



GREEN  
MARINE

PERFORMANCE REPORT

2014

# SUSTAINABILITY AT WORK IN MARINE TRANSPORTATION

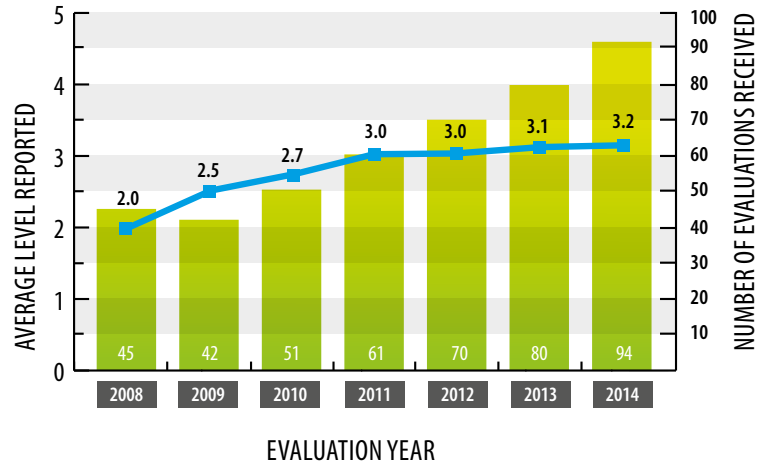
The past year – 2014 – was amazing for Green Marine. A record 94 evaluation reports were submitted! The overall average for this seventh year continued on its upward trend, reaching a 3.2 level, and the individual results clearly show that our participants are continuing to improve their environmental performance for a number of issues.

More than half of the participants (58%) across all categories have gone up a level in at least one of the performance indicators relevant to their type of operations. The increase is even greater among ship owners, with 68% reaching a higher level in relation to at least one of the applicable environmental issues. The continual improvement reflects the concrete actions on the part of the ship owners, ports, terminals, shipyards and Seaway corporations in keeping with Green Marine's mission of advancing environmental excellence.

The participants' overall average has continued to improve, even though membership has steadily expanded over the years. Since the program's inception, new performance indicators and more stringent program requirements have also been implemented. The graph to the right clearly shows the evolution of the overall performance results and the increasing number of participant evaluations.

Increased membership can affect the global average with new participants being initially less familiar with the Green Marine program and some higher-level criteria requiring new policies and processes that can take some time to establish. The program's requirements are reviewed and revised annually with the bar shifting upwards to account for new regulations. Performance level criteria are accordingly readjusted to stay above regulatory compliance. Maintaining the same levels thus requires continual management and improvement on the part of each participant.

## PARTICIPATION/PERFORMANCE



*Note: Green Marine received a total of 94 evaluations for 2014. A few participants submitted more than one evaluation to report on diverse operations (i.e. ferries and terminals, or tugs and shipyards), while others chose not to submit an evaluation their first year of joining Green Marine, as is permitted to give new members some time to become acquainted with the program.*




## FURTHER EXPANSION AND HIGH RECOGNITION

Green Marine draws interest throughout Canada and the United States and has welcomed new participants from the East and West Coasts, the Gulf of Mexico, the shores of the Saint Lawrence River, and across the Great Lakes. The environmental program's reputation is also gaining new horizons in terms of recognition. Green Marine was chosen as the winner of the Environmental Excellence category at the Lloyd's List North American Maritime Awards 2015. The peer recognition is a testament to the program's success and, even more importantly, to its relevance and credibility across North America.

# 2014 RESULTS

The results rank each participant's performance against each applicable performance indicator on a 1-to-5 scale, with Level 1 representing regulatory monitoring and Level 5 indicating excellence and leadership.



