Ready for the Future
The front cover depicts two eras. As the first commercial ship to transit the St. Lambert Lock during the 2019 navigation season, the *Federal Kumano* exemplifies the state-of-the-art vessels that Seaway carriers are commissioning as they invest billions of dollars in the renewal of their fleets. The scope of this investment underlines the confidence that users have in the future of the Great Lakes – St. Lawrence Seaway System. Indeed, this strong outlook for the future was foretold by the scene displayed in the smaller black and white photo, as crowds milled about the St. Lambert Lock in 1959 exuberantly watching the first commercial ship to transit the lock on April 25th, and anticipating what the decades ahead would bring in terms of trade and prosperity.

The St. Lawrence Seaway Management Corporation, the successor to the St. Lawrence Seaway Authority, was established in 1998 as a not-for-profit corporation by the Government of Canada, Seaway users and other key stakeholders. In accordance with provisions of the Canada Marine Act, the Corporation manages and operates the Canadian assets of the St. Lawrence Seaway, which remain the property of the Government of Canada, under an agreement with Transport Canada.
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The Seaway is celebrating its 60th anniversary in 2019, and we marked this significant milestone on March 26th at the official opening of the navigation season. We have just emerged from the most transformative era in the Seaway’s history with the completion of our modernization program. Hands Free Mooring has brought about the greatest advancement in operations since the Seaway’s inception in 1959. The theme for this year’s report reflects the substantial progress that has been realized since The St. Lawrence Seaway Management Corporation was established in 1998. Thanks to substantial gains in safety, reliability and efficiency, the St. Lawrence Seaway is “ready for the future”.

At the opening, we were proud to welcome Minister Marc Garneau as keynote speaker, who paid tribute to the Seaway’s legacy and its bright future, noting in his remarks: “The St. Lawrence Seaway has a distinguished past, a dynamic and vital present and will continue to play a pivotal role in Canada’s economy in the future”. Other dignitaries in attendance at the St. Lambert Lock were Quebec Transport Minister Chantal Rouleau, U.S. DOT Assistant Secretary Joel Szabat, SLSDC Deputy Administrator Craig Middlebrook and Fednav President Paul Pathy. Fednav is celebrating its 75th anniversary this year, and so it was fitting that the Federal Kumano was the inaugural vessel for the 2019 navigation season.
Our 2018/19 fiscal year which ended on March 31st showed strong gains, with cargo tonnage rising 7% to over 41 million tonnes, the best result since the Global Financial Crisis hit in 2008. In fact, over the past two years, cargo has risen by 17%.

I am pleased to report that revenues, including revenues remitted for land administration, increased by $4 million to $87 million during the fiscal year. With manageable costs coming in at $51 million, a $9 million reduction from the previous year, revenues exceeded manageable costs by $36 million. Now turning to asset renewal, the total investment made last year was $61 million, $7 million less than the previous year. These results allowed the Corporation to contribute over 50% of the investment required for Seaway asset renewal. For more insight, please consult the Financial Highlights found later in this report.

Hands Free Mooring has brought about the greatest advancement in operations since the Seaway’s inception in 1959.
Operationally we had another strong year with system availability once again exceeding 99%. This track record stands as a strong testament to our proactive approach to system maintenance, and our skilled teams who ensure that the Seaway’s structures and equipment are kept at peak operational efficiency. We also continue to work closely with the IJC’s International Lake Ontario – St. Lawrence River Board which regulates water flows. As 2019 began with above average water levels on the Great Lakes, we have been working closely with the Board to support their efforts to deal with high water levels, while also mitigating the impact of ship wakes upon the shoreline by limiting vessel speeds in areas that are highly sensitive.

The initial construction of the St. Lawrence Seaway has long been recognized as an engineering marvel and, over the years, changes have been introduced to ensure its sustainability, the most recent being the modernization program which included hands-free mooring and remote operation of locks. These advancements constitute the most significant change to the operation of the Seaway since its opening in 1959, and have improved safety and efficiency for the Seaway and the vessels transiting the system. As part of the ceremony, Minister Garneau and I dedicated a plaque recognizing the contributions of the highly skilled and dedicated workforce responsible for shaping the Seaway of today. The plaque will be affixed to the St. Lambert Lock’s administration building.

The Seaway connects the Great Lakes and the Atlantic Ocean. In its 60-year history, almost three billion tonnes of cargo have transited the Seaway’s locks. The provinces and states it serves collectively generate over $6 trillion of GDP and, if they were a country, would constitute the world’s 3rd largest economy. In addition, according to the updated Martin Economic Impact Study released in 2018, cargo moving over the Great Lakes – St. Lawrence Seaway System supports 329,000 jobs, underlining the importance of the role played by the marine supply chain.
Over the last 20 years since the Seaway was commercialized, we have worked closely with our industry partners to reinforce the Seaway’s competitiveness. This has resulted in the following achievements:

- System availability has exceeded 99%
- $1 billion invested in asset renewal
- Covered operating costs and contributed to asset renewal
- Completed modernization program, installing Hands Free Mooring and converting the locks to remote control operation
- Cumulative toll increases over the last 10 years held to less than CPI

- Creation of Hwy H2O Market Development Program
- Instituted toll incentive programs to encourage new traffic
- Implemented automatic identification system and draft information system to maximize ship efficiency
- Optimized length of navigation season (+10 days) and working to extend this further

Given the progress made over these last 20 years, I am pleased to say that The St. Lawrence Seaway Management Corporation is fulfilling its mission statement and its commitment to the Government of Canada. Moreover, recognizing that the Seaway’s existing locks and channels can support even higher volumes of traffic, we are exploring ways to further increase the efficiency and competitiveness of the Seaway.

