



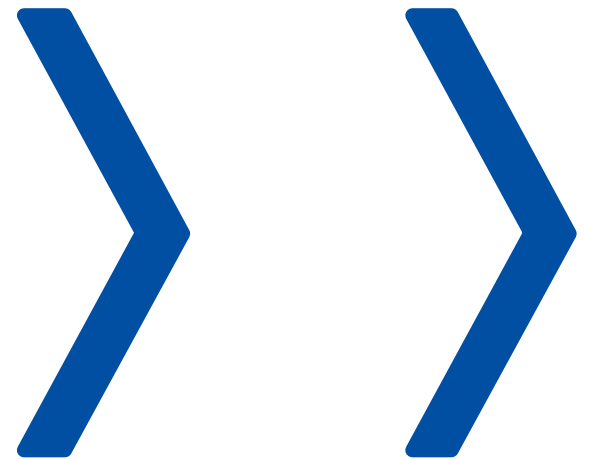
The St. Lawrence  
Seaway Management  
Corporation

Corporation de Gestion  
de la Voie Maritime  
du Saint-Laurent



# MOVING FORWARD IN A CHANGING ENVIRONMENT

2010/2011 ANNUAL REPORT



# THE ST. LAWRENCE SEAWAY



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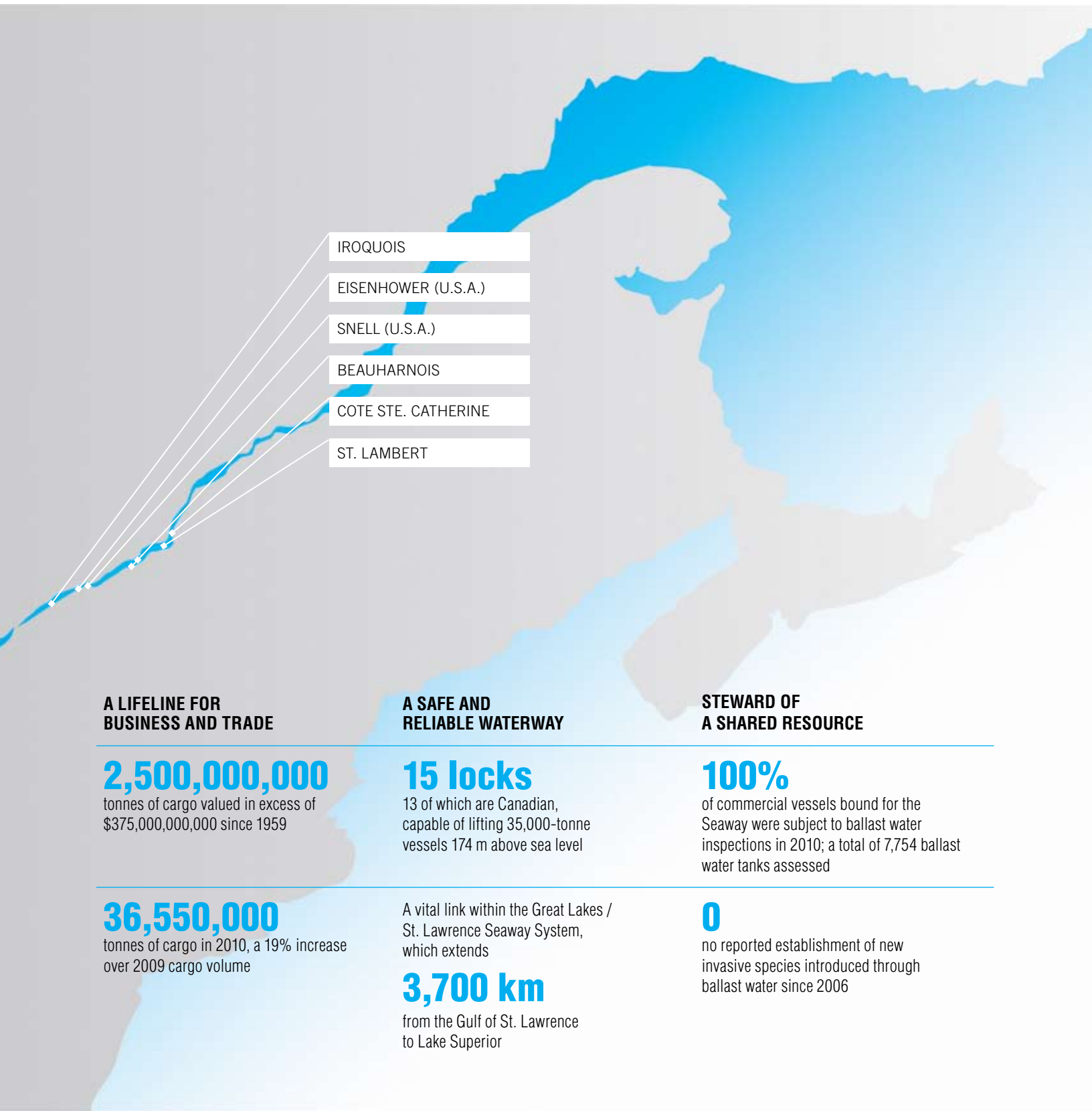
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WELLAND CANAL



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- IROQUOIS
- EISENHOWER (U.S.A.)
- SNELL (U.S.A.)
- BEAUHARNOIS
- COTE STE. CATHERINE
- ST. LAMBERT

**A LIFELINE FOR  
BUSINESS AND TRADE**

**2,500,000,000**  
tonnes of cargo valued in excess of  
\$375,000,000,000 since 1959

**36,550,000**  
tonnes of cargo in 2010, a 19% increase  
over 2009 cargo volume

**A SAFE AND  
RELIABLE WATERWAY**

**15 locks**  
13 of which are Canadian,  
capable of lifting 35,000-tonne  
vessels 174 m above sea level

A vital link within the Great Lakes /  
St. Lawrence Seaway System,  
which extends  
**3,700 km**  
from the Gulf of St. Lawrence  
to Lake Superior

**STEWARD OF  
A SHARED RESOURCE**

**100%**  
of commercial vessels bound for the  
Seaway were subject to ballast water  
inspections in 2010; a total of 7,754 ballast  
water tanks assessed

**0**  
no reported establishment of new  
invasive species introduced through  
ballast water since 2006

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 assets of the St. Lawrence Seaway for the Federal Government under a long-term agreement with Transport Canada.

## OUR VISION

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

## OUR 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.

## CORPORATE GOALS AND DESIRED OUTCOME

### BUSINESS GROWTH

Increase the benefits – economic, social and environmental – of the marine mode through the increase of tonnage in the system

### OPERATIONAL EXCELLENCE

Consistently deliver a hassle-free passage to carriers and cost effective transportation alternative to shippers

### HIGH PERFORMANCE WORK FORCE

Create a work environment for employees who are skilled, engaged, versatile and accountable to business results and personal success

### STAKEHOLDER ENGAGEMENT

Align all stakeholder views to a common Seaway system vision and its long term contribution

### FINANCIAL SUSTAINABILITY

Manage resources for optimal use and minimize cost to the users and owners of the system

## OUR VALUES

### SAFETY, RESPECT, OPENNESS, INTEGRITY AND INNOVATION

The Seaway is an essential part of North America's transportation infrastructure and a lifeline to business with the rest of the world. It moves raw materials and finished products from a vast network of inland ports to worldwide markets, and vice versa, in an environmentally, economically and socially-responsible manner.

**The St. Lawrence Seaway** serves cargo vessels, cruise ships and a multitude of other vessels through a series of locks and channels connecting Montreal to Lake Erie and providing access to 3,700 km of navigable waters. 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.







> Flight locks in the Welland Canal





> Vessel moored in lock



> Lock in Welland Canal / Credit: Shipphotos by Paul Beesley



> Vessel engine telegraph



> Bridge in Welland Canal / Credit: Shipphotos by Paul Beesley



# PRESIDENT'S MESSAGE



THE 2010/11 NAVIGATION SEASON WAS A REBOUND YEAR FOR THE SEAWAY FOLLOWING THE SIGNIFICANT DECREASE EXPERIENCED IN 2009.