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	4	4	5	4	5	4
Atlantic Towing Limited	2	5	3	5	n.a.	3	4
British Columbia Ferry Services Inc.	n.a.	2	2	2	n.a.	2	1
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	3
Croisières AML	n.a.	3	3	3	n.a.	3	2
CSL Americas	3	3	3	2	n.a.	2	2
CSL Australia	2	3	3	2	n.a.	2	1
CSL Europe	2	3	3	3	n.a.	1	3
CTMA Group	2	3	2	2	n.a.	2	2
Fednav Ltd.	5	3	4	5	5	4	3
Groupe Desgagnés Inc.	4	5	4	5	4	4	5
Lower Lakes Towing Ltd.	3	4	3	3	3	3	2
Marine Atlantic Inc.	n.a.	2	2	2	n.a.	1	1
McAsphalt Marine Transportation Ltd.	4	3	3	3	n.a.	3	3
McKeil Marine Ltd.	3	3	3	3	3	3	2
North Arm Transportation	n.a.	3	3	2	n.a.	3	3
Ocean	n.a.	3	3	2	n.a.	4	2
Oceanex Inc.	3	4	3	4	n.a.	5	4
Owen Sound Transportation Company*	2	1	2	2	n.a.	2	2
Reformar	2	3	3	3	n.a.	2	2
Saam Smit Canada Inc.	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	5	n.a.	2	2
Svitzer Canada Ltd.	n.a.	3	3	3	n.a.	3	3
TBS Ship Management Inc.*	3	3	3	3	n.a.	3	3


\* Companies whose results have not yet been verified as of June 22<sup>nd</sup>, 2015.

n.a. not applicable

## NEW LEVEL 1


The 2014 year of evaluation coincides with Green Marine's redefinition of its Level 1 criteria to 'regulatory monitoring.' Level 1 is the program's baseline. The new definition integrates specific requirements aimed at ensuring that a company takes steps to maintain an awareness of relevant environmental regulations. During its external verification, a company must demonstrate to the verifier that it follows a process to

ensure a reasonable level of knowledge of its legal and regulatory obligations. The company must also be able to identify personnel responsible for the monitoring, interpretation, application and follow-up of regulations. By signing the membership form, a participating company also pledges to adhere to Green Marine's guiding principles, which includes compliance with all applicable laws and regulations.

PORT AUTHORITIES 	GREENHOUSE GASES	SPILL PREVENTION	DRY BULK HANDLING AND STORAGE	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Cleveland-Cuyahoga County Port Authority	3	4	3	2	3
Duluth Seaway Port Authority	3	5	4	2	4
Greater Victoria Harbour Authority	3	5	n.a.	5	3
Halifax Port Authority	5	5	n.a.	4	5
Hamilton Port Authority	3	3	n.a.	3	3
Illinois International Port District	3	2	n.a.	3	3
Montreal Port Authority	4	4	n.a.	5	5
Nanaimo Port Authority	2	2	n.a.	2	1
Port Everglades*	1	1	2	1	1
Port Metro Vancouver	5	3	n.a.	5	5
Port of Gulfport	2	3	2	2	1
Port of Indiana-Burns Harbor	3	3	n.a.	3	2
Port of Milwaukee	2	2	n.a.	2	3
Port of New Orleans	1	3	n.a.	2	5
Port of Seattle	3	4	n.a.	5	5
Port of Valleyfield	3	2	n.a.	2	3
Prince Rupert Port Authority	3	3	n.a.	3	5
Quebec Port Authority	4	3	n.a.	4	3
Saguenay Port Authority	3	2	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, NFL	2	3	n.a.	2	3
Thunder Bay Port Authority	4	2	n.a.	2	3
Toronto Port Authority	3	2	2	2	2
Trois-Rivières Port Authority	2	5	n.a.	4	3
Windsor Port Authority	2	n.a.	n.a.	2	3

\* Companies whose results have not yet been verified as of June 22<sup>nd</sup>, 2015.

n.a. not applicable

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


† Each Seaway corporation filed an individual self-assessment report to Green Marine and had its results separately verified, but they both opted 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 Seaway corporation.

## 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 pump ballast water, and container vessels do not have to treat 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 are landlords 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 independent verifier every two years.