What will the next 20 years look like? With an expanding economy putting pressure on various parts of the transportation network, encouraging more shippers to use the Seaway is an excellent way to promote both economic growth and a low carbon economy. After all, marine transportation is the most energy-efficient means of moving cargo and emits the lowest level of greenhouse gasses per tonne-mile, while also reducing congestion on land and wear-and-tear on roadways.

With strong advancements in safety, reliability, and efficiency, the stage has been set for a St. Lawrence Seaway that will effectively serve its stakeholders for decades to come. As we celebrate the Seaway’s 60th anniversary and take stock of the progress made, we can truly say that we are ready for the future!
Business Growth

The results for 2018/19 cover shipping activity between March 29, 2018 and December 31, 2018.


Simple. The Corporation through HWY H₂O is focused on creating an easy, streamlined approach to doing business on the Great Lakes – St. Lawrence Seaway System.

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

Connected. The network of contacts and connections via HWY H₂O are vast and experienced.
TRAFFIC RESULTS

Seaway traffic in 2018 totaled 41 million tonnes, an increase of 7% or 2.7 million tonnes compared to 2017 and was the highest level achieved over the past 11 years. Both international and domestic movements of bulk and breakbulk commodities such as grains, salt, liquid cargoes and steel slabs have played an important role in supporting the growth in tonnage. Vessel traffic increased in step with tonnage.

Over the past two years, cargo volume has risen by 17% to 41 million tonnes, the best result since the Global Financial Crisis in 2008. – Terence Bowles, President and CEO
2018 New Business Results

The New Business Incentive program, which offers reduced tolls for eligible “new” cargo movements, attracted 97 applications in 2018, of which 84 were approved. This translated into 1.5 million tonnes of new cargo, led by movements of salt, coke, and grains, generating revenues of $2.7 million.

Seaway Tolls

Tolls increased by 1% for the 2018 navigation season and, likewise, increased by 1% for the 2019 season.

Seaway Toll Incentives

The Corporation’s various toll incentive programs will remain in place in 2019. These programs currently consist of the New Business Incentive, the Volume Incentive, the Service Incentive, and the Gateway Incentive. The newest addition, the Gateway Incentive, offers shippers a negotiated percentage reduction in cargo toll rates, in order to attract shipments to the Seaway that are currently moving via a competing gateway.

Seaway Administered Lands

The Corporation manages substantial land holdings, and the Market Development team is working diligently with community stakeholders to ensure optimal utilization of these lands.

The redevelopment of the Port Weller Dry Dock stands as one example, where the tenant’s revitalization of the facilities has resulted in new marine-related business activity creating 90 full time jobs.
**BI-NATIONAL MARKETING INITIATIVES**

The St. Lawrence Seaway Management Corporation and the U.S. Saint Lawrence Seaway Development Corporation continue to work together to create and implement joint strategic initiatives. These initiatives are anchored by the HWY H₂O program, and include the sponsorship of various marketing campaigns, hosting of the annual HWY H₂O Conference, and participation in trade shows and workshops.

**Trade Initiatives**

HWY H₂O participated in both the Breakbulk Europe Exhibition and the Breakbulk Americas Exhibition, both of which were well attended. With over 400 exhibitors, Breakbulk Europe attracts many attendees, leading to many new business opportunities. This event is matched only by the Breakbulk Americas show, which is the largest event in the Americas for project cargo and breakbulk.

The HWY H₂O booth, staffed by a large contingent of stakeholders representing carriers, stevedores and ports on the Great Lakes – St. Lawrence Seaway System, attracted a lot of attention at these events. The booth provided opportunities for networking, and the development of sales leads leading to customer meetings.
Opportunities for networking, and the development of sales leads.

**HWY H₂O Conference**

The 2018 HWY H₂O Conference was a very successful event. With some 150 delegates attending, the conference is another key HWY H₂O initiative designed to support networking, education and business growth within the Great Lakes – St. Lawrence Seaway System.
Operational Excellence

With the completion of the modernization program, ships can now transit locks without the need for mooring lines, improving safety for both lock and vessel crews, while leading to gains in operational efficiency.
NAVIGATION SEASON

In 2018, the St. Lawrence Seaway opened its 60th navigation season on March 29th in both the Niagara and the Montreal/Lake Ontario (MLO) Sections. The Niagara and MLO Sections closed on December 31st resulting in a season totalling 278 navigation days.

EMERGENCY PREPAREDNESS

Activities were held throughout 2018 to maintain a high level of emergency preparedness. In November, the Niagara Section dedicated a full day to emergency response training. The day began with a review of the newly revamped Emergency Response Plan followed by a full-scale internal exercise that involved a mock evacuation of the Glendale complex.

Other activities encompassed pollution response exercises, including full boom deployments which were conducted across the Corporation. In the MLO Section, personnel also worked with local fire departments to practice rescue techniques in confined spaces.

MARINE SAFETY AND SECURITY

During the 2018 navigation season, there were 14 commercial vessel incidents in which minor damage to a vessel occurred, translating to a rate of 2.3 incidents per 1,000 transits. While this rate represents an increase over 2017, the rate remains under the established threshold of less than 5 vessel incidents per 1,000 transits and represents an excellent result.