With lingering uncertainties at the end of 2009, cargo projections had been relatively conservative for 2010 and it was therefore heartening to see the recovery take hold, and for this to be reflected in increased traffic through the system. The pace of recovery was slow but steady and this is expected to continue in 2011.

The 19% traffic increase reported in 2010 was led by strong showings in iron ore and general cargo, which includes iron and steel break-bulk shipments, as well as project cargo such as wind turbine components. Another strong element of this success was the New Business Incentive Program introduced in 2008, which produced solid results even during the downturn in the economy. The traffic improvement translated to toll revenue of \$60.7 million, compared to last year's \$50 million; however, for the second year since commercialization, the Corporation was unable to cover operating expenses.

In addition, we must not lose sight of the fact that although 2010 was a better year, we did not return to 2008 traffic levels. As well, structural changes to industries that for many years were stalwarts of the Seaway, such as iron ore, means we may not return to pre-recession levels for some time. This reality confirms the strategic actions being taken by the organization to diversify cargo mix and simplify operations in order to encourage more vessels to enter the system and maximize the capacity currently available.

We are building on the ongoing success of the New Business Incentive Program by offering a Service Incentive Program for the 2011 and 2012 navigation seasons that provides a 20% refund on applicable tolls for export cargoes transported by operators of liner or semi-liner services between Great Lakes ports and markets outside the Great Lakes / St. Lawrence Seaway System.

Our long history of providing quality service to users continued in 2010. Even with increased traffic, operational standards for transit times and system availability improved compared to 2009. As well, the vessel self-spotting program was completed allowing for more efficient positioning of ships in locks. We also continued testing the hands-free mooring system located at Lock 7 in the Welland Canal and identified elements requiring improvement.





Quality service requires a system that is properly maintained. In the third year of the current five-year Asset Renewal Plan, the Corporation spent \$50.8 million to ensure the reliability of its infrastructure. With aging infrastructure, it is expected that these yearly costs will continue to increase for the foreseeable future.

Over the years, we have worked closely with our U.S. counterpart, the Saint Lawrence Seaway Development Corporation, and Seaway users to develop technology and procedures to maximize use of the system. In 2010, this included finalization of work on the draft information system and approved specifications for equipment required on vessels to allow them to safely transit the system at deeper draft.

Along with operational improvements, we continued working on increasing awareness of the Great Lakes / St. Lawrence Seaway System and its potential to play a greater role in helping contribute to a sustainable world. One initiative which continues to gain traction is Green Marine. Green Marine is a joint Canada – U.S. initiative designed to equip its members with the means of voluntarily improving their environmental performance by undertaking concrete and measurable actions. A sign of its acceptance and value was the announcement in December by the Great Lakes and St. Lawrence Cities Initiative, a bi-national collaboration of mayors and local officials dedicated to the protection and restoration of waterways, that they were endorsing the program and becoming an official supporter.

Externally, we are impacted by government decisions. One which is already showing positive signs is the decision by the Government of Canada to repeal the 25% duty on imported vessels. Owners of domestic fleets have announced plans to invest in new ships which will be equipped with modern and more efficient systems, thereby using less fuel and producing fewer greenhouse gas emissions. On a less positive note, New York State's announcement that it will postpone implementation of its ballast water regulations does not bring about a lasting solution. We will continue our support of the marine industry and various levels of government to have New York amend their regulations, which are not viable given available technology.

During 2010, the Marine Delivers public relations campaign, a joint effort between the Canadian and U.S. Seaway Corporations and industry members, was successful in getting the marine message out, counteracting misperceptions and correcting inaccuracies in media stories that can prove damaging if left unchecked. One initiative under the Marine Delivers umbrella is the Economic Impact Study being carried out by John Martin Associates. When released, it will provide data on the Seaway's importance within the North American economy.

Since my arrival in early November, I have become familiar with the many aspects and groups associated with the Great Lakes / St. Lawrence Seaway System. I look forward to my first full year at the helm of the organization and in working to position the Seaway as a key contributor to Canada's economy. I will be working closely with the management team and all Seaway employees to build on the Seaway's strong safety record, to increase tonnage and revenues while controlling costs, to reach fair labour agreements with union employees to replace those that expired in March 2011, and to continue leveraging technology and innovative practices to improve the Seaway's performance.

I would also like to thank my predecessor Richard J. Corfe for his contributions during his 28-year Seaway career and, in particular, his eight years as President. He has been instrumental in moving the organization forward and introducing initiatives to position it to meet the challenges of the future.

This annual report is divided under the five pillars of our revised Strategic Plan: Business Growth; Operational Excellence; High Performance Workforce; Stakeholder Engagement; and Financial Sustainability. I hope you find it informative and interesting.

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



# BUSINESS GROWTH

THROUGHOUT THE SEAWAY'S 52 YEARS OF OPERATION, BULK CARGOES HAVE CONSTITUTED OVER 95% OF ITS TONNAGE. GIVEN THE MARKET TRENDS AFFECTING THE TRADITIONAL CORE COMMODITIES OF IRON ORE AND GRAIN, THE SEAWAY MUST ATTRACT A BROADER MIX OF CARGO IN ORDER TO BOLSTER ITS TONNAGE VOLUME AND FINANCIAL SUSTAINABILITY.

## TRAFFIC RESULTS

In 2010, the economy's gradual recovery from the global financial crisis of 2008/2009 contributed to a traffic increase for the Seaway. New traffic patterns also emerged, particularly new export shipments, as a result of further globalization within the steel industry.

Total combined traffic for 2010 reached 36.55 million tonnes (MT), an increase of 19.0% or 5.84 MT over 2009. More specifically, traffic increased by 30.0% or 6.22 MT in the Montreal-Lake Ontario section (MLO) and by 10.6% or 2.80 MT in the Welland Canal, amounting to 26.92 MT of cargo in the MLO and 29.18 MT in the Welland Canal.

Canadian grain shipments benefitted from strong world demand at season end, closing with a 6.1% or 0.35 MT increase over 2009 in the MLO and a slight decrease of 3.4% or 0.18 MT in the Welland Canal. On the American side, U.S. grain increased by 41.6% or 0.88 MT in the MLO and by 28.9% or 0.67 MT in the Welland Canal due to high grain availability, good world demand, the early closing of the Mississippi River system, and improved ocean vessel availability.

Iron ore shipments in 2010 recovered from the low levels of 2009 and increased by 86.1% or 3.33 MT in the MLO and by 14.1% or 0.88 MT in the Welland Canal. These improved results reflect the partial recovery in the steel industry, as well as new export trade patterns brought about by industry globalization.

Coal shipments in 2010 increased over the previous year by 23.6% or 0.17 MT in the MLO and by 28.7% or 0.82 MT in the Welland Canal due to a greater demand for steel.

Shipments of "other bulk" commodities also increased in 2010 by 11.8% or 0.86 MT in the MLO and to a lesser degree of 1.0% or 0.09 MT in the Welland Canal. The economic recovery brought increases to all "other bulk" cargoes except for salt. Salt was impacted by a mild 2010 winter, reducing shipments by 35%.

