



# ALGOMA CENTRAL CORPORATION 2015 SUSTAINABILITY REPORT

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## About This Report

This report provides an update to the Algoma 2013 Sustainability Report and presents the status of our sustainability programs as of 2015.

Performance on a range of environmental and social responsibility indicators is presented. Safety statistics are reported as consolidated for all of the Corporation's operating units. Environmental emissions data are presented for the domestic fleet of vessels (dry bulk and tankers), and do not include information for the ocean fleet or real estate division.





# Message from the CEO

As the new President and CEO of Algoma, I am pleased to introduce our latest update report on sustainability progress at Algoma. Despite the very difficult economic environment the shipping industry is experiencing both regionally and globally, we are committed more than ever to sustainability as one of the foundations of our business. Our leadership position as the largest domestic dry bulk shipowner operating in the Great Lakes – St. Lawrence region has been established for well over a century through the dedication of our employees and business partners. Our continued success will depend in large part on our ability to be as sustainable as we can. To that end, we are making significant investments in renewing our fleet, which will enable us to continue to more sustainably meet the needs of our customers, our employees and our communities for many decades to come.

Since our last Sustainability Report in 2013 we have seen the arrival of three of our new Equinox Class vessels. An additional seven new Algoma vessels will arrive to Great Lakes service in 2017 and 2018. As highlighted in this report, we are benefiting from the environmental advantages of these newly built vessels and the other investments we have made. We have achieved reduced emissions of greenhouse gases and other air pollutants through efficiency improvements and the introduction of new technologies including pioneering exhaust gas scrubber technology in the Great Lakes. Scrubbers on our new vessels have successfully demonstrated 99% removal of sulphur oxide emissions from engine exhaust; on the basis of this success we have begun to investigate scrubber retrofits for existing vessels.

We are making good progress on reducing our environmental impacts, but we continue to evaluate opportunities to adopt proven technologies to further advance our efforts. We are also monitoring industry developments as we begin to envision how the next advancements in environmental improvements might be achieved.

Also highlighted in this report is our safety performance. In this area, I am very pleased to report the continuing downward trend in workplace injuries for our fleet. Safety of our employees is paramount and we never relent or compromise in this area.

Algoma's vision, "to grow our position as the carrier of choice for bulk commodities in the Great Lakes – St. Lawrence Waterway to become a leader in short sea shipping globally", expresses our renewed focus and commitment to growth. At the end of 2015, we announced large investments in the acquisition of two ocean-going ships and in a newly created joint venture focused on cement product marine transportation. Sustainability information related to these new ventures will be presented in future reports.

Looking ahead we are excited for the future of our company and will continue to focus on long-term investment and continued growth in a sustainable manner.



**Ken Soerensen**  
President and CEO

# About Algoma



Algoma Central Corporation is a leading Canadian marine shipping company based in St. Catharines, Ontario, Canada, owning and operating the largest fleet of dry and liquid-bulk vessels operating on the Great Lakes – St. Lawrence Waterway. In 2015, the company's domestic fleet comprised eighteen specialized (self-unloading) dry-bulk carriers, seven gearless dry-bulk carriers and seven product tankers. In addition to its domestic fleet of vessels, Algoma has ownership or joint interest in four ocean-going dry bulk vessels and operates a ship repair facility located in Port Colborne, Ontario.

The majority of Algoma's domestic marine operations take place within the Great Lakes and St. Lawrence River region. In 2015, the company's dry bulk fleet transported 24.3 million tonnes of raw materials such as grain, iron ore, salt, cement and aggregates to and from Canadian and United States ports in support of many primary industries in the region. Some of these commodities were also moved from ports located within the lakes to ports along the St. Lawrence River for transfer to larger ocean-going vessels owned by others for export to international markets. The domestic tanker fleet carried over 2.2 million tonnes of liquid bulk products, primarily petroleum products. A small portion of Algoma's dry bulk domestic vessels, as well as all of the fleet's tankers, are capable (approved by Classification Society based on structural capability) of operating also in the Gulf of St. Lawrence and coastal region when needed.

## Fleet Renewal

In 2011 Algoma announced plans for the construction of eight newly designed lakes vessels, the Equinox Class, continuing the fleet renewal initiative that began in 2004 with the purchase of new tanker vessels and in 2009 and 2011 with the arrival of the new dry bulk vessels Radcliffe R. Latimer and Algoma Mariner.

The first ship in this new class of vessels, the Algoma Equinox, was delivered in 2013, followed by the Algoma Harvester in 2014. A third vessel, the G3 Marquis, owned by G3 Canada Limited (formerly the Canadian Wheat Board) and managed by Algoma on their behalf, was also received in 2014. While completion of further new vessels was delayed, fleet renewal remains a priority for Algoma. Seven additional new vessels are now expected to join the Algoma domestic fleet in 2017 and 2018, all of which will be dedicated to renewing the domestic fleet operations in the Great Lakes-St. Lawrence region. By 2020, the average age of the Algoma domestic dry bulk vessel will be twelve years, reduced from thirty-six years in 2010.

The Equinox Class vessels are living up to our expectations in terms of performance. The new vessels bring many improvements, including better fuel efficiency, fewer emissions, more advanced equipment and enhanced safety features. They emit on the order of 40% less greenhouse gases per tonne-kilometre of cargo carried than our older vessels operating in similar trades, and are equipped with exhaust gas scrubbers to remove sulphur oxides from engine exhaust gases. We look forward to continuing to further reduce our environmental footprint and improve our operational efficiency as additional new vessels join our fleet.





# Sustainability

Marine transportation is a vital component of the North American supply chain and Algoma has proudly been a part of this critical industry for well over a century. We understand that it is a privilege to operate on one of the most important waterways in the world and we don't take this responsibility lightly. At Algoma we know that we must always act in a sustainable manner, improving our operations, protecting the environment and promoting economic prosperity.

