

***The St. Lawrence
Seaway
Management
Corporation***



***Annual Report
2004/2005***



The St. Lawrence Seaway Management Corporation

The St. Lawrence Seaway Management Corporation (SLSMC) was established in 1998 as a not-for-profit corporation by Seaway users and other interested parties. In accordance with provisions of the *Canada Marine Act*, the SLSMC manages and operates the Canadian assets of the St. Lawrence Seaway for the federal government under a long-term agreement with Transport Canada.

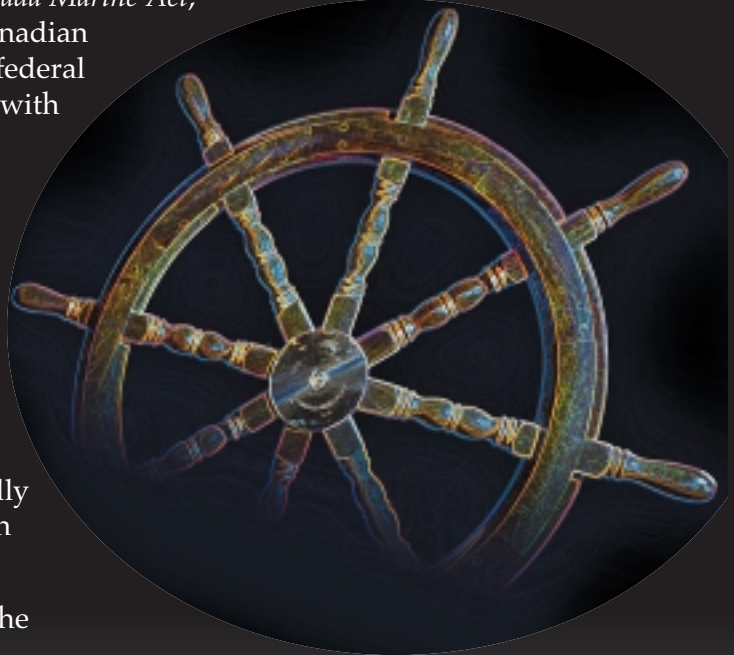
Our Guiding Principles

*Steering for success ...
On course to the future.*

Our Mission: We pass ships through a safe and reliable waterway system in a cost-effective, efficient and environmentally friendly manner to meet our customers' transportation needs.

Our Vision: The SLSMC and its partners ... the transportation system of choice.

Our Values: Integrity, Respect, Openness, Innovation



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Front cover photos (upper to lower):

Jumbo ship and trailer at the Port of Sarnia, May 2005
(Photo Thies Bogner, MPA/F/PPO)

A mechanical boring machine built in Germany and bound for Minneapolis-St. Paul offloaded from the Antigua-flagged vessel *Scan Partner* at Duluth's Clure Public Marine Terminal.
(Photo courtesy of Port of Duluth)

Pineglenn upbound on Welland Canal, approaching Lock 3
(Photo Jeff Cameron)

Ocean-going vessel *Seneca* exiting Lock 8 at Welland Canal, northbound to Lake Erie

Design: **Walters & Greene Associates**
Printing: **National Printers**
June, 2005

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The Highest Standards of Service

The St. Lawrence Seaway serves cargo vessels and cruise ships with:

- 15 efficient locks and well-maintained channels connecting Montreal to Lake Erie, and providing access to 3,700 km of navigable waters
- an unequalled safety record
- joint Canadian and U.S. government inspections at entry, eliminating duplication
- ISO 9001: 2000 certification for ship inspections, traffic control and lock operations
- state-of-the-art computerized traffic management system
- automatic vessel identification system
- 24-hour navigation even in bad weather, throughout the nine-month season
- a bi-national Web site, the most comprehensive single source of Seaway / Great Lakes information, with real-time navigation data, links to related government and commercial marine transportation sites and full e-business services

The Seaway is a significant economic asset to both Canada and the U.S. In 46 years of operation, it has carried more than 2.2 billion tonnes of cargo, worth over \$265 billion. Vessels from 50 countries around the world have passed safely through our locks over 255,000 times.

2004—A Year to Celebrate

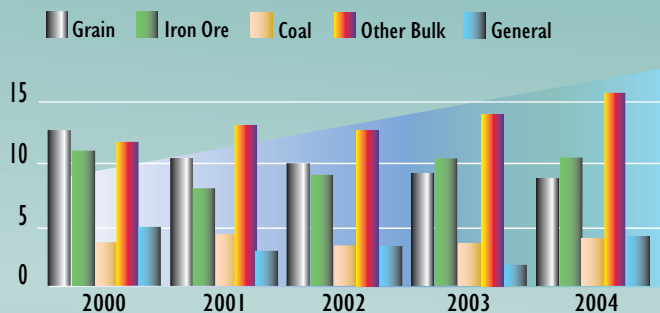
In 2004, we marked the 50th anniversary of the start of Seaway construction, and the 175th anniversary of the opening of the original Welland Canal.



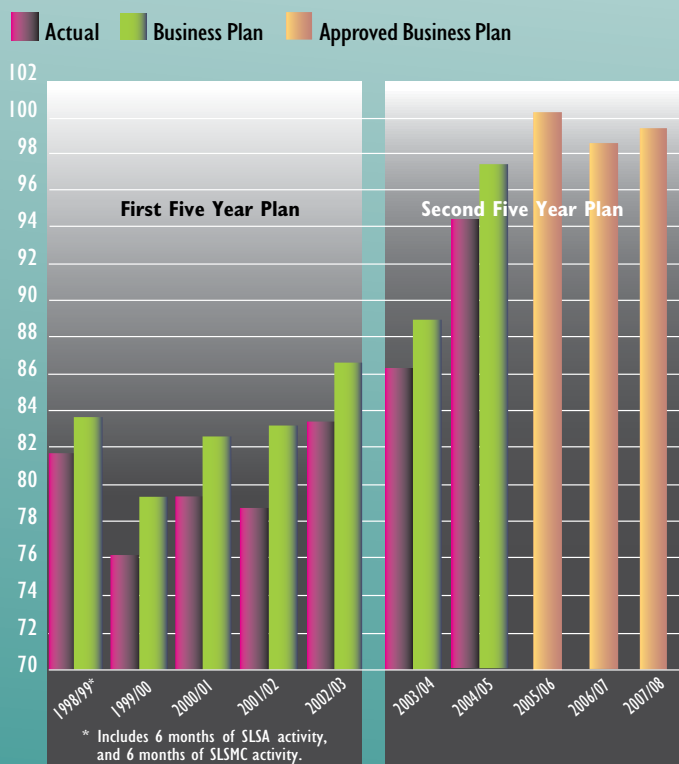
2004/2005 Performance Highlights

- Longest navigation season in Seaway history—281 days
- System up and available 99.56% of the time during the season
- Successful increase in draft to 26'6"
- Overall 6.5% increase in traffic over 2003, to 43.4 million tonnes
- MLO section handled 2,683 vessel transits, an increase of 104 over 2003

