



# GREEN MARINE

ADVANCING ENVIRONMENTAL  
EXCELLENCE

PERFORMANCE  
REPORT **2013**

# MESSAGE FROM THE CHAIR OF THE BOARD



This past year has been remarkable for the Green Marine environmental program in terms of expanding membership, improving the verification and certification process and, most importantly, achieving continually improving results.

Green Marine's reach now extends from the Atlantic to the Pacific and from the Great Lakes and St. Lawrence to the Gulf of Mexico. Membership continues to increase both in Canada and the United States with close to 150 companies actively participating or partnering in the program.

The program's verification and certification process was enhanced in 2013 with an expansion in the number of verifiers who have been trained and accredited by Green Marine. This not only gives Green Marine participants access to a pool of highly qualified verifiers in Canada and the United States, but also ensures a high degree of consistency and credibility in verification procedures.

We are extremely pleased with the continued improvement in the environmental performance of the companies participating in Green Marine. The upward curve in performance since the program's inception in 2007 is especially striking considering that membership has more than doubled and the program requirements have expanded during this period.

The Green Marine program is demanding and ambitious, as are the challenges of sustainability. We appreciate the support of organizations that have recognized Green Marine as a highly effective initiative to enhance the sustainability of the marine transportation industry. Although great improvement has been achieved to date, our commitment going forward is as strong as ever as we continue to advance the environmental excellence of the marine industry.

**Greg Wight**  
*Chair*  
*Green Marine Board of Directors*

## MEMBERS

	2007	2014*	
<b>PARTICIPANTS</b>	34	82	Participants are shipowners, ports, terminals, shipyards and the Seaway corporations.
<b>PARTNERS</b>	23	65	Partners are suppliers of services, products, technology and/or equipment that offer environmental advantages or opportunities to help Green Marine participants to improve their environmental performance.
<b>Total</b>	<b>57</b>	<b>147</b>	

## ADVOCATES

	2007	2014*	
<b>SUPPORTERS</b>	19	43	Supporters encourage and support the sustainable development initiative undertaken by the marine industry. They have endorsed and help to shape the program.
<b>ASSOCIATIONS</b>	7	15	Maritime associations play a key role in Green Marine by serving as ambassadors for the program and promoting the continued growth in membership.
<b>Total</b>	<b>26</b>	<b>58</b>	

\*as of May 29, 2014

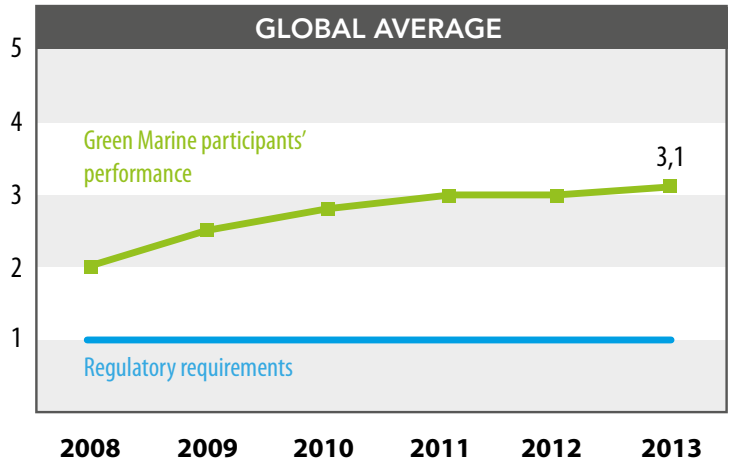
# STEERING TOWARDS ENVIRONMENTAL EXCELLENCE

Green Marine requires its participants to adopt best practices and technologies that hit the ground running in terms of positive impact.

The 2013 results reached a global average of Level 3.1 (based on a scale of 1 to 5) confirming the environmental program's effectiveness in encouraging shipowners, ports, terminals, shipyards and Seaway corporations in Canada and the United States to surpass regulatory environmental requirements.

These results show true commitment towards sustainability by Green Marine's participants since, once again, despite more demanding criteria, the addition of new performance indicators, and the arrival of new participants, their overall average environmental performance continues on its upward curve.

## CONTINUAL IMPROVEMENT



## ENHANCED VERIFICATION AND CERTIFICATION

In 2013 Green Marine expanded its pool of verifiers to facilitate the verification and certification process in response to the growing number of Green Marine participants. Green Marine's accredited verifiers have been selected in collaboration with an independent consultant to ensure objectivity. All of the verifiers have received training to understand Green Marine's evaluation framework and standards, as well as its verification and certification process.


Green Marine's certification policy has also been revised. It now furthers the rigour and founding principle of continual improvement with criteria obliging certain improvement. A participant must attain Level 2 in at least one of the performance indicators within the first year after joining the program, and demonstrate as of the second year a yearly improvement of one level for at least one performance indicator until Level 2 is achieved for all applicable performance indicators.





