THE CSL GROUP ENVIRONMENTAL REPORT 2012

ANADA STEAMSHIP LINES

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CSL'S COMMITMENT TO OUR ENVIRONMENT

Environmental stewardship is a fundamental corporate objective and core value at CSL and is intrinsically linked to the company's long-term growth. As part of its comprehensive environmental policy, CSL is committed to actively pursuing opportunities to reduce its overall environmental footprint, to implementing strict internal standards, to measuring performance and to establishing targets for improvement. For CSL, continually working to improve its environmental performance and showing leadership in promoting green practices throughout the industry make good business sense and position the company for the future.

As part of its environmental policy, CSL is committed to communicating its environmental initiatives and performance to customers, suppliers and service providers in a transparent manner, and to creating awareness about the business case for all companies involved in the shipping industry to conduct their operations sustainably.

CSL also realizes that its environmental objectives cannot be reached in isolation of industry stakeholders, NGOs, governments and regulators. Partnership building, consultation and effective communications are recognized as essential to promoting sound public policy and industry standards in marine transportation.

Published since 2008, the CSL Environment Report was created to communicate, through the annual reporting and measurement of its environmental performance, CSL's fundamental commitment to continually reduce the environmental impact of its operations and those of the marine shipping industry.

For more information about CSL's environmental program and commitments, visit our website at www.cslships.com.

Cover photo: The *Baie St. Paul* transits through the Panama Canal. Her maiden voyage is believed to be the first ever trans-Pacific delivery trip from China to eastern Canada by a Great Lakes bulk carrier.

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The CSL Whyalla, a former self-unloader converted into a transhipper, operates off the southern coast of Australia. The vessel conversion included the addition of a transhipment boom for direct loading into Capesize vessels, dust suppression equipment and decant tanks to comply with Environmental Protection Agency requirements.

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LETTER FROM THE CHAIR OF THE CSL SUSTAINABILITY COMMITTEE

For well over a decade, environmental accountability has been reshaping the market framework in which shipping companies around the world conduct their operations. Whether by design, public pressure or regulation, the paradigm shift to sustainable business practices is steadily setting in, though the challenges remain significant. Solutions that serve to advance both environmental and business objectives require creative, long term thinking and a collaborative approach among all stakeholders.

For progressive companies like CSL, environmental challenges present opportunities to improve our operations, contribute to a cleaner, greener world and invest in the



DAVID MARTIN

future. In our view, taking a proactive, inclusive approach to environmental stewardship is a winwin proposition that offers intrinsic value to our customers, our communities, our industry and our business. In an industry typically characterized by winners and losers, we strongly believe there is much to gain from taking a leadership role in driving change to protect our environment.

At CSL, we encourage innovation and calculated risk-taking that help improve the environmental performance of our operations. In 2012, we pushed our company to invest in new ideas, explore new partnerships and experiment in new technologies.

Indeed we welcomed the most advanced and environmentally-friendly self-unloaders in the industry – our new Trillium Class ships – and we embraced the opportunity to push the limits of emissions control with the testing of Ecospec's $CSNO_x$ technology. Moreover, we fostered new partnerships with environmental and academic groups and strengthened our commitment to the Green Marine Program and the World Wildlife Fund (WWF).

While we are encouraged by steady improvements in our environmental performance, we remain mindful that in our quest to safeguard our water, air, and shoreline, our work is never finished. Collectively, the shipping industry must do more to promote the inherent environmental, economic and social benefits of short sea shipping. We must work in collaboration with industry partners, governments and NGOs to develop sound policy and solutions to reduce our environmental impact and curtail air emissions.

As a recognized industry leader and innovator in sustainable practices, we are proud CSL is uniquely positioned to meet current and future environmental challenges with solutions that enhance efficiencies and performance throughout our operations. For our customers, this translates into a distinct competitive advantage. The *Baie St. Paul*, the first of four new Trillium Class Lakers received the *International Bulk Journal*'s 2012 Bulk Ship of the Year Award and was selected by the Royal Institution of Naval Architects as a Significant Ship of 2012. Moreover, in 2012, Canada Steamship Lines and its Trillium Class were honoured by the St. Lawrence Economic Development Council with the prestigious St. Lawrence Award.

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FOSTERING SUSTAINABLE CHANGE

Change is rarely easy, especially in the complex world of shipping.

Leading meaningful change is made easier with the genuine buy-in from the people that every day, manage, operate and crew CSL ships. Effective communication at all levels of the company and with those that support us ensures a clear alignment in our commitment to protect the health and vitality of the marine environment while providing world-leading customer service.

The information contained in this report is testament to our resolve to lead from the front and communicate our progress with all of our stakeholders, customers and employees. We are laser-focused on creating value by being as energy efficient as possible, reducing our environmental footprint and promoting the value of sustainability and community interaction. We care. We care about our customers, the environment and our employees.