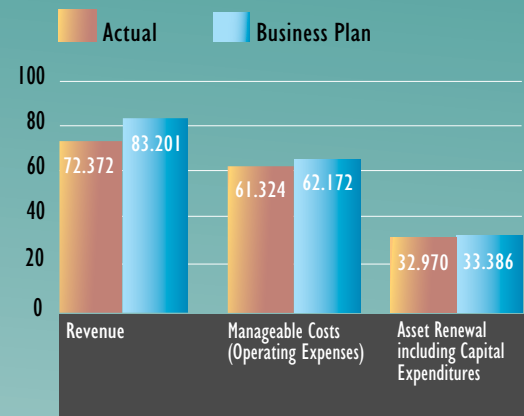
Five Year Review of Combined Traffic by Commodity (millions of tonnes)



Review of Business Plan Performance (millions of dollars)



Comparison of Actuals to Business Plan (millions of dollars)



- Welland Canal handled 3,185 vessel transits, an increase of 158 over the 2003 navigation season
- Most successful season since 2000
- Total toll revenue followed tonnage and increased to \$70.3 million, up 12.5%
- Corporation again outperformed business plan by successfully controlling manageable costs
- Spending on manageable costs and asset renewal totalled \$93.2 million, bettering the business plan target of \$96.4 million
- Notional reserve balance at end of 7th year of operations is \$14.5 million
- Combined salaries and wages plus employee benefits and pension costs totalled \$51.7 million or 86.0% of total operating costs
- Asset renewal program (maintenance and major repairs of locks, canal bridges, buildings and other infrastructure) totalled \$32.1 million
- Welland Canal Lock 7 fully converted to hydraulic operation.

SLSMC: the Driving Force of Hwy H₂O

The St. Lawrence River, St. Lawrence Seaway and the Great Lakes together form Hwy H₂O. This is the Great Lakes/ St. Lawrence Seaway System—a 3,700-kilometer (2,400 mile) marine highway that runs between Canada and the United States.

Hwy H₂O flows directly into North America's commercial, industrial and agricultural heartland. It's an alternative, uncongested transportation route, relieving pressure on overtaxed road arteries and offering:



*Tug and barge under Garden City Skyway in St. Catharines (May 2005)
(Thies Bogner, MPA, F/PPO)*



- the shortest route to the industrial and recreational centre of North America from many European ports
- more than 65 ports with all facilities
- lower charges than ocean ports for handling, wharfage, dockage and stevedoring
- excellent intermodal connections with a vast network of roadways and rail lines providing complete door-to-door service
- environmentally friendly, safe and reliable transportation
- plenty of room for more cargo

Marine transport reduces costs, congestion and pollution on land....

- Ships use only 10% to 20% of the energy required by trucks.
- On a single litre of fuel, one tonne of freight can travel 240 km by ship. By train, the distance drops to less than 100 km and by truck, to less than 30 km.
- Seaway-max ships, twice as long and half as wide as a football field, carry cargoes equivalent to the loads of 870 trucks or 225 rail cars.
- Ships emit 1/10 the greenhouse gas of trucks and 1/2 that of trains (in grams/tonne-kilometre).
- Only one marine accident is recorded for every 13.7 rail accidents and 74.7 truck accidents, and only one marine spill is recorded for every 10 rail spills and 37.5 truck spills.

Sponsors, partners and supporters of Hwy H₂O include the two Seaway entities, major ports along the route, and marine groups.

We've got a good thing flowing...

PRESIDENT'S MESSAGE

The year 2004, which marked the 50th anniversary of the start of construction of the Seaway, gave SLSMC stakeholders more than one reason to celebrate. After several years of sluggish traffic, last year the Seaway turned a corner with increases in both cargo shipments and revenue. While combined tonnage increased 6.5%, revenue grew more than 12% due, in particular, to a strong market for steel. Total revenue for the fiscal year reached \$74 mil-



lion, of which \$70.3 million was from Tolls, an increase of \$7.6 million compared to 2003/04. Our seventh year of operation turned out to be the most successful since 2000.

On the operational side, 2004 was also a banner year. We increased draft

across the system by three inches to 26' 6"; the navigation season lasted 281 days, the longest in Seaway history; and we completed work on the second lock in our hydraulic conversion project. Relationships with the trade have been very good and, while new marine security requirements translated into a great deal of work for the Corporation, we were able to meet the established deadlines and receive our Certificates of Compliance.

Once again, the Corporation outperformed its business plan by successfully controlling its spending. Our manageable costs for the year ended up \$2.8 million below plan, at \$60.2 million, of which \$51.7 million was expended on salaries and benefits. The portion of this amount devoted to Employee Benefits rose to more than 41% of salaries paid.

Asset renewal costs were 1% below the approved plan, at \$33 million, and additional one-time expenditures of \$4.2 million were incurred to re-habilitate the electric generators in the Power House.

Strategic actions take us down the road to the vision

While carrying out our mission in an exemplary fashion in 2004, we also kept our eye on our vision of the future. To this end, significant effort and resources were devoted to advancing our key strategic initiatives of:

- growing the business
- innovating to optimize the current system
- setting the stage for people to succeed

Growing our business

Our general strategy for market development is to show why the marine system should be used to advantage, and then show how to use its advantages. This requires both the 'wide' promotion and public awareness thrust, highlighting our environmental and social benefits, and the 'narrow' cargo-focused initiatives, showing how we can add value in terms of cost reduction, reliability, and available capacity.

It was an active and productive year in the marketing arena for the Seaway. With Board approved funding for promotional initiatives and support to attract new cargo, we started the year with a 'first' and ended the year with another 'first'.

Beginning last spring, we carried out a highly successful multi-media promotional campaign in the Toronto-Windsor corridor, which has now evolved into the popular Hwy H₂O branding project for the entire Great Lakes/St. Lawrence system. Already, 18 major ports have signed on, and the Hwy H₂O logo is showing up with increasing prominence.

And to end the year, in March 2005, we implemented the first significant change to our toll structure in 20 years, with a reduced lockage fee for new cargo on the Welland Canal.

