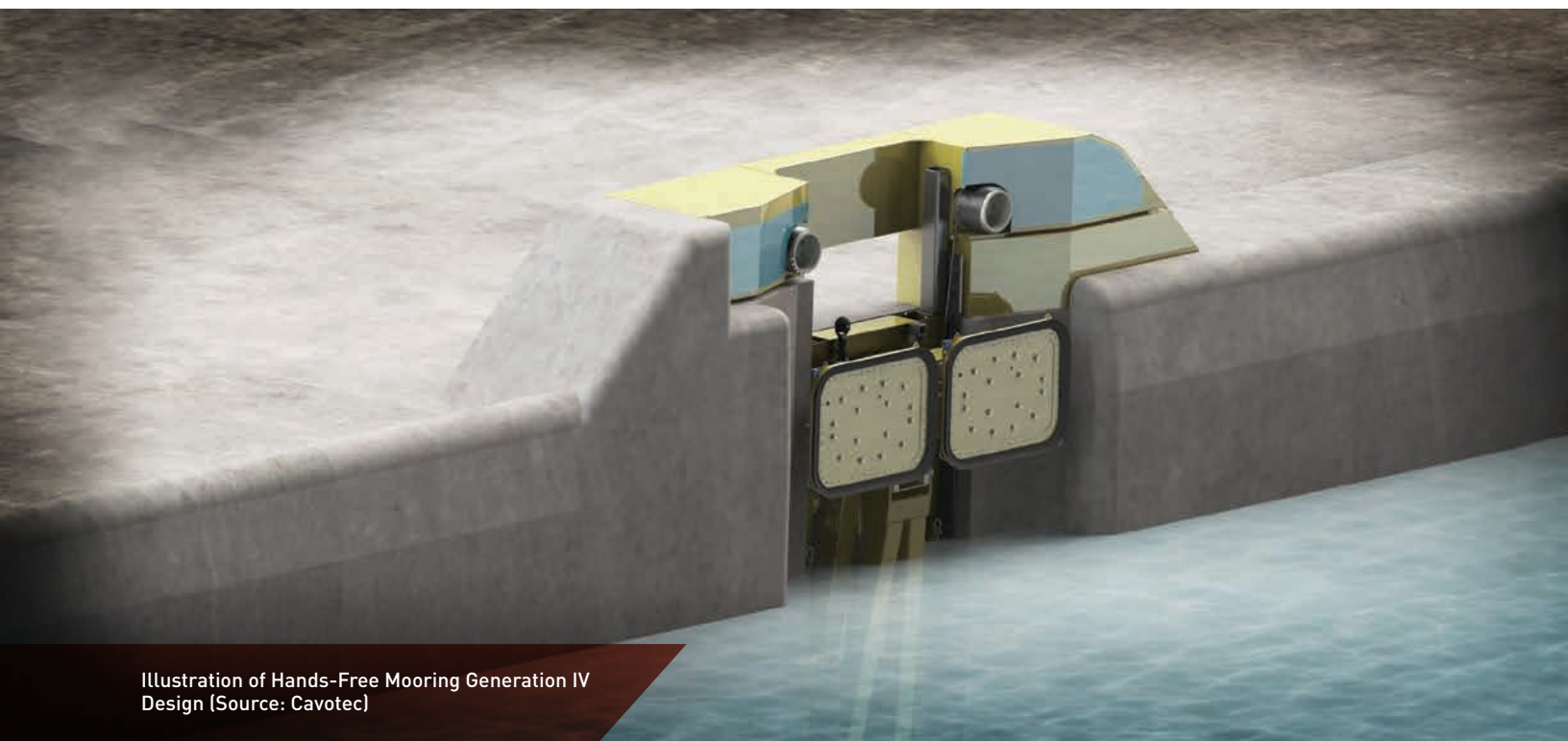


Illustration of Hands-Free Mooring Generation IV Design (Source: Cavotec)

- In November, a 3" draft reduction was announced for vessels transiting both the Niagara Region and the MLO Region, for implementation on December 11<sup>th</sup>. However, sufficient precipitation throughout December allowed the draft reductions to be repeatedly postponed, and they were eventually cancelled on December 20<sup>th</sup>.