# Sustainability at Algoma

As described in our [2013 Sustainability Report](#), our approach to sustainability is framed by four pillars:

- Operations excellence
- Environmental responsibility
- Social responsibility
- Responsible corporate governance

Fleet renewal remains a central theme of our sustainability efforts. Through innovation and modern technologies, our new vessels have been designed to improve on the already superior environmental performance of marine transportation, and these improvements have been reflected in the reduced environmental footprint achieved by the Algoma fleet. Given the comparatively long life span for lakes vessels, generally around 40 years, these new vessels will provide economic benefits for the region's industries that rely on marine shipping and for Algoma employees and shareholders for many decades to come.

In addition to fleet renewal, we have recently strengthened and enhanced our sustainability efforts in a number of ways.

A renewed focus on operations excellence in the areas of energy efficiency, safety performance, reliability and cost control was initiated in 2015, with dedicated resources assigned to achieving defined improvement targets. Delivering operations excellence enables us to provide value to our customers, to maintain long-term profitability and to increase shareholder value, and is a key part of planning and execution throughout our operations.

We continue to promote and recognize operations excellence in safety performance within Algoma and believe that zero injuries is an achievable goal. Algoma's Integrated Management System (IMS), which is certified to the International Safety Management Code for ships and to the international management systems standards for environment (ISO 14001) and quality (ISO 9001), was also certified to the OHSAS 18001 Health and Safety Assessment Series standard in 2015. This is a significant accomplishment that demonstrates our dedication to continual improvement in safety management.

## Stakeholder Engagement

Algoma engages with a wide variety of stakeholders in an effort to communicate and maintain dialogue on our sustainability challenges, efforts and achievements. We actively participate in industry associations, such as the International Chamber of Shipping, the Canadian Shipowners Association and the Canadian Chamber of Marine Commerce, to address sustainability issues in the marine industry, and on Green Marine stakeholder advisory committees to advance and improve the program. We also collaborate and engage with government agencies and policy makers on issues and concerns that affect the company and the marine shipping industry. Last, but not least, employee engagement is encouraged through regular communication, such as annual meetings, our semi-annual company newsletter, corporate wide fundraising initiatives and annual employee performance reviews.

As a publicly traded company, we maintain an investor relations program and issue updates on our financial performance in our regulatory filings.

Seven Algoma vessels and their crews were recognized in 2015 for achieving Algoma's Gold Safety Award for zero injuries, zero spills and no out of service events.



## Operations Excellence in Action

The crews of the Radcliffe R. Latimer and the Algoma Integrity worked with the Operations and Technical Services teams to undertake a cargo transfer operation, which was successfully completed without incident under difficult environmental conditions including wind, tide and current.



# Governance

At Algoma we believe that strong and transparent corporate governance is essential for a sustainable company. The Board of Directors has responsibility for corporate governance and has implemented a series of corporate governance policies and guidelines that are consistent with current standards. This includes policies on Corporate Disclosure, Insider Trading, Employee Complaint on Auditing and Accounting Matters, Employment Equity and Respect in the Workplace. These policies, along with all relevant investor relations information, are available on our [website](#).

The Board delegates authority for management of economic, environmental and social responsibility to the Executive Committee, which comprises senior management at the company. Sustainability is a key focus of the Environment, Health and Safety Committee of the Board. Improvement plans and results achieved across the Corporation are reviewed semi-annually by this committee.

Our actions are also guided by the Algoma [Code of Conduct](#). Over Algoma's history, employees have developed a culture of honesty, integrity and ethical conduct, standards which form the basis of the Code.



All Algoma employees, officers and directors are expected to adhere to the Code of Conduct and are required to formally re-commit to it each year, symbolizing the common values that we share.

## Code of Conduct themes:

- Company Values
- Compliance with Laws, Regulations and Company Policies
- Confidentiality of Information
- Conflicts of Interest
- Company Assets
- Respect in the Workplace
- Fair Dealing
- Duty to Report

"Each employee of ACC represents the Company and is expected to act in a manner that will reflect the Company's commitment to our core values of Teamwork, Integrity, Leadership, Responsibility and Respect."



# Environmental Management

Algoma is committed to operating and growing in a responsible manner while minimizing the impacts to water, air and land from our operations. Management of environmental issues is guided by our fundamental commitments to environmental protection, compliance and continual improvement, and achieved through the diligent efforts of our employees as they implement our ISO 14001 certified management system.



## Green Marine



Algoma continues to be a very active participant in Green Marine, a voluntary environmental improvement program for the marine industry that promotes environmental stewardship beyond regulation. The base requirement for participation in the program is regulatory compliance, or a 'Level 1' score in each of the performance indicators. All scores higher than this indicate voluntary actions that go above and beyond regulatory requirements, such as development of emissions inventories, achievement of improvement targets and/or contributing to research and development towards issue mitigation. Participation in Green Marine has assisted in advancing our sustainability strategy and challenges us to continually improve our environmental management systems and performance. Since joining the program in 2008 as one of the co-founders and original participants, Algoma's scores have steadily increased from an average of 3.5 to 4.4 (out of a possible 5).

Green Marine Issue	Level Achieved by Algoma, 2015
Aquatic Invasive Species	4
Pollutant Air Emissions (SOx and PM)	5
Pollutant Air Emissions (NOx)	4
Pollutant Air Emissions (GHGs)	5
Cargo Residues	4
Oily Waters	5
Garbage Management	4

## Responsible Ship Recycling

Given the on-going renewal of our fleet, Algoma has retired several vessels over the last decade and is planning to retire additional vessels as their replacements are delivered. Hand in hand with fleet renewal and our cradle to grave approach to ship ownership has been the formalization of Algoma's ship recycling practices into a new Ship Recycling Policy. We are committed to ensuring socially and environmentally sound recycling of our end-of-life vessels at facilities where the dismantling and recycling processes will not pose any unnecessary risks to human health, safety or the environment. We enter into recycling contracts only with facilities that commit to operations in adherence with the principles of international conventions and directives on ship recycling. Recycling facilities that have obtained relevant certification of their management systems are preferred.

All Algoma vessels demised to date have been dismantled at responsible recycling yards in Canada (5 vessels) or Turkey (10 vessels). Each vessel is provided with an Inventory of Hazardous Materials, formerly known as a Green Passport, to identify any remaining hazardous vessel construction materials once the vessel has been made ready for recycling. This enables the recycling facility to employ safe procedures for dealing with these materials during both dismantling and downstream hazardous waste management.