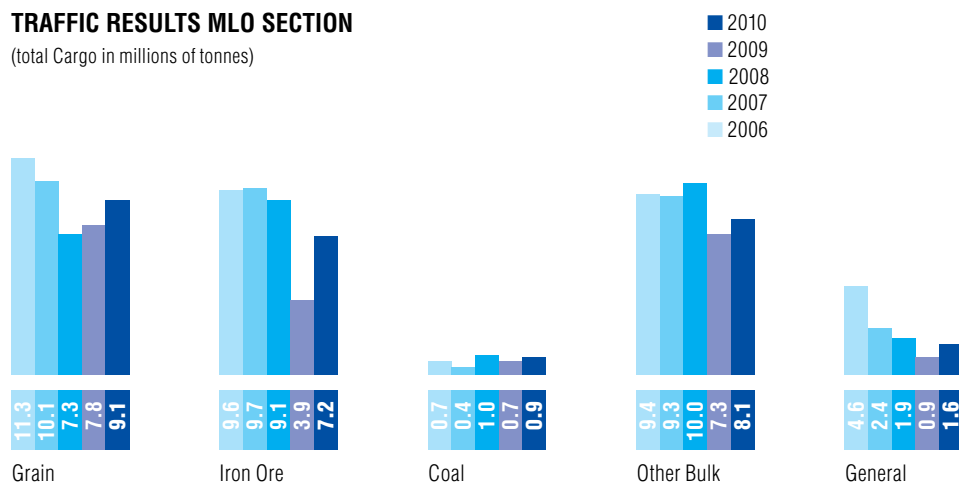
General Cargo, which was also affected by the recovery of the steel industry, increased by 70.1% or 0.64 MT in the MLO section and 73.2% or 0.51 MT in the Welland Canal compared to 2009. Steel alone increased by 69.8% in the MLO and by 73.7% in the Welland Canal. With renewed shipments of windmills, other general cargo increased by 122% in the MLO and 145% in the Welland Canal.

The increase in cargo volume in 2010 led to a corresponding increase in Seaway vessel traffic. In 2010, combined Seaway traffic registered 3,925 vessel transits, 294 more than 2009. More specifically, in the MLO, there was an overall increase of 15.8%, with inland vessel transits up 2.3% and ocean vessels 57.0%. Similarly for the Welland Canal, there was an overall increase of 12.1% compared to 2009. Inland vessel transits rose 3.4% and ocean transits 58.1%.



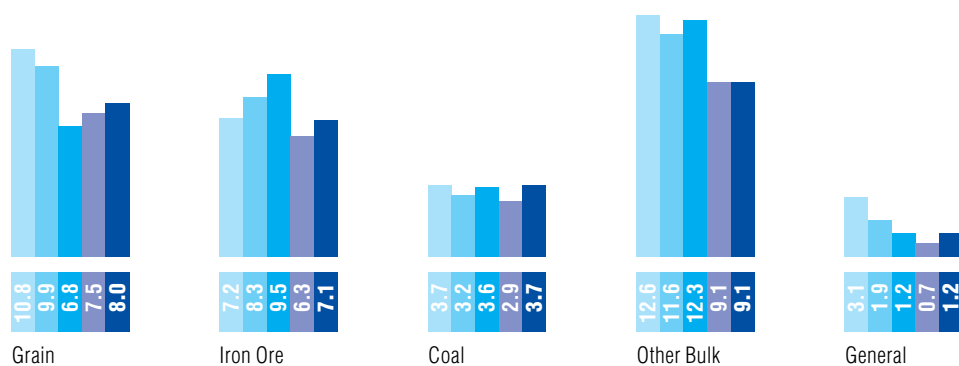
### TRAFFIC RESULTS MLO SECTION

(total Cargo in millions of tonnes)



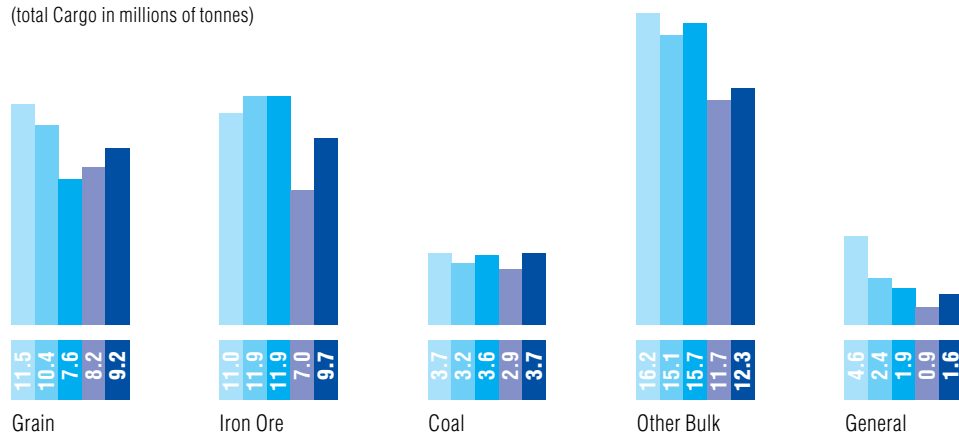
### TRAFFIC RESULTS WELLAND SECTION

(total Cargo in millions of tonnes)



### TRAFFIC RESULTS COMBINED

(total Cargo in millions of tonnes)





## MARKET DEVELOPMENT

### NEW BUSINESS / NEW CARGO

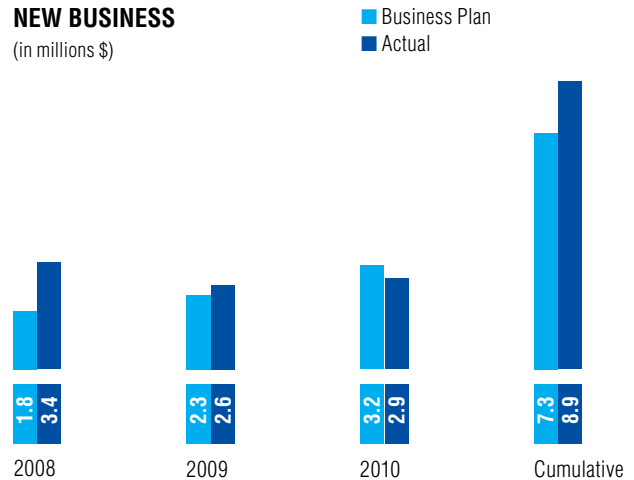
The New Business Incentive program, offering rebates for specific “new” cargo movements (defined generally as new origin / destination combinations for existing cargo, or cargo that had not been shipped via the Seaway over a span of time), attracted 58 applications in 2010, of which 52 were approved.

The 2010 season closed with 279 movements of new business, amounting to 1.4 million tonnes of cargo and contributing \$2.9 million in revenue. Cargo classified as new business included coke, windmills, steel, steel slabs, quartz stone, salt, chemicals, iron ore, grains, machinery and machines, petroleum products, furnace slags, wood pulp, tar pitch and creosote, aluminum, cement and manufactured products. Containerized cargo was mainly composed of arctic trade (63%) and imported windmill components (35%).

After three years of offering this new business incentive program, new business revenue reached \$8.9 million which is 121% of the three-year revenue target of \$6.8 million.

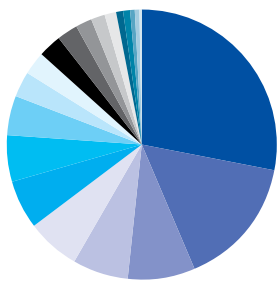
### NEW BUSINESS

(in millions \$)



### NEW CARGOES

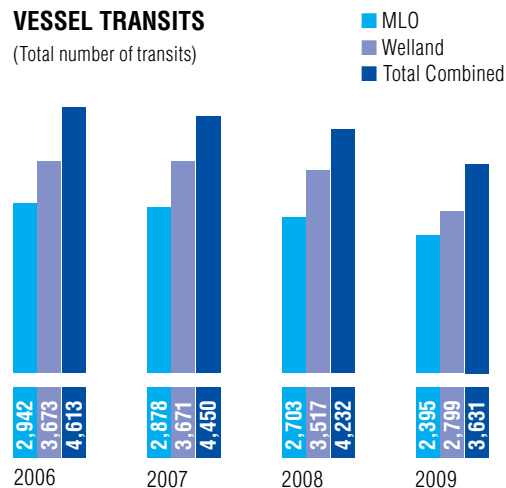
(Tonnage)



- Coke
- Iron & Steel
- Windmills & Parts
- Salt
- Iron ore
- Aluminium
- Grains
- Tar, Pitch & Creosote
- Quartz stone
- Urea
- Containers
- Petroleum Products
- Steel Slabs
- Furnace Slag
- Cement
- Machinery & Machines
- Urea Ammonium Nitrate
- Woodpulp
- Fish & Animal Products
- Manufactured & Misc Chemicals

### VESSEL TRANSITS

(Total number of transits)



### SEAWAY TOLL INCENTIVE

In order to support the Seaway's market development initiatives of reducing system costs and attracting new cargo, the Corporation announced in January 2011 that no toll increase will take effect this year. In addition, a Service Incentive Program was launched for the 2011 navigation season, with an objective of assisting carriers in developing or expanding liner or semi-liner services between ports in the Great Lakes and global markets. The Service Incentive, combined with the New Business Incentive, will provide eligible operators a total savings of 40% on tolls for new export cargoes.