Throughout the year, we worked with major stakeholders to promote marine transportation and to encourage government action in support of the marine mode, and we are harvesting results. At the federal level, we saw the launch

*Foreign flagged vessel
bringing steel products to
the lower Great Lakes*

Photo courtesy Duluth
Seaway Port Authority



of the National Marine and Industrial Council, and Transport Canada's National Conference on Short Sea Shipping. At the provincial level, success has flowed from the marine industry working together in partnership with both the Quebec and Ontario governments. In Quebec, enthusiastic support from the Ministry of Transportation has led to a host of initiatives, bringing short sea shipping to life with concrete examples. In Ontario, SLSMC became a founding member of the Ontario Marine Transportation Forum, a first step towards ensuring that the marine mode plays its rightful role in Ontario transportation.

While encouraging increased use of the Seaway, the Corporation remains aware of its responsibilities for stewardship of the environment, and we continue working to ensure balance between commercial use and the ecology of the waterway and surrounding lands. During the past year, in addition to various projects to protect the environment and clean up Seaway lands, we initiated actions to be more pro-active in dealing with the future challenges in the environmental arena.

Innovating to optimize the current system

We must nurture new business opportunities by being innovative in the way we provide service and, in line with this, we are actively pursuing initiatives to define different operating approaches and to reduce the barriers to entry for new users. Our goal is to provide a stable, known operating environment for current users, while finding the necessary flexibility and value-added incentives to attract new customers.

Asset Renewal Plan funds are being put to work, both to ensure reliability of our infrastructure going forward and to apply new technology to our operating equipment. Last year's draft increase and the longer navigation seasons that are now becoming the norm are also products of innovation, notably AIS and our cutting-edge traffic management technology. We have made giant strides in our strategy to remotely operate certain structures and we have launched a feasibility study on the application of new technology to the vessel securing process. If successful, it will do much to improve the safety of lock workers and speed up transit time through the system.

We have called on our staff to help in this endeavour, with excellent results. Our Innovation Support Group has already captured ideas from employees at all levels of the organization and a budget has been made available in each region for the testing and implementation of quick, innovative improvements to procedures and services.

Setting the stage for people to succeed

In 2004, our vision and three strategic directions pushed us to refine our process-centered organization by grouping together the resources necessary to make significant progress towards our Vision, while running the business in line with our Mission. Our new structure reinforces regional accountability for operating results, for managing effectively through people and for supporting the corporate agenda. The corporate



*Truck ferry next to Windsor
Ambassador Bridge*



Twenty-one wind turbine blades manufactured in Denmark and the United Kingdom were discharged from the Bavaria at Duluth's Clure Public Marine Terminal and were delivered via truck to southern Manitoba.

Photo courtesy Duluth Seaway Port Authority

groups are responsible for progress in achieving our Vision, for providing common and consistent support services to all and for ensuring we have the plans and developmental initiatives in place to ensure our future success.

While the organizational structure is important, inasmuch as it clarifies reporting relationships and responsibilities, I firmly believe that our continued success will come from employees and managers alike embracing our values and working towards common objectives. Our Values of Integrity, Respect, Openness and Innovation set the context for all our interactions and our ways of working; and it is from living these values that our success flows. With our wellness program, succession planning and the "jobs of the future" initiatives, we are well down the road to ensuring the success of the Corporation and its employees.

Ready for upcoming challenges

We have come to know challenge and change; it has become a way of life at the Seaway, and we expect that to continue. We are already aware of, and preparing to address, many of the challenges that we will face in the future, not the least of which is the rapidly approaching loss of current employees to retirement. Defining job requirements into the future, identifying and meeting the necessary skills by getting the right training, development and hiring programs in place becomes more urgent year-by-year.

For the overall good of the waterway, we will continue working to attract new cargoes, to

establish short sea shipping as an integral part of the transportation network and to make progress on dealing with environmental issues.

Our employees and all members of management have the best interests of the Corporation at heart, and I have very much appreciated their efforts over the last year. Similarly, the support I have received from the Board has been invaluable in moving forward as we have and in setting our sails into the wind for the coming year. The Corporation has the advantage of solid partnerships, growing government support and loyal staff. As a result, we are well placed to deal with challenges, and the future is promising for us all.

CSL Laurentian in the Saint-Lambert Lock
Thies Bogner, MPA



OUR BUSINESS

THE BASICS

Season Length

In 2004, the Seaway was open for 281 days, the longest navigation season in its history. The Welland Canal opened on March 23, and the Montreal-Lake Ontario (MLO) section on March 25; the waterway closed officially on December 30 at St. Lambert, although the last ship left the Welland Canal on December 31. The late closing date was negotiated with shippers and carriers, to allow them to make up some of the cargo lost to strikes in the iron ore industry and supply problems in the coal trade.

Transits

During the 2004 navigation season, there were 2,683 vessel transits of the MLO section. This represents an increase of 104 over 2003 results. In the Welland Canal, there were 3,185 vessel transits—an increase of 158 over the 2003 navigation season. Cargo tonnage increased by 6.5% from 2003, to 43.5 million tonnes overall.

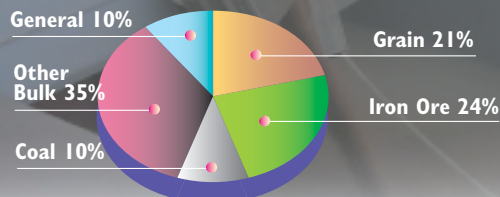
Toll Revenue

Total toll revenue followed tonnage and increased in 2004 to \$70.3 million, up 12%. Revenue rose by a higher percentage than tonnage, the growth coming in part from the mandatory 2% toll increase and in part from the significant increase in general cargo, with its higher tariff.

TRAFFIC HIGHLIGHTS

In 2004, solid economic activity in Canada and the United States helped fuel the growth in Seaway traffic. However, strikes at two iron ore sites in Labrador and in Quebec interrupted iron ore movements over the summer, and although harvests were larger, low quality and strong competition among exporting countries contributed to a decline in grain traffic. On the other hand, the removal of the U.S. import tariff

**Combined Traffic
by Commodity 2004/2005**



on steel encouraged an increase in steel imports. In all, traffic increased over the 2003 figures on the MLO by 6.6% to a total of 30.8 million tonnes and on the Welland Canal by 7.6% to 34.3 million tonnes.

Grain

Canada harvested more grain in 2004 than in 2003, but unfavourable weather conditions led to a product of lower than average quality. Canadian grain shipments were down on the MLO section by 5.2%, to 5.5 million tonnes, and on the Welland Canal by 5.4%, to 5.2 million tonnes.

In the U.S., good harvests raised total shipments of American grain—on the MLO section by 5.8%, to 3.57 million tonnes, and on the Welland Canal by 0.9%, to 3.81 million tonnes.

