GREEN MARINE

Program Update

AAPA Environment Committee, April 17th, 2017
Eleanor Kirtley, PhD, LEED AP, PE, West Coast Program Manager

www.green-marine.org

9th Annual GreenTech Conference

[GreenTech 2016](link)

Quebec City

Monday, May 30 →

Wednesday, June 1

- 226 attendees
- 34 speakers
- 17 exhibitors

Member and Outreach Event

New Orleans

Thursday, Oct 27

Following the AAPA Convention

50+ participants

To bring members together, gather their input.

To showcase the Green Marine program for interested ports, terminals, ship owners, partners, etc!

2016 Verifier Quality Control

- ✓ Hired external consultant to verify the verifiers
- ✓ Reviewed verification reports for content, quality, and consistency
- ✓ Provided feedback and recommendations to verifiers
- ✓ Executive Summary to Green Marine with findings and Recommendations

GREEN MARINE STAFF CHANGES

Program Manager– St. Lawrence

- Permanent position since June 2016

- St. Lawrence Advisory Committee

- Marine mammals & aquatic ecosystems issues

Program Manager – East Coast

- Located in Halifax– started November 21st

- Great Lakes Advisory Committee

- Ports & terminals technical committee

- Verifiers oversight

REVISED Performance Indicators for 2017 Program

Performance Indicators	Ship owners	Ports & Term's
Invasive species	1	0
Air emissions (SOx and PM)	**2**	**-**
Air emissions (NOx)	**3**	**-**
Greenhouse gases (GHG) & Air Pollutants	**4**	**1**
Oily water	5	-
Garbage / waste management	6	2
Prevention of spills and leakages	**-**	**3**
Dry bulk handling and storage	-	4
Community impacts	**-**	**5**
Environmental leadership	-	6
Underwater Noise – New!	**7**	**7**

NEW Performance Indicators on Underwater Noise (Optional)

Objective: Reduce underwater noise made by activities to reduce impacts on **marine mammals**

Applicability:
- ✓ Ship Owners
- ✓ Ports on salt water

NEW Performance Indicators on Underwater Noise (Optional)

Level 1
- Monitoring of regulations

Level 2
- Raise awareness and implementation of best practices

Level 3
- Develop and implement a Management Plan
- Data acquisition : noise or whales

Level 4
- Measurement for ships (Ship Owners)
- Introduction of new technologies (Ship Owners)
- Development of UN reduction targets (Ports)
- Incentive program for SO (Ports)

Level 5
- In depth Underwater Noise measurement
- Meet reduction targets

REVISED Performance Indicators for 2017 Program - Ship Owners

Green Marine Environmental Program 2017

10 YEARS 2007-2017

Performance Indicators for Ship owners

GREEN MARINE

SOx&PM, NOx, and GHG PIs:

✓ New Level 2 (optional) criteria on energy efficient lighting

✓ Updates for harbor craft and internationals in response to fuel sulfur regulations

✓ Simplified GHG inventory method and tougher Level 5 reduction target

✓ Expanded inventory scope for harbor craft

REVISED Performance Indicators for 2017 Program - P, T, SY, & SW

Greenhouse Gas & Air Pollutants
- New criteria (optional) to complete a detailed inventory on entire area of jurisdiction within the last 5 years

Spill Prevention
- New criteria 2.8, 2.9, 3.3, 4.2, 5.1, 5.7
- 4.6 shifted down from L5

Community Impacts
- New notes on applicability
- New criteria 3.2, 3.3, 3.6
- 3.5 shifted down from L4 and updated

New Members

www.green-marine.org

WELCOMED New Participants (110)

PORTS

- **Northwest Seaport Alliance**
- **Port of Olympia (WA)**
- **Port of Corpus Christi**
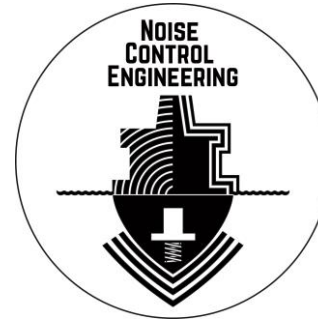- **Alabama State Port Authority**
- **Port of Everett (WA)**

TERMINALS

- **Tymac Launch Service**
- **West Coast Reduction**
- **New Orleans Terminal**

SHIP OWNER

- **Ledcor**

WELCOMED New Partners (81)

WELCOMED Supporters (63) and Associations (21)