The Algoma Quebecois was dismantled and recycled in Port Colborne, Ontario, Canada in 2014.

# Reducing Carbon Emissions

Marine transportation is a driver for green growth and is already by far the most carbon efficient mode of commercial transport. Despite this, we understand the need to reduce greenhouse gas (GHG) emissions to the extent possible and have made improving the fuel efficiency of our fleet a major priority at Algoma.

Energy efficiency and reduction in air pollutant emissions are being achieved through the use of new technologies and application of energy efficiency measures on our vessels. Algoma's new vessels were designed with fuel-efficiency in mind. That said, we work to implement measures where possible on all of our vessels, new and old.

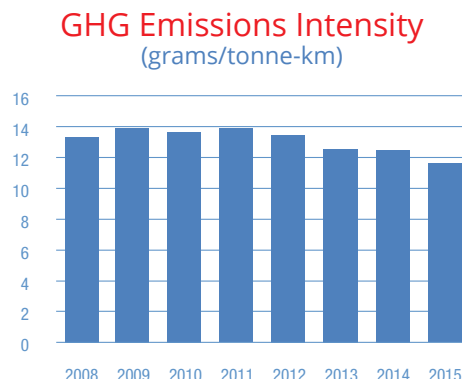
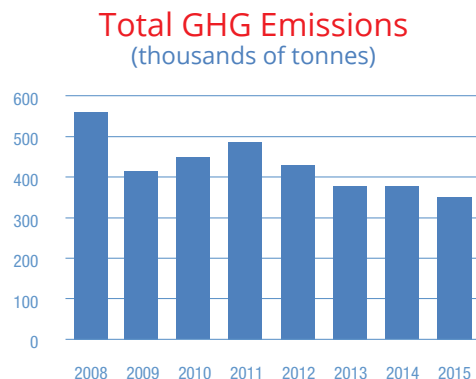
A formal Energy Management Policy was implemented in 2015 to renew and reinforce our commitments to managing energy use, reducing our carbon footprint and reducing overall emissions. In addition, a carbon reduction target has been adopted and a dedicated energy management team formed to focus on efficiency projects.

Measures that are being used or trialled throughout the Algoma fleet include waste heat recovery, advanced engine performance monitoring, lighting retrofits, trim optimization and slow steaming where feasible. A major investment in fuel monitoring systems was recently made in order to better track efficiency and optimize vessel speeds. This is in addition to several engine replacements and upgrades implemented over the last decade.

## Results

GHG emissions per tonne-kilometre have decreased by an average of 1.9% annually since 2008, an achievement that has qualified Algoma for Green Marine Level 5 status. Overall, the Algoma fleet has achieved a 13% reduction in emissions per tonne-kilometre since 2008, driven in large part by introduction of new more efficient vessels. Other actions that have contributed to this result include engine replacements on older tonnage, the retirement of less efficient vessels and implementation of energy saving technical and operational measures.

We expect this downward trend in emissions to be maintained as new vessels continue to be brought into the fleet and as additional efficiency measures are implemented, and we are confident that our reduction target of 25% in GHG emissions by 2025 (tonne-km basis, compared to a 2008 baseline) can be met.



13% Reduction in  
GHGs per cargo  
tonne-km since 2008

Algoma Carbon Reduction Target

25% Reduction in  
GHGs by 2025

## New Vessels Efficiency Improvements

The Equinox Class vessels were constructed with features intended to maximize fuel efficiency, including a new hull form designed to reduce power requirements and vessel wake, a large-diameter propeller and a fully electronic, slow speed engine. Further improvements have been made to the original Equinox design to promote additional energy efficiency in the vessels currently under construction. These include:

- In addition to main engine heat recovery, an economiser has been installed on the auxiliary engines
- Waste heat recovery also installed on the lube oil purifier system
- All motors specified at energy efficiency standard IE3 or better
- Installation of a higher efficiency HVAC plant
- Additional lighting replacements with high efficiency, high visibility LED floodlights

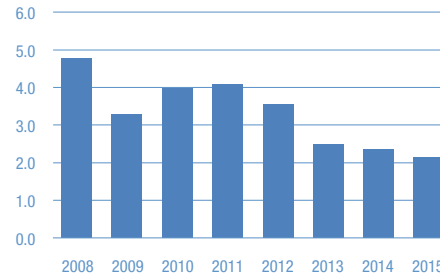


# Reducing Sulphur Emissions

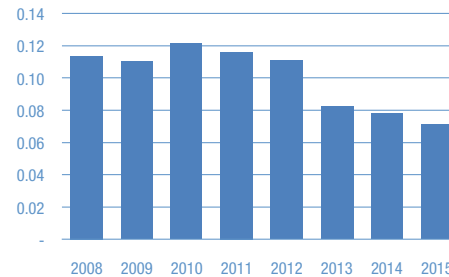
Algoma's Equinox Class vessels are equipped with an exhaust gas scrubber that has been shown to remove over 99% of sulphur oxide (SOx) emissions (see below). Operation of this equipment enables Algoma to meet stringent Emission Control Area standards for SOx emissions and will assist the fleet to continue to reduce its overall emissions in accordance with the schedule prescribed in Canadian Fleet Averaging regulations.

Total emissions of sulphur oxides for the domestic fleet have steadily decreased since 2011, and in 2015 were less than half of those in 2008. While total emissions are in part dependent on economic conditions and the number of vessels operating, the emissions per tonne-kilometre have also decreased significantly. SOx emissions per tonne-kilometre were reduced 42% in 2015 compared to 2010. This is attributed to the use of higher quality fuels, more efficient vessels and introduction of the exhaust gas scrubbers in 2013.

**Total SOx Emissions**  
(thousands of tonnes)



**SOx Emissions Intensity**  
(grams/tonne-km)



## Exhaust Gas Scrubber Approval Testing

Exhaust gas scrubbers on Algoma's new vessels are designed to remove sulphur from the exhaust gas and reduce SOx emissions to a level equivalent to low sulphur fuel. The scrubber is a closed loop, fresh water system that uses water with the addition of an alkaline chemical to clean exhaust emissions from all engines on the vessel (main engine, three auxiliary engines and thermal oil heater).