Throughout the entire navigation season, the International St. Lawrence River Board of Control supported a minimum water level of 67'7" (20.6m) on Lake St. Louis. This critical level of support prevented the need for any further reduction in draft in the MLO Region.

Given the combination of the measures outlined above, in concert with the introduction of DIS, the Corporation was successful in minimizing the impact of lower water levels on navigation. In 2012, despite relatively low water levels, some 4,083 ship transits moved 39 million tonnes of cargo within the Seaway, compared to a "wetter" 2011, in which 4,227 ship transits moved 37.5 million tonnes of cargo. In 2013, the Corporation will continue to actively monitor conditions and make optimal use of the available water levels.

## HANDS-FREE MOORING

In 2012, the design details for the Generation IV Hands-Free Mooring (HFM) system were finalized. Installation of three "Gen IV" double pad units at the upper Beauharnois Lock will begin this spring, and the final phase of testing is set to take place this summer. The Gen IV units have full vertical mobility, which will enable them to be positioned to avoid a ship's wear bars. The units can also reach 2 metres into the lock, in order to grab hold of vessels and position them in the lock, while holding them off the concrete wall (to prevent the hull from scraping the lock's concrete wall during transit).

## VESSEL SELF-SPOTTING

The new pre-scan sequence for vessel self-spotting has proven to be very effective in measuring a vessel's position throughout a lockage. In 2013, the qualification of tug and barge combinations for this process will be pursued.

Full deployment of the new pre-scan sequence is expected to be completed in the MLO Region during 2013. In the Niagara Region, work is underway to install additional scanners at Locks 4, 5 and 6 of the Welland Canal, and testing of the pre-scan sequence will continue during 2013.

## INFORMATION SECURITY

The Information Technology Security Group continued to implement monitoring, detection and prevention measures to ensure the security of the Corporation's electronic information. The Corporation is aiming to protect its assets through the use of both state-of-the-art intrusion prevention technology and the training of its employees to ensure that safe practices are adhered to during day-to-day operations.

## BALLAST MANAGEMENT

In 2012, 100% of vessel transits originating from outside the Exclusive Economic Zone and bound for the Great Lakes/Seaway System (386 transits in total) received ballast management exams covering all of their ballast water tanks. As a result of pre-arrival screenings, 11 vessels altered course to enable satisfactory ballast water exchange.

All ballast water reporting forms were screened to assess ballast water history, compliance, voyage information and proposed discharge location. Of 6,974 assessments, 6,841 tanks complied with ballast water regulations and 133 tanks (from 36 vessel transits) were issued letters of retention. These letters order vessels to retain all ballast water (from tanks failing compliance) onboard until the vessels exit the Great Lakes/Seaway System.

Subsequent verification efforts indicated that no non-compliant ballast water was discharged into the Great Lakes/Seaway System. For the 2013 navigation season, a continuation in the high rate of compliance is anticipated.

## LENGTH OF NAVIGATION SEASON

The length of the 2012 navigation season fell within the norm experienced during the last decade. The St. Lawrence Seaway opened its 54<sup>th</sup> navigation season on March 22, 2012. The system remained open for 283 days in the MLO Region and for 285 days in the Niagara Region (Welland Canal). The last vessel to transit the MLO section exited the Iroquois lock on December 29<sup>th</sup>. The same vessel was the last to transit the Welland Canal, exiting Lock 8 on December 31<sup>st</sup>.





# HIGH PERFORMANCE WORKFORCE

*An engaged, skilled and versatile workforce that is accountable is essential to accomplishing the task of moving cargo efficiently. To this end, the Corporation ensures that its workforce has both the required tools and an environment conducive to being highly productive.*

## **REINFORCING PERFORMANCE MANAGEMENT**

The Corporation implemented a new organizational structure to support each objective associated with its five strategic pillars, including a High Performance Workforce. These changes provide a greater level of role clarity and create a synergy by bringing together groups with common goals and skills needed to achieve the Corporation's objectives for a sustainable future.

In addition, through training and the introduction of new procedures, the Corporation supported its leaders in people management and was able

to increase accountability and transparency. Building on the previous year's efforts, the Corporation continued to strengthen its succession plan by investing in the development of future leaders through training and leadership development opportunities.