Recognizing CSL's vision to do more, our people are answering the call with creative and aggressive action across all of our global divisions. Through individual efforts, CSL's divisions are collaborating to create a global strategy to lead our industry in measures to ensure the purity of our coasts, air, and waters.

Breaking from the "conservative marine industry" paradigm, CSL is encouraged to explore new emission control technologies, test ballast treatment innovations, and improve fuel consumption through state-of-the art monitoring. In addition, we have engaged with regulators, environmentalists and like-minded individuals to tackle some of the industry's toughest challenges including the effects of climate change on water levels in the Great Lakes and promoting bi-national government action to control this steady loss of fresh water.

CSL's leadership is eager to cultivate positive change. Building support from our customers and competitors, CSL is positioned to improve awareness about shipping efficiency. In order to make educated decisions, the industry must first understand the challenges we face.

CSL supports the industry as a whole through contributions to scientific and socio-economic research such as the Sahu/Gray Short-Sea Shipping Emissions Air Quality Modeling and the study on the Environmental and Social Impacts on Marine Transport of the Great Lakes and St. Lawrence Seaway Region. Moreover, as an early contributor to the Maritime Industrial Transportation Alliance, CSL stands as a partner to advance the role of short sea shipping as a measure to reduce emissions. CSL strongly led the pack and promoted sensible North American ECA regulation to enhance its cumulative effect on air quality.

At CSL, embracing positive change is a fundamental element of our forward-thinking business approach. We believe it leads to a healthy environment, which reduces customer risk and benefits all.



ROD JONES President and CEO, CSL Group



KIRK JONES Vice President, Sustainability, Government and Industry Affairs

TAKING ACTION FOR THE FUTURE

At CSL, we take action to solve challenges whether logistical, commercial, or environmental. Through focused teamwork, our technical and environmental professionals analyze our performance and identify areas for improvement. Leveraging in-house expertise and creativity, CSL takes action through regulatory development, technological innovation and operational optimization to deliver meaningful and tangible results.

CANADA STEAMSHIP LINES

"In the Great Lakes, CSL's fleet has pursued numerous voluntary projects that support environmental stewardship. Based on our experience, the best projects for greenhouse gas reduction are those that target electrical heat load or large electric motors that run 24 hours/day, seven days/week. That is why Canada Steamship Lines replaced all of its s.w. pump motors during the winter lay-up and installed variable frequency drives to better control energy use. The energy efficiency resulting from the pump upgrades will yield an average yearly savings in the order of \$35,000 per ship (CAD). This represents nearly half a million dollars in cost savings and a GHG reduction of well over 1500 tonnes."

Daniel Cesari

Director, Technical Operations

CSL AMERICAS

"To better protect marine habitat and the environment, the CSL Americas fleet pursues engineering and operational solutions ranging from major investments such as fuel saving ship conversions to smaller scale stern tube seal replacements to avoid unwanted oil discharge. Everything helps. CSL continues to embrace fuel monitoring as a long-term efficiency solution and has installed Kyma fuel monitoring systems aboard five ships in the North American trade. The systems maximize engine efficiency through continuous monitoring of engine demand and fuel use. Both real-time and historical data can be leveraged into better engine management. The operational engine control maximized through the Kyma systems enhances fuel efficiency by about 1%."

Andy Lennox

Manager, Technical Operations

CSL ASIA

"CSL Asia's Indonesian transhipment operation achieved previously unrealized fuel savings through a new Generator Usage Management Plan. Historically, generators servicing cargo gear remained on-line while the transhipper idly waited in between shuttle barges. This interim down time meant the platform delivered unnecessary and unused power. To lower emissions, reduce fuel consumption and improve efficiency, CSL Asia instituted a policy to better manage generator usage. When it is optimal and safe to do so, power generation is now altered between the platform's main generators to the auxiliary generators. This system maximizes power with reduced generator use, which results in fuel savings and reduced air emissions."

Jakob Hansen

Managing Director and Vice President

CSL EUROPE

"As CSL Europe divests some of its older vessels, our sensitivity is raised to ensure that our ships are recycled with the utmost respect for safety and the environment. In 2012, the *CSL Tiber* was the first European ship to be recycled, which provided valuable lessons in how to do it right.

Finding a suitable ISO-certified recycling facility that complied with CSL's Ship Recycling and Safety policies as well as with European Commission and IMO International Convention requirements proved challenging. Additionally, as our ships are European flagged, we needed to comply with EU directives that categorize"end-of-life" ships as hazardous waste,

requiring recycling only in countries listed by the Organization for Economic Co-operation and Development (OECD).

