



PERFORMANCE REPORT

— 2015 —

GM



## CHAIRMAN'S ADDRESS



In the following pages, you will read about Green Marine and its participants' accomplishments in 2015 and the preceding seven years. As you will certainly notice, our environmental program is gaining significant momentum not only in popularity across North America, but also in terms of helping more and more companies and ports to improve their environmental performance beyond regulatory compliance.

For the past few years, I have had the opportunity to witness the growth of this voluntary initiative from the inside, first as one of the directors, and as Chairman since May 2015. I am very proud of the results we are presenting in the 2015 Performance Report. They show that Green Marine has been able to meet the challenge of successfully recruiting and welcoming new participants while

continuing to work on the program's development. As Chairman of the Board, and the current president of a company that has participated in the Green Marine program since the very beginning, it is rewarding to witness how an ever-increasing part of the marine industry is taking the path of sustainability through Green Marine.

While the continued involvement of several CEOs in the management of the corporation ensures true industry leadership, I also wish to underline the work done in the various working groups and advisory committees, where participants interact with environmental groups, academics and legislators. Their work is central to Green Marine's ability to evolve and stay relevant.

I congratulate all of the participants for their commitment and efforts to improving their environmental performance in a transparent and collaborative way. The results found in this report clearly show that the Green Marine program is successful in encouraging innovative partnerships as well as promoting environmental excellence for the marine industry.

**Paul Gourdeau**

## NEW HEIGHTS

Green Marine reached a milestone during this past year. In February, the environmental program welcomed its 100th participant! Overall membership has tripled since the program's creation in October 2007. This steady expansion is proof that a voluntary certification program meets an important need and that we are fulfilling the mission that we have set to advance environmental excellence within North America's marine industry.

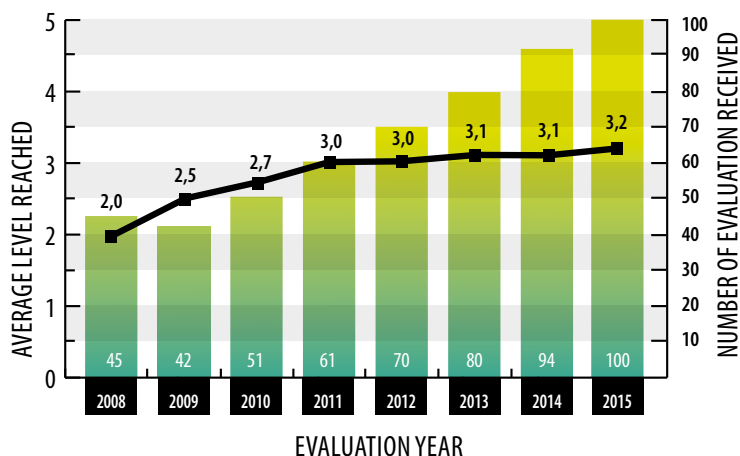
The annual results of our participants attest to the constant evolution of the industry's environmental performance. Again this year, the overall average – all performance indicators combined – is on the rise, reaching 3.2 (on the scale of 1 to 5).

	2007	2016*	
<b>PARTICIPANTS</b>	34	108	Participants are ship owners, ports, terminals, shipyards and the Seaway corporations.
<b>PARTNERS</b>	23	82	Partners provide services, products, technology and/or equipment that offer environmental advantages or opportunities to help Green Marine participants to improve their environmental performance.
<b>ASSOCIATIONS</b>	7	21	Associations serve as ambassadors for the environmental program by encouraging their members to join and/or endorse the program, as well as by promoting Green Marine's efforts and successes.
<b>Total</b>	<b>74</b>	<b>211</b>	

\* As of November 21, 2016.



## PARTICIPATION/PERFORMANCE



*Note: Although Green Marine currently has 102 participants, there were 100 self-evaluations submitted for 2015. The number varies slightly because some participants chose not to submit an evaluation within their first year of joining Green Marine (as is permitted to give new members some time to become acquainted with the program), while a few other participants submitted more than one self-evaluation to report on multiple sectors (e.g. ferries and terminals, or tugs and shipyards).*

Green Marine reached another milestone, an administrative one, by incorporating an **American subsidiary**. This incorporation and the opening of an office in Seattle, Washington, bolster our presence in the United States. Although binational since its launch in the St. Lawrence and Great Lakes region, it is only since July 2015 that the program has its U.S. corporate identity. This expansion was the next logical step in response to the growing interest of many American ports to join the program.