## **SUPPORTING EMPLOYEE WELLNESS**

The Corporation recognizes the important role that workplace wellness programs play in increasing employee engagement, attendance and productivity. Throughout the year, a number of wellness initiatives were offered to employees. In addition, the Corporation coordinated a month-long wellness campaign to coincide with Canada's Healthy Workplace Month.

Through these efforts, and by encouraging both employee participation and management commitment, the Corporation has created a supportive culture that fosters healthier lifestyles. In recognition of these efforts, the Niagara Region was the recipient of the 2012 Healthy Living Niagara awards in the "Diamond" and "Platinum" categories. The awards program recognizes work environments that encourage, support and sustain healthy choices. The

Cornwall Head Office received 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

Employee engagement is a critical driver of business success in today's competitive marketplace. In 2010, the Bob Swenor Memorial Award was established in memory of the Corporation's first Chairman, to recognize a Seaway employee who embodies the Corporation's values. The recipient for 2012 was Shirley Bissonnette. Shirley joined the Seaway in 2003 and serves as the Payroll and Pension Officer at Head Office in Cornwall, Ontario. The award presentation was made in June, 2012, at which time Shirley was recognized for her engagement, dedication and overall contributions to her co-workers, her community and to the St. Lawrence Seaway.

## SUPPORTING EMPLOYMENT EQUITY

In the 2012 Employment Equity Status Report, the Corporation was assessed and its performance compared to other employers subject to the Employment Equity Act. The Corporation was deemed to have improved its overall Employment Equity results, and was rated as "above average" when compared to employers in the marine transportation sector.

The overall representation of persons with disabilities was excellent, representing a level significantly above labour market availability. The Corporation also achieved results for women that are superior to those found in the marine transportation sector.



Additional progress is required in the "other designated groups"—particularly Aboriginal peoples. A review of the Corporation's Employment Equity Plan will be conducted this fiscal year, including a review of short and long-term goals, timetables, and strategies for eliminating barriers and for achieving appropriate representation in the four designated groups.





# 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.*

## **MARINE DELIVERS—ENVIRONMENTAL IMPACT STUDY**

The Corporation is a key supporter of Marine Delivers, a bi-national communications and educational initiative sponsored by the marine industry. The mandate of Marine Delivers is to convey the economic and environmental benefits generated by shipping cargo on the Great Lakes/Seaway System.

With the advent of a new generation of ships currently being introduced into our waterway, such as Canada Steamship Lines' Trillium Class

and Algoma Central Corporation's Equinox Class, the marine mode of transportation is poised to widen its lead as the most fuel efficient means of moving cargo. To quantify the true state of the marine mode's lead in energy efficiency, Marine Delivers sponsored a study undertaken by the Research and Traffic Group.

As outlined earlier in this report, the peer-reviewed study entitled *Environmental and Social Impacts of Marine Transport* was released in February 2013. The study confirms that marine transportation is the most fuel efficient means of moving cargo and generates the lowest level of greenhouse gas (GHG) emissions, when compared to the rail and truck modes of transportation.

Moving more cargo on ships provides a ready means of reducing the transportation industry's collective carbon footprint, while supporting trade and economic growth. Ships moving cargo over the Great Lakes/Seaway System support 227,000 jobs and \$35 billion in economic activity annually.<sup>3</sup> Marine Delivers will continue to convey these important facts to all stakeholders, to ensure that marine transportation's critical role and strong contribution to our quality of life is fully understood.

<sup>3</sup> *The Economic Impacts of the Great Lakes – St. Lawrence Seaway System, Martin Associates (October, 2011)*



## GREEN MARINE

The Corporation is an active member and proponent of Green Marine, a joint Canada-U.S. initiative. Green Marine is an independently-audited program, having a goal of encouraging ports, terminals and carriers across North America to adopt best practices in terms of managing their environmental footprint.