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

Hwy H<sub>2</sub>O is an initiative to brand the Great Lakes / St. Lawrence Seaway System, from a marketing point of view, and to have all interested parties use the same material when promoting the system. It initially brought together the Canadian and U.S. Seaway Corporations with all the major ports along the waterway and has now expanded to include, amongst others, carriers and logistic companies.

A new Hwy H<sub>2</sub>O exhibition booth, introduced in 2010, yielded positive results. Booth traffic increased during the Break Bulk Europe and Break Bulk Americas exhibitions. In late July, a revamped [www.hwyh2o.com](http://www.hwyh2o.com) website was launched illustrating the Great Lakes / St. Lawrence Seaway System's competitive advantages and featuring more in-depth information concerning the Seaway's cargo capabilities. Hwy H<sub>2</sub>O also made its debut on Twitter (follow **@hwyh2o** on **Twitter** and stay up to date on Seaway news and information).

The 6<sup>th</sup> annual Hwy H<sub>2</sub>O Conference took place October 27<sup>th</sup> and 28<sup>th</sup> in Toronto. The theme of the conference was the New Supply Chain Challenge. The four modules included: Market Update – The Global View; The Shipper Perspective – Across the Modes; The European View – Inland Waterways; and Innovation Excellence – Today & Tomorrow. Attendance at the conference remained steady at 130 participants, supported by an increased number of sponsors.

The cargo-specific approach for advertising initiatives continues to move ahead and is resulting in a number of business development enquiries, as well as positive feedback from stakeholders.

### TRADE MISSION

The 2010 bi-national Seaway Trade Mission took place November 5-12, 2010 and included stops in Amsterdam and Rotterdam, The Netherlands; Antwerp, Belgium; and London, England. The objective was to provide the 23-member delegation with insight into how portions of the European model can be adopted to advance short sea shipping in North America.

During the Trade Mission, a Memorandum of Understanding was signed between the Port of Amsterdam and the St. Lawrence Seaway Management Corporation. The parties agreed to analyze the possibility of pursuing a common project to connect a sustainable hinterland logistics network in Canada/US with European networks, to investigate the feasibility of setting up a Green Lane (Customs Authorized Economic Operator) between Canada and Europe, and to analyze the possibility of linking this joint initiative with current European Union/Canada trade discussions.

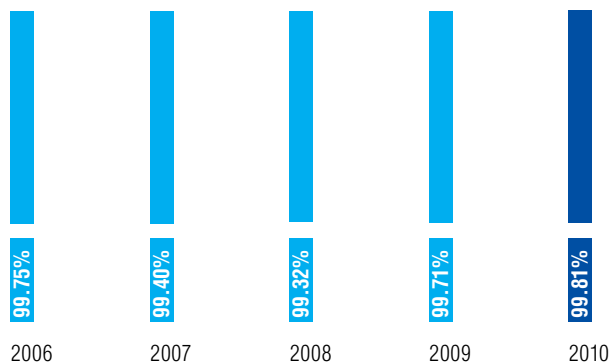


# OPERATIONAL EXCELLENCE

THE SEAWAY EXCELS IN PASSING SHIPS THROUGH A SAFE AND RELIABLE WATERWAY SYSTEM. TO ENHANCE ITS COMPETITIVE POSITION AS A COST EFFECTIVE, EFFICIENT AND ENVIRONMENTALLY RESPONSIBLE SYSTEM, THE CORPORATION IS LEVERAGING TECHNOLOGY TO MAXIMIZE THE BENEFITS PROVIDED BY ITS EXISTING LOCKS AND CHANNELS.

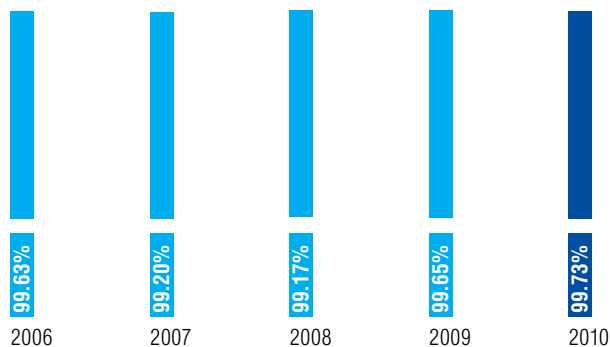
## SYSTEM RELIABILITY

(target 99.75%)



## SYSTEM AVAILABILITY

(target 99.00%)



## RELIABLE INFRASTRUCTURE

To continue providing its customers with a safe, reliable and cost-effective transportation system, the Corporation is addressing the needs of its aging infrastructure, which is now over 50 years old. The proven performance of the Corporation's Asset Management System has over the past 16 years provided significant benefits, not the least of which is the ability to maintain high levels of system availability and reliability.

During the 2010 season, system availability was 99.73%, the highest it has been in five years, and exceeding the target level of 99.0%. Similarly, the system's reliability was at a five-year high of 99.81%, exceeding its target level of 99.75%. The Corporation also kept its average delay per transit (attributable to its own operations) at 13 minutes in the MLO section, under the targeted 20 minutes. The Welland Canal was at 22 minutes which is over the 20-minute target, but better than the previous year's 25 minutes.

Based on the effective identification and prioritization of risks, the Corporation has implemented a series of remedial actions to address the needs of its aging infrastructure. Various asset renewal projects were completed over the past year, marking the third year of the Corporation's five-year Asset Renewal Plan (2009 to 2013). The major projects included:

### MLO SECTION

#### ST. LAMBERT LOCK

- Repairing contact blocks for gates 1 and 6
- Realigning valve drive shaft
- Reconditioning valves; removal of one valve and replacement with a spare
- Reconditioning stop log slides for valve
- Installing new sluice gates

#### IROQUOIS LOCK

- Repairing gate quoins

#### UPPER BEAUHARNOIS LOCK

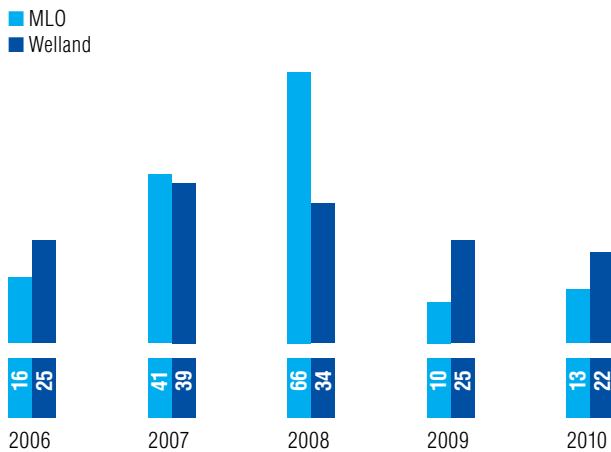
- Installing new derrick with increased functionality





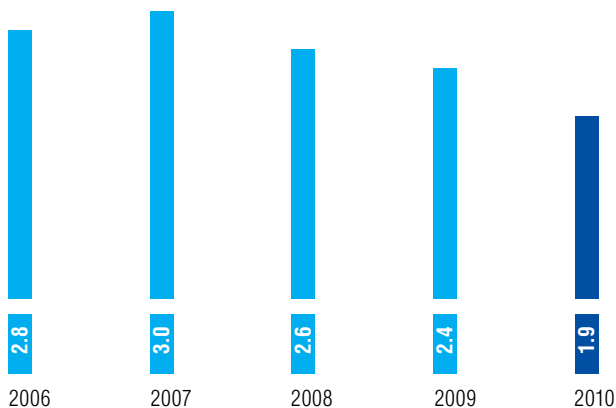
### SEAWAY DELAYS PER TRANSIT, PER SECTION

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



### VESSEL ACCIDENT RATE

(Accidents per 1,000 transits)



### WELLAND CANAL

- Refacing half of the Lock 3 West concrete wall
- Rehabilitating the derrick and concrete refacing at the Lock 4 bullnose
- Rehabilitating valves at Lock 6
- Replacing downhaul ropes at Bridge 5
- Replacing span and counterweight gibs at Bridges 5 and 11
- Installing new bridge festoon cable control arm at Bridges 5, 11 and 21
- Converting timber fendering to rubber at locks 1, 2 and 3
- Upgrading electrical distribution at maintenance and administration buildings
- Upgrading closed circuit television at Bridge 19

As the timber pile tie-up walls within the Welland Canal are reaching their end-of-life, remedial work has been stepped up.