BALLAST WATER MANAGEMENT

Since 2006, ballast water management requirements in the Great Lakes – St. Lawrence Seaway System have been the most stringent in the world. Independent research by Fisheries and Oceans Canada (Science) indicates that the risk of a ballast water mediated introduction of aquatic invasive species into the Great Lakes is extremely low.

In 2018, 100% of vessels bound for the Great Lakes – St. Lawrence Seaway System originating from outside the Exclusive Economic Zone (EEZ) received ballast water management tests. Verification indicated that there was no non-compliant ballast water discharged in the System.
Verification indicated that there was no non-compliant ballast water discharged in the System.

Encompassing 498 vessel transits, some 9,343 ballast tanks were assessed and 100% of ballast water reporting forms were screened for ballast water history, compliance, voyage information and proposed discharge location. Inspectors identified 58 non-compliant vessel transits, representing 166 tanks, and these vessels were required to either retain the ballast water and residuals on board, treat it in an environmentally-sound and approved manner, or return to sea to conduct a ballast water exchange.

RELIABLE INFRASTRUCTURE AND ASSET RENEWAL

Over the course of the 2018 navigation season, the system availability rate of 99.19% (which incorporates delays attributable to the Seaway) once again exceeding the 99.00% target.

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

The Corporation uses a well-established Asset Management System to optimize value.

**SYSTEM AVAILABILITY**

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<th>Target 99.00%</th>
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<td>2014</td>
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<td>2016</td>
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<td>2017</td>
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<tr>
<td>2018</td>
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Encompassing 498 vessel transits, some 9,343 ballast tanks were assessed and 100% of ballast water reporting forms were screened for ballast water history, compliance, voyage information and proposed discharge location. Inspectors identified 58 non-compliant vessel transits, representing 166 tanks, and these vessels were required to either retain the ballast water and residuals on board, treat it in an environmentally-sound and approved manner, or return to sea to conduct a ballast water exchange.
Examples of major projects executed over the course of the 2018/19 fiscal year:

**Niagara Section (Welland Canal)**

Welland Canal “Flight Locks” – recoating of lock gates

Lock 5 – rehabilitation of centre wall for twinned locks

Lock 6 – rehabilitation of lock gates

Lock 7 – replacement of ship arrestor braking system

Welland Canal – commissioning of backup operations control centre in rehabilitated building

Welland Canal – interior of backup operations control centre under construction
MLO Section (Montreal/Lake Ontario)
ST. LAMBERT LOCK – REHABILITATION OF BRIDGE STRUCTURE AND ACCESS LANE

BEAUHARNOIS LOCK 3 – REHABILITATION OF LOWER APPROACH WALL
HEALTH AND SAFETY

The objective for Health and Safety continues to be “zero harm”. From April 1, 2018 to March 31, 2019, the Corporation reported five lost time injuries, none of which were serious in nature. While the latest results represent an increase over the previous year, the overall long-term trend continues to demonstrate consistent gains toward the goal of “zero harm”.

Every year with the help of Regional Health and Safety Committees, the Corporation strives to eliminate work accidents by placing the focus on the main challenges. This year, efforts were undertaken to identify the most difficult manual material handling issues and efforts were made to address these issues. As well, a significant amount of effort was placed towards reducing slips, trips, and falls, in part by providing ice cleats to employees where warranted, inspecting high traffic areas three times per day, and implementing new de-icing technology.

The use of anti-cut gloves, for use with cutting tools and when handling sharp objects, was also made mandatory. Following a serious injury to a contractor’s employee during winter maintenance, contractors were asked to review their safety measures.

Over the year, over 3,300 safety interventions were carried out including “Toolbox meetings”, inspections targeting various locks, structures and equipment, as well as observations focusing on work habits. The implementation of an Emergency Procedure Plan specific for each building will help to manage risks in the future, such as fire, gas leaks or severe weather.

The overall long-term trend continues to demonstrate consistent gains toward the goal of “zero harm”.

---

**HEALTH AND SAFETY**

**Number of incidents**

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<tr>
<th>Year</th>
<th>Health Care</th>
<th>Lost Time</th>
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<tr>
<td>2011/12</td>
<td>15</td>
<td>2</td>
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<td>2012/13</td>
<td>16</td>
<td>3</td>
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<td>2013/14</td>
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<td>1</td>
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<td>2015/16</td>
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<td>2016/17</td>
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<td>1</td>
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<td>2017/18</td>
<td>5</td>
<td>1</td>
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<tr>
<td>2018/19</td>
<td>3</td>
<td>0</td>
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</table>

*restated from the previous year’s report"
High Performance Workforce

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

Michel Thibault accepting the Bob Swenor award from Terence Bowles
BOB SWENOR AWARD

The annual Bob Swenor Living the Values Award is given to a Seaway Employee who lives the corporate values, demonstrates continuous personal development, shows commitment to the Corporation and the community, and holds a strong belief that people make a difference.

In 2018, the recipient was Michel Thibault, a civil inspection engineer. Michel is relatively new to the Seaway. His colleagues recognize him as someone who readily adopts new methods and technologies. Safety is always a priority, and his colleagues describe him as a respectful and active listener.

Michel participates in conferences and seminars on innovation and research in the field of cement and concrete, both within Quebec and internationally, sharing his knowledge while showcasing the Seaway in a positive light.