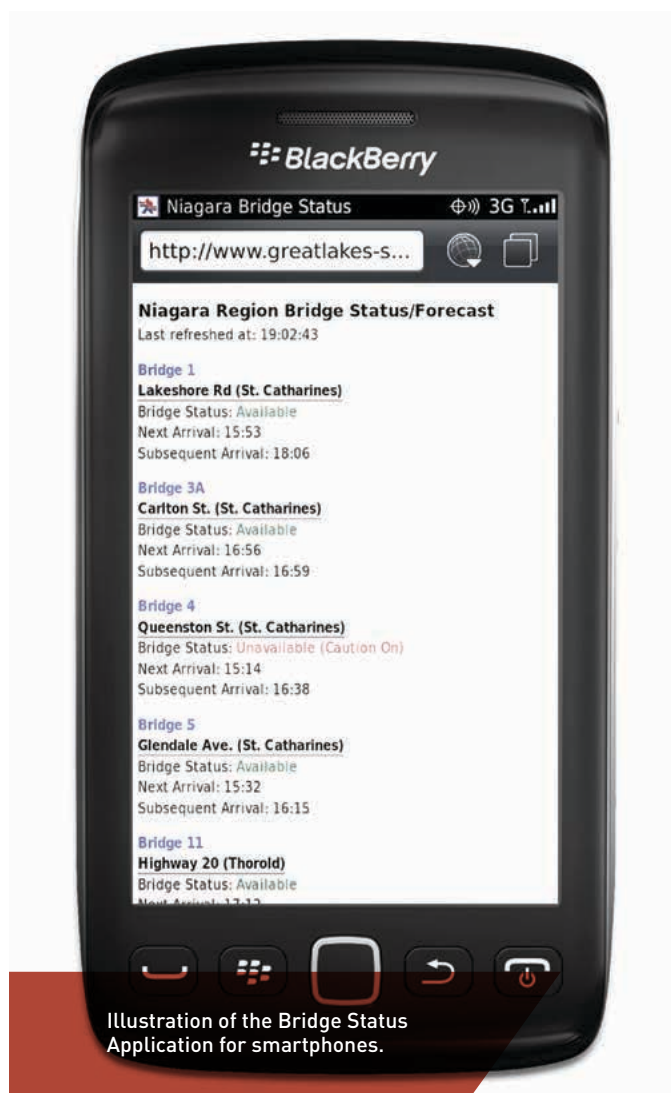
For 2012, an external audit assessed the Corporation's performance, as measured by a series of criteria, including management of aquatic invasive species, greenhouse gas emissions, the prevention of pollution within waterways and lands, stewardship of community issues, and environmental leadership.

The assessment revealed that the Corporation made notable improvements on a number of fronts, including the enhancement of measures to prevent pollution within waterways and lands. Overall, the Corporation achieved, in 2012, a score of 3.7 out of a maximum score of 5.

## GREENHOUSE GAS EMISSIONS

In 2012, the Corporation's greenhouse gas (GHG) emissions were the equivalent of 1,807 tonnes of CO<sub>2</sub> (a decrease of 7% in comparison to the volume emitted in 2011).

A substantial portion of the reduction in GHG emissions can be explained by the warmer weather experienced over the spring and fall portions of the navigation season, which resulted in less energy being consumed by various pieces of equipment designed to prevent the formation of ice in the Seaway's locks. Indeed, the relatively warm weather experienced during the past couple of winters has kept the Seaway's total GHG emissions under the long-term yearly average. In addition, less energy was consumed in heating the Corporation's structures and buildings.



## SUPPORTING OUR COMMUNITIES

The Corporation continued to strengthen its relationships with the communities that border the Seaway. The Beauventois festival in Beauharnois was again a great success, with many residents and visitors enjoying the sights and sounds of the celebration, including the traditional kite flying activities. The Port Colborne Canal Days Marine Heritage Festival is another event that the Corporation continues to support. The Corporation's employees attending these events take the opportunity to raise public