- Acceleration of the wood piles repair program
- New project to repair the traveling and working surfaces of the tie-up walls
- Replacement of an 83 m section of the Lock 2 lower approach wall

In 2010, \$50.8 million was spent on asset renewal projects to maintain the reliability of the infrastructure, compared to \$47 million in 2009.

## NAVIGATION SEASON

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The 2010 navigation season, the 52<sup>nd</sup> since the Montreal-Lake Ontario section was inaugurated in 1959, opened March 25<sup>th</sup>. The system remained open 280 days, six more than in 2009, but three less than in 2008. The last vessel to transit the MLO section exited St. Lambert Lock on December 29<sup>th</sup>, while the last ship in the Welland Canal transited Lock 1 on December 30<sup>th</sup> making its way to the Port Weller dry docks.

In 2010, there were 11 vessel incidents, equivalent to 1.9 per 1,000 transits, confirming that shipping on the Seaway is a safe and reliable means of transportation. The 11 reported vessel incidents ranged from contact with structures to groundings, one of which resulted in an oil spill.

On July 13, 2010 a vessel lost engine power while transiting the South Shore Canal in the MLO section. Efforts to bring the vessel to a halt resulted in a fuel tank being punctured, releasing fuel into the canal above the Côte Ste. Catherine lock. Prompt action by the vessel's crew and by SLSMC operations personnel in sealing the lock ensured that the spill remained in the immediate vicinity of the vessel. Federal agencies and the clean-up contractor initiated a remedial action plan, limiting the environmental impact from the spill. Waterborne oil was removed and a clean-up initiated of the oil that washed up on the canal's banks. Specialists attended to a small number of birds that were affected by the spill. Vessel traffic was suspended for a total of three days.

An environmental incident, which is not included in the vessel incident count above, occurred on June 15, 2010, while a tug was refuelling at Wharf 16 in Port Colborne. Diesel oil spilled into the Welland Canal as a result of an overflow of tanks. The vessel and the SLSMC immediately put their emergency response plans into action. The major portion of the oil was swiftly removed. The residual was contained by oil booms, and cleaned up the next day. Personnel from local, provincial and federal agencies were on hand to observe the clean-up.

Following the incidents, the Seaway conducted debriefing sessions with external agencies to review lessons learned and identify areas for improvement.

## EMERGENCY PREPAREDNESS

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The Corporation recognizes that training is critical to providing its employees with the knowledge required to handle emergency situations effectively. Consequently, emergency response exercises are conducted throughout the year and contribute directly to quick and efficient responses in the event of actual emergencies.

- In March, the MLO operations centre personnel participated in emergency exercises at the back-up traffic control centre prior to the opening of navigation.
- Security drills reviewing the roles, responsibilities and actions at MARSEC Level II (a heightened level of Marine Security) were conducted in both the MLO and the Welland Canal.
- In June, Iroquois lock personnel participated in boom deployment training.
- In the fall, two table-top exercises were conducted in the Welland Canal section, focusing on communications between personnel in the Seaway's Emergency Operations Centre and external agencies throughout the region.

## WORKPLACE HEALTH AND SAFETY

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In line with the Corporation's commitment to safety in the workplace, over 45 Health and Safety Committee meetings were held in 2010 and various health and safety related activities were organized. Improvements in Lost Time Injury results were realized in 2010. The frequency rate was 1.7 accidents per 100 person years worked, compared to 4.02 in 2009. Similarly, time lost due to injury decreased from 74.56 days of work per 100 person years to 40.49 in 2010. In 2011, the Corporation will be zeroing in on near misses and improved root-cause analysis of incidents to further enhance its safety performance.

## ENABLING TECHNOLOGIES

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### DRAFT INFORMATION SYSTEM

The Draft Information System (DIS) provides a graphical representation of the anticipated underwater conditions for a vessel, given its speed and heading. Created as a means to increase safety for deep draft vessels, as well as to increase vessel cargo capacity, this project has been a joint venture between the Canadian and U.S. St Lawrence Seaway Corporations, the shipping industry, equipment suppliers and federal governments.

A pilot program, allowing qualified participants to transit at a draft of 26'9", was in effect in the MLO section for the entire 2010 navigation season, and a similar initiative was in effect in the Welland Canal from October to mid-December. A total of 21 vessels participated in this program.

An Implementation Specification to be used by system developers to have their draft information system certified by recognized authorities for Seaway use was developed and published in March 2011. It is expected that more ships will make use of DIS in 2011.



## GERRY MIELE

### Process Support Coordinator, Canal Services

Gerry's responsibilities at the Seaway include, amongst others, developing emergency and security exercises. His involvement in the exercises has greatly contributed to the Corporation's level of preparedness and served to strengthen partnerships with external agencies.

"Working on a variety of projects over the past 22 years has allowed me to foster great working relationships with some very talented and creative employees at the Seaway. In some cases, these collaborative projects have had a significant impact on the organization and its people. One of my most satisfying contributions to the Seaway is the development of emergency and security exercises. During a recent conference, I had the privilege of meeting Admiral Thad Allen, Retired Commandant of the US Coast Guard, and Incident Commander for the BP oil spill in the Gulf of Mexico in 2010. He made reference to two striking phrases during our conversation – "Unity of effort" and "Pre-needed friends" – which imply working together for a common goal and establishing working relationships well in advance of an incident. Emergency and security exercises are a great tool in achieving both of these goals."

## AUTOMATIC IDENTIFICATION SYSTEM (AIS)

A critical component of the effective use of the draft information system is the availability of water elevation information. The Seaway implemented changes to its AIS in support of the draft information system to ensure that accurate water level information can be broadcast to vessels. Memorandums of agreement between the Seaway and other stakeholders have been ratified allowing for the sharing of water elevation information at various locations. The availability of this information will provide additional redundancy for the water level network.

## VESSEL SELF SPOTTING

By the end of 2010, vessel self-spotting systems were installed and commissioned at all locks with the exception of the Iroquois Lock and Welland Canal Lock 8, which are subject to the walk-thru procedure and do not require this system. Work continues on the analysis of collected data in order to improve the accuracy and reliability of the system. Programming changes in 2011 will also facilitate the tracking of tug and barge combinations.

## HANDS FREE MOORING (HFM)

Research and development continues on the hands-free mooring system installed at Lock 7. Since 2007, almost 600 lock transits have been successfully carried out with the HFM system. The test results confirmed the benefits of employing winch units to capture vessels versus buoyancy units, principally for their ability to avoid obstacles on the hulls of vessels. They also demonstrated the need for improvements to the HFM system in order to increase the number of vessels able to use the technology. Targeted tests will be carried out in 2011 to solidify the direction for the remainder of the project.

## NETWORK SECURITY

The Information Technology Security Group continued over the course of 2010 to address network security. The focus shifted from specific projects designed to protect mission critical assets and personal information to projects aimed at protecting the underlying network infrastructure. The group also continued to actively monitor corporate networks and assess the state of corporate security measures and practices.

## SUSTAINABLE OPERATIONS

### GREEN MARINE

The Corporation is an active member and proponent of Green Marine, a joint Canada-U.S. initiative aimed at implementing a marine industry environmental program throughout North America.