The decrease in Canadian shipments more than offset the increase in American grain, bringing total grain shipments down by 1.5% on the MLO section and by 3.2% on the Welland Canal.

Iron Ore

Strikes at the Labrador mines reduced shipments on the MLO section by 9.95%, to 8.34 million tonnes. On the Welland Canal, increased downbound shipments more than offset the decreased upbound shipments, creating a modest growth in overall traffic of 1.1%, to 6.63 million tonnes.

Coal

Coal traffic grew by almost 200% to 640,000 tonnes on the MLO section, as industrial demand more than offset reductions in coal movements for steel production. On the Welland Canal, the increase was 0.8%, to 4.23 million tonnes.

Other Bulk

Movements of other bulk cargo increased on the MLO section by 11.6%, to 8.56 million tonnes, and on the Welland Canal by 13.0%, to 11.39 million tonnes. With good vessel availability, many commodities showed impressive growth: limestone 75%, gypsum 40%, fluorspar 30%, urea and related commodities more than 100%, pulpwood 300% and feed 50%. Coke, stone, salt, cement and scrap metal also increased.

General Cargo

General cargo (mainly steel) traffic improved strongly in 2004, driven by economic growth and the removal of the U.S. import tariff. On the MLO section, traffic was up by 65.0%, to 4.2 million tonnes, and on the Welland Canal by 77.3%, to 2.99 million tonnes.

Welland Canal (Millions of Tonnes)



Outlook

With solid economic activity forecast for both Canada and the U.S. in 2005, Seaway traffic is expected to grow next year. Congestion at west coast ports due to increased outsourcing and globalization also augurs well for Seaway traffic. Our initiative to reduce lockage fees for new cargo in the Welland Canal, introduced at the start of navigation in 2005, is expected to bring in additional tonnage for the year.

Grain movements are expected to grow slightly over the low levels of 2004, as better harvests will increase traffic in the fall. In the long term, competition among export routes may limit Canadian grain exports through the eastern corridor.

Despite the high Canadian dollar, iron ore shipments are forecast to increase on both sections of the Seaway to make up for the impact of the 2004 strikes on inventories. However, ongoing labour disputes in the industry will likely continue to affect both iron ore shipments and steel production in 2005. Reduced demand for coal due to environmental concerns, lower coke production in the steel industry and the closing of the Lakeview coal-fired electrical generating station in April 2005 will decrease coal traffic on the Seaway.

SERVICE MEASURES

Overall, 89% of vessel transits in 2004 were accomplished within the standards plus two hours, compared to 91% in the previous year.

Montreal-Lake Ontario Section (Millions of Tonnes)



The main reason for a slightly slower average transit time in 2004 was the safety precaution of imposing slower speeds in certain areas of the Seaway for vessels operating at the deeper draft of 26'6", and the extra time those vessels took to enter and leave the locks.

In the Montreal - Lake Ontario (MLO) section, total ship delays under the control of the Corporation were reduced by 36% (942 hours), while in the Welland Canal they increased by 7% (834 hours), due to increased traffic. However, the average delay per transit in the MLO section was only 21 minutes, while the Welland Canal came in at 16 minutes, both well under the target of "less than 30 minutes."

There were 23 commercial vessel incidents during the season, representing an average of 3.5 incidents per 1000 transits. While more than in 2003, this figure is an improvement over the 2001 and 2002 statistics and meets the service level objective of less than 5 incidents per 1000 transits. Vessel groundings represent the most common incident and these were mainly the result of human error or steering gear problems.

System Uptime, the index that measures short-term physical reliability, was 99.71%, compared to a target of 99.75%. System Availability, the index that measures all causes of delays under Seaway control, was 99.56% for 2004, bettering the target of 99.0%.

The SLSMC is committed to continually improving the reliability of its infrastructure. To this end the corporation has had, for a number of years, a Reliability Index that measures the long-term health of the system. The Reliability Index for 2004 remained unchanged from 2003 at 3.11. This index is based on a consideration of the condition of each structure and its importance.

Following a corporation-wide review of risk, it was determined that a more sensitive Reliability Index was required and a new one, based on both condition and risk, was developed and implemented in parallel. This new index would have stood at 10,403 in 1999; it had dropped to 6590 by 2003 and it improved further in 2004 to 5870.

ISO 9001: 2000 Certification Continues

ISO 9001: 2000 certification from Lloyd's Register is a widely recognized mark of quality serv-



Maintenance dredging in the Seaway channel under the Champlain Bridge (summer 2004)

Unloading of equipment manufactured in Spain and Italy and destined for a Syncrude UE-1 oil sands project near Ft. McMurray, Alberta, Canada.

Photo courtesy Duluth Seaway Port Authority



ice, and Seaway services have reached this high standard on a number of fronts. In 2004, we achieved a major milestone when we obtained ISO 9001: 2000 certification for Structures Operations, which include locks and bridges. As a result, all three main operations processes: structures operation, vessel traffic control and ship inspection are now ISO certified and are audited on a regular basis to ensure continued conformity to our high quality standards.

DRAFT INCREASE IMPLEMENTATION

In 2004 we achieved a major milestone by increasing the operating draft for the Seaway system by three inches. This was made possible in part by the previous introduction of our automatic vessel identification system (AIS) and by the definition of the relationship between speed and “under-keel clearance”. Every inch of draft adds 100 tonnes of cargo to what a ship can carry through our waterway, and last year we attracted more ocean vessels as a result. The increase in draft from 8.0 m (26’3”) to 8.08 m (26’6”) applied to all inland vessels and to ocean vessels equipped with bow thrusters.

During the season, there were 406 vessel transits at drafts greater than 8.0 m in the Welland Canal and 414 in the MLO section. On the Welland Canal, almost 16% of inland vessel transits and 13% of ocean vessel transits were at drafts greater than 8.0 m, while in the MLO the figures were 25% and 13% respectively.

To ensure that adequate water depth continues to be available for ships in the long term, a project has been started to dredge material from the channel between Locks 1 and 2 on the South Shore Canal. The Seaway’s Environmental Impact Screening Report was accepted by the Federal Department of Fisheries and Oceans in April 2004 and the first phase of the three-year project was completed in the fall of 2004. The two additional phases are presently scheduled for 2005 and 2006 to remove further sediments

accumulated in the canal. The total value of the project is estimated at over \$5 million.

OPERATIONS CENTRE


We are continuing to implement new functions in the state-of-the-art Operations Centre which opened in 2003, at the Welland Canal.

The remote operation of bridge 11 started during the 2004 navigation season after successful technical testing. The preparatory work to remotely operate bridges 4 and 21 began in the latter part of the navigation season and continued during the winter. The control of these bridges will be transferred to the Operations Centre during the 2005 navigation season. All four vertical lift bridges on the Welland Canal will then be operated from the Centre, thus improving the safety and efficiency of the Canal.