Certification testing was conducted on the Algoma Equinox in 2014 by a team consisting of emissions testing experts and Classification Society authorities. The testing was conducted according to the requirements of the International Maritime Organization's Guidelines for Exhaust Gas Cleaning Systems, with exhaust gas samples taken before and after the scrubber over a range of test conditions, engine loads and fuel types. All test results demonstrated that the scrubber system meets the expected SOx reduction to a level equivalent to fuel having a sulphur content of no more than 0.1% sulphur (m/m). Based on these compliant emission results, and also on successful testing of the treated effluent from the associated scrubber washwater treatment unit, type approval was granted.

Further testing on board the Algoma Equinox is planned in order to evaluate the level of reduction in other exhaust emissions provided by the exhaust gas scrubbers. Of most interest is confirming what is expected to be a significant reduction in the particulate matter content of the exhaust gas.



# Minimizing Spill Risks

Algoma vessels employ all available technical and operational measures to mitigate the risk of spills to water. The most modern, state-of-the-art navigation systems available are in place to assist vessel officers with safe navigation in the confined waters of the Great Lakes/St. Lawrence River/Canadian East Coast system. To further reduce the already minimal risk of oil pollution from our vessels, Algoma employs very strict risk management related to fueling operations, equipment maintenance and inspection and housekeeping on decks and in engine rooms.

Shipowners, including Algoma, work in partnership with all levels of government to develop contingency plans, which are tested through regular emergency preparedness exercises involving vessels, Coast Guards, ports and the St. Lawrence Seaway Corporations. Our vessels maintain detailed emergency response plans, conduct quarterly drills and spill response exercises, and carry oil containment booms and other equipment to deal with possible incidents. In the unlikely event that a spill occurs that is beyond the response capability of the vessel, our contracted, government-approved emergency response company is called upon to respond and assist.

At Algoma we are also continuing our program of phasing in biodegradable/environmentally preferable lubricants in underwater and deck equipment and replacing, where possible, hydraulic equipment with non-oil containing equipment. Stern tubes, a common source of operational leakage, have either been replaced by water lubricated models or utilize a fully biodegradable product on all Algoma vessels.



## Flawless Execution in Delivery of Liquid Bulk Products

The Algoma domestic product tanker fleet provides safe and reliable transportation of liquid petroleum products throughout the Great Lakes, St. Lawrence Seaway and Atlantic Canada regions. Customers include major oil refiners, leading wholesale distributors and large consumers of petroleum products who demand the highest levels of safety, environmental protection, quality and service. Our goal is to achieve *Flawless Execution* in delivering oil products to our customers. To ensure achievement of this goal, our fleet operates under a very robust Integrated Management System certified to all major management system standards (ISM Code/ISO 9001/ISO 14001/OHSAS 18001) and is subject to rigorous internal and external oversight. All Algoma tankers are double-hulled.

*Flawless Execution* is further supported through compliance with the Oil Companies International Marine Forum (OCIMF) requirements. This includes the Ship Inspection Report Programme (SIRE), which includes shipboard internal self assessments and requires two external inspections per year for each vessel to verify compliance. Tanker Management Self Assessment is also practiced, focusing on management system requirements. Algoma evaluates its operations and procedures against these requirements and provides the results to customers to demonstrate compliance.

Through these robust requirements and verification activities a high level of performance and compliance is achieved by the Algoma product tanker fleet. Several of Algoma's tanker vessels have achieved the company's Gold Safety Award, awarded on the basis of no injuries (beyond first aid), no spills to water and no vessel or customer property damage. In 2013 through 2015, there were zero spills to water of **any** volume of oil or product from Algoma's domestic tanker vessels.