Founded in 2008 by the major marine industry associations in both Canada and the U.S., Green Marine has rapidly gained a reputation for credibility and transparency, and for challenging participating companies to improve their environmental performance beyond regulatory compliance.

The Corporation participates in this initiative as a member of the Land Installations Committee. Last year, a new indicator was developed to assess the environmental practices of each member. An external audit will be performed in 2011 to evaluate the Seaway's performance on a range of issues concerning its operations, including aquatic invasive species, greenhouse gas emissions and its overall environmental footprint.

### **GREENHOUSE GAS REDUCTION (GHG) PLAN**

The GHG emissions reduction plan announced in 2007 was aimed at reducing emissions by 15% over the course of three years, when compared with the baseline period of 2003 to 2005. Actual reductions were 15.9% for the period 2008 to 2010, which averaged an equivalent of 2,695 tonnes CO<sub>2</sub> compared to the baseline of 3,204 tonnes. These results included 2008 emissions (3,212 tonnes CO<sub>2</sub> equivalent) which were equivalent to the baseline period, and 2009 emissions where weather conditions were exceptionally favourable during opening and closing periods. Although the reduction program took one extra year to implement, the Seaway has accomplished sustainable improvements.

When comparing the last three years with the baseline period, it should be noted that the most important reductions occurred as a result of building management (emissions from fuel consumption were reduced by 12%, while emissions from refrigerant releases were reduced by 89%). Emissions from transportation activities were also down by 14% because of a reduction in travel by personnel and the use of more efficient vehicles in the corporate fleet.

The challenge for the forthcoming years will be to maintain the Corporation's annual GHG emissions at this level, taking into account that emissions from operations, which represent a significant portion of the total, are heavily impacted by weather conditions in late fall and early spring.

### **KAHNAWAKE EMERGENCY DOCK**

After more than 50 years of service, the emergency docking wharf in the Kahnawake First Nations reserve was replaced. The new wooden floating wharf was built down river and brought up through the locks before being installed last fall with the collaboration of First Nations people. The location of the wharf is important as, in the case of an emergency, it is the only place a vessel can tie-up between the Côte Ste. Catherine loading docks and the Beauharnois Locks.

### **BALLAST WATER MANAGEMENT**

During the 2010 navigation season, 100% of the mandatory ballast water reporting forms were screened to assess ballast water history, compliance, voyage information and proposed discharge location. All 7,754 ballast water (BW) tanks from 415 vessels bound for the Seaway were assessed. Of the tanks examined, 7,273 complied with the ballast water regulations and the remaining 481, from 71 ship transits, were issued letters of retention, ordering the non-compliant ballast water to be retained on board. Three ships altered course to comply with the ballast water exchange requirements and one ship decided not to enter the Great Lakes. One letter of violation was issued to a tug/barge operator who did not manage its ballast water in compliance with established practices during its transit.

During the 2010 ballast water inspections, it was noted that an increasing number of new ships and barges are equipped with ballast water remote level reading devices. They do not have sounding pipes, making it difficult to sample ballast water. This has contributed to the number of ballast water tanks deemed non-compliant. The Seaway will work with the classification societies to address this issue.

The Seaway continues to work with the U.S. Coast Guard, Transport Canada and the U.S. Seaway Corporation to deter the introduction of aquatic invasive species in the Great Lakes using regulation, technology, and management-based protocols. Since the inception of the mandatory testing in 2006, there has been no establishment of new aquatic invasive species in the Great Lakes / St. Lawrence Seaway System.

### **SPECIES AT RISK**

In 2010, the Corporation pursued efforts on its properties to protect species at risk, as well as other species protected by applicable environmental laws and regulations.

### **PEREGRINE FALCONS AT THE VALLEYFIELD BRIDGE**

A new protocol was tested to manage the Peregrine Falcons at the Valleyfield Bridge. A nesting box was built and installed on a tower leg and the surviving young bird was transferred to the box where the parents fed it. It is hoped that in the future, the birds will adopt the box for nesting instead of laying their eggs on a counterweight where they face various breeding challenges.

### **OSPREY AT IROQUOIS LOCK**

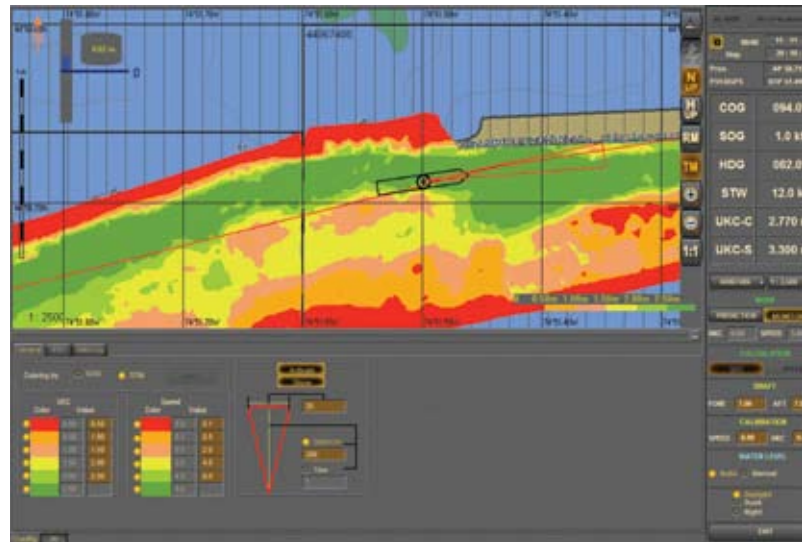
In 2010, a pair of ospreys built their nest on top of a derrick at Iroquois lock. Since the derrick was required for maintenance work, the Corporation built a nesting platform and hired a consultant who moved the nest, with permission from Ontario's Ministry of Natural Resources. The parent birds adopted the new platform and the single chick hatched was successfully raised on the platform.



> Sébastien Gibeault, lock operator at St. Lambert lock



> Draft information system, Indusol



> Draft information system, Transas



> Vessel draft



# HIGH PERFORMANCE WORKFORCE

TO DELIVER OPERATIONAL EXCELLENCE TO ITS CUSTOMERS AND TO ENSURE THE SYSTEM'S SUSTAINABILITY, THE CORPORATION IS RESOLUTE IN ITS COMMITMENT TO A HIGH PERFORMANCE WORKFORCE, CHARACTERIZED BY EMPLOYEES WHO ARE SKILLED, VERSATILE, ENGAGED, AND ACCOUNTABLE. AS THE WORKFORCE CONTINUES TO EXPERIENCE HIGH TURNOVER DUE TO RETIREMENTS, THE TRANSFER OF KNOWLEDGE FROM ONE GENERATION TO THE NEXT IS CRUCIAL TO THE CORPORATION'S ABILITY TO MANAGE ITS OPERATIONS EFFECTIVELY.

## PERFORMANCE BASED CULTURE

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A performance management program is being implemented across all levels of the Corporation. This process will provide a structured approach to managing employee performance and development, as well as providing for ongoing feedback regarding each individual's contribution in realizing strategic objectives.

## A WORKFORCE IN TRANSITION

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The Seaway is undergoing a generational shift as more and more of its current staff members reach retirement age. It is estimated that by March 31, 2015, 35% of the workforce will become eligible for retirement. While staff turnover creates challenges for succession planning and knowledge management, it also provides opportunities as the Seaway adapts to new realities.

The succession planning process has identified high potential individuals from across the Corporation for whom

development plans are being created and closely monitored by line management and the Executive Committee, in order to ensure adequate support and progress in their development efforts. Areas in the organization where there is a lack of depth in terms of future replacement personnel have also been identified.

To transfer knowledge effectively from departing employees, the Corporation is taking a more structured approach to identifying and managing critical business knowledge. Knowledge can be defined as specialized competencies, skills, and behaviours, which have been acquired through the collective experience of employees.

## EMPLOYEE WELLNESS

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The Seaway recognizes the importance of a healthy workplace for its employees. In line with its values of safety, respect, openness, integrity, and innovation, it provides programs to employees and puts procedures in place that support employee safety, health and well-being.