AIS (AUTOMATIC IDENTIFICATION SYSTEM)

The 2004 navigation season marked our second complete year of operating AIS fully integrated with the Traffic Management System. The operation of the system was very stable throughout the year, both from shore and aboard ships. The number of ship transponder problems was reduced substantially, to nearly zero, during the year.

A vessel speed monitoring program utilizing AIS was introduced in 2004. The program allows both for better speed monitoring in environmentally sensitive areas of the river and for speed surveillance of vessels operating at draft greater than 26’ 3”.



During the season a working group comprised of industry, pilots, and Seaway representatives was formed to investigate further methods of using AIS to increase the efficiency of the waterway. Under review are options such as lessening reliance on VHF communications with vessels, developing lock scheduling modules and reducing the number of navigation aids.

INNOVATION TO IMPROVE SERVICE

One of the Corporation's strategic objectives is to "innovate to improve service." To reach this objective, we will seek opportunities to enhance safety, reliability and efficiency through new uses of technology, or by changing methods or procedures.

To encourage innovation among Seaway employees and to help generate and gather ideas from all levels of the organization for improving procedures and services, SLSMC has established an Innovation Support Group. So far, more than 140 ideas have been received and a budget has been allotted in each region to test and implement quick innovations.

One strategic initiative is testing the application of new technology aimed at securing vessels in the locks. Two such projects were underway last year.

Two "Quick-Release Hook" units for securing vessels, complete with a remote-controlled winch, have been installed at Beauharnois Lock for testing and development purposes, in order to increase efficiency and safety during lockage. We are also planning to implement vessel self-spotting technology. The Transportation Development Centre (TDC) is supporting the project with funding and we are working with Innovation Maritime to review and test various technologies that could be used to help vessels position themselves in the locks. After a review of possibilities, laser scanning technology was selected as the most promising option for site testing, which will take place in 2005.

INTERNATIONAL SHIP & PORT FACILITY SECURITY (ISPS)

2004 saw the introduction of increased ship and port security worldwide, and the Seaway received the required ISPS Certificates of Compliance as of the effective date, by meeting Transport Canada's Marine Transportation Security Regulations (MTSR), which came into effect July 1, 2004. This was achieved through the preparation and implementation of a comprehensive Marine Facilities Security Plan.

Physical upgrades, including improvements in fencing, signage, cameras and access controls have improved security at our locks and other facilities. Audits and exercises to test the components of the security plan are being conducted regularly.

Ongoing security training programs have been conducted in both regions. Security communication strategies include new sections on both our public Internet and employee Intranet sites.

Security requirements also affect our customers. Vessels must now provide 96 hours notice before entering Seaway waters. All foreign ships entering the Seaway are now boarded at Montreal for initial security verification by inspectors from SLSMC, Transport Canada Marine Security and the U.S. Coast Guard.

Marine Security Contribution Program

SLSMC submitted an application for funding under Transport Canada's Marine Security Contribution Program before the Round 1 December 31, 2004 deadline. The Corporation's application has been approved for reimbursement of up to 75% of our expenses.

ASSET RENEWAL

The Corporation completed a total of \$33 million in work on its Asset Renewal Plan during the year. An additional \$4.2 million was spent on upgrading the hydroelectric powerhouse in the Niagara Region. A total of \$22.3 million was spent in Niagara, \$9.6 million in Maisonneuve



Contractor refacing lock wall during 2005 winter works

and \$1.6 million on corporate projects. As usual during the winter, all critical components of the 225 km Seaway canal system were inspected and made ready for the upcoming navigation season. All work was completed in time for the opening of the system in March.

A number of corporately administered projects were completed both in the Regions and in Head Office. These include installation of automated booths for the collection of pleasure craft tolls at a cost of \$0.15 million and the first phase of a project to upgrade the regional telecommunications backbone at a total cost of \$0.9 million.

Maisonneuve

A major project to repair and reset the quoin blocks of lock gates was undertaken at Lock 1 at a cost of \$1.6 million. The first year of a multi-year dredging project was completed at a cost of \$0.85 million, and a multi-year project to repaint Bridge 10 was finished at a value of \$0.85 million.

Almost 50 projects were carried out in the Region in 2004/05. Work included improvements to electrical controls, distribution and communication systems and various projects related to the repair and upgrade of the bridges, lock structures, canal banks and associated structures.

*New Hydraulic Cylinder at Lock 7, Gate 4
Iqbal S. Biln*

Included in the \$9.6 million spent on asset renewal in the Maisonneuve Region was \$1.1 million for regular maintenance work carried out mainly by the Seaway's own forces.

Niagara

The project for conversion of mechanical drives to hydraulic drives continued at a cost of \$6 million. Work continued on the automation and conversion to remote control of "free-standing" bridges, with Bridge 4 being automated and Bridge 21 set up for remote control. The cost of these two projects was \$1.1 million. Continuing its program to rehabilitate the concrete in the locks, the Corporation spent \$3.5 million on concrete repair and refacing in the Flight Locks.

More than 60 projects were completed throughout the year. These included structural repair and painting of Bridge 4, painting and quoin block rehabilitation of gates at Lock 8, dredging below Lock 1, various electrical communication and control upgrades and a variety of work related to the repair or upgrade of the bridges, locks, canal banks and associated structures.

Included in the \$22.3 million spent on asset renewal in the Niagara Region was \$2 million for regular maintenance work carried out mainly by the Seaway's own forces.

Hydraulic Conversion Project

The first complete Seaway lock was converted to hydraulic operation in 2004, bringing to a successful completion the two-year pilot project, with the whole of Lock 7 and part of Lock 6 now under hydraulic operation. Based on the



problem-free operation of the equipment at Lock 6 during the 2004 navigation season and the lessons learned through the installation, testing and commissioning of the Lock 7 conversion, we plan to proceed with the remaining locks over the next four years. Because of the dramatic increase in steel prices in 2004, a supplemental cost/benefit analysis was completed, which confirmed the viability of the project.

The 6-year program to convert all locks in the Welland Canal to hydraulic operation is estimated to cost about \$60 million. All lock mitre gates, lock valves and ship arrestors will be converted.

GROWING THE TOP LINE

The Corporation's current strategic plan has a strong focus on market development, which we are pursuing through a number of avenues. We are working more closely than ever with Seaway stakeholders to strengthen our common message and attract new cargoes to the Great Lakes/St. Lawrence Seaway System.

