

March 3, 2021

MEMORANDUM

TO: AWO Member Representatives

FROM: Safety Leadership Advisory Panel
Brian S. Bailey

RE: Safety Statistics Reporting Program 2020 Annual Report

In conjunction with software developer SALIX Data, AWO launched the Safety Statistics Reporting Program (SSRP) in 2015 as an association-wide reporting and tracking program for industry safety statistics. Conceived with the idea that it is impossible for the industry to improve what it does not measure, the resulting program is designed for simple, confidential tracking of a small set of vessel- and mariner-related safety data. By participating in the SSRP, members have access to a valuable benefit that allows the production of reports and tools to benchmark and compare their data against their sector and AWO's membership overall. The reports include charts used to show trends in data over time and draw time comparisons of summarized data. For the first time since the SSRP's creation over five years ago, AWO is publishing these charts for members' review.

The data points members submit to the SSRP include vessel crew work hours, crew fatalities, recordable injuries, lost-time injuries, falls overboard, spills, and volume of spills. These data sets were selected because all members are already required – through their safety management system – to collect this data as a means of driving continuous improvement. AWO members select a sector – inland¹, inland fleeting² or coastal/coastal harbor³ – in which to submit their data. Some companies who operate in multiple sectors make different entries for each sector while others input their data into the sector where they operate most of the time.

Participation in SSRP is strongly encouraged and increasing among AWO's 300 carrier members. The Board of Directors has continually reaffirmed the goal of 100 percent voluntary member participation. Participation has now reached 81.4% of all eligible members, which

¹ Inland includes those vessels and mariners transporting cargoes on inland river routes.

² Inland Fleeting, specifically, refers to those companies and mariners involved in fleeting operations where barges are moored, loaded, unloaded, built into a tow for delivery to a loading or unloading location, cleaned and/or repaired for use.

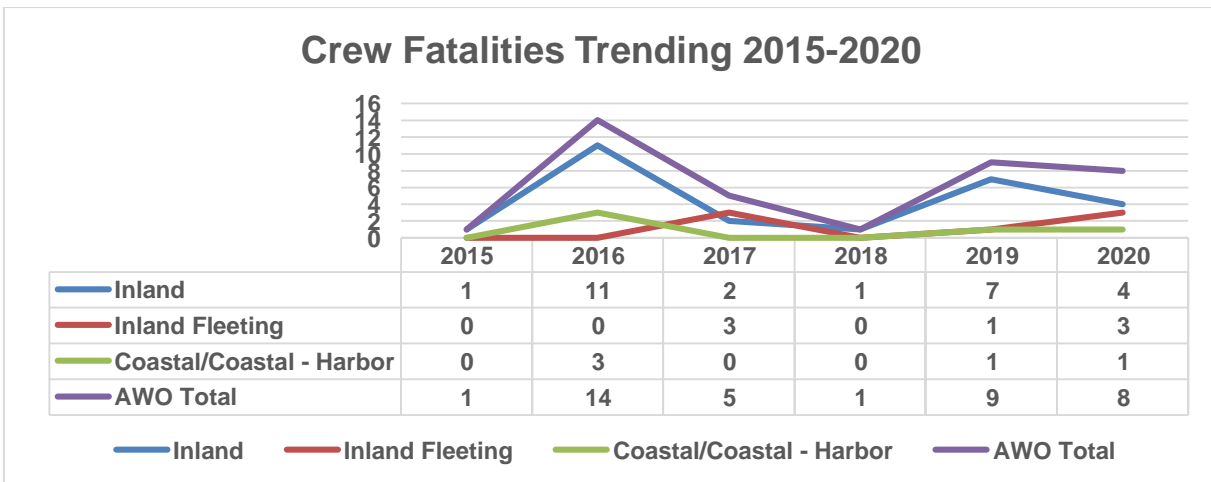