TERMINALS AND STEVEDORING COMPANIES 	GREENHOUSE GASES	SPILL PREVENTION	DRY BULK HANDLING AND STORAGE	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
British Columbia Ferry Services Inc.	2	2	n.a.	1	2
Bunge of Canada Ltd.	4	3	3	3	3
Ceres Marine Terminals Inc. (Charleston, Savannah, Houston, Baltimore, Halifax)	3	5	n.a.	3	4
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 LP	5	3	5	3	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	3	5	3	4
Kinder Morgan Canada (Westridge Terminal)	3	3	n.a.	3	3
Logistec Corporation (Montreal, Contrecoeur, Halifax, Saint John, Sydney, Trois-Rivières, Rideau Bulk, Sept-Îles, Thunder Bay, Toronto)	4	2	4	3	2
Maher Terminals (Prince Rupert)	2	3	n.a.	2	2
Marine Atlantic Inc.	2	1	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.	3	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.	2	2	2	3	2
Porlier Express Inc. (Sept-Îles)	3	3	3	2	2
Richardson International (Hamilton)*	3	5	3	3	3
Ridley Terminals Inc.	3	5	5	5	4
Rio Tinto Alcan (Port Alfred)	5	5	5	5	5
Squamish Terminals Ltd.	3	2	n.a.	2	3
Sterling Fuels Limited	3	5	n.a.	3	4
Termont Montréal Inc.	2	2	n.a.	1	2
Tidal Coast Terminals Ltd.	3	1	1	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	2	2
Yellowline Asphalt Products Limited	2	3	n.a.	5	2

\* Companies whose results have not yet been verified as of June 22<sup>nd</sup>, 2015.

n.a. not applicable

SHIPYARDS 	GREENHOUSE GASES	SPILL PREVENTION	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Marine Recycling Corporation	5	5	4	5
Ocean Industries Inc.	3	2	3	3
Seaspan ULC	3	4	4	4



# 2014 SYNOPSIS

## MEMBERSHIP GROWTH

11 new participants, 10 new partners and 3 new association members joined Green Marine in 2014 and membership continues to steadily expand.

	2007	2015*	
<b>PARTICIPANTS</b>	34	92	Participants are ship owners, ports, terminals, shipyards and the Seaway corporations.
<b>PARTNERS</b>	23	70	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	18	Associations serve as ambassadors for the environmental program by encouraging their members to join and/or endorse the program, as well as promote Green Marine's efforts and successes.
<b>Total</b>	<b>74</b>	<b>180</b>	

\* As of June 22, 2015

## PROGRAM DEVELOPMENT

Two new performance indicators are in the works: one will aim to minimize the impacts on marine mammals of underwater noise generated by commercial shipping and port activities; and, the other will focus on garbage management at ports and terminals.

## A BIGGER TEAM!

Green Marine welcomed Dr. Eleanor Kirtley in November 2014 as a new team member based in Seattle. A professional engineer in Washington State, she is the new program manager for the West Coast. Her primary role is to support Green Marine's West Coast participants in implementing the program and to coordinate Green Marine's West Coast Advisory Committee.

## AIR QUALITY

The vast majority (89%) of ship owners have achieved Levels 3, 4 or 5 for at least one of the performance indicators related to air quality. A Level 3 result demands significant efforts on the part of a participant, requiring among other things to measure its emissions, including particulate matter, nitrogen and sulfur oxides, and greenhouse gases.

## WIDE SUPPORT

# 50

SUPPORTERS

- **Environmental groups and NGOs**
- **Government agencies and municipalities**
- **Research and academic institutions**

Green Marine now has 50 official supporters – 31 more than when the program began in 2007. A pivotal element of Green Marine's success from the outset has been the active support from environmental stakeholders and governments. Several of them participate in shaping and reviewing the environmental program.

## PARTNERSHIPS AND COLLABORATION

Green Marine and the Association of Canadian Port Authorities (ACPA) have entered into a Memorandum of Understanding with the goal of jointly expanding efforts to reduce the marine industry's environmental footprint and to encourage the industry to continuously improve its environmental performance. Green Marine signed a similar agreement with the American Association of Port Authorities (AAPA) in 2013. These MOUs confirm the commitment of the North American port industry to sustainability.