The Canadian and U.S. Seaway Corporations are pooling resources and co-operating in efforts to better utilize available resources, and we are making progress with our stakeholder umbrella marketing organization in using the HWY H₂O brand as a launch platform.

MARKET DEVELOPMENT INITIATIVES

Short Sea Shipping and Containers

Much of our market development effort over the past year has been invested in promoting the need to market the system as a whole by bundling marketing and promotion resources available among the various stakeholders. Specific emphasis was given to short sea shipping, the movement of cargo by water for relatively short distances. We are encouraged by the successful example of the European Union, which has supported short sea shipping as an environmentally friendly and efficient local transport option since 1992.

We have been actively involved in discussions with shippers, carriers and ports in an effort to bring short sea shipping to the Seaway. Besides the obvious benefits to the marine industry, short sea shipping as an alternative to road haulage benefits society at large by reducing highway congestion, road repair expenses and the need for additional highways. These benefits have led both Transport Canada and the U.S. Maritime Administration to promote short sea shipping, and recently both institutions held well-attended conferences on the subject.

Lower Lockage Fees on Welland Canal

During the past winter, SLSMC negotiated a collaborative initiative with Transport Canada to attract new and lost cargoes and promote short sea shipping.

*Canfornav's Puffin
off Port of
Thunder Bay
Photo courtesy
Canfornav*



Old Powerhouse Control desk at Welland Canal Lock 4 soon to be replaced with state-of-the-art equipment.

As of March 23, 2005, lockage fees were reduced on the Welland Canal for ships carrying "new cargo". The new tariff is based on the Gross Registered Tonnage of a vessel rather than a fixed fee. All qualifying ships benefit and so far we have seen good results from new cargo transiting the Canal.

The reduced lockage fees apply to all "new cargo", which is defined as either containerized cargo, or cargo which has not moved through the Welland Canal in an average annual amount greater than 10,000 metric tonnes between 2001 and 2003. Any cargo that qualifies as new cargo will remain qualified for the reduction through the 2007 shipping season.

Pleasure Craft Ticketing Machines

SLSMC has introduced a new automated payment method to streamline the locking process for pleasure craft. Ticket machines have been installed at each end of the Welland Canal and similar equipment will be installed at both ends of each lock in the Montreal-Lake Ontario section during the summer of 2005. The payment machines dispense one or more tickets and are operated by credit card only. Use of these machines will be mandatory beginning in the 2006 navigation season, when cash payments will no longer be accepted.

Diversifying into Related Services

In keeping with the SLSMC Vision statement, we are planning to grow our business by diversifying into related marine services and by leveraging other business opportunities. In this context, the Corporation has undertaken an initial land use study to evaluate how certain Seaway lands could be applied as a resource to aid the growth of our core business.

In addition, action has already been taken to increase the benefits derived from the Seaway's generating station, located near Lock 4 on the Welland Canal, and to generate further electricity from the Canal weirs. The powerhouse supplies electricity for the operation of Canal struc-



tures, locks, bridges, communication equipment and lighting, as well as bringing in revenue from the sale of excess power. In January 2005, the Corporation received its electricity generation license from the Ontario Energy Board and is now an independent power generator.

The powerhouse generators have been completely rehabilitated, and will be operated by remote control from the Operations Centre. The training of SLSMC personnel is underway and resulting savings will start in the autumn of 2005.

We have an agreement with Ontario Power Generation (OPG) to utilize their excess water when the Niagara River flows allow. This will optimize the amount of power we can generate over the next four years, potentially resulting in additional revenue of some \$500,000, without any additional capital investment. We are currently finalizing the required approvals from various agencies involved, including the International Niagara Commission (INC) and Foreign Affairs.

PROMOTIONAL INITIATIVES

Posidonia 2004

A 21-member delegation of trade and maritime representatives from the Great Lakes/St. Lawrence Seaway system traveled to Athens and Piraeus, Greece, in early June 2004, to participate in Posidonia 2004, a biennial maritime trade show. The delegation met with representatives from three shipowner/operator companies, made a presentation at an event hosted by the American-Hellenic Chamber of Commerce and attended a function hosted by the U.S. Commercial Service. The delegation also co-hosted a dinner and reception with the Saint

Lawrence Seaway Development Corporation (SLSDC) that was attended by the Canadian Ambassador to Greece, the chief of U.S. Commercial services and 85 maritime officials from around the world.

More than 1,650 companies from 74 countries exhibited maritime products to approximately 20,000 visitors. As a key exhibitor in the U.S. pavilion, the mission delegation sponsored and staffed an exhibition booth with extensive Seaway handout materials and graphic displays. Meetings held during the trade show have led to new business development.

HWY H₂O Campaign

During the past year, SLSMC promoted the Great Lakes/St. Lawrence Seaway System, with our first major initiative being the HWY H₂O campaign. Concurrent with last year's Seaway opening, we launched this billboard, newspaper and radio ad campaign in the Windsor-Toronto corridor to increase awareness of the benefits of marine transportation and the Seaway system. The campaign was well received and the success of this initial effort led to Phase 2 of the project: to establish HWY H₂O as the official "brand" for the Great Lakes/St. Lawrence Seaway System. We approached Canadian and U.S. ports to partner with us in promoting the brand to reap the benefits of widespread visibility. To date, 18 ports have joined the two Seaway entities and the HWY H₂O brand is becoming widely known. Ports are making use of the logo in various ways such as displaying it on



their promotional and marketing materials, Web sites, advertising and billboards.

A Year to Celebrate

In 2004, we celebrated two anniversaries: 50 years since the beginning of Seaway construction in 1954, and 175 years since the opening of the first Welland Canal in 1829.

The anniversaries made an excellent platform for promotional events, and our own efforts were aided by those of other organizations. Three hour-long documentaries on the Seaway and Welland Canal were produced by the CBC and by the U.S. History Channel, and aired a number of times during the year; and the 2004 International Waterways Conference was held in St. Catharines to mark the Canal anniversary.

SLSMC featured a new 50th Anniversary logo on our promotional materials, and took the opportunity to go out into ports and communities along the Seaway to get out the message about the benefits of marine transportation. Many employees participated in local parades, exhibits and open houses, establishing a widespread corporate presence. Anniversary mementoes were produced for staff and customers and passed out as promotional items.



Collage by Canadian Sailings
Photo: Thies Bogner, MPA

www.greatlakes-seaway.com

Consistently ranked first by Google in searches targeting the Seaway and Great Lakes, *www.greatlakes-seaway.com* continues to assert itself as the authoritative source of information on Seaway and Great Lakes matters. Delivering over 1.8 million pages of information in 2004, our Web site conveyed the Seaway's message to tens of thousands of visitors spanning the globe.