## Aquatic Invasive Species

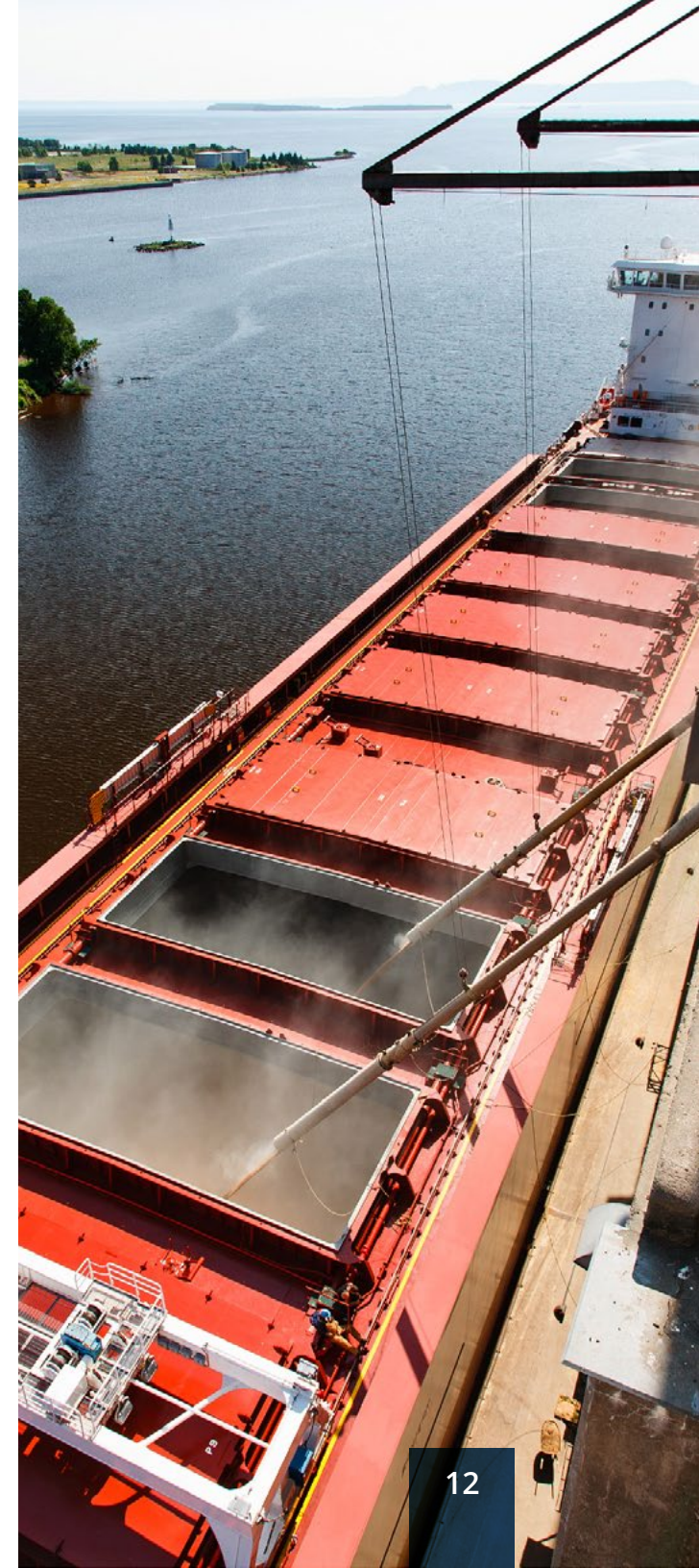
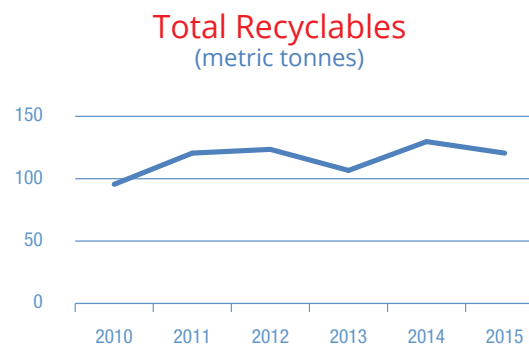
The ecological and economic harm that has been caused globally by the introduction of aquatic invasive species through ballast water transfer is significant. Mandatory global phase-in of ship-board ballast water treatment systems intended to eliminate these impacts will commence when the International Ballast Water Convention comes into force in 2017. To protect the Great Lakes, Canada and the United States implemented rules in 2004 requiring mandatory mid-ocean ballast water exchange or flushing for vessels entering the lakes from overseas, actions that either purge or kill organisms being transported in the tanks. This requirement, coupled with mandatory inspection of 100% of the tanks on 100% of the ocean vessels entering the lakes, has proven very effective – according to scientists, no new invasive species attributed to ballast water has been detected in the lakes since 2006. This is a significant success.

Algoma is committed to complying with all ballast water management requirements and best practices in an effort to mitigate any potential impacts related to our operations. We continue to actively collaborate and provide access to vessels for sampling and research by Canada's Department of Fisheries and Oceans, most recently in a project to compare and evaluate ballast water sampling methods. We also continue to investigate viable ballast water management options, and are active in on-going efforts by the Canadian Shipowners Association (CSA) to advance understanding of the invasive species issue as it relates to short sea shipping in the region.

In particular, Algoma has contributed significant funds and resources to the CSA's Ballast Water Research and Technical Evaluation project launched in 2015. This project aims to develop a risk-proportionate and achievable approach to ballast water management for the domestic fleets operating in the Great Lakes region. Ships that operate primarily in the region are unique in many respects and face several technical challenges to ballast water treatment. Challenges stem from both the operational characteristics of the vessels (including relatively short voyages, fast unloading rates and uncoated tanks) and certain environmental characteristics of Great Lakes waters (including zero salinity, freezing temperatures, high suspended solids and low ultraviolet transmittance in some ports). These factors can negatively impact treatment system efficacy and make certain treatment processes unsuitable for use on these vessels. The CSA continues to work actively towards identifying workable ballast water management solutions.