## A REWARDING COMMITMENT

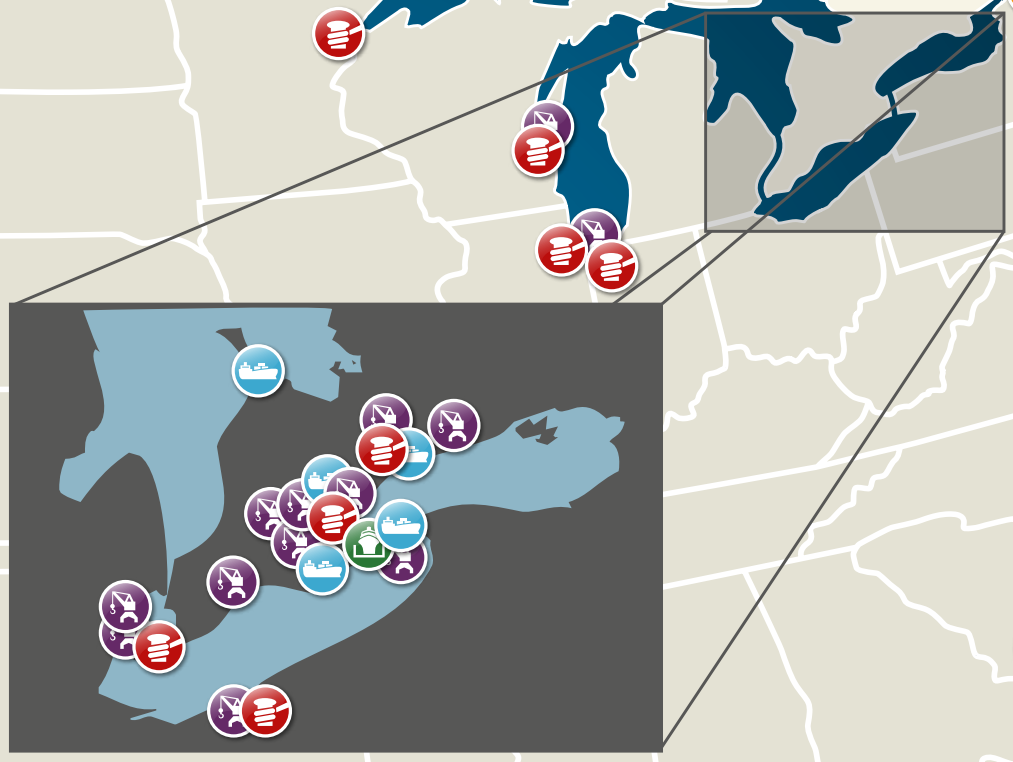
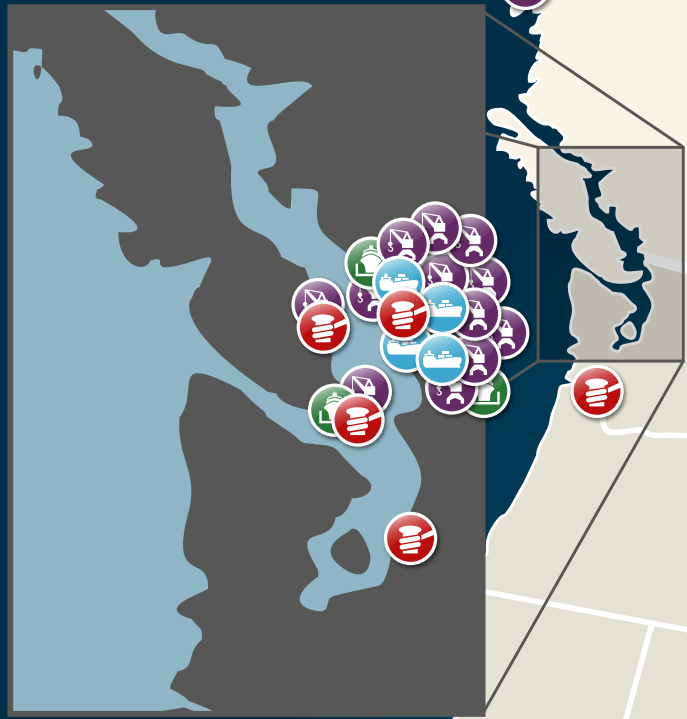
Being a Green Marine participant really does make a difference in improving a company's environmental performance year over year in the long-term. The group of founding members reporting their results since 2008, for instance, scored an overall average of 3.4 for their 2014 efforts, compared to the 2.5 attained by new participants reporting for the first time for the same period. These results are testimony to Green Marine's effectiveness in enhancing marine transportation's sustainability.

## WATER QUALITY

Almost three-quarters (71%) of the ports and terminals have implemented a plan to prevent water and land pollution. These participants have put in place measures to identify sources of potential pollution and to monitor coastal waters to immediately detect and respond to any spill. They also have prepared a detailed map of their territory, regularly complete an inventory, inspection and maintenance of all equipment, and ensure the proper training and preparedness of their employees.



**GREEN  
MARINE**



### THE PARTICIPANTS

	
SHIP OWNERS	PORTS
	
TERMINALS	SHIPYARDS
	
ST. LAWRENCE SEAWAY	