Today, users visit our site to obtain updates on Seaway Advisories and news, download forms, check the position of their vessels, and obtain information for a wide variety of research projects. Users range from commercial agents and carriers, to students pursuing studies in geography, history and economics.

GREENING OUR BUSINESS

Marine transportation has significant environmental benefits and we plan to promote these in the broader context of developing a sustainable transportation system. During 2004, we determined the strategy to do this while implementing a pro-active approach to dealing with potential environmental threats.

We are firmly committed to greening the Seaway and lead by example in the way we deal with internal environmental management. Protecting the environment is a high priority when planning our projects, and the Board receives regular reports on the Corporation's progress in managing environmental issues.

ENVIRONMENTAL STEWARDSHIP

Implementing a pro-active approach to environmental stewardship, the Corporation is devoting substantial effort and funds to identifying and cleaning up any contaminated site it inherited when it was created. The work is ongoing and some of the sites have already been brought up to regulatory standards.

In 2004, SLSMC invested nearly \$100,000 to seek out and evaluate additional problem areas. Environmental clean-up is a complex and lengthy process, involving a large number of regulatory bodies, repeated testing and analysis, and careful planning. We have awarded a contract to carry out phase I and phase II environmental assessments of a series of sites. During phase I, our consultants study the history of use of each site, and examine records and site inspection data to identify the location and type of possible contamination. Phase II consists of sampling soils and underground water over a period of time, based on phase I results, to confirm whether or not contamination exists, and to define its nature and extent.

MANAGEMENT OF PETROLEUM PRODUCT STORAGE TANKS

To date, the Corporation has invested over \$500,000 to modernize its petroleum product storage tanks to current standards, notably the Environmental Code of Practice for Above-ground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, endorsed by the Canadian Council of Ministers of the Environment (CCME). This upgrade program aims to reduce the risk of leaks, which are the primary cause of soil and underground water contamination in Canada.

DRINKING WATER MANAGEMENT

The Corporation is accountable for responsible management of drinking water supply systems at its locks. While we supply bottled water for human consumption, the Canada Labour Code requires that we also supply employees with potable water for meal preparation, dishwashing and personal hygiene. In carrying out this

*Wagenborg vessel at
Iroquois Lock*





(From left to right)

Rick Sinnige, Benoit Nolet, Jim Wheeler and Craig Freeman participated in the Bike to Work Week, as part of the North American Occupational Health and Safety Week held May 2 to 6, 2005 in Niagara.

responsibility, we are meeting Health Canada's strictest requirements, as well as those established by Ontario and Quebec.

In 2004, the Corporation replaced the potable water treatment system at the Iroquois Lock. The new system includes chlorination and ultraviolet disinfection. The well water supplying the maintenance centre at Iroquois was also equipped with an ultraviolet lamp disinfection system. The new systems meet the standards of the Ontario Drinking Water Regulations.

We also significantly increased the frequency at which we inspect the systems and analyze the microbiological, chemical and physical parameters of the water we supply to our facilities.

GROWING OUR PEOPLE

HEALTH AND SAFETY ISSUES INITIATIVES

Wellness program

Our new Health and Safety policy has been reviewed with all employees and committees were set up across the organization to launch our Wellness Program. Progress began on the wellness initiative at the grass roots level of the Corporation, which is essential to the program's success and to employee ownership. Regional Wellness Committees report their action plans to the Corporate Wellness Committee, which makes recommendations for corporate action.

Last year, we carried out a wellness survey,

which showed us the priority that employees placed on various wellness needs. Access to gym and physical activities, help with stress management, help with balancing work and personal life, personal growth and development opportunities were at the top of the list. The general consensus in the wellness field is that such activities lead to improved health and reduced medical and other related costs. With the average age of Seaway employees at 49, the payback could be considerable. The Corporation will implement a program based on these recommendations in 2005.

Lost Time Injury Statistics

The SLSMC's Annual Health and Safety Reports were submitted to Human Resources Development Canada as required. Overall, we have continued our successful results in managing safety. Our lost time injury statistics increased slightly with a frequency rate of 1.58 per 100 person years for 2004-2005 as compared to 1.15 per 100 person years for 2003 and a severity rate of 16.24 per 100 person years in 2004-2005. The Maisonneuve Region had 6 lost-time accidents, resulting in 53 days lost, while the Niagara Region had 2, for a total of 5 days lost and Head Office did not report any.

Prevention of Drug and Alcohol Use in the Workplace

Our policy on early detection, prevention and testing for drugs or alcohol in safety-sensitive work, established with Union agreement in 2003, continued to be enforced across the Corporation and is becoming part of the Corporation's safety culture. Likewise, all new hires in safety-sensitive positions were screened for drug use prior to confirmation of their employment. We are currently working out ways to improve the protocol for carrying out tests after regular working hours, as this service is not



Yuna Milli, Administrative Assistant
of Marine Services, at SLSMC's
Saint-Lambert Office.
Thies Bogner MPA, F/PPO

readily offered or available in the communities that house Seaway facilities.

Working Alone and Ergonomics

We are being pro-active with respect to pending regulations for working alone and ergonomics, with the preparation of draft policies and actions to improve workplace ergonomics, including training, underway across the organization.

HUMAN RESOURCES

Jobs of the Future

The Jobs of the Future project supports the SLSMC strategy of "Setting the Stage for People to Succeed."

The Seaway is experiencing a period of change and transition, both in terms of employees and the nature of our work. Our average employee is 49 years old, and more than half of our employees will be able to retire in the next eight years. In addition to a new Vision we are implementing some key technological initiatives that are changing the core processes of Operations and Maintenance, such as our new Operations Centre in Niagara, the vessel securing process, AIS and Hydraulics.

The Jobs of the Future project identifies major changes and trends in our work, and the resulting impacts on our core process jobs. The ultimate goal is to define the jobs of the future at the Seaway, and to ensure we have people in the organization with the right skills to effectively function in these positions.

The three phases of the project are: to establish a transition blueprint for work change direction, to assess key implications for jobs and create new profiles and, finally, to develop a Migration Plan.

Potential scenarios for change are based on a

set of key assumptions centered on traffic demand, the degree of remote operation and the level of manual intervention in the core vessel securing process. The study showed how operations would be organized under each scenario, and completed a preliminary analysis of efficiency, idle time and impact on core skill sets for major jobs.

Work continues on the 2004–08 timeframe, and the longer-term horizon (5–10 yrs.) will be firmed up over the next two or three years as a result of research and thorough study of the technological changes that could actually be implemented.