*"Our vision and mission are very much aligned in terms of engaging industry leaders interested in pursuing environmental performance that goes well beyond legislative compliance."*

*- Peter Boyd, Chief Operating Officer, Carbon War Room*

# 2013 RESULTS

TERMINALS AND STEVEDORING COMPANIES 	GREENHOUSE GASES	SPILL PREVENTION	DRY BULK HANDLING AND STORAGE	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Bunge of Canada Ltd.	4	3	3	3	3
Ceres Marine Terminals Inc. (Charleston, Savannah, Houston, Baltimore, Halifax)	3	5	n.a.	3	4
Cliffs Natural Resources - Mines Wabush-Pointe-Noire	5	3	3	2	3
Empire Stevedoring Co. Ltd (Montreal)	3	3	n.a.	3	2
Esso Imperial Oil (Sept-Îles)	3	4	4	3	3
Federal Marine Terminals Inc. (Burns Harbor, Cleveland, Hamilton, Milwaukee, Thorold, Albany, Eastport, Port Matanee, Tampa)	5	4	5	4	3
Fraser Surrey Docks	5	3	5	3	2
Groupe Desgagnés Inc. (Relais Nordik, Sept-Îles)	3	2	n.a.	1	2
Iron Ore Company of Canada (Sept-Îles)	3	3	5	4	4
Kinder Morgan Canada (Westridge Terminal)	3	3	n.a.	3	3
Logistec Corporation (Montreal, Contrecoeur, Halifax, St. John's, Sydney, Trois-Rivières, Rideau Bulk, Sept-Îles, Thunder Bay, Toronto)	4	2	4	3	2
Maher Terminals	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.	4	5
Neptune Bulk Terminals (Canada) Ltd.	3	5	5	5	5
Norcan Petroleum Group Inc.	3	3	n.a.	n.a.	2
Northern Stevedoring Company Inc. (Sept-Îles)	3	3	3	3	3
Pacific Coast Terminals Co. Ltd.	1	2	5	4	4
Porlier Express Inc.	3	3	3	2	2
Ridley Terminals Inc.	3	5	5	4	4
Rio Tinto Alcan (Port Alfred)	5	5	5	5	4
Squamish Terminals Ltd.	2	2	n.a.	2	3
Sterling Fuels Limited	2	4	n.a.	3	4
Suncor Energy Products (Montreal Refinery) *	5	5	n.a.	2	3
Termont Montréal Inc.	1	2	n.a.	1	1
Valero Energy Inc. (Jean-Gaulin Refinery)	5	3	n.a.	5	3
Valleytank Inc.	2	3	n.a.	1	2
Valport Maritime Services Inc.	2	2	2	2	2
Westshore Terminals *	3	1	2	1	1

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


SAINT LAWRENCE SEAWAY 	GREENHOUSE GASES	SPILL PREVENTION	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Saint Lawrence Seaway Development Corporation / St. Lawrence Seaway Management Corporation †	4.1	2.1	4.1	4.1


\* Companies whose results have not yet been verified n.a. not applicable

† While each Seaway corporation filed a separate self-assessment report to Green Marine and had 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.

The abbreviated term “n.a.” (not applicable) appears in several places in the tables because of the high degree of operational diversity among the participants. The environmental issues addressed by the program do not necessarily apply to all participants in the same way. For example, tugs and ferries do not pump ballast water, and container vessels do not have to treat cargo residues.

The published results reflect the environmental performance of the participants within the quite precise framework of the performance indicators established within the Green Marine program. Green Marine does not presume to have evaluated in an exhaustive fashion all of the environmental performance of the ports and other participating companies inasmuch as certain environmental aspects are not yet covered by the program.

SHIPOWNERS 	AQUATIC INVASIVE SPECIES	AIR EMISSIONS (Sox & PM)	AIR EMISSIONS (Nox)	GREENHOUSE GASES	CARGO RESIDUES	OILY WATER	GARBAGE MANAGEMENT
Algoma Central Corporation	4	4	4	5	4	5	4
Atlantic Towing Limited	2	3	3	4	n.a.	3	2
Canada Steamship Lines	5	5	4	5	4	4	5
Canfornav Inc.	4	3	3	5	5	5	4
COGEMA	n.a.	3	3	2	n.a.	3	2
Croisières AML	n.a.	3	3	3	n.a.	n.a.	2
CSL Americas	2	3	3	2	n.a.	2	1
CTMA Group	2	3	2	2	n.a.	2	2
Fednav Ltd.	5	3	3	5	5	4	3
Groupe Desgagnés Inc.	4	5	4	5	4	4	5
Island Tug and Barge Ltd.	n.a.	3	3	3	n.a.	2	2
Lower Lakes Towing Ltd.	3	3	3	2	2	2	1
McAsphalt Marine Transportation Ltd.	4	3	3	3	n.a.	2	3
McKeil Marine Ltd.	3	3	3	3	3	2	1
North Arm Transportation *	n.a.	5	3	2	n.a.	4	3
Ocean	n.a.	3	3	2	n.a.	4	n.a.
Oceanex Inc.	3	4	3	5	n.a.	5	4
Reformar	2	3	2	3	n.a.	2	2
Seaspan ULC	n.a.	3	2	4	n.a.	2	4
SMIT Marine Canada Inc.	n.a.	3	3	3	n.a.	2	1
Société des traversiers du Québec	n.a.	3	3	3	n.a.	2	2
Svitzer Canada Ltd.	n.a.	2	2	2	n.a.	2	2
TBS Shipping Services Inc./Roymar Ship Management	3	3	3	3	n.a.	3	3