CONTINUOUS IMPROVEMENT

The Corporation’s continuous improvement (CI) culture manifests itself in many different ways. Traditional lean six sigma (LSS) projects utilizing a structured, data-driven process improvement methodology is applied to all aspects of our business. Yellow, green and black belt facilitators lead teams to a more scientific means of decision-making by deploying a disciplined analytical approach to identifying root causes to problems.

An idea generating platform (also known as iGen) enables employees at all levels to present and collaborate on ideas. For the third consecutive year, the Corporation achieved in excess of $1 million in value from continuous improvement initiatives, which demonstrates a heightened awareness for CI in the mindset of employees.

The 2018 Continuous Improvement Most Valuable Project / Person award was presented to Sandro Pasqualetto (Supervisor, Canal Services and Operations) recognizing his persistence and leadership as it pertains to CI efforts in his daily activities.

The Corporation achieved in excess of $1 million in value from continuous improvement initiatives.
SUPPORTING EMPLOYEE HEALTH AND WELLNESS

The Corporation continues to support and enhance its commitment to employee wellness, supporting its care for the workforce while minimizing employee disabilities and absences. Over the past year, enhancements were made to the Physical Fitness Reimbursement Program and the provision of voluntary health screening assessments.

Fast Facts for Physical Fitness Reimbursement Program in 2018

- 190 requests received
- Over $27,000 in reimbursements to employees
- Popular Activities: fitness centres, hockey, skiing, golf, music lessons, Weight Watchers

The Corporation continues to support the annual mental health campaigns of Not Myself Today and Bell’s “Let’s Talk”.

REINFORCING HR PROGRAMS WITH TECHNOLOGY

The Corporation’s efforts to leverage technology in its human resource processes are part of its long term goal to improve HR service delivery. This initiative has brought about the integration of all talent management functions, creating greater alignment, increasing visibility and accessibility to information, and reducing the volume of data entry and errors.

The Corporation’s Learning Management System in Connexions was launched this year. Featuring training content provided online to employees, whereby completion of a training module by an employee triggers an update of the Corporation’s training log. This new system also grants managers easy access to their employees’ training records, as well as notifications to upcoming training requirements.

SUPPORTING EMPLOYMENT EQUITY

In 2018, the Corporation continued to apply industry best practices in shaping its recruitment and hiring processes, in order to enhance its ability to meet employment equity goals. These efforts in recruitment and hiring once again served to enhance the Corporation’s efficiency in finding the right talent to fill its diverse range of employment opportunities.

The Corporation also completed the renewal of its Three Year Employment Equity Action Plan and Employment Systems Review by partnering with the consultant Employment Matters. The Employment Equity Management Consultative Committee met to review the proposed action plan and highlight actions to complete in the next three years.

The Corporation continues to support and enhance its commitment to employee wellness.
Stakeholder Engagement

As a steward of the St. Lawrence Seaway, the Corporation recognizes that the task of managing the waterway must take into account the interests of a wide range of stakeholders, including business and industry, local communities, and recreational users.
The Corporation is an active member and proponent of Green Marine, a world leading environmental performance measurement program for the marine industry. The Corporation aligns its scores with those of its U.S. counterpart, the Saint Lawrence Seaway Development Corporation (SLSDC), and provides results on an aggregated basis. Overall for 2018, the Seaway entities achieved an aggregated score of 4.5 out of a maximum of 5, with the joint assessment revealing notable improvements on a number of fronts, including the enhancement of measures to prevent environmental impacts to waterways and lands, and in the management of waste.

Green Marine President David Bolduc (centre) presenting Steven Murray (Senior Environmental Advisor, standing on the left) and Jean Aubry-Morin (Vice President of External Relations, standing on the right) with the Corporation’s Green Marine Certificates at the 2018 Green Tech Conference.
GREENHOUSE GAS EMISSIONS

In 2018, the Corporation’s greenhouse gas (GHG) emissions were the equivalent of 1,837 metric tonnes of CO₂, a 5% decrease when compared to the 1,935 metric tonnes of CO₂ generated in 2017. The decrease is principally due to warmer weather conditions encountered during the closing of the 2018 navigation season.

Over the last three years, the Corporation achieved a 48% reduction in its overall level of GHG emissions, when measured against emissions generated during the 2003–2005 baseline period. As part of its GHG reduction plan, the Corporation acquired in 2018 an additional electrical charging station for its Brossard office, raising the total number of charging stations provided for electric vehicles to four.

ENVIRONMENTAL MANAGEMENT SYSTEM

As part of its continuous improvement process, the Corporation continued aligning its Environmental Management System (EMS) with the ISO 14001:2015 Standard, and has now implemented 80% of its EMS work methods and forms. The objective remains to deploy 100% of the EMS by the end of fiscal 2019/20. Internal and external audits of the EMS are scheduled to begin in 2019/20.

Over the last three years, the Corporation achieved a 48% reduction in its overall level of GHG emissions, when measured against emissions generated during the 2003–2005 baseline period.
SUPPORTING OUR COMMUNITIES

In 2018, $124,000 was pledged to various United Way campaigns in Quebec and Ontario, through donations from employees matched by the Corporation.

In the Niagara Section, employees continued the tradition of participating in Port Colborne’s annual Canal Days Marine Heritage Festival. Employees welcomed visitors to the Corporation’s tent, handing out Seaway literature and answering questions. In the Seaway’s MLO Section, employees once again staffed a booth at the annual Montreal Boat and Water Sports Show, a major event for boating enthusiasts in Quebec. Employees answered questions about boating within the Seaway including questions regarding pleasure craft lock schedules and fees, while also raising awareness about Seaway regulations and safe boating practices.