## Environment Information

Water Levels (MLO) Water Levels (Welland) Water Temperatures Wind Information

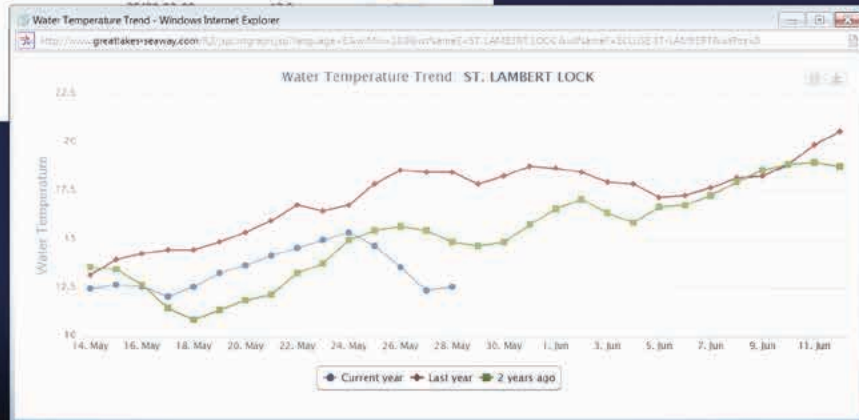
## Water Temperatures

## Montreal-Lake Ontario

Gauge	Location	Date/Time	Temp(C)	Trend
SLB	ST. LAMBERT LOCK	05/28 07:00	12.6	<a href="#">View Details</a>
CSC	COTE STE. CATHERINE LOCK	05/28 07:00	12.8	<a href="#">View Details</a>
P09	ST. LOUIS BRIDGE	05/28 07:00	12.1	<a href="#">View Details</a>
IR0	IROQUOIS LOCK			

## Welland Canal

Gauge	Location
L91	LOCK 1
L97	LOCK 7
L98	LOCK 8



Environmental information available on [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com) now includes charts, which illustrate trends.

awareness of safety along the waterway and on the Seaway's navigation structures. This year, part of the orientation dwelled on the need to respect the guidance and warnings found on signage posted on the Seaway's various bridges and lands.

Employees contributed to a number of fund raising efforts, including campaigns undertaken for the United Way and the Salvation Army. The generosity of Seaway employees was evident in the results. As part of its commitment to Corporate Social Responsibility, the Corporation matched employee contributions to the United Way. In total, the Corporation and its employees contributed approximately \$100,000 to various charitable campaigns over the course of 2012.

## BRIDGE STATUS APPLICATION FOR SMARTPHONES

On October 24, 2012, the Corporation held a joint news conference with CAA Niagara in St. Catharines (Ontario) to announce that bridge status information has been specially formatted to fit within a smartphone's web

browser display. Members of the media were briefed on how residents can check the status of all bridges spanning the Welland Canal from their smartphones, and determine if the bridge they plan to cross is available. This function is also available to residents in Quebec, who cross the bridges spanning the South Shore Canal and the Beauharnois Canal.

## ENVIRONMENTAL INFORMATION

Responding to requests from our stakeholders, a series of enhancements were made in December, 2012, to the display of environmental conditions on our bi-national [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com) website. Current environmental data and past trends are now presented both in numerical format and via a series of graphs that convey great insights into the underlying trends.



# FINANCIAL SUSTAINABILITY

*The results for 2012/2013 cover the period from April 1, 2012 to March 31, 2013. The comparative numbers reflect the same time span for the preceding fiscal years.*