Support for the program is growing strong across North America. The program now counts **57 supporters**. During the past few months, Green Marine has received the support of the Environmental Defense Fund, Clear Seas Centre for Responsible Marine Shipping, and the Inter-American Committee on Ports of the Organization of American States, along with others. Green Marine supporters encourage the sustainable development initiatives undertaken by the participating maritime enterprises. The supporters play a pivotal role in Green Marine's relevance and credibility by endorsing, shaping, and reviewing the environmental program, most notably through our advisory committees.

## CONTINUAL IMPROVEMENT AND EXPANDED IMPACT

In keeping with Green Marine's requirement of continual improvement, work is being done all year long to ensure that the program's criteria are always up to date, reflective of current best practices, and exceeding the regulations in force. The revision of performance indicators by the working groups and the technical and advisory committees aims to improve the program's usability and impact every year. As a benchmarking tool, the environmental program encourages ship owners, ports, terminals, shipyards and Seaway corporations to continually surpass regulatory requirements in their pursuit of environmental excellence.

We are also constantly on the lookout for emerging issues and never stop improving the program. In 2015, for example, a **new performance indicator** for waste management was introduced for ports and terminals. Reporting on this new issue was optional for the 2015 reporting year, as it is always the case for new indicators. The environmental program now counts 12 distinct indicators, compared to the seven indicators required to complete the program's first year of evaluations (2008). By the beginning of 2017, at least two more performance indicators will be added!

Internationally, **underwater noise** and its impacts on marine mammals are gaining more attention. To address this emerging issue, Green Marine is developing new performance indicators: one for ship owners, and another for ports. Véronique Nolet, Green Marine's Project Manager – Marine Habitat, manages the working group comprised of underwater noise experts and industry representatives, which was first assembled in 2014 to study the issue and draft new performance indicators. In the summer of 2015, the concerns about underwater noise led to a contractual arrangement between Green Marine and Transport Canada to undertake a study on the matter. This contract facilitated hiring Véronique, who is long-time marine biologist. Her final report was submitted in April 2016. It outlines the various types of underwater noise, the impacts on marine life, different measurement techniques, current regulations and guidelines to address this issue, as well as existing research and the gaps in knowledge that must still be filled. This report helped to inform the development of the two new indicators scheduled to be released for optional reporting on 2016.