$124,000 was pledged to United Way campaigns in Quebec and Ontario
60TH ANNIVERSARY

With the advent of the St. Lawrence Seaway’s 60th anniversary, the Corporation seized upon a number of opportunities to highlight the St. Lawrence Seaway and the many benefits that its operation provides.

Corporate Video

A new four minute corporate video was created to celebrate the 60th anniversary. Painting a vivid portrait of the modernization program and the advances made possible by Hands Free Mooring and remote lock operation, the video impresses upon viewers the Seaway’s bright future as the lynchpin tying together a vital marine supply chain that lies at the heart of a $6 trillion economy.

The Corporation supported the Canadian Coast Guard Auxiliary’s Search and Rescue Unit 56, which is based within the St. Lawrence Seaway’s South Shore Canal. Through a variety of initiatives, including a donation of $3,000 to fund gasoline for their boats, the Corporation supported the unit’s 76 security patrols, 32 search and rescue missions, and 114 courtesy inspections.
The St. Lawrence Seaway's 15 locks connect the Great Lakes to the Atlantic Ocean. The implementation of Hands Free Mooring units represents the greatest advancement in Seaway operations since its inception in 1959. The Hands Free Mooring system eliminates the need for traditional wire or rope lines to secure ships, allowing them to be connected directly to the mooring units which move up or down by vacuum pads instead of "wear and tear" as they enter and exit locks. Safety is improved, and ships experience less "sweating." Journeys become shorter, crews enjoy a better working environment, and there is less wear and tear on the locks. With the elimination of tie-up lines during a lockage, utilizing vacuum pads instead of traditional wire or rope lines, ships are held in place by the mooring units which move up or down by the ship's hull. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release the ship is raised or lowered. Once the ship is at the desired level, the mooring units release.

Ships have the smallest carbon footprint among all modes of transportation. As the most energy efficient transportation mode, with the lowest carbon footprint, moving more cargo using the Great Lakes – St. Lawrence Seaway System is an excellent way of supporting sustainable growth while easing congestion on land. With strong advancements in safety, reliability, and efficiency, cargo using the Great Lakes – St. Lawrence Seaway System is an important part of the solution to enabling economic growth that is sustainable, and will be made available to marine industry stakeholders.

Signage for Stakeholder Venues
A revised set of key messages will be presented on posters and panel boards. The signage highlights why marine transportation is an important part of the solution to enabling economic growth that is sustainable, and will be made available to marine industry stakeholders.

Royal Canadian Mint – Special Commemorative Coin
The Corporation was proud and honoured to play a supporting role, as the Royal Canadian Mint issued a special coin to mark the Seaway’s 60th anniversary. The coin features a modern laker transiting the Montreal scene, reflecting the Seaway’s vital role in connecting the heartland of North America to the Atlantic Ocean. The coin may be purchased (while supplies last) on the Royal Canadian Mint’s www.mint.ca website.

Signage highlights why marine transportation is an important part of the solution.
Original Paintings

To mark the Seaway’s 60th anniversary, the Corporation commissioned a set of four original paintings depicting the Seaway by Yvon Lemieux, a Quebec City artist. These paintings will be showcased at the Seaway’s Head Office in Cornwall, Ontario.
Financial Sustainability

The results for 2018/19 cover the period April 1, 2018 to March 31, 2019.

Ship transiting the Welland Canal at Lock 7
# Financial Highlights 2018/2019

## Full-time Equivalents (FTE)

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## Revenue

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<tr>
<td>Other</td>
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<td>4,472</td>
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<tr>
<td>Category 1 Lands Revenue remitted directly to Receiver General (*)</td>
<td>3,223</td>
<td>4,223</td>
<td>4,260</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td><strong>$68,999</strong></td>
<td><strong>$83,053</strong></td>
<td><strong>$86,840</strong></td>
</tr>
</tbody>
</table>

## Manageable Expenses

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>('000s)</td>
<td>('000s)</td>
<td>('000s)</td>
</tr>
<tr>
<td>Salaries and benefits **</td>
<td>68,024</td>
<td>65,137</td>
<td>57,809</td>
</tr>
<tr>
<td>Other ***</td>
<td>12,276</td>
<td>15,074</td>
<td>12,074</td>
</tr>
<tr>
<td>Employee Future Benefits (Non-cash)</td>
<td>(20,780)</td>
<td>(20,180)</td>
<td>(18,510)</td>
</tr>
<tr>
<td><strong>Total manageable expenses</strong></td>
<td><strong>$59,520</strong></td>
<td><strong>$60,031</strong></td>
<td><strong>$51,373</strong></td>
</tr>
</tbody>
</table>

## Excess of Revenue Over Manageable Expenses

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</thead>
<tbody>
<tr>
<td></td>
<td>('000s)</td>
<td>('000s)</td>
<td>('000s)</td>
</tr>
<tr>
<td><strong>Excess of revenue over manageable expenses</strong></td>
<td><strong>$9,479</strong></td>
<td><strong>$23,022</strong></td>
<td><strong>$35,467</strong></td>
</tr>
</tbody>
</table>

## Asset Renewal Investments

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>('000s)</td>
<td>('000s)</td>
<td>('000s)</td>
</tr>
<tr>
<td>Regular maintenance</td>
<td>9,664</td>
<td>10,641</td>
<td>10,067</td>
</tr>
<tr>
<td>Major maintenance ****</td>
<td>92,697</td>
<td>55,295</td>
<td>49,915</td>
</tr>
<tr>
<td>Capital acquisitions</td>
<td>1,811</td>
<td>1,886</td>
<td>1,049</td>
</tr>
<tr>
<td><strong>Total Asset renewal investments</strong></td>
<td><strong>$104,172</strong></td>
<td><strong>$67,822</strong></td>
<td><strong>$61,031</strong></td>
</tr>
</tbody>
</table>

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

* Revenues not segregated between categories for 2016/17.