Throughout Health and Safety Week in May, employees participated in training and awareness seminars and activities promoting health, safety and physical fitness. The week also provided an opportunity for designated first aiders to respond to a mock emergency situation. In addition, on September 29<sup>th</sup>, employees from across the Seaway participated in the annual Corporate Wellness Day, which featured a variety of activities aimed at promoting healthy and active lifestyles.

In 2010, the Niagara (Welland Canal) Region was the recipient of the Platinum and Diamond Healthy Living awards for adopting healthy workplace practices and promoting healthy living behaviours. Head Office was also presented the Gold Level Workplace Health Award by the Eastern Ontario Health Unit for the fourth consecutive year. This award recognizes workplaces that encourage their employees to develop and maintain a healthy lifestyle.



**IANIK  
BLANCHET**

**Technical Officer-Mechanical**

Ianik has been employed at the Seaway for nearly five years, first as a draftsman and most recently as a Technical Officer. One important aspect of his job is to ensure that the Seaway mechanical maintenance teams have all the documents and material required to carry out their work effectively.

"I enjoy the diversity of my work and the ability to go out into the field to better understand the structures and their maintenance requirements. Since my first day at the Seaway, I have had the opportunity to work with people who have extensive operations experience. I have learned a lot during these years and hope to gain even more knowledge from my experienced colleagues who will be retiring, as I take up some of their workload."

**BOB SWENOR MEMORIAL AWARD**

The "Bob Swenor Memorial Award" was established in 2010 in honour of the Corporation's first Chairman. The inaugural recipient, Carol Capeluck, Senior HR Programs Officer in the Niagara Region, was presented with the award at the annual President's meeting in June. Ms. Capeluck started with the Seaway in 1976 and over the years has been a strong contributor to the Niagara Region, and the Corporation as a whole. She was recognized for her commitment, dedication and overall contributions to the Seaway, her co-workers and her outstanding support of various health and wellness classes conducted in her community, characteristics embodied by Mr. Swenor during his lifetime.



> Carol Capeluck with past-president Richard Corfe

**EMPLOYMENT EQUITY**

All Employment Equity Annual Reports from federally regulated private sector employers were tabled on October 20, 2010, by the Minister of Labour, and the various employers were rated on their progress. The Corporation was rated "A" (strong performance) for Aboriginal Peoples and Persons with Disabilities, "B" (good performance) for Women and "C" (average to less than average performance) for Visible Minorities. For the third year in a row, the Corporation was given a score of 5 out of 5 for reporting compliance. A workforce analysis will be completed during 2011, and the Corporation's hiring and promotion goals and recruitment strategies will be adjusted accordingly to improve performance in these areas.





# STAKEHOLDER ENGAGEMENT

THE CORPORATION RECOGNIZES THAT AS STEWARDS OF THE ST. LAWRENCE SEAWAY, WORK MUST BE ACCOMPLISHED IN TANDEM WITH A WIDE RANGE OF STAKEHOLDERS, INCLUDING BUSINESS AND INDUSTRY, LOCAL COMMUNITIES, AND RECREATIONAL USERS. THE PRINCIPLE OF SUSTAINABILITY BRINGS ABOUT A “TRIPLE BOTTOM” LINE, ENCOMPASSING ENVIRONMENTAL, SOCIAL AND FINANCIAL INTERESTS. THESE INTERESTS MUST BE CAREFULLY BALANCED, WITH AN EYE TO THE DIVERSE NATURE OF THE STAKEHOLDERS IMPACTED BY THE SEAWAY SYSTEM.

## INITIATIVES

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### **MARINE DELIVERS PUBLIC RELATIONS PROGRAM**

The Seaway is a member of Marine Delivers, a joint effort between the U.S. and Canadian Seaway Corporations and marine industry stakeholders within the Great Lakes / St. Lawrence Seaway System. The primary mission of the Marine Delivers program is to provide responsible, timely, consistent and relevant information to help shape a positive image of the Great Lakes / St. Lawrence Seaway marine industry.

The Marine Delivers program consists of three principal messages:

- Marine Delivers ... jobs and economic prosperity.
- Marine Delivers ... safe, sustainable and environmentally responsible transportation.
- Marine Delivers ... innovation, new technologies and best practices.

In 2010, Marine Delivers began the process of telling the industry's story to our stakeholders through the media. In 2011, it will intensify its efforts to foster a positive image of Great Lakes / St. Lawrence Seaway shipping.

### **SEAWAY SAFETY VIDEO**

A safety video was completed in the Niagara (Welland Canal) Region during the fall of 2010. A joint venture between the Corporation and Niagara College, the 10-minute video focuses on bridge safety, trespassing on Seaway lands and water safety. The video will serve as an important component of the Corporation's education campaign targeting schools in the Niagara Region.

### **NEW “VISIT THE SEAWAY” MAP**

Frequently, tourists call the Corporation to request information on how they can visit a lock and witness the impressive sights that occur during a vessel transit. Thanks to a new interactive map, tourists can now obtain more information on our [www.greatlakes-seaway.com](http://www.greatlakes-seaway.com) website, via a feature located within the “Contact Us” page.

### **BRIDGE STATUS PAGE FOR MOBILE PHONE USERS**

In response to numerous requests by mobile phone users, the Corporation's web team designed a presentation format to facilitate viewing of the Seaway Bridge Status page on mobile phone browsers. Equipped with a clean interface, the page loads quickly and provides a full report at a glance. Using the service, commuters can readily check on the bridge status from their mobile phone before starting their trip, enabling them to plan ahead and avoid needless delays.



## CHANTAL GARNEAU

**Administrative Secretary,  
Finance Services**

Chantal has been at the Seaway since 2003. In addition to her administrative duties and coordination of bursary and service award programs, she is known for her extensive involvement in various community-based activities.

“I appreciate the diversity of my administrative work and, more specifically, the interactions resulting from my work related to the Seaway’s corporate social responsibility initiatives such as the United Way campaign and the “Take Our Kids to Work Day”. Although I have always felt the need to help, I must emphasize that it is the generosity of our employees, coupled with the financial contribution of the Seaway, which has provided me with additional motivation in coordinating the local United Way campaign. As for the “Take Our Kids to Work Day”, I have always enjoyed organizing this activity for our youth. We must not forget that some of them may be the ones operating our structures in the years to come.”

### **SUPPORTING COMMUNITY PROGRAMS**

Seaway employees are committed to making a difference in their communities. Every year, they work diligently to support their local United Way campaigns. In 2010, the Corporation once again matched employee contributions culminating in a total donation to the United Way of \$84,600.

Throughout the year, a number of employees donated time and funds to various local charities and causes, including the Canadian Cancer Society’s Relay for Life, National Smile Day in support of Opération Enfant Soleil, the Alzheimer Society Niagara Foundation, Bowl for Kids for Cornwall Big Brothers and Big Sisters, and the Salvation Army.

In 2010, the Seaway was twice recognized for its support of local charities. On February 9<sup>th</sup>, employees at the Cornwall Head Office were presented with a Certificate of Appreciation in recognition of 25 years of outstanding support of the Salvation Army’s Family and Community Services Program. On May 6<sup>th</sup>, Head Office also received a gold award from the United Way, in recognition of a participation rate of at least 90% and average contributions exceeding \$60 per employee.

In addition to contributing towards various charities, the Seaway also supported community events such as the Canal Days Marine Heritage Festival in Port Colborne, BeauVENTois in Beauharnois, the Montreal Boat and Water Sports Show, and Take Our Kids to Work Day.

## CORPORATE SUSTAINABILITY

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In the 2008/2009 annual report, an initial Materiality Matrix was provided to give readers a visual representation of issues that the Corporation believes are the most significant to its sustainability. Inspired from different methods of reporting on sustainability, the Materiality Matrix is a way to organize the more material business considerations depending on three criteria: current and potential impact on the Corporation, the degree of concern to Stakeholders and the relative level of control the Corporation has over the issue. For this report on Corporate Sustainability, the Matrix has been updated to take into account certain internal and external issues the Corporation has faced within the last two years.