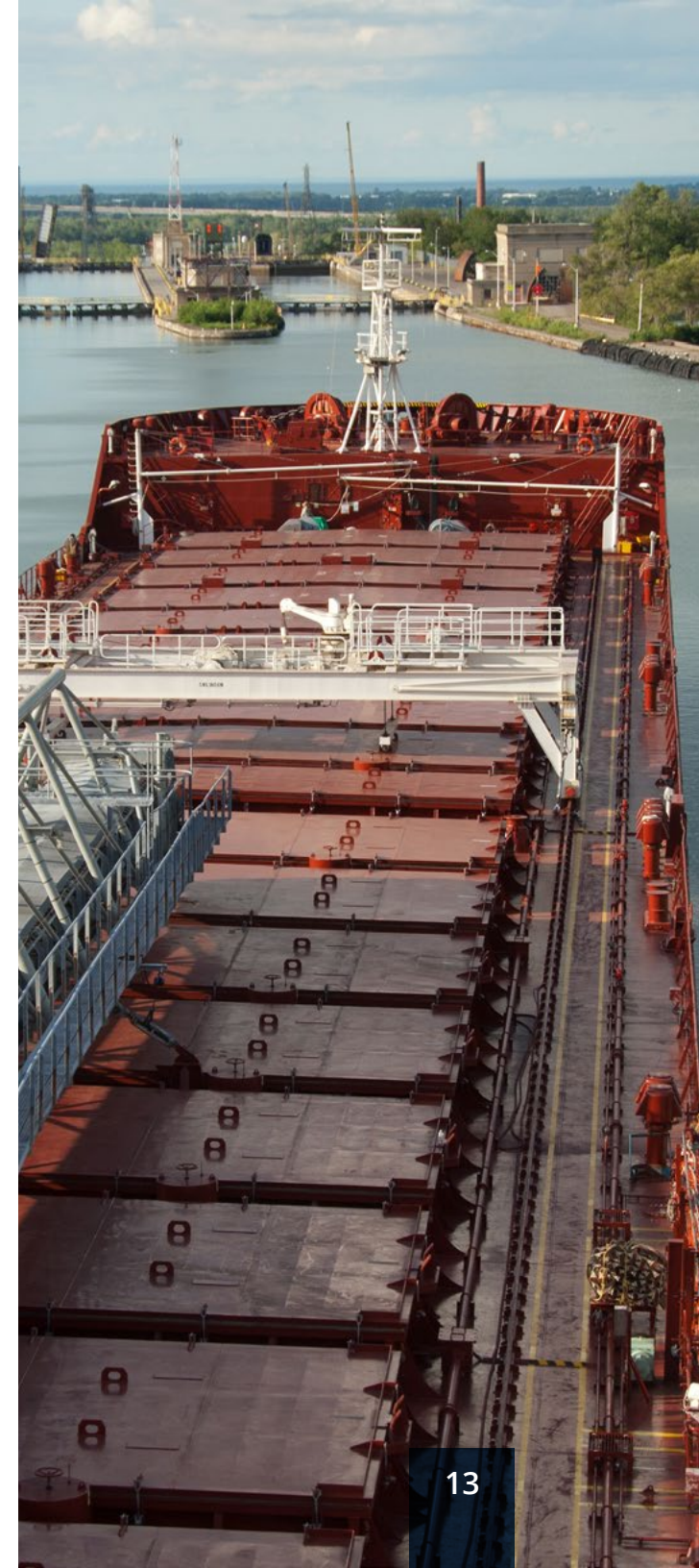
## Reducing Wastes

Algoma's domestic vessels operating in the Great Lakes-St. Lawrence region have collected materials for shore-side recycling since 2010, including co-mingled materials (paper, plastic, glass, cans and bottles), cardboard and organics for composting. Efforts in 2015 resulted in saved resources representing 299 mature trees and 92 barrels of oil, and the equivalent of 612 cubic yards of landfill space avoided.



# Environmental Performance Highlights

Issue	Progress
Greenhouse Gas Emissions	<p>Total emissions reduced by 37% since 2008</p> <p>Emissions per tonne-km reduced by 13% since 2008</p> <p>Energy Management Policy and Team launched 2015</p> <p>New or upgraded fuel monitoring systems implemented on majority of fleet to improve monitoring and speed optimization</p> <p>Ship-specific energy efficiency management plans in place or in development on all ships</p>
SOx Emissions	<p>Total emissions reduced by 55% since 2008</p> <p>Emissions per tonne-km reduced by 36% since 2008</p> <p>Exhaust gas scrubber certified in 2014 and confirmed 99% reduction in SOx emissions</p>
Aquatic Invasive Species	<p>Participation in Canadian Shipowners Association Ballast Water Technology Evaluation and Research Project</p> <p>On-going evaluation of ballast water management solutions</p> <p>On-going collaboration with Canadian Department of Fisheries and Oceans research on ballast water sampling methods</p>
Stern Tube Pollution	<p>New vessels fitted with water lubricated stern tubes</p> <p>All other stern tubes retrofitted to water lubricated or Environmentally Acceptable Lubricants</p>
Vessel End-of-Life Management	<p>Ship Recycling Policy issued</p> <p>All demise vessels recycled in responsible shipyards</p> <p>All new vessels and demise vessels provided with an Inventory of Hazardous Materials</p>





A large industrial ship, likely a bulk carrier, is docked at a port. The ship has a white upper hull and a dark blue lower hull. It is positioned under several large red gantry cranes. The cranes have long horizontal beams and vertical supports, with various mechanical components and cables visible. The ship's name "ALGOMA" is partially visible on its side. The background shows a cloudy sky and some distant structures.

# Social Responsibility

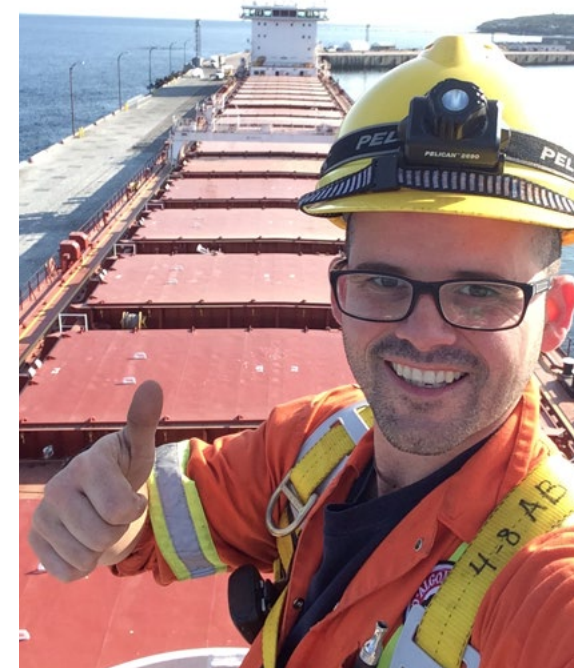
We believe that a healthy, engaged and committed workforce is the backbone of our company, therefore we strive at Algoma to provide a stable, supportive and, above all, safe workplace for all of our employees.

## Employment Policies and Programs

Algoma employs almost 2,000 people between the fleet and shore-side operations. We maintain comprehensive employee health and wellness, engagement, retention and assistance programs and believe that we offer competitive compensation, health benefits and retirement plans that will provide long-term health and financial stability for our employees and their families. Policies are in place, and reinforced in our Code of Conduct, to ensure fair and equitable treatment of all employees, respect of diversity in the hiring process and a workplace free from discrimination or harassment.

The long tenure of many of our employees provides us with a workforce rich in knowledge and experience. In recognition of the need to attract and retain a new generation of employees, we have initiated a new program to enhance skills training. This program, branded as “It’s all About the BEAR (Building Excellence, Achieving Results)” after Algoma’s iconic mascot, aims to develop the organizational structure through strategic workforce planning and strengthening the talent pipeline. Algoma has also made significant contributions to promoting the shipping industry as a rewarding and lucrative career choice, attending many career fairs to raise awareness of the industry.

Algoma also recognizes the value of higher education. To demonstrate this commitment, the company established a scholarship program for eligible family members of Algoma full-time employees who have enrolled in a qualified post-secondary program. Since 1993, the program has provided \$464,000 in assistance to 258 children of Algoma employees.