** Includes pension solvency deficit payments of $3,892 (18/19), $9,803 (17/18) and $10,741 (16/17).

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

**** 2016/17 was the completion of the tie-up wall and wind-down of the modernization projects.
Corporate Governance

(As of March 31, 2019)

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

Tim Dool (Chair)
Domestic Carriers

Terence F. Bowles
President and Chief Executive Officer

Patrick Bushby
Grain

Gerald Carter
Québec Provincial Government

Frank Hummell
Ontario Provincial Government (appointed April 17, 2019)

Bronko Jazvac
Steel and Iron Ore

Raymond Johnston
Other Members

Georges Robichon
International Carriers

Karen Tippett
Federal Government

Seated (left to right): Georges Robichon, Gerald Carter, Terence Bowles, Karen Tippett
Standing (left to right): Patrick Bushby, Raymond Johnston, Frank Hummell, Tim Dool, Bronko Jazvac
INDUSTRY MEMBERS 2018/19

Domestic Carriers

- Algoma Central Corporation
  St. Catharines, Ontario
- Canada Steamship Lines, A Division of The CSL Group Inc.
  Montréal, Québec
- Groupe Desgagnés Inc.
  Québec, Québec
- Lower Lakes Towing Ltd.
  Port Dover, Ontario
- McAsphalt Marine Transportation Ltd.
  Toronto, Ontario
- McKeil Marine Limited
  Hamilton, Ontario
- St Marys Cement Inc. (Canada)
  Toronto, Ontario

Grain

- ADM Agri-Industries Company
  Windsor, Ontario
- G3 Canada Limited
  Winnipeg, Manitoba
- Louis Dreyfus Company
  Canada ULC
  Calgary, Alberta
- Richardson International Limited
  Winnipeg, Manitoba
- Viterra Inc.
  Regina, Saskatchewan

International Carriers

- Colley Motorships Ltd.
  Montréal, Québec
- Fednav International Ltd.
  Montréal, Québec
- Gresco Ltée
  Montréal, Québec
- Inchcape Shipping Services
  Dorval, Québec
- Lower St. Lawrence Ocean Agencies Ltd.
  Québec, Québec
- McLean Kennedy Inc.
  Halifax, Nova Scotia
- Navitrans Shipping Agencies (East) Inc.
  Laval, Québec
- Ramsey Greig & Co. Ltd.
  Québec, Québec
- Robert Reford, A Division of MRRM (Canada) Inc.
  Montréal, Québec

Other Members

- Lehigh Hanson Canada ULC
  Edmonton, Alberta
- K & S Windsor Salt Ltd.
  Pointe-Claire, Québec
- Lafarge Canada Inc.
  Laval, Québec
- Redpath Sugar Ltd.
  Toronto, Ontario
- Suncor Energy Inc.
  Mississauga, Ontario

Steel And Iron Ore

- ArcelorMittal Dofasco Inc.
  Hamilton, Ontario
- Iron Ore Company of Canada
  Montréal, Québec
- Stelco Inc
  Hamilton, Ontario
The St. Lawrence Seaway – Ready for the Future

Looking ahead after 60 years of operation
THE SEAWAY STORY

The Great Lakes and St. Lawrence River have served as major North American trade arteries since long before the U.S. or Canada achieved nationhood.

A new era in marine transportation was made possible by construction of the 306-kilometer (189-mile) stretch of the St. Lawrence Seaway between Montreal and Lake Ontario during the mid to late 1950s. Recognized as one of the most challenging engineering feats in history, seven locks were built, five Canadian and two U.S., in order to lift vessels 246 feet (75 meters) above sea level as they transit from Montreal to Lake Ontario.

The Seaway is considered to be one of the engineering marvels of the 20th century.
Initiated in 1954 and completed in 1959, building the Seaway required:

- Some 22,000 workers
- Moving 210 million cubic yards of earth and rock
- Pouring over 6 million cubic yards of concrete

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

History of the Seaway’s Two Sections:

- Welland Canal Section (consisting of eight locks) was completed in 1932
- The Montreal – Lake Ontario Section (consisting of seven locks) was completed in 1959
- The combination of these two sections forms the St. Lawrence Seaway, which permits ships to transit between “sea level” in Montreal to Lake Erie.

Note: The U.S. Army Corps of Engineers runs the Soo Locks, which permits ships to gain access to Lake Superior.
On April 25, 1959, the icebreaker “D’IBERVILLE” began the first through transit of the St. Lawrence Seaway which was officially opened by Her Majesty Queen Elizabeth II and President Dwight D. Eisenhower of the United States on June 26\textsuperscript{th} of that year.