While some ship-owners by-pass European directives, CSL sought to embrace green recycling. Through due diligence and consideration of the vessel's trading area, we recycled the *CSL Tiber* in Turkey (OECD listed) using suitable facilities that met the stringent standards of international convention, ISO, and our own internal policy."

Jim Hardie

Director, Technical Operations

CSL AUSTRALIA

"CSL Australia participates in the Energy Efficiency Opportunities (EEO) program, which encourages businesses in Australia to improve efficiency by identifying, evaluating and reporting on cost-effective energy saving opportunities. Using the CSL Thevenard as an example, three initiatives led to considerable energy efficiency improvements. In March 2012, the ship recorded decreased bunker consumption of 4.8 metric tonnes (MT) per day with modest main engine speed reductions. Other successes included ballast pump variable frequency drive installation and efficient lighting management. The summary of the three projects significantly improves efficiency and estimates annual fuel savings of 595.67 MT, emissions reduction of 1,747.2 (t CO₂-e), GHGE (GJ) of 23,958.4, with an overall annual cost benefit of \$518,207 (AUD)."

Leslie Sheremeta

Manager, Safety and Environment



TRILLIUM DELIVERS

In December 2012, the delivery of the *Rt. Hon. Paul E. Martin* and the *Baie St. Paul*, CSL's first two new Trillium Class vessels, represented the fruition of CSL's ambitious and long-awaited fleet renewal program.

Since the early 2000s, it had been CSL's vision to design and build its next generation of self-unloaders to position the company for the future. Employing latest-generation technology, CSL's new Trillium Class vessels use less fuel, release significantly fewer emissions and minimize cargo residue, and provide overall operational efficiency – all with the objective to better meet the evolving needs of customers.

The *Rt. Hon. Paul E. Martin*, a Panamax self-unloader, began operating in the CSL Americas fleet in November 2012, while the *Baie St. Paul*, a Laker built for the St. Lawrence Seaway/Great Lakes market, discharged her first cargo in December the same year. The vessels set the course for five additional new Trillium Class vessels – three Lakers and two Panamax – as well as two new bulk carriers to be introduced into the company's fleet in 2012-2013.

REDUCING OUR AIR EMISSIONS

At CSL, we strive to reduce the impact of our operations on the air we breathe by improving our asset efficiency through enhanced operations and technology. We are committed to improving air quality through deliberate action, creative solutions, and through the exploration and testing of emerging technologies.

CSL LEADS FLEET AVERAGING

Among the top CSL environmental stewardship accomplishments of 2012 is the implementation of an innovative fleet averaging plan in Canada that will systematically reduce fuel sulfur content over the next ten years. As a measure to reduce sulfur oxide emissions, international regulations limit the maximum sulfur content of marine fuel at 3.5% m/m. The standard applied to the Great

CSL PROPOSES SOUND SOLUTIONS TO NORTH AMERICAN EMISSIONS CONTROL AREA

At CSL, we believe that sustainable solutions to improving coastal air quality require a multi-faceted approach. CSL has been at the forefront of taking meaningful actions to achieve the goals of the Emission Control Area (ECA) legislation in a way that is sustainable to short sea shipping and the communities that it serves.

In addition to the shipboard energy efficiency projects that CSL voluntarily supports to reduce emissions, CSL achieved various milestones in improving the balance of the North American ECA in 2012 through Congressional testimony, fleet averaging, and leadership within the Maritime Industrial Transportation Alliance. Moreover, CSL continues to promote a science-based case for "Equivalency" to North American policy makers for inherently higher efficiency ships. This effort will carry into 2013 with growing support within the short sea shipping and commercial community.

In its testimony before the U.S. Congressional House Subcommittee on Coast Guard and Maritime Transportation held on April 26, 2012, CSL proposed solutions to achieve the equivalent environmental goals of the ECA without jeopardizing the economic and environmental benefits of short sea shipping. These include:

- A 200 nautical mile ECA for 1% sulfur fuels, effective August 1, 2012;
- A submission to the IMO Marine Environmental Protection Committee calling for an amendment to reduce the North American ECA to 50 miles for 0.1% sulfur fuels on vessels of less than 20,000 horsepower in 2015; and
- A mechanism to indemnify vessel owners who are unable to purchase low sulfur.

CSL's 2012 testimony was so relevant and germane that, a second invitation to testify is anticipated during 2013 to update the Congressional Subcommittee.

Lakes-St. Lawrence navigation system is even more aggressive, limiting shipboard fuel sulfur content to 1.5% m/m in 2012 and 1.3% in 2013. The program permits a company's fleet of vessels to collectively meet pre-established annual fuel sulfur targets through the use of lower sulfur fuels, exhaust gas treatment, or a combination of measures. Transport Canada will oversee and monitor the industry to assure compliance. The CSL-led initiative will continue to tighten fuel sulfur limits until the entire fleet achieves 0.1% m/m in 2020, dramatically curbing sulfur emissions from ships.