The majority of the issues included in the Matrix have been covered directly or indirectly in this annual report. For added insight, we have provided some background information on the context that has led the Corporation to increase the importance it attaches to six issues in the conduct of its business.

**Awareness Campaign:** The Marine Delivers awareness campaign appears in the Materiality Matrix given its role in conveying the benefits of the marine mode of transportation and the positive impact that it has on all communities surrounding the Great Lakes / St. Lawrence Seaway.

**Ship Air Pollution:** Today, air pollution is a core issue for many industries and communities. Within the transportation sector, the burning of fossil fuels brings about greater scrutiny, and new regulations are being issued by different levels of government in order to cut emissions and reduce global warming.

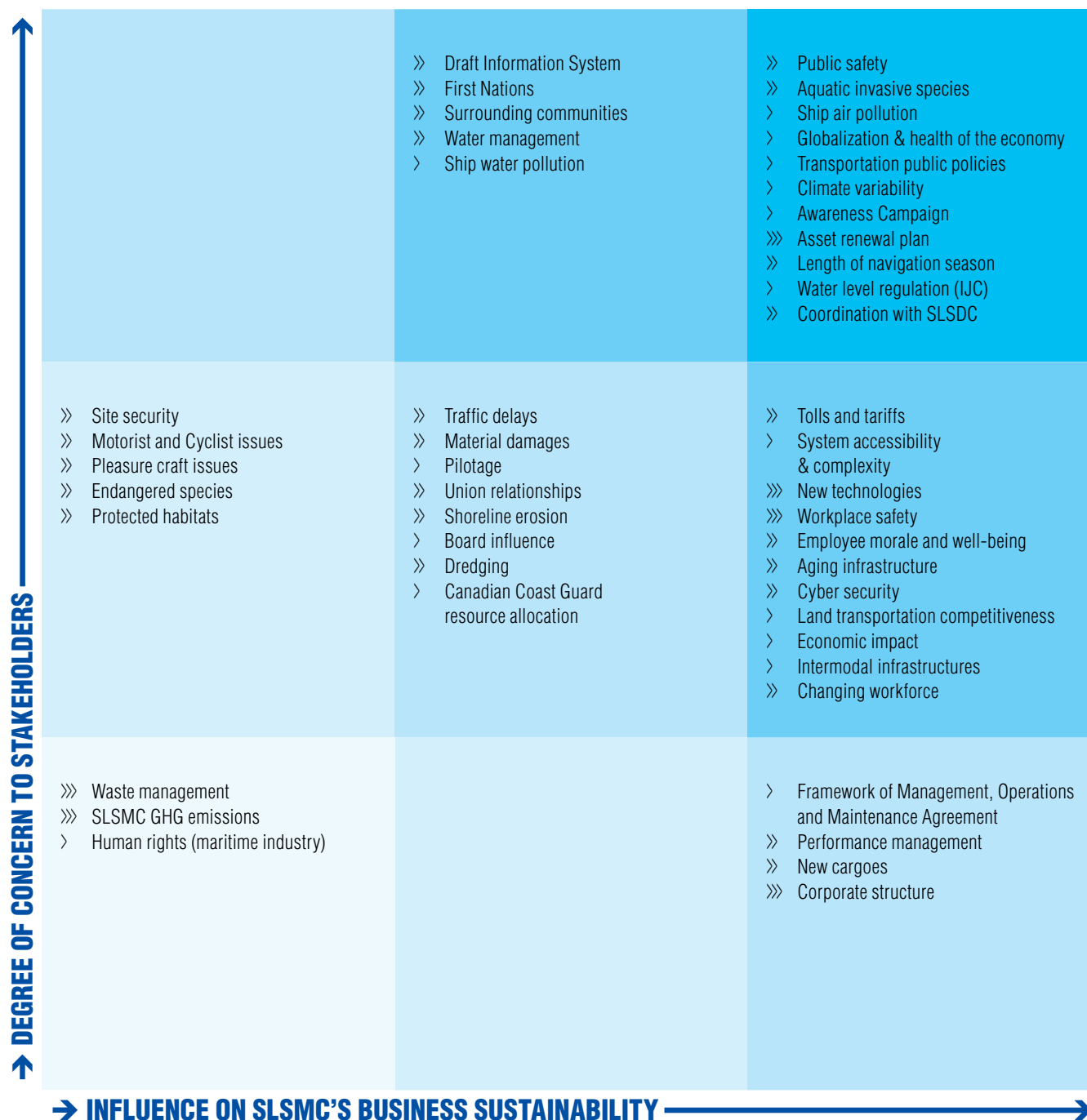
**Transportation – Public Policies:** From ballast water regulations to the elimination of the 25% duty on imported new vessels, public policy heavily impacts the marine mode of transportation.

**Climate Variability:** The operation of the Seaway and the success of every transit are closely related to weather conditions, especially during the opening and closing of the navigation season.

**System Accessibility and Complexity:** In order to increase accessibility to the Seaway and help its users gain improved operating efficiency, the complexity of the system must be reduced. This issue has become of vital importance to ensuring the competitiveness of the marine mode of transportation, and affects a vast array of stakeholders.

**Economic Impact:** In order to move toward sustainability, it is important to ensure that everyone profits from the use of the system by creating the right balance between the three bottom lines inherent to corporate sustainability: environmental, social and financial.

## MATERIALITY MATRIX



Level of SLSMC's control over the issues:

- > Low
- » Medium
- »» High





> Pleasure craft in a lock in the MLO Region





> Tug and barge in lock / Credit: Shipphotos by Paul Beesley



> Kahnawake emergency dock



> Ospreys on platform at Iroquois lock



> Vessel in channel at Brockville



# CORPORATE GOVERNANCE

(as of March 31, 2011)

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 QUEBEC AND ONTARIO. INDIVIDUAL BOARD COMMITTEES OVERSEE GOVERNANCE, HUMAN RESOURCES, AUDIT AND ASSET RENEWAL.



> From left to right: Terence F. Bowles, Robert J. Armstrong, Paul A. Gourdeau, Wayne Devlin, Ian MacGregor, David F. Mothersill, Ralph Mercier, Jonathan Bamberger, David Muir





## BOARD OF DIRECTORS

**Robert J. Armstrong**  
Ontario Provincial Government

**Jonathan Bamberger**  
Other Members

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

**Wayne Devlin**  
Grain

**Paul A. Gourdeau**  
International Carriers

**Ian MacGregor**  
Chair  
Domestic Carriers

**Ralph Mercier**  
Québec Provincial Government

**David F. Mothersill**  
Steel and Iron Ore

**David Muir**  
Federal Government

## CORPORATE GOVERNANCE OFFICERS

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

**Jean Aubry-Morin**  
Vice-President, Corporate Sustainability  
Corporate Environment Officer

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

**Karen Dumoulin**  
Director of Finance

**Yvette Hoffman**  
Counsel and Secretary

## INDUSTRY MEMBERS 2010/2011 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

**Upper Lakes Group Inc.**  
Toronto Ontario

**Vanguard Shipping  
(Great Lakes) LTD.**  
Ridgeville, Ontario

## GRAIN

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

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

**Bunge du Canada Ltée**  
Québec, Québec

**Cargill Limited**  
Winnipeg, Manitoba

**Louis Dreyfus 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

**Gibson Canadian & Global  
Agency Inc.**  
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

**Montship Inc.**  
Montréal, Québec

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

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

## OTHER MEMBERS

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

**Essroc Italcementi Group**  
Mississauga, Ontario

**Keystone Canada Inc.**  
Montréal, Québec

**Lafarge Canada Inc.**  
Concord, Ontario

**OmniSource Corporation**  
Burlington, Ontario

**Redpath Sugar Ltd.**  
Toronto, Ontario

**Suncor Energy**  
Mississauga, Ontario

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

**The Mosaic Company**  
Colonsay, Saskatchewan

## STEEL AND IRON ORE

**ArcelorMittal Dofasco Inc.**  
Hamilton, Ontario

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

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