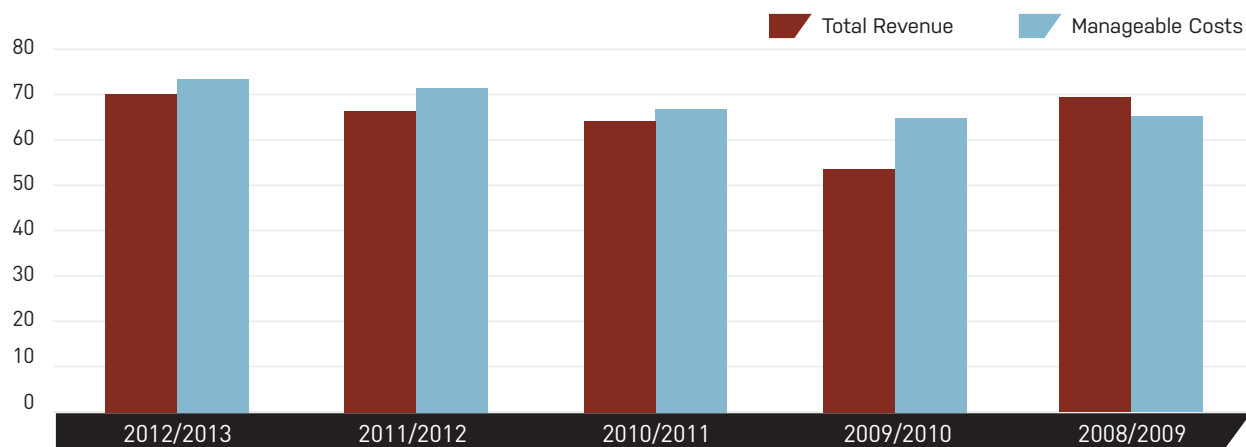
## FINANCIAL HIGHLIGHTS

	2012/2013	2011/2012	2010/2011	2009/2010	2008/2009
Full-time equivalents (FTE)	584	574	575	572	576
<b>ASSET RENEWAL COSTS ('000s)</b>					
Regular maintenance	\$ 4,657	\$ 5,330	\$ 4,599	\$ 4,159	\$ 4,389
Major maintenance	54,643	48,334	44,677	41,056	43,834
Capital acquisitions	1,987	1,667	1,492	1,730	2,818
Total asset renewal costs	\$ 61,287	\$ 55,331	\$ 50,768	\$ 46,945	\$ 51,041



	2012/2013	2011/2012	2010/2011	2009/2010	2008/2009
<b>TONNAGE</b> (‘000s tonnes)	<b>39,070</b>	<b>37,558</b>	<b>36,548</b>	<b>30,708</b>	<b>40,798</b>
<b>REVENUE</b> (‘000s)					
Tolls	\$ 66,555	\$ 62,967	\$ 60,651	\$ 50,147	\$ 66,272
Other revenue	3,673	3,537	3,754	3,643	3,088
Total revenue	70,228	66,504	64,405	53,790	69,360
<b>MANAGEABLE COSTS</b> (‘000s)					
Salaries and benefits	48,506	48,027	46,282	44,559	44,428
Pension and future benefits	12,232	11,118*	8,509	8,610	7,452
Other expenses	11,734	12,303	12,207	11,843	13,334
Total manageable costs	72,472	71,448*	66,998	65,012	65,214
<b>EXCESS OF (MANAGEABLE COSTS OVER REVENUE)/ REVENUE OVER MANAGEABLE COSTS</b>	<b>\$ (2,244)</b>	<b>\$ (4,944)*</b>	<b>\$ (2,593)</b>	<b>\$ (11,222)</b>	<b>\$ 4,146</b>

\* Restated due to a change in accounting principles, which decreased pension and future benefits by \$2,140.



A full copy of the St. Lawrence Seaway Management Corporation's audited financial statements is available upon request.



# ***CORPORATE GOVERNANCE***

(AS OF MARCH 31, 2013)

*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 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**

**Jonathan Bamberger (Chair)**  
Other Members

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

**Robert J. Armstrong**  
Ontario Provincial Government

**Wayne Devlin**  
Grain

**Tim Dool**  
Domestic Carriers

**Ralph Mercier**  
Quebec Provincial Government

**David Muir**  
Federal Government

**Georges Robichon**  
International Carriers

**James Wilson**  
Steel and Iron Ore

## CORPORATE GOVERNANCE

### OFFICERS

**Terence F. Bowles**

President and Chief Executive Officer

**Guy Yelle**

Vice-President, Operations  
Corporate Health and Safety Officer

**Stephen Kwok**

Vice-President, Engineering and Technology

**Jean Aubry-Morin**

Vice-President, External Relations  
Corporate Environment Officer

**Karen Dumoulin**

Chief Financial Officer

**Yvette Hoffman**

Counsel and Secretary

## INDUSTRY MEMBERS 2012/13

### 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

**McKeil Marine Limited**

Hamilton, Ontario

**St Marys Cement Inc.**

Toronto, Ontario



Seated, left to right: Robert J. Armstrong, Terence F. Bowles, Jonathan Bamberger, David Muir

Standing, left to right: James Wilson, Tim Dool, Georges Robichon, Ralph Mercier, Wayne Devlin



## 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 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

**Laden Maritime Inc.**  
Montréal, 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

**Keystone Anthracite Inc.**  
Repentigny, Québec

**Lafarge Canada Inc.**  
Concord, Ontario

**Redpath Sugar Ltd.**  
Toronto, Ontario

**Suncor Energy**  
Mississauga, Ontario

**The Canadian Salt Company Ltd.**  
Pointe-Claire, Québec

## STEEL AND IRON ORE

**ArcelorMittal Dofasco Inc.**  
Hamilton, Ontario

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

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