**Administration of the St. Lawrence Seaway**

The St. Lawrence Seaway was built as a binational partnership between the U.S. and Canada through international agreements that carry the weight of treaties, and continues to operate as such. Administration of the waterway is shared by two entities, the Saint Lawrence Seaway Development Corporation in the U.S., a federal agency within the U.S. Department of Transportation, and The St. Lawrence Seaway Management Corporation in Canada, a not-for-profit corporation established by the Government of Canada.

The waterway remains a fine example of the spirit of co-operation that can exist between two nations and its successful operation is a tribute to the ingenuity, capability and perseverance of all those who had a hand in its realization. The two Seaway Corporations have an excellent working relationship, and continue to work together on a daily basis in administering Seaway operations, supporting a vital trade gateway connecting the heart of North America to over 50 nations across the globe.
THE SEAWAY @ 60

Today, the Great Lakes – St. Lawrence Seaway System serves as a key supply chain for the world’s 3rd largest economy.

According to a special report compiled by BMO Capital Markets, the eight states and two provinces that border the Great Lakes – St. Lawrence Seaway System generate an immense economic impact within North America.

- **GDP of**
  - **US $6 Trillion** (2017 est)

- **Population**
  - **108 Million** (2017)

- **30%**
  - Of Canadian/U.S. economic activity

- **52 Million**
  - Jobs

- **30%**
  - Of Canadian/U.S. workforce

- More than **1/2**
  - Of Canada/U.S. cross-boarder trade

The Great Lakes – St. Lawrence Seaway System serves as a key supply chain for the world’s 3rd largest economy.
For every ton of cargo, there are scores—often hundreds—of human faces behind the scenes. On board, there are the mariners, while shore side there are lock operators and longshoremen, vessel agents and freight forwarders, ship chandlers and shipyard workers, stevedores and terminal operators, Coast Guard personnel and port officials, railroad workers and truck drivers—a wide web of service providers.

Cargo moving on the Great Lakes – St. Lawrence Seaway System supports:

- $59 Billion in Economic Activity
- $23 Billion in wages
- 329,000 jobs

Source: The Economic Impacts of the Great Lakes–St. Lawrence Seaway System (Martin Associates, 2018)
From Great Lakes/Seaway ports, a multi-modal transportation network fans out across the continent.

More than 40 provincial and interstate highways and nearly 30 rail lines link the 15 major ports of the system with consumers, products and industries all over North America and across the globe, facilitating trade with over 50 countries.
The St. Lawrence Seaway—A Vital Waterway

The binational St. Lawrence Seaway’s 15 locks (13 Canadian and 2 American) serve as the linchpin within the broader waterway, connecting the lower St. Lawrence River to the Great Lakes, enabling ships to transit between Montreal and Lake Erie, a difference in elevation of 168 metres. The “Soo” Locks, managed by the U.S. Army Corps of Engineers, enable ships to reach Lake Superior, which is 183 metres above sea level.

Cargo moving on the Great Lakes – St. Lawrence Seaway System supports:

- $59 Billion in Economic Activity
- 329,000 Jobs
- $23 Billion in Wages
Great Lakes – St. Lawrence Seaway System (HWY H₂O) Facts

- Distance from the Atlantic Ocean to Duluth, Minnesota on Lake Superior = 2,038 nautical miles (2,342 statute miles or 3,700 kilometres) or 8.5 sailing days. The waterway includes some 245,750 square kilometres (95,000 square miles) of navigable waters.
- In a typical year, about 25% of Seaway traffic travels to and from overseas ports, especially in Europe, the Middle East, and Africa.
- The waterway includes some of North America’s largest ports, part of an excellent intermodal transportation network, and has maintained a near-perfect record of trouble-free navigation through ongoing improvements and meticulous maintenance for more than 60 years.

### Lock dimensions

**Length**
- 233.5 m (766 ft.)

**Width**
- 24.4 m (80 ft.)

**Water depth**
- 9.1 m (30 ft.)

### Maximum vessel size

**Maximum beam**
- 23.77 m (78 ft.)

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

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

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

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

---

**Seaway Locks**

Each lock is 233.5 metres long (766 feet), 24.4 metres wide (80 feet) and 9.1 metres deep (30 feet) over the sill. A lock fills with approximately 91 million litres of water (24 million gallons) in just 7 to 10 minutes. Getting through a lock takes about 45 minutes.

**Seaway Ships**

Ships measuring up to 225.5 metres in length (or 740 feet) and 23.8 metres (or 78 feet) in width (also known as the ship’s “beam”) are routinely raised more than 180 metres above sea level, as high as a 60-storey building. These ships can be over twice as long and about half as wide as a football field and carry cargoes the equivalent of 30,000 metric tonnes.
THE PRIMARY TYPES OF SHIPS ON THE SEAWAY FALL INTO THREE MAIN GROUPS:

“Lakers” are built specifically for use within the Great Lakes – St. Lawrence Seaway System, and rarely exit the waterway. They are characterized by a design that includes vertical sides and a snub-nosed bow, to maximize cargo carrying capacity within the confines of the Seaway’s lock dimensions. Some lakers also are equipped with a self-unloading boom that contains a conveyor belt, allowing the ship to position its boom and unload bulk cargo (such as stone or road salt) directly onto a shore-side dock or wharf.
“Salties” are ocean going ships that enable trade with nations overseas. They are characterized by a V-shaped hull, sharp bows, and in many cases, cranes mounted on the deck to facilitate the loading and unloading of cargo.