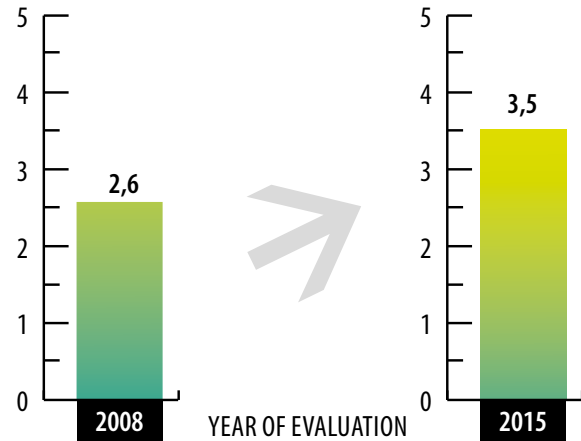


## RAISING THE BAR

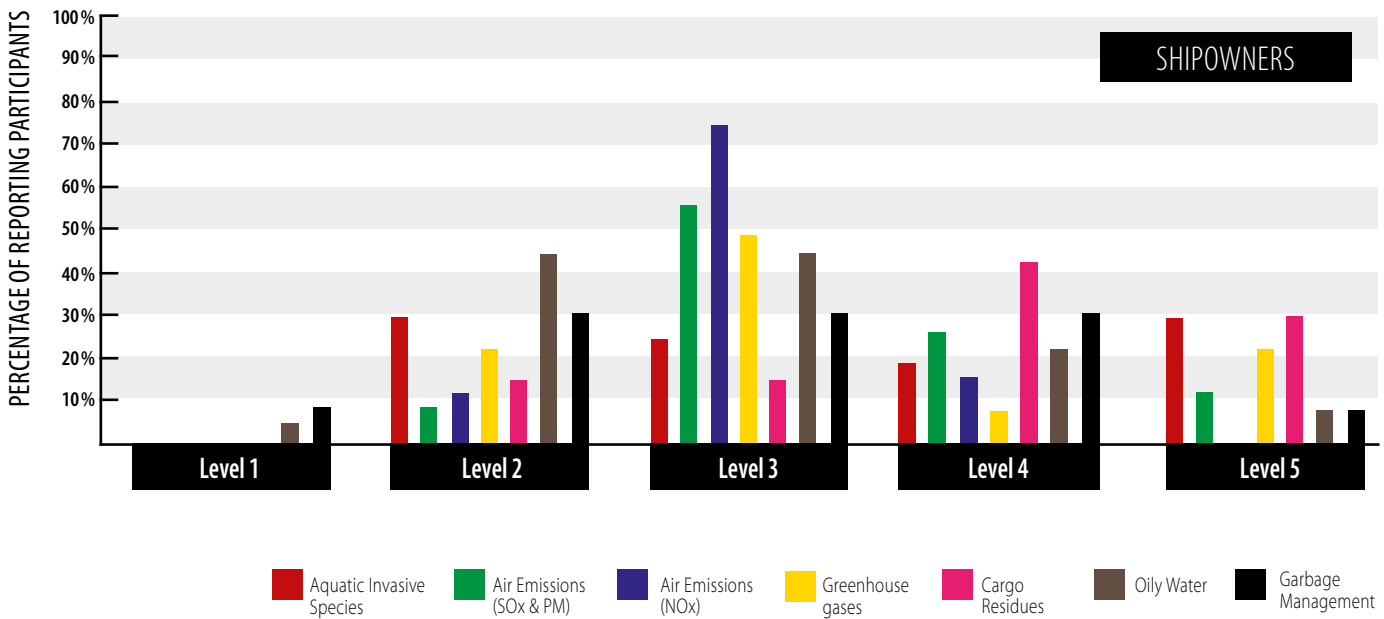
Again this year, the results of our participants are on the rise with the overall average climbing from 3.1 to 3.2. The two performance indicators with the highest average increases were achieved by ship owners. The overall average for aquatic invasive species reached 3.5 in 2015 compared to 3.2 in 2014, and for garbage management reached 3.0 in 2015 compared to 2.7 in 2014. One of the factors explaining the significant improvement in the aquatic invasive species performance indicator is the momentum generated by the attention paid to the issue of ballast water around the world. Several ship owners took major steps to meet international ballast water regulations that are expected to enter into force soon.

The performance average by ports and terminals has remained stable over the last three years, even while the number of ports and terminals participating in the program has significantly increased. In fact, the membership of ports and terminals has soared by 500% within nine years – from 15 to 75.