## Training

Training and skills development are essential to maintain excellence in operations and assist employees to excel in their careers. Training programs for Algoma seafarers ensure that crews are provided with on-going skills training and education. We are an industry leader in promoting and utilizing Bridge Resource Management, Engine Room Resource Management and Pilotage and Ship Handling training programs, and provided significant funding to Georgian College’s Great Lakes Marine Training and Research Centre for a modern bridge and engine room simulator. These advanced marine simulators are used to provide unique situational training in confined channel and port navigation, including emergency ship handling and self-pilotage.

We also continue to support Canada’s marine colleges and their cadets by providing annual Safety Awareness training at marine schools in British Columbia, Ontario and Nova Scotia for all cadets, whether they are destined to work for Algoma or not. In a typical year up to 100 cadets receive Algoma Safety Awareness training at the various marine schools. Shortages of skilled workers is a concern in the marine industry and one that Algoma is making significant efforts to address.

### Algoma Support for Georgian College’s New MED Training Centre

In 2015, Algoma announced a \$1-million donation towards construction of the new Marine Emergency Duties Training and Research Centre at Georgian College in Owen Sound, Ontario. A long-time supporter of Georgian’s marine programs, the MED Centre will be named in Algoma’s honour and will be used by cadets enrolled in Georgian’s marine programs and by working mariners. The students will take introductory and advanced courses in first aid, firefighting, survival craft, life raft and immersion suit training. MED training is mandatory for everyone who works aboard ships.

**In 2015 Algoma announced  
a \$1-million donation to  
Georgian College in  
Owen Sound, Ontario.**



## Safety First - First in Safety

Protecting each and every one of our employees working on board vessels and ashore is our most important responsibility. For that reason, we are dedicated to injury prevention and an injury-free workplace for our employees and contractors and we apply a constant focus on safety first throughout our operations. Experienced personnel are dedicated to the management of health and safety risks and to the prevention of occupational illness within the company.

Algoma's safety management system has been certified to the International Safety Management (ISM) Code for vessels since 1995 and has been steadily strengthened since that time. In 2015, we further improved our already robust management system by incorporating the requirements of the international OHSAS 18001 Occupational Health and Safety Assessment Series and successfully achieving certification to this standard. The most important change that resulted was a strengthening of risk management processes. For example, we introduced "POINT Cards", a pro-active hazard identification program designed and targeted to identify workplace hazards and address them before an incident or injury occurs. The objective is for an employee to observe a work activity and identify "safe" and "at risk" conditions or actions. The observations are reviewed with the work team and resolved, and the results entered into a database for further analysis of trends. This pro-active approach, using leading indicators to resolve hazards before an injury occurs, is the backbone of any loss prevention program and can be used for both operations and personal safety activities.

In addition to the on-going and long-term safety programs that comprise our safety management system, the below initiatives have recently been implemented to further focus on prevention.

### Weekly Review of all Personal Injuries and Near Misses

Each and every injury and near miss is discussed and reviewed with line management, and the Senior Vice President.

### Advanced Incident Investigation Training

Specialized training in advanced investigation techniques and root cause analysis has been provided, allowing for more in depth investigations to assist in determining effective preventive action.

### Introduction of 'Safety Shorts'

Safety is promoted on a weekly basis during operations meetings where a topic is presented and discussed. Topics include both workplace and non-workplace examples.



### Operations Excellence in Action

Amongst many examples of proactive actions taken to improve safety, employees suggested, fabricated and installed safety rails at ship embarkation areas and spotting platforms.

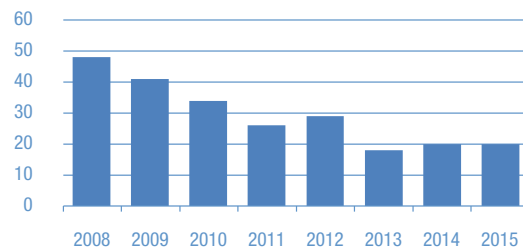
# Safety Performance

Concerted efforts continued throughout 2015 to maintain the positive trend in safety performance that has been achieved over the last several years.

The combined total number of lost time injuries for Algoma business units has seen a generally steady decline since 2008. The number of injuries in 2015 were less than half of those experienced in 2008, representing a 58% reduction.

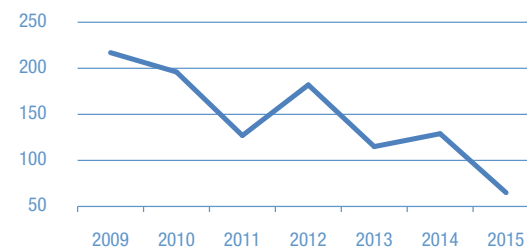
## Lost Time Injuries

(all business units)



## Lost Time Injury Severity

(lost time days per 200,000 hours worked, all business units)



While the decline in total injuries has levelled off over the last three years, Lost Time Injury Severity, which represents the number of lost time days per 200,000 hours worked, has continued to decline. This indicates that fewer days away from work are being incurred year over year as a result of the injuries being less severe (requiring less treatment and recovery time) coupled with the support of an active modified work and early/safe return to work program.

## Highlights

Commitments	Results	Improvement Plans
OHSAS 18001 Certification	Achieved 2015	Continuous improvement
Enhanced Hazard ID Program	Achieved 2015	Expand to Algoma Ship Repair in 2016
Zero Lost Time Injuries	Overall downward trend since 2008 56% decrease in lost time injuries compared to 2008 49% decrease in lost time injury frequency compared to 2008	Continue to reduce injuries through comprehensive safety management program
Senior Management Oversight of Injury Review	Implemented 2015	Increased ownership of injury prevention by line management
Pro-active Awards Program	Implemented 2015	Modify to encourage near miss and hazard ID reporting

**Zero lost-time injuries was achieved in 2015 by nineteen vessels in our domestic fleet (dry bulk and tankers).**

## New Vessel Safety and Ergonomic Improvements:

In addition to the environmental improvements on our Equinox Class vessels, these new vessels were designed with safety and ergonomic improvements in mind. Some of the improvements:

- All stairways specified at a 40° - 45° angle for safety purposes
- Direct access from the unloading tunnel into the cargo hold
- A fibre-optic heat detection system installed throughout the unloading system
- A water spray fire encapsulation system installed to protect personnel in the rare event of a belt fire
- Automatic sprinkler system and temperature regulation in the accommodations
- Galley and mess room layout designed to suit high traffic and ergonomic movement
- Dual string air delivery ventilation system – electric re-heaters have been eliminated in cabins.