SULPHUR EMISSIONS

Canada Steamship Lines has also endeavoured to outperform this standard and has achieved Level Four of Green Marine's SO_x performance indicator, which requires a company to allocate 25% percent of its annual consumption of fuel with a sulfur content equal to or less than 1.5%. In 2012, almost 57% of the fuel purchased by CSL for its fleet contained less that 1.5% m/m sulfur, a significant improvement from 2011 when 50% of this fuel was less than 1.5% m/m.

CANADA STEAMSHIP LINES PERFORMANCE ON SULPHUR EMISSIONS (2012)



CLIMATE CHANGE

CSL has been monitoring and continually reducing its CO_2 emissions since 1990. In 2012, CSL proudly reported reductions of 16% and 22%, respectively achieved since monitoring at Canada Steamship Lines began. In 2012, Canada Steamship Lines' CO_2 emissions slightly increased from 2011 results. The relative increase was a result of less cargo being moved per voyage in 2012 as compared to 2011, coupled with shorter voyages requiring more energy-consumption manoeuvring at ports.

GREENHOUSE GAS EMISSIONS (GRAMS PER TONNE-MILE)

Although reduction targets are not required by law for existing ships, Canada Steamship Lines voluntarily achieved the highest score (Level Five) under the Green Marine Program for greenhouse gas (GHG) reduction. To receive this top rating, CSL ambitiously achieved an average annual reduction of 1.5% of GHG emissions per tonne-kilometre. Specifically, CSL reduced an average of 2.23% of GHGs every year between 1990 and 2012. Further reductions are expected in forthcoming years based on a series of GHG reduction projects. CSL's new award-winning Trillium Class vessels will significantly contribute to reduce fleet emissions.



CANADA STEAMSHIP LINES GREENHOUSE GAS EMISSIONS (GRAMS PER TONNE-MILE)

ENERGY EFFICIENCY PROJECTS

In 2012, CSL's divisions initiated a number of projects and operational measures to improve the energy efficiency of its ships.

Trim Optimization/Draft Sensors: When completed, this project will allow the crew to tune a ship's performance at lowest cost through draft and trim adjustments resulting in fuel efficiency savings of up 2% per ship.

Variable Frequency Drive: Variable frequency drive (VFD) projects underway in various CSL divisions have been recognized for their energy efficiency and operational benefits. Through better energy management afforded through the VFD, vessels can expect to save up to 58,000 kg of fuel oil per year.

Shaft Generators: CSL Europe is training engineering crews to maximize installed shaft generators. Shaft generators will harness previously unused energy created by the ship's propeller shaft while underway. The enhanced employment of shaft generators will reduce auxiliary generator use and marine gas oil consumption.

The first of three new Trillium Class Panamax self-unloaders, the *Rt. Hon. Paul E. Martin* loads her first cargo in Sechelt, British Columbia. The vessel features the most advanced technology available for bulk cargo handling and transportation.

RT. HON PAUL E. MARTIN



REDUCING OUR IMPACT ON BIODIVERSITY

As the maritime industry continues to learn about the effect of shipping on marine habitats, CSL is taking on an active role to control bio-impacts through practical and ambitious leadership. The following programs highlight some of the innovative measures we have taken to control invasive species and mitigate the effects of shipping on marine mammals.

BALLAST WATER MANAGEMENT SYSTEMS CONSTRAINTS

Over the past several years, Canada Steamship Lines together with other shipping companies have engaged in a collaborative effort to review ballast water treatment methodologies and systems that could operate efficiently on the Great Lakes and St. Lawrence Seaway. This includes the onboard trial of an advanced filtration system and more recently, a review of IMO type-approved systems. These systems and associated testing, evaluation and approval protocols were mainly designed for large ocean-going ships and intended to address the risks of introducing invasive species through transoceanic shipping. As such, these systems are not technically appropriate for the operating environment of the Great Lakes and Seaway waters, which include significant variances in salinity, temperature, and assemblage of organisms. Moreover, these systems are not meant to be installed in uniquely designed vessels that have constraints not found in vessels sailing on transoceanic and coastal trading routes.

As a result of the IMO type-approved systems review, it is unclear whether a ballast water management system exists today that will work efficiently with the operational and environmental constraints of Lakes vessels. Nonetheless, CSL remains fully committed to the pursuit of efficient management techniques or technologies that can be fitted on its Lakers. For more information about the Canadian industry perspective on ballast water issues in the Great Lakes and St. Lawrence Seaway, visit www.glslballast.net.

ADVANCED FILTRATION SYSTEMS

Biological invasions by non-indigenous species are considered by many researchers as a leading threat to biodiversity. CSL has partnered with the Canadian Department for Fisheries and Oceans (DFO) to evaluate the biological efficacy of a ballast water filtration unit, the HYDAC International AutoFilt RFU-5 Automatic, back-flushing filter, installed on the *M/V Richelieu* through shipboard trials.