## AQUATIC INVASIVE SPECIES

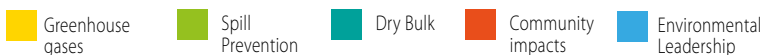
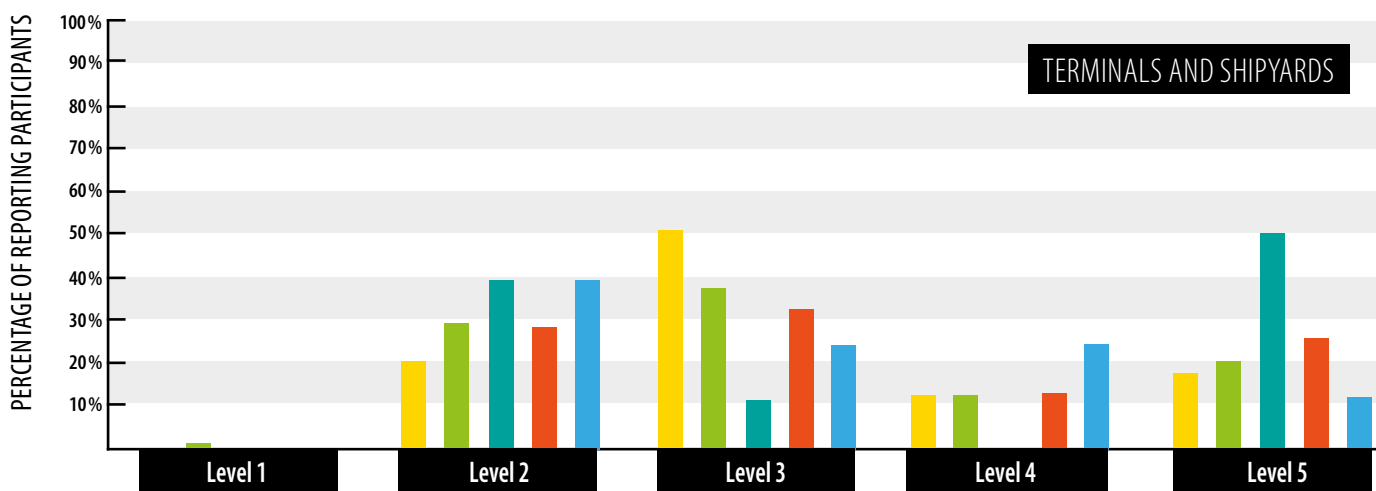
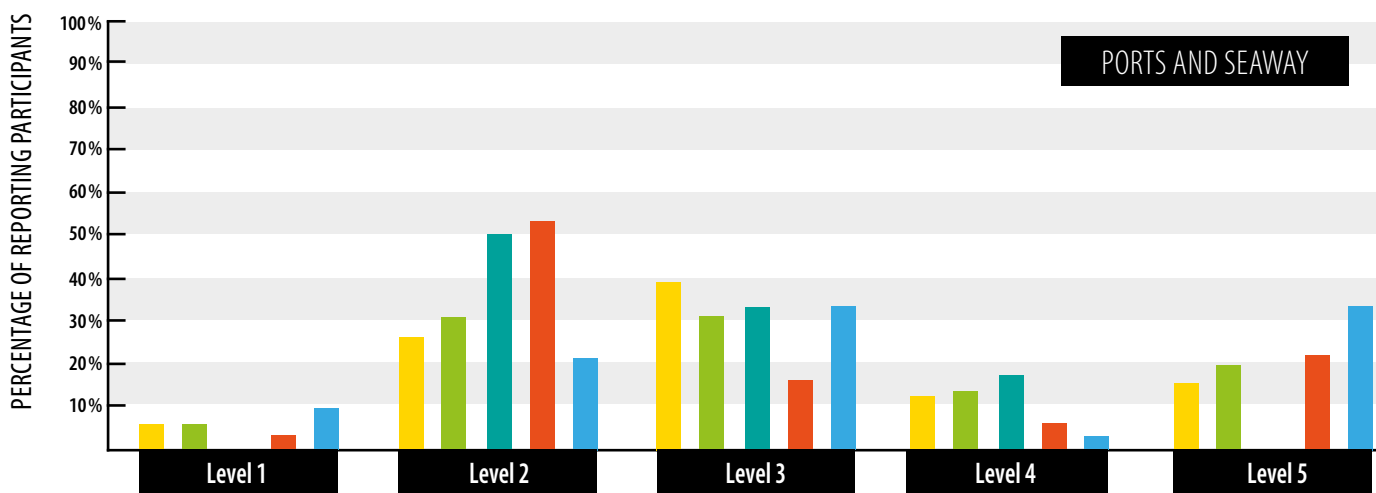


## PERFORMANCE BY LEVEL



## PERFORMANCE BY LEVEL

Yet the overall average of 3.2 indicates that more participants are reaching higher levels within the program. The percentage of participants reaching a global average of 3 or higher differs from one sector to another: 63% among ship owners, 48% among ports and Seaway corporations, and 61% among terminals and shipyards. The following graphs illustrate the percentage of participants at each of the program's five achievement levels for each of the 12 performance indicators.