Employee Opinion Survey

The Employee Opinion survey was carried out in May 2004. The response rate was approximately 70%, a successful rate of return by Hay Management standards and one which allowed for reliable data and analysis. The last full survey of employees was carried out in 1996, while a mini-survey was conducted in 1998. Hay Management Group has analyzed the information provided by our employees and identified the Corporation's strengths and areas requiring improvement. The results have been communicated to employees and discussions are ongoing.

The results of the current survey indicate that our relative strengths include strategic clarity, team leadership, working conditions/safety and overall commitment. The key areas requiring improvement are company leadership and performance management. Action plans are currently underway to address these issues.

Pension Plan

The SLSMC Pension Plan is now valued at about \$120 million, making it larger than 62% of plans in the Canadian Pension Fund Directory and twice the size of the median plan.

As a result of our mandatory valuation in 2004, SLSMC will make ongoing lump sum payments to the plan over the next years, during which time contributions will continue to be in excess

of disbursements. The plan is growing at a rate of over 10% per year as a result of regular contributions (both employer and employee), the special lump sum payments to fund the solvency deficit and investment earnings.

As a result, changes were made to the investment strategy to increase equity holdings as a percentage of the fund and to engage a specialist manager for the international equity portion of the fund.

In June 2004, the Corporation met with its Pension Advisory Committee as required by the Pension Benefit Standards Act to review the plan's status, valuation and obligations. Shortly after the meeting, the Committee circulated a communiqué to all SLSMC employees and pensioners with this information.

Employment Equity Compliance

In November 2004, the Canadian Human Rights Commission (CHRC) found the Seaway in compliance with all twelve (12) of the statutory requirements under the *Employment Equity Act*. This achievement confirms that the organization implemented the required undertakings

it agreed to with the CHRC as a result of a follow-up audit in May 2002.

SLSMC continues making progress in carrying out our three-year Employment Equity Action Plan (April 2003 – March 2006), particularly as it relates to activities affecting workplace barriers. In the last year, we were also successful in developing new policies on Accommodation in the Workplace and Employment Equity and Diversity, as required by the Compliance Review Officer of the Canadian Human Rights Commission. These policies were developed in consultation with the Union and are being communicated to all employees.



Glen Rutherford spotting a downbound vessel ready to enter Lake Ontario in Lock 1 at the Welland Canal.

GOVERNANCE

The St. Lawrence Seaway Management Corporation is governed by a nine-member board that is responsible for ensuring the long-term viability of the Corporation and of the Seaway as an integral part of Canada's transportation infrastructure. The Board oversees many aspects of the SLSMC's mandate, including strategic planning, risk management, succession planning, communications policy and the integrity of the Corporation's internal control. It also reviews SLSMC's financial results and future direction and sets limits on management authority, accountability and unforeseen expenditures.

Board committees focus on governance, human resources, audit and asset renewal.

Members of the Corporation (as of March 31, 2005)

Board of Directors

J. Douglas Smith^{1, 2}
Chair
Domestic Carrier Members' Representative

Peter G. Cathcart²
Ontario Provincial Government Representative

Richard J. Corfe
President & Chief Executive Officer
The St. Lawrence Seaway Management Corporation

W. Nick Fox^{4*}
Grain Members' Representative
Vice-President, Terminals & Eastern Operations
James Richardson International Limited

Richard Gaudreau^{1, 3}
Federal Government Representative
Langlois Kronström Desjardins, L.L.P.

William Keays^{3*}
Québec Provincial Government Representative
Director, Business Development
Genivar

Georges H. Robichon^{1*}
International Carrier Members' Representative
Senior Vice-President and General Counsel
Fednav Limited

Robert J. Swenor^{2*}
Steel and Iron Ore Members' Representative

Guy C. Véronneau^{3, 4}
Other Members' Representative

*SLSMC Board of Directors,
left to right:
Front row:
R. Corfe, D. Smith,
P. Cathcart
Back row: R. Swenor,
G. Véronneau, W. Keays,
R. Gaudreau, N. Fox
Absent: G. Robichon*

Members of:

1. Governance Committee
2. Human Resources Committee
3. Audit Committee
4. Asset Renewal Committee
- * Committee Chair

Photo Thies Bogner, MPA



Officers

Richard Corfe
President and Chief Executive
Officer

Michel Drolet
Vice-President, Niagara Region

Adina Juster
Vice-President,
Maisonneuve Region

Carol Lemelin
Vice-President, Finance
and Administration

Yvette Hoffman
Counsel and Secretary

Industry Members 2004/2005

Domestic Carriers

Algoma Central Corporation
St. Catharines, Ontario

Canada Steamship Lines Inc.
Montréal, Québec

Groupe Desgagnés Inc.
Québec, Québec

Lower Lakes Towing Ltd.
Port Dover, Ontario

McKeil Marine Ltd.
Hamilton, Ontario

St. Marys Cement Co.
Toronto, Ontario

Upper Lakes Group Inc.
Toronto, Ontario

Grain

ADM Agri-Industries Ltd.
Windsor, Ontario

Agricore United
Winnipeg, Manitoba

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

Bunge Canada Ltd.
Québec, Québec

Cargill Limited
Winnipeg, Manitoba

James Richardson Int'l Ltd
Winnipeg, Manitoba

Louis Dreyfus Canada Ltd
Calgary, Alberta

Saskatchewan Wheat Pool
Regina, Saskatchewan

The Canadian Wheat Board
Winnipeg, Manitoba

International Carriers

Canfornav Limited
Montréal, Québec

Christensen Shipping Corporation
Montréal, Québec

Colley Motorships Limited
Montréal, Québec

Fednav International Ltd.
Montréal, Québec

Inchcape Shipping Services
Montréal, Québec

Montreal Marine Services Inc.
Longueuil, Québec

Montship Inc.
Montréal, Québec

Navitrans Shipping Agencies
Montréal, Québec

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

Robin Maritime Inc.
Montréal, Québec

Other Members

AGP Grain Ltd.
Minneapolis, Minnesota

Essroc Canada Inc.
Mississauga, Ontario

General Chemical Canada Ltd.
Mississauga, Ontario

IMC Canada Ltd.
Regina, Saskatchewan

Keystone Canada Inc.
Montréal, Québec

Lafarge Canada Inc.
Hamilton, Ontario

OmniSource Corporation
Burlington, Ontario

Ontario Power Generation
Toronto, Ontario

Petro-Canada
Oakville, Ontario

Redpath Sugars
Toronto, Ontario

The Canadian Salt Company Ltd.
Pointe-Claire, Québec

Steel and Iron Ore

Dofasco
Hamilton, Ontario

Iron Ore Company of Canada
Montréal, Québec

Québec Cartier Mines
Montréal, Québec

Stelco Inc.
Hamilton, Ontario