During the summer of 2012, three shipboard trials were conducted while the vessel was docked in Quebec City, Sarnia and Thunder Bay. Ballast water was treated by filtration during uptake as per normal vessel operations. Samples of phytoplankton and zooplankton were collected at the beginning, middle and end of each ballast uptake to determine the removal percentage achieved by the filter.

CSL had earlier conducted a risk assessment and concluded that many of the non-native organisms were already common in some lakes. To mitigate risks, CSL focused on the species that had not yet been transferred. The species consisted of both phytoplankton and zooplankton. Early results show:

- · Removal percentage of zooplankton was as high as 50.5%; and
- · Removal percentage of phytoplankton was as high as 62%.

Considering the combined results of all trials, mean densities of both total zooplankton and phytoplankton were significantly lower after filtration, indicating potential benefits of this alternate ballast water management technology to prevent the transfer of species from lake to lake or river to lake.

Based on these encouraging results, CSL intends to continue to lead the investigation of advanced filtration technology performance for minimizing the risk of transfer of AIS within the Great Lakes and St. Lawrence River.









M/V Richelieu

Onboard laboratory

Sampling devices

Back-flushing filter

MODELING FOR THE GRAND BANKS CETACEAN STUDY

"This type of project is an exceptional opportunity to demonstrate innovation in Canada that will help drive ocean recovery on a global scale."

-Dr. Robert Rangeley, WWF-Canada VP, Atlantic Region

With CSL's support, WWF has undertaken a modeling project in the Grand Banks to examine ecosystem recovery scenarios. The overall goal is to understand the effect of conservation and fisheries management on the productive capacity of the system. As part of this project, the following will be examined:

- 1. The role of cetaceans (whales, porpoise, and dolphins) within the Grand Banks ecosystem.
- 2. How potential management and climate change scenarios will affect the future health of cetacean populations.

Existing data will be used to develop estimates of current and historical population abundance of cetaceans on the Southern Grand Banks. As part of the ecosystem modeling, we will examine how cetaceans and other species relate to each other within the food web. WWF will also estimate how well the Southern Grand Banks will be able to support increasing cetacean populations under various scenarios.

In 2012, work has involved procuring and organizing existing cetacean data collections and literature on the subjects of cetacean biodiversity, abundance and timing on the Grand Banks, diet, bioenergetics and nutrient release. Once the data and methodology are in place in January 2013, WWF will develop abundance estimates for multiple cetacean species on the Southern Grand Banks.

ENVIRONMENTAL MANAGEMENT SYSTEMS

GREEN MARINE

Green Marine is a bi-national (Canada/U.S.) independent environmental alliance designed to enhance maritime environmental performance. The multi-faceted system challenges shipping companies, ports and marine facilities to set tough environmental goals, which are verified through independent audits. Founded in 2007, the program was initially based in the Great Lakes, but it has now broadened its participants to include international fleets, such as CSL Americas in 2012. The program pursues meaningful change in environmental preservation through the aggressive performance targeting of:



- · Aquatic invasive species
- · Air emissions
- · (SO_x, NO_x particulate matter)
- · Greenhouse gases
- · Cargo residues
- · Oily waste
- · Garbage management (optional starting in 2012)

Through CSL's participation in Green Marine, we aim to continue to enhance our industry's understanding of the fragile environment in which we work as we seek to best protect it. Green Marine's philosophy of continuous improvement requires corporate vigilance to keep pace

with environmental targets that are regularly enhanced. Changing the milestones demands more out of Green Marine participants in that goals become increasingly challenging within each designated level of performance. To advance to the next performance level takes exceptional commitment.

CSL has performed well against the rigorous independent standards. When evaluated against six Green Marine environmental measures, CSL has achieved an average score of 4.3 out of 5 points for two straight years. We received top scores (Level Five) in the categories of aquatic nuisance species and greenhouse gas reduction, due largely to our industry-leading prototype testing program.

In 2012, CSL equipped its entire fleet with a Ship Energy Efficiency Management Plan (SEEMP) in anticipation of international CO_2 reduction regulations to come into effect on January 1, 2013. A SEEMP plan is developed for each ship and describes the operational measures undertaken to improve energy efficiency. These measures can include, routing assistance systems, speed optimisation, a modern coating for the ship's hull, or the use of energy-saving lamps.