## TELLING THE STORY

Through Green Marine's many communication tools, we are helping our members to relate their success stories. Along with the website and newsletter, Green Marine now manages a Twitter feed, which is another great way to shine a light on the environmental accomplishments of our members and expand the readership of their own posts. The Green Marine Magazine was also revamped this year to better highlight the events and achievements of the membership. Of largest continued note the GreenTech annual conference that gathers approximately 200 maritime professionals for three days to share the latest environmental information, discuss actual experience, learn about new technologies and network with peers as well as environmental leaders, researchers and innovators.

## LARGER ROSTER OF ACCREDITED VERIFIERS

In response to an expanding membership and the desire to maintain the environmental program's rigor, Green Marine completed a process in early 2016 to recruit, train and test new verifiers. Sixteen new verifiers were accredited, bringing the total number to 27. The recruitment has expanded the geographic area readily served by accredited verifiers. To achieve Green Marine certification, every participant must submit its results to an external verification every two years. The first verification must be completed within the first two years of joining the program. Certification and the use Green Marine's 'certified' logo are only awarded after the self-evaluated scores are verified.



## MOVING FORWARD

While we celebrate 2015 successes, the criteria for reporting on 2016's environmental performance have already been posted on Green Marine's website, and program development is already underway for 2017. Along with underwater noise and shore-side waste management, we are working on a couple of other key areas. We will be focusing on greenhouse gases, air emissions, and metrics. The performance indicator on community impacts will also be updated for ports and terminals. We extend a huge thank you to our members who have and will be working with the Secretariat on these developments in the coming months.


## RESULTS INTERPRETATION NOTES

The term n.a. (not applicable) appears several times in the report's tables because the environmental issues addressed by the program do not necessarily apply to all participants. For example, most tugs and ferries do not discharge ballast water, and container vessels do not have to manage dry bulk cargo residues. The n.a. denotation could also refer to a situation in which a participant does not have full control of the operations on its premises. For example, a port cannot apply the Green Marine criteria where a terminal operator is in charge of facilities. Most port authorities oversee the leasing of port property and do not themselves operate terminals.

The published results indicate each participant's self-reported and verified performance within the Green Marine program's indicator framework, and are not an exhaustive evaluation of all environmental matters related to maritime operations. Green Marine has not itself evaluated the environmental performance of the participating companies. Each participant is required to submit all of the documentation for the performance level claimed for each indicator to an external verifier every two years.