PORT AUTHORITIES 	GREENHOUSE GASES	SPILL PREVENTION	DRY BULK HANDLING AND STORAGE	COMMUNITY IMPACTS	ENVIRONMENTAL LEADERSHIP
Cleveland-Cuyahoga County Port Authority	2	4	3	2	3
Duluth Seaway Port Authority	2	5	3	2	3
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	2
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.	1	1
Port Metro Vancouver	5	3	n.a.	5	5
Port of Gulfport	2	3	1	2	1
Port of Indiana-Burns Harbor	2	3	1	2	2
Port of Milwaukee	2	3	n.a.	3	2
Port of Seattle	3	4	n.a.	5	5
Port of Valleyfield	2	2	2	2	3
Prince Rupert Port Authority	3	3	n.a.	3	4
Quebec Port Authority	3	3	n.a.	3	3
Saguenay Port Authority	3	2	2	n.a.	3
Saint John Port Authority, NB	1	2	3	2	2
Sept-Îles Port Authority	3	3	n.a.	3	5
Thunder Bay Port Authority	4	2	n.a.	2	3
Toronto Port Authority	2	2	2	2	2
Trois-Rivières Port Authority	2	2	n.a.	3	3
Windsor Port Authority	2	n.a.	n.a.	2	3

LEVEL	CRITERIA	NOTES
1	Regulatory compliance	
2	Systematic use of a defined number of best practices	
3	Integration of best practices into an adopted management plan and quantifiable understanding of environmental impacts	
4	Introduction of new technologies	
5	Excellence and leadership	

# TANGIBLE RESULTS

## A DEMANDING AND INCREASINGLY AMBITIOUS PROGRAM

In keeping with Green Marine's ambition for continual improvement, two new performance indicators were added to the 2013 evaluation: garbage management for shipowners, and environmental leadership for terminals. Other indicators, notably community impacts, have been revised and now demand a greater effort by participants. Additional indicators are also currently in the design stage with the goal of expanding the environmental program's scope.

Existing criteria are likewise being put regularly under the magnifying glass by Green Marine's advisory committees to ensure they evolve in line with regulations, technological breakthroughs and exemplary practices. The contribution of the advisory committees – comprised of participants, legislators, non-governmental organizations and environmental groups – ensure the environmental program's relevance, credibility and advancement.

To consult the list of issues and specific criteria that participants must abide by within the environmental program's framework, visit the Green Marine website: [www.green-marine.org](http://www.green-marine.org).

**78%**

of the shipowners have equipped their vessels with recycling bins and trained crews to respect 3R-RD (reduce at source, reuse, recycle, and reclaim and properly dispose of – preferably by composting) which has contributed to a reduction of waste at source.

**67%**

of the ports, terminals and shipyards refill vehicles and machinery with fuel or lubricants at a minimum of 30 m (100 ft) from any body of water to reduce the risk of water pollution.

**67%**

of the ports and terminals have established a plan for the prevention of water and soil pollution.

**83%**

of shipowners have completed an inventory of NOx (nitrogen oxide) emissions.

**54**

participants have completed a greenhouse gas inventory, which represents 67% of all participants.

**35%**

of the shipowners have achieved an average yearly reduction of at least 1% within their greenhouse gas emissions per tonne-kilometre.

**33**

port/terminal/shipyard participants periodically sample their noise levels and/or air quality (for dust or odours) as part of their program to reduce operations-related nuisances potentially affecting residents living within the vicinity of their facilities.

**93%**

of the ports, terminals and shipyards restrict vehicle engine idling to improve air quality in their port communities.

*" We want to ensure the association gives the best tools to its members to help them benchmark and improve their environmental performance and we have determined that the Green Marine program is valid, applicable, and scalable for port authority and terminal operations. "*

*- Kurt Nagle, President and CEO, American Association of Port Authorities*