MARINE LEVELS		-				
		2008	2009	2010	2011	2012
EN	🗕 Canada Steamship Lines	3.3	3.8	3.8	4.3	4.3
GRE	- Regulatory Requirements	1	1	1	1	1

CANADA STEAMSHIP LINES — GREEN MARINE PERFORMANCE 2008-2012

CSL'S 2012 GREEN MARINE RESULTS

INDICATOR	LEVEL	ACTION(S) UNDERTAKEN TO ACHIEVE THE LEVEL
1. Aquatic Invasive Species	5	CSL has trialed a commercialized ballast water treatment system on its <i>M/V Richelieu</i> . CSL has also carried out an annual inspection and scheduled cleaning of ballast tanks, with all sediments disposed at shore.
2. Pollutant Air Emissions	4	CSL has completed its annual inventory and sampling to validate and improve the NO _x inventory. CSL has also used a NO _x reduction technology on one of its ships that is resulting in a 15% reduction of NO _x emissions below the permitted limits.
3. Greenhouse Gases	4	CSL has achieved an annual reduction of 2.23% of GHG emissions per tonne-kilometre between 1990 and 2012.
4. Cargo Residues	4	CSL has implemented fleet-wide practices and a training plan to improve the accuracy of cargo residue inventory. CSL new ships tanks are equipped with wash water apparatus.
5. Oily Waters	4	CSL has adopted a modernization policy for oily water separators and related control and verification equipment.
6. Garbage Management (optional in 2012)	1	CSL complies with existing regulatory requirements.

AWARDS RECEIVED BY CSL IN 2012

2012 BULK SHIP OF THE YEAR AWARD

The *Baie St. Paul*, Canada Steamship Lines' first of four new Trillium Class self-unloading Lakers was honoured with the prestigious *International Bulk Journal*'s 2012 Bulk Ship of the Year Award. Presented to the year's most outstanding individual bulk ship or newly built vessel, the award recognizes the operational efficiency, design innovation, and superior safety and environmental features that set the *Baie St. Paul* apart from other vessels.

SODES AWARD

On October 23, Canada Steamship Lines was presented with the prestigious 2012 St. Lawrence Award by the St. Lawrence Economic Development Council (SODES).

The St. Lawrence Award is presented annually to an organization, company or individual that has made an outstanding contribution or achieving a project that has helped promote the St. Lawrence and further its economic development while maintaining principles of sustainable development.

GREEN FLAG (LA/LB)

The Green Flag Program is a voluntary vessel speed reduction program offered by the Port of Long Beach. The port rewards vessel operators for achieving targeted slower speeds within 40 nautical miles of the harbor's entrance. Because the ships emit less when they travel more slowly, the program has been highly successful in reducing smog-forming emissions and diesel particulates and is credited with preventing over 1,000 tons a year of air pollution. Vessel compliance is verified by the Marine Exchange of Southern California. CSL earned the coveted Green Flag environmental achievement award for extraordinary voluntary [100%] compliance with the program for a 12-month period.

Through a variety of employee engagement initiatives, CSL encourages vessel crews and office employees to support environmental sustainability by working in a responsible, safe and conscientious manner.

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EMPLOYEE AND COMMUNITY ENGAGEMENT

CSL encourages employees to actively participate in community initiatives that serve to conserve and enhance our natural environment. Through activities such as an annual coastal clean-up and partnerships with schools and organisations, CSL aims to support sustainable actions and enhance public understanding of short sea shipping's inherent environmental value.

PROMOTING ENVIRONMENTAL INNOVATION AT MASSACHUSETTS MARITIME ACADEMY

Through an academic partnership with the Massachusetts Maritime Academy, CSL Americas sponsored a project to promote innovative thinking on the environment. The project team included three students, a faculty advisor and a CSL liaison. The collaboration provided an opportunity for selected students to examine "real world" environmental challenges and provide CSL with new ideas to reach sustainability goals such as eco-friendly fuel additives, stateof-the-art hull coatings and hydro-dynamics. The project underscores CSL's commitment to

CSL PARTNERS WITH MARITIME INDUSTRIAL TRANSPORTATION ALLIANCE

To support the advancement of a safe, efficient and environmentally-responsible marine transportation industry, CSL teamed up with the Maritime Industrial Transportation Alliance (MITA). MITA's key focus areas include short sea shipping, the North American Emissions Control Area and air quality. Seeking to advise governments and regulatory bodies including the U.S. Coast Guard, Transport Canada, and the International Maritime Organization, MITA champions short sea shipping as a means to reduce shore-side congestion and emissions. For more information about MITA, visit www.mitaweb.com

cultivate maritime education while making headway in sustainability. Sponsoring the project sends a strong message to the next generation of seafarers that environmental responsibility is an absolute "must" for maritime operators.

CSL SUSTAINABILITY AWARD

Every year, Canada Steamship Lines recognises the vessel that has demonstrated outstanding commitment to the concept of sustainability. In 2012, the *CSL Laurentien* was honoured with that distinction.