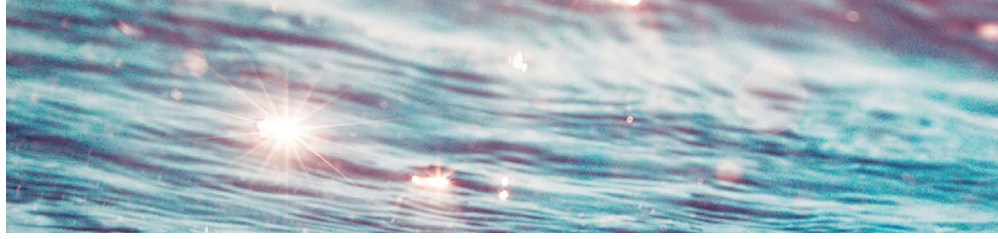
# 2015 RESULTS




SHIPOWNERS 	AQUATIC INVASIVE SPECIES	AIR EMISSIONS (SO <sub>x</sub> & PM)	AIR EMISSIONS (NO <sub>x</sub> )	GREENHOUSE GASES	CARGO RESIDUES	OILY WATER	GARBAGE MANAGEMENT
Algoma Central Corporation	4	5	4	5	4	5	4
Atlantic Towing Limited	4	5	3	5	n.a.	3	4
British Columbia Ferry Services Inc.	n.a.	3	3	3	n.a.	4	2
Canada Steamship Lines	5	5	4	5	4	4	5
Canfornav Inc.	5	3	3	5	5	5	4
COGEMA	n.a.	3	3	2	n.a.	3	4
Croisières AML	n.a.	3	3	3	n.a.	3	2
CSL Americas	5	4	3	4	n.a.	3	4
CSL Australia Ltd.	3	3	3	3	n.a.	3	3
CSL Europe Limited	2	3	3	3	n.a.	3	3
Fednav Ltd.	5	3	4	5	5	4	3
Groupe CTMA	2	3	2	2	n.a.	2	2
Groupe Desgagnés Inc.	5	4	4	5	4	4	5
Lower Lakes Towing Ltd.	3	4	3	2	2	2	2
Marine Atlantic Inc.	n.a.	2	2	2	n.a.	1	2
McAsphalt Marine Transportation Ltd.	4	3	3	3	n.a.	3	3
McKeil Marine Ltd.	2	3	3	3	3	3	1
North Arm Transportation Ltd.	n.a.	3	3	2	n.a.	4	4
Ocean	n.a.	4	3	4	n.a.	4	2
Oceanex Inc.	3	4	3	3	n.a.	3	4
Owen Sound Transportation Company	2	2	2	2	n.a.	2	3
Reformar	2	3	3	3	n.a.	2	3
Saam Smit Canada	n.a.	3	3	3	n.a.	2	2
Seaspan ULC	n.a.	4	3	3	n.a.	2	4
Société des traversiers du Québec	n.a.	3	3	3	n.a.	3	2
Svitzer Canada Ltd.	n.a.	4	3	3	n.a.	3	3
TBS Ship Management Inc.	3	3	3	3	n.a.	3	3


n.a.: non applicable






PORT AUTHORITIES 	GREENHOUSE GASES	SPILL PREVENTION	DRY BULK HANDLING AND STORAGE	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Bécancour Waterfront Industrial Park	4	1	n.a.	2	3
Canaveral Port Authority *	2	4	n.a.	2	1
Cleveland-Cuyahoga County Port Authority	3	4	3	2	4
Duluth Seaway Port Authority	3	5	4	2	5
Greater Victoria Harbour Authority	3	5	n.a.	5	3
Halifax Port Authority	5	5	n.a.	5	5
Hamilton Port Authority	3	3	n.a.	3	3
Illinois International Port District	3	2	n.a.	3	3
Montreal Port Authority	5	4	n.a.	5	5
Nanaimo Port Authority	2	2	n.a.	2	2
Oshawa Port Authority*	2	2	n.a.	2	1
Port Everglades	1	1	2	1	1
Port of Gulfport	2	3	2	2	2
Port of Indiana-Burns Harbor	2	3	n.a.	3	2
Port of Longview	2	3	3	2	2
Port of Milwaukee	3	2	n.a.	2	3
Port of New Orleans	1	3	n.a.	2	5
Port of Seattle	3	2	n.a.	2	5
Port of Valleyfield	3	2	n.a.	2	3
Prince Rupert Port Authority	3	3	n.a.	5	5
Quebec Port Authority	5	5	n.a.	5	5
Saguenay Port Authority	3	3	n.a.	n.a.	3
Saint John Port Authority, NB	2	2	n.a.	2	2
Sept-Îles Port Authority	3	3	n.a.	3	5
St. John's Port Authority, NL	3	3	n.a.	3	3
Thunder Bay Port Authority	4	2	n.a.	2	3
Toronto Port Authority	4	2	2	2	2
Trois-Rivières Port Authority	2	5	n.a.	4	3
Vancouver Fraser Port Authority	5	4	n.a.	5	5
Windsor Port Authority	2	n.a.	n.a.	2	3

n.a.: non applicable \* New participant whose results have not yet been verified.


SAINT LAWRENCE SEAWAY 	GREENHOUSE GASES	SPILL PREVENTION	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Saint Lawrence Seaway Development Corporation / St. Lawrence Seaway Management Corporation †	4,1	4,1	4,1	5

† While each Seaway corporation filed a separate self-assessment report to Green Marine and has its results separately verified, both were motivated to publish their results jointly to reflect their allied efforts in achieving environmental excellence. The published results are the weighted average of the individual results based on the number of locks managed by each corporation.