# Community

Algoma believes strongly in giving back and in supporting our communities. The company participates in and financially supports a number of social programs in communities across Canada where our employees live and work. Algoma employees are also encouraged to participate in fundraising activities of their choosing with the company often matching the funds raised by individual fundraising efforts.

## Fundraising

**United Way:** Algoma employees organize events both shipboard and shore side to raise funds and awareness for the United Way. Algoma was awarded the Platinum Award in 2011 through 2014 for its fundraising efforts and commitment, and in 2015 was named as “1 of the top 20 Employee Campaigns” for the Niagara Region.

**CIBC Run for the Cure:** Algoma continues to participate as a team in the annual Canadian Breast Cancer Foundation CIBC Run for the Cure in the Niagara Region. For eleven consecutive years, Algoma has been awarded the CIBC Corporate Spirit Award for being the top corporate fundraising team in the Niagara Region.

**Alzheimer’s Society of Niagara Region:** Algoma participates in the annual Coffee Break fundraiser where shipboard and shore side employees partake in the day by sharing a meal with their co-workers.

## Donations

Algoma was a major contributor to building campaigns for the new St. Catharines Performing Arts Centre (\$250,000 donation) and the St. Catharines General Hospital (\$700,000). In recognition of these commitments, Algoma was given naming rights for the Performing Arts Centre Atrium and the cafeteria at the hospital.

## Best Managed Company Recognition – Gold Level Status



Algoma has been recognized since 2012 for both its business success and community commitment as one of Canada's Best Managed Companies, qualifying in 2015 for Gold Level status. Established in 1993, Canada's Best Managed Companies is the country's leading business awards program, recognizing excellence

in Canadian owned and managed companies with revenues over \$10 million. Gold level is awarded to those companies who have maintained their Canada's Best Managed Companies designation for four consecutive years.



Since 2010, Algoma employees have participated in Backpacks for Kids on an annual basis, filling and delivering thousands of backpacks.

## Economic Contribution - 2015

Revenues:	\$448 Million
Jobs:	1,900
Taxes Paid:	\$17.7 Million
Community Donations:	\$335,000



**United Way**

Algoma was awarded the Platinum Award in 2011 through 2014 for its fund-raising efforts and commitment to the United Way

# Performance Indicators

Indicator	Units	2008	2009	2010	2011	2012	2013	2014	2015
<b>Environment</b>									
Green Marine score (average of scores for all issues) <sup>1</sup>	1 (lowest) to 5 (highest)	2.6	3.3	3.3	4	4	4.3	4.3	4.4
Greenhouse Gas Emissions (GHGs) <sup>1</sup>	Thousands of Tonnes	561	416	448	487	430	378	376	351
	Grams/tonne-km	13.3	13.9	13.7	13.9	13.5	12.6	12.5	11.6
Sulphur Oxide Emissions (SOx) <sup>1</sup>	Thousands of Tonnes	4.8	3.3	4.0	4.1	3.5	2.5	2.4	2.1
	Grams/tonne-km	0.11	0.11	0.12	0.12	0.11	0.08	0.08	0.07
Nitrogen Oxide Emissions (NOx) <sup>1</sup>	Thousands of Tonnes	13.7	10.1	10.8	11.8	10.5	10.2	10.1	9.5
	Grams/tonne-km	0.32	0.34	0.33	0.34	0.33	0.34	0.34	0.31
Spills / Leaks (>10 litres) <sup>2</sup>	Number	0	1	0	0	0	0	1	2
Spills / Leaks (<10 litres) <sup>3</sup>	Number	1	1	11	11	9	5	7	6
Recyclables <sup>1</sup>	Tonnes	N/A	N/A	99	133	143	127	156	132
Fines/Violations	Number/\$ Amount	0	0	1/32,000 <sup>4</sup>	0	2/83,000 <sup>5</sup>	0	0	1/5,000 <sup>6</sup>
<b>Safety</b>									
Lost time injuries <sup>7</sup>	Number	48	41	34	26	29	18	20	21
Lost time injury frequency <sup>7</sup>	Injuries/200,000 person hrs	2.73	2.37	1.95	1.50	1.70	1.19	1.26	1.39
Lost time injury severity <sup>7</sup>	Days lost/200,000 person hrs	-	217	196	127	182	115	129	65
Fatalities	Number	1	0	0	0	0	0	0	0
<b>Economic</b>									
Revenue	Cdn \$millions	689	520	394	583	560	491	503	413
Net earnings	Cdn \$millions	41	39	19	69	44	42	53	26
Donations & sponsorships	Cdn \$	344,156	308,983	355,904	257,839	309,000	217,228	327,555	335,452

<sup>1</sup> Domestic dry bulk and tanker fleet only.

<sup>2</sup> Spill volumes: 2014 - one spill of 15 litres; 2015 - 2 spills, one each of 12 and 25 litres.

<sup>3</sup> Majority are minor equipment leaks of very minimal quantities, includes leaks of environmentally acceptable lubricants.

<sup>4</sup> Fine assessed against the vessel management firm Seaway Marine Transport related to delayed reporting of an equipment leak.

<sup>5</sup> Fine (\$75,000) levied against the vessel management firm Seaway Marine Transport related to a 2008 fatality. Fine (\$8,000) assessed by the United States Coast Guard against the vessel management firm related to a 2011 inspection finding on the Honourable Henry Jackman.

<sup>6</sup> Fine levied against Algoma for a 2014 spill of waste sludge (15 litres) at a land-based transfer facility.

<sup>7</sup> All business units (Algoma Central Corporation, Algoma Tankers Limited, Algoma Central Properties, Algoma Shipping Inc., and Algoma Ship Repair).





**Algoma Central Corporation**  
63 Church Street, Suite 600  
St. Catharines, ON L2R 3C4