COASTAL CLEAN-UP

In 2012, staff from both CSL Americas and Canada Steamship Lines took part in coastal cleanup activities as part of the Ocean Conservancy's annual global initiative. Aimed at cleaning shorelines around the world, the Ocean Conservancy has carried out this work for the past 25 years. The one-day annual event has become the largest volunteer effort for ocean health. By recording the items found during the cleanup, the Ocean Conservancy is able to get a clearer understanding of the state of the world's waterways and make informed decisions about trash prevention and future cleanup strategies.



2012 PERFORMANCE

As part of CSL's ongoing commitment to environmental accountability and transparency, we closely monitor and measure the environmental performance of our fleet in a number key areas. Among the highlights contained in our 2012 Report Card is a significant reduction in fuel sulphur levels when averaged across our global divisions. Areas we seek to improve are sludge reduction and energy efficiency.

GOALS	DIVISIONS	TARGETS	STATUS
REDUCE AIR POLLUTION	CANADA	Reduce GHG emissions by 1.5% (grams per tonne-mile)	Not Achieved: + 2.2%
	STEAMSHIP LINES	Reduce sulphur content to an average of 1.35%	Achieved: - 1.17%
			Not Achieved: Net GHG + 14% due to higher cargo to mileage ratio in 2013
	CSL AMERICAS	Reduce GHG emissions by 1% (grams per tonne-mile)	Gross GHG - 27% due to efficiency of transhipment operations and divestiture of 2 vessels
	CSL AUSTRALIA	Reduce GHG emissions by 0.5% (grams per tonne-mile)	Achieved
		Reduce fuel sulphur content to average of 2.65%	Achieved: - 2.58%
REDUCE OUR	CANADA	Investigate ballast water technologies for Lakers	Achieved
IMPACT ON BIODIVERSITY	STEAMSHIP LINES	Initiate and participate in projects to study reproductive capacity of whales in the Grand Banks of Newfoundland	Achieved
	ALL DIVISIONS	No major oil spill incidents	Achieved
	CANADA STEAMSHIP LINES	Replace engine chemicals with greener products	Not Achieved
		Better estimate dry cargo residue production	Achieved
		Improve marine sanitation device discharge quality by 5%	Achieved
REDUCE	CSL AMERICAS	Reduce dry cargo residue by 5%	Achieved: - 38%
MARINE POLLUTION		Reduce/Eliminate water pollution potential from stern tube	Achieved: Upgraded 1 stern tube lubrication system
		Replace engine chemicals with greener products	Not Achieved
	CSLAUSTRALIA	Better estimate dry cargo residue	Not Achieved
	CSL EUROPE	Create emergency response plan	Achieved
	CSL ASIA	Create emergency response plan	Achieved
REDUCE WASTE PRODUCTION	CANADA STEAMSHIP	Increase recycling by 2%	Achieved: + 35%
	LINES	Reduce sludge production by 2%	Achieved: - 1.89%
	CSL AMERICAS	Reduce plastics in fleet by 3%	Achieved: - 47%
	CSL AUSTRALIA	Reduce sludge production by 2%	Not Achieved: - 1%
	CSL ASIA	Improve waste stream recording	Achieved
		Establish statistical environmental footprint program	Achieved
MANAGEMENT SYSTEMS	CSLEUKUPE	Establish environmental committee	Achieved
	CSL ASIA	Establish statistical environmental footprint program	Achieved

OVERVIEW OF 2012 ENVIRONMENTAL FOOTPRINT

Every year, CSL reports on environmental data that is tracked and collected on its vessels and offices in an effort to present a comprehensive picture of the company's overall footprint. The data is used to identify areas for improvement and determine the appropriate solutions and actions.

ACTIVITIES AT SEA (VESSELS)								
	CANADA STEAMSHIP LINES	CSL AMERICAS	CSL ASIA	CSL AUSTRALIA	CSL EUROPE			
ENERGY	'							
Fuel Oil (Tonnes)	71,068	55,162	N/A	42,692.188	15,135			
Diesel (Tonnes)	20,180	4,042	1,005	3159.313	5,544			
AIR								
CO₂e – Gross (includes voyages in ballast, in grams-tonne-mile)	20.59	16.3	N/A	135781*	13.9			
CO₂e – Net (does not include voyages in ballast, in grams-tonne-mile)	11.12	9.8	N/A	67890*	5.6			
Fuel Sulphur (%)	1.17	1.9	<1**	2.5	<1**			
HFC (Kg)	296	408	8.4	556.1	236.6			
WASTE	WASTE							
Cargo Residue (m ³)	713.7	303.7	N/A	317.4	N/A			
	Domestic 440.19			1,258	1,326			
Garbage (m³)	Recycled/Organics 505.1	1,637	8.8					
	Incinerated Ash 45.5							
Sludge (m ³)	2,808	591.2	N/A	1,436.1	1,050			
WATER								
Significant Oil Spills (>100 Lt.)	0	0	0	0	0			
ACTIVITIES ON LAND (OFFICES)								
	CANADA STEAMSHIP LINES	CSL AMERICAS	CSL ASIA	CSL AUSTRALIA	CSL EUROPE			
ENERGY								
Electricity (kWh)	733,167	199,339	14,528	60,879	14,152			
PAPER								
Paper Consumption (Kg)	11,176	2,100	122	1,154	150			
Recycled Paper (Kg)	20,536	1,962	61	93	100			