<b>TERMINALS AND STEVEDORING COMPANIES</b> 	<b>GREENHOUSE GASES</b>	<b>SPILL PREVENTION</b>	<b>DRY BULK HANDLING AND STORAGE</b>	<b>COMMUNITY IMPACTS</b>	<b>ENVIRONMENTAL LEADERSHIP</b>
British Columbia Ferry Services Inc.	2	2	n.a.	2	3
G3 Canada Limited (Quebec Terminal)	4	3	3	3	3
Ceres Marine Terminals Inc. (Charleston, Savannah, Houston, Baltimore, Halifax)	3	5	n.a.	3	4
DP World Prince Rupert Inc.	3	2	n.a.	2	2
Empire Stevedoring Co. Ltd (Montreal)	3	3	n.a.	3	2
Federal Marine Terminals Inc. (Burns Harbor, Cleveland, Hamilton, Milwaukee, Thorold, Albany, Eastport, Port Manatee, Tampa, Lake Charles)	5	4	5	4	3
Fraser Surrey Docks	5	3	5	5	2
GCT Global Container Terminals Inc. (Bayonne)	5	5	n.a.	4	5
GCT Global Container Terminals Inc. (Deltaport)	3	4	n.a.	5	4
GCT Global Container Terminals Inc. (New York)	3	5	n.a.	3	4
GCT Global Container Terminals Inc. (Vanterm)	3	4	n.a.	5	4
Groupe Desgagnés Inc. (Relais Nordik, Sept-Îles)	3	3	n.a.	2	2
Iron Ore Company of Canada	3	5	5	3	5
Kinder Morgan Canada (Westridge Terminal)	3	3	n.a.	3	4
Logistec Corporation (Montreal, Contrecoeur, Halifax, Saint John, Sydney, Trois-Rivières, Rideau Bulk, Sept-Îles, Thunder Bay, Toronto)	5	2	5	3	3
Marine Atlantic Inc.	2	2	n.a.	2	2
McAsphalt Industries Ltd. (Eastern Passage, Valleyfield, Oshawa, Hamilton, Port Stanley)	2	3	n.a.	3	3
Montreal Gateway Terminals Partnership	5	3	n.a.	5	5
Neptune Bulk Terminals (Canada) Ltd.	4	5	5	5	5
Norcan Petroleum Group Inc.	3	3	n.a.	n.a.	3
Northern Stevedoring Company Inc. (Sept-Îles)	3	3	3	3	3
Pacific Coast Terminals Co. Ltd.	2	3	5	5	4
Pinnacle Renewable Energy Inc.	3	2	2	3	2
Porlier Express Inc. (Sept-Îles)	3	3	n.a.	3	3
QSL (Beauport)	3	2	2	2	2
QSL (Anse au Foulon)	2	2	2	2	2
Richardson International (Hamilton)	4	4	5	4	2
Ridley Terminals Inc.	4	5	5	5	4
Rio Tinto (Port-Alfred)	5	5	5	5	5
Squamish Terminals Ltd.	3	3	n.a.	4	4
Sterling Fuels Limited	3	5	n.a.	3	4
Termont Montréal Inc.	2	2	n.a.	2	2
Tidal Coast Terminals Ltd.	3	2	2	2	2
Tymac Launch Service	2	2	2	2	2
Valero Energy Inc. (Jean-Gaulin Refinery)	5	3	n.a.	5	3
Valleytank Inc.	3	3	n.a.	n.a.	2
Valport Maritime Services Inc.	2	2	2	2	2
Westshore Terminals Ltd.	3	2	2	3	2
Yellowline Asphalt Products Limited	3	3	n.a.	5	3

n.a.: non applicable

<b>SHIPYARDS</b> 	<b>GREENHOUSE GASES</b>	<b>SPILL PREVENTION</b>	<b>COMMUNITY IMPACTS</b>	<b>ENVIRONMENTAL LEADERSHIP</b>
Ocean Industries Inc.	3	2	2	2
Seaspan Shipyards	4	4	4	4



25, du Marché-Champlain, suite #402  
Quebec City, QC, G1K 4H2

418-649-6004  
[info@green-marine.org](mailto:info@green-marine.org)

[green-marine.org](http://green-marine.org)

1201, Alaskan Way, Suite #200  
Seattle, WA, 98101

206-409-3943  
[info@green-marine.org](mailto:info@green-marine.org)