Current Focus

Analyzing 2016 Results and Verifications

Self Evaluation

- Annual self-evaluation requiring CEO sign-off
- Due April 1

External Verification

- Third party verification every two years
- Due May 12

Results Publication

- Produced by Green Marine staff
- Released at GreenTech conference

Certification Ceremony & Reception

- At GreenTech
- May 31, 2017 in Ft Lauderdale

2016 Annual Performance Report

www.green-marine.org/certification/results/

10th Annual Conference

[GreenTech 2017](#)

Fort Lauderdale

Tuesday, May 30 →

Thursday, June 1

Sponsorships Available
6 Expo booths remaining
Preliminary Program is
posted and Registration
is online

Coming up …

www.green-marine.org

Performance Indicators
TO BE REVIEWED in 2017 for 2018 Program

Performance Indicators	Ship owners	Ports & Term's
Invasive species	**1**	**0**
Air emissions (SOx and PM)	**2**	-
Air emissions (NOx)	**3**	-
Greenhouse gases (GHG) & Air Pollutants	**4**	**1**
Oily water	**5**	-
Garbage management **(Shore Reception Fac.)**	6	**2**
Prevention of spills and leakages	-	3
Dry bulk handling and storage	-	4
Community impacts	-	5
Environmental leadership	-	6
Underwater Noise **(annexes TBD)**	**7**	**7**

Ports' 2018 Program Development

o Update GHG & Air Quality Performance Indicator (PI)
- Phase 2 Kick-off last week with workgroup
- Quantitative metrics and targets

o Complete new PI on Shore-side Reception Facilities for ship-generated waste at Canadian Port Authorities

o Start development of new PI on Community Relations and Social Responsibility
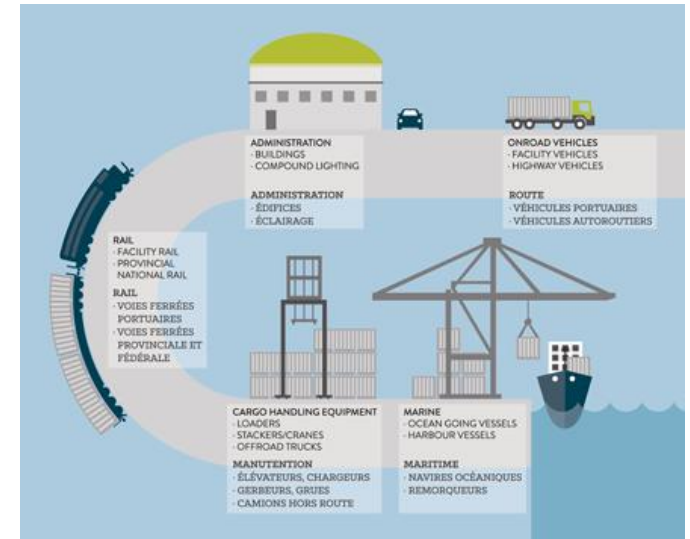
PORT EMISSIONS INVENTORY TOOL

License agreement
- Green Marine obtained the rights from Transport Canada to copy and use the Port Emissions Inventory Tool with the objective to make the tool available to all Green Marine participants

Official release
- At GreenTech - May 31, 2017
- How-to Workshop
- Sublicense agreement

Pilot project
- Port of Prince Rupert, Montréal and Trois-Rivières
- Port of New-Orleans

10th Anniversary!

QUESTIONS?

CONTACT INFO:

ELEANOR KIRTLEY
West Coast Program Manager
1201 Alaskan Way Suite 200 (Pier 56)
Seattle, WA USA
eleanor.kirtley@green-marine.org
206-409-3943

DAVID BOLDUC
Executive Director
Quebec City, QC CANADA
david.bolduc@green-marine.org
418-649-6004 ext. 300

www.green-marine.org

VERIFICATION: QUALITY CONTROL PROCESS

Executive Summary

Findings:

1. Declared scores by participants were accurate

2. Reports were of varying quality

3. Verifiers were competent

4. Participant preparation was high

5. The involvement of verifiers in continuous improvement process was uneven

6. Green Marine's expectations require clarification

7. Unclear process in event of non-compliant verification reports

VERIFICATION: QUALITY CONTROL PROCESS

Executive Summary

Recommendations:

1.) Clarify the verifier's mandate as it pertains to a verifier's obligation to provide continuous improvement recommendations.

2.) Clarify Green Marine's expectations as it pertains to the minimum requirements for report format, content and quality (for example: tables of content, general summary, etc.).

3.) During verifier annual training, include a best practices portion using real past reports anonymously as examples of good and bad practices.

4.) A process should be put in place for the refusal of non-compliant reports.