* Total CO_2E value; tonne-mile method not applied

** Only diesel oil used; less than 1% sulfur content

N/A = Not Applicable

Lt. = Liter

HFC = Hydrofluorocarbons

2013 GOALS AND TARGETS

CSL voluntarily sets ambitious annual environmental goals that challenge us to be innovative, resourceful and creative as we seek to improve our company and our industry. Please note that the baseline year for the targets listed below is 2012.

GOALS	DIVISIONS	TARGETS			
	CANADA	Reduce GHG by 3% (in grams per tonne-mile) compared to GHG emissions in 2012			
	STEAMSHIP LINES	Reduce sulphur content in fuel to an average of 1.15% across the fleet			
		Reduce GHG by 2.5% (in grams per tonne-mile)			
REDUCE AIR	CSLAMERICAS	Convert 70% of Freon 22 ship refrigeration systems to environmental alternative			
POLLUTION	CSL AUSTRALIA	Reduce GHG by 0.5% in grams per tonne-mile between 2012-2013			
		Reduce amount of bunkers used by 1%			
		Complete data collection for footprint and establish where savings can be made			
	CSL EUROPE	Apply and assess Dr Diesel engine performance unit as prototype on one ship or more			
	CSL ASIA	Reduce GHG by 1.5% (reduce fuel-litre/tonne of cargo)			
REDUCE IMPACT	CANADA	Continue to investigate solutions to address risk of transfer of species via ballast water			
ON BIODIVERSITY	STEAMSHIP LINES	Establish an environmental employee engagement action plan			
	ALL DIVISIONS	No major oil spill incidents			
	CANADA	Replace engine chemicals with greener products			
	STEAMSHIP LINES	Design new strategy to reduce dry cargo residue and cleaning frequency			
	CSL AMERICAS	Reduce lube oil usage by 0.5% and add Alpha lube system onboard Sheila Ann			
REDUCE MARINE		Minimise impact of products inadvertently released into marine environment			
POLLOTION	CSL AUSTRALIA	Zero oil spills from deck side hydraulic oil entering the marine environment			
	CSL EUROPE	Review data and set targets to be achieved to reduce impact within first quarter			
		Investigate replacement of dated OWS equipment and monitors			
	CSL ASIA	Perform 1 oil spill response exercise			
	CANADA STEAMSHIP LINES	Increase recycling by 5%			
		Reduce sludge production by 2% compared with 2012			
	CSL AMERICAS	Survey agents regarding waste removal practices and explore green alternatives			
		Increase sludge recycling by 2%. Improve shipboard segregation of garbage			
REDUCE WASTE	CSL AUSTRALIA	Reduce the amount of plastic waste generated/recycled on board from bottled wat			
PRODUCTION		Increase energy efficiency from lighting			
		Implement a recycling program that includes paper, plastic and toner cartridges			
		Improve waste stream record keeping			
	CSL ASIA	Implement garbage disposal plan. Reduce sewage by 25% compared to 2012			
ENVIRONMENTAL MANAGEMENT SYSTEM	CANADA STEAMSHIP LINES	Maintain a leading position in the Green Marine program for all indicators			
		Obtain 2 Green Passports in 2013			
	C3L AIVIERICAS	Reach level 2 in the Green Marine environmental program for at least 2 indicators			
	CSL EUROPE	Environmental Committee to review 2012-13 data and set goals in first quarter			
	CSL ASIA	Implement environmental management to be audited/verified			
		Include V.Ships Asia in CSL Asia Environmental Committee			
		Carry out staff training prior to joining platform			

The *CSL Elbe*, a conveyor belt self-unloader operating in the CSL Europe fleet, sails in the North Sea off the coast of Norway.

CSL ELBE

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THE CSL GROUP

The CSL Group Inc. ("CSL") of Montreal, Canada is a world-leading provider of marine dry bulk cargo handling and delivery services. Through its major operating divisions, Canada Steamship Lines, CSL International, CSL Australia, CSL Asia and CSL Europe, CSL owns and operates a highly diversified fleet of specialized self-unloading vessels, off-shore transhippers and Handysize bulk carriers, and delivers more than 70 million tonnes of cargo to industrial customers annually. CSL's history can be traced back to 1845.

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