**Tug-propelled barges** consist of a tug fitted into a specially designed barge. The nose of the tug is secured within the stern of the barge, creating a very stable unit that can be used to move a variety of cargoes, depending upon the type of barge that the tug is paired up with.
Seaway Ships Move a Wide Variety of Cargo

ALL SECTORS OF THE ECONOMY BENEFIT

The St. Lawrence Seaway serves miners, farmers, factory workers and vast array of other commercial interests from the western prairies to the eastern seaboards.

GRAIN

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

DRY BULK

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

IRON ORE

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

GENERAL CARGO

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

LIQUID BULK

Liquid bulk products shipped include refined petroleum products (gasoline, diesel, kerosene, jet fuel) and alternate fuels (ethanol, biodiesel).
10 WAYS SEAWAY SHIPPING IMPACTS YOUR LIFE

**Your Meals:**
Grain (including wheat, corn, soybeans, canola, peas, lentils, and barley) shipped over the Seaway is used to produce everything from bread, pasta, soy milk, and vegetable oil to beer, alcohol, ethanol and animal feed.

**Your Breaks:**
Sugar brought in by ocean ships is used in many applications, from sweetening your coffee to serving as an ingredient in countless baked goods.

**Your Home:**
From the steel, dry wall, concrete and cement used to build a home to the steel used in the manufacturing of household appliances, Seaway ships are instrumental in the supply chain that supports all types of activity that makes your home comfortable and resilient.

**Your City:**
Construction of highways, bridges, office buildings, factories, schools, and hospitals relies upon huge volumes of steel, cement, gypsum, and asphalt moved by ship.

**Your Holidays:**
Double-hulled Seaway tankers move refined fuels between storage depots, enabling cars, buses and planes to whisk people away to holiday destinations.

**Your Safety:**
Road salt moved over the Seaway is key to the efficient maintenance of roads in the winter, keeping motorists and pedestrians safe during their winter commutes.

**Your Ride:**
Manufacturing of cars and trucks is heavily reliant upon the marine supply chain moving across Seaway waters. From high quality steel to specialized aluminum, assembly lines are fed with supplies that in many cases count upon the Seaway to facilitate part of the journey to the assembly plant.

**Your Commute:**
A Seaway ship can carry almost 1,000 truckloads of cargo. Moving cargo over the Seaway eases congestion on land, enabling commuters to reach their destination every day with fewer delays and a greater degree of safety.

**Your Money:**
Shipping cargo by ship is one of the most cost effective ways to move huge volumes of goods over longer distances. It is estimated that shipping goods over the Great Lakes – St. Lawrence Seaway System saves shippers billions of dollars per year compared to land alternatives, helping manufacturers, farmers, construction companies and energy providers compete effectively in a global market and provide jobs to many citizens in Canada and the United States.

**Your Future:**
Inland shipping is part of the solution to making our economy more energy efficient and reducing our carbon footprint. Advanced new ship designs and engine technology, coupled with new types of marine fuels, will further extend marine’s advantage over other modes of transportation. A more sustainable transportation system will emerge by using marine to move more cargo, and the Seaway is the critical link between the Great Lakes and the Atlantic Ocean, enabling a 3,700 km marine highway to serve the heart of North America.
The Seaway Moves Cargo Efficiently and Safely

Moving cargo efficiently and safely is vital to the Seaway’s competitive position as a trade gateway.

The St. Lawrence Seaway Management Corporation continues to work closely with its U.S. counterpart, the Saint Lawrence Seaway Development Corporation, and with industry partners to reinforce the Seaway’s efficiency and safety. From being the first inland waterway to implement the Automatic Identification System in 2003, which enables the precise monitoring of ship locations by satellite, to the implementation of the Draft Information System which provides a 3-D model of the channel and enables ships to safely carry up to 400 additional tonnes of cargo per voyage, the Seaway Corporations have been at the forefront of progress within the marine industry.

The recent implementation of Hands Free Mooring (HFM) represents the greatest advancement in Seaway operations since its inception in 1959.

Each lock is equipped with three HFM units, which reach out to secure a ship during a lockage, utilizing vacuum pads instead of traditional wire or rope lines. Ships are held by the mooring units which move up or down on rails recessed within the lock wall as the ship is raised or lowered. Once the ship is at the desired level, the mooring units release their grip, allowing the ship to proceed on its journey.

With the elimination of tie-up lines for most vessels, less manual labour is required from Seaway employees and vessel crews, safety is improved, and ships experience less “wear and tear” as they enter and exit locks.
In addition, the high-lift locks have also been converted to remote control operation, and are managed from two Operations Control Centres, located in St. Lambert (Québec) and St. Catharines (Ontario).

The Seaway Corporations have also worked closely together to optimize the Seaway’s navigation window by incrementally adding days to the season, which today typically extends from the third week of March to late December. As a result, carriers have an additional week of navigation (on average) each season when compared to the late 1990s.
THE ST. LAWRENCE SEAWAY: READY FOR THE FUTURE

As the most energy efficient transportation mode, with the lowest carbon footprint, moving more cargo using the Great Lakes – St. Lawrence Seaway System is an excellent way of supporting sustainable growth while easing congestion on land.

Moving more cargo using the Great Lakes – St. Lawrence Seaway System is an excellent way of supporting sustainable growth.
With strong advancements in safety, reliability, and efficiency, the stage has been set for a St. Lawrence Seaway that will effectively serve its stakeholders for decades to come.

A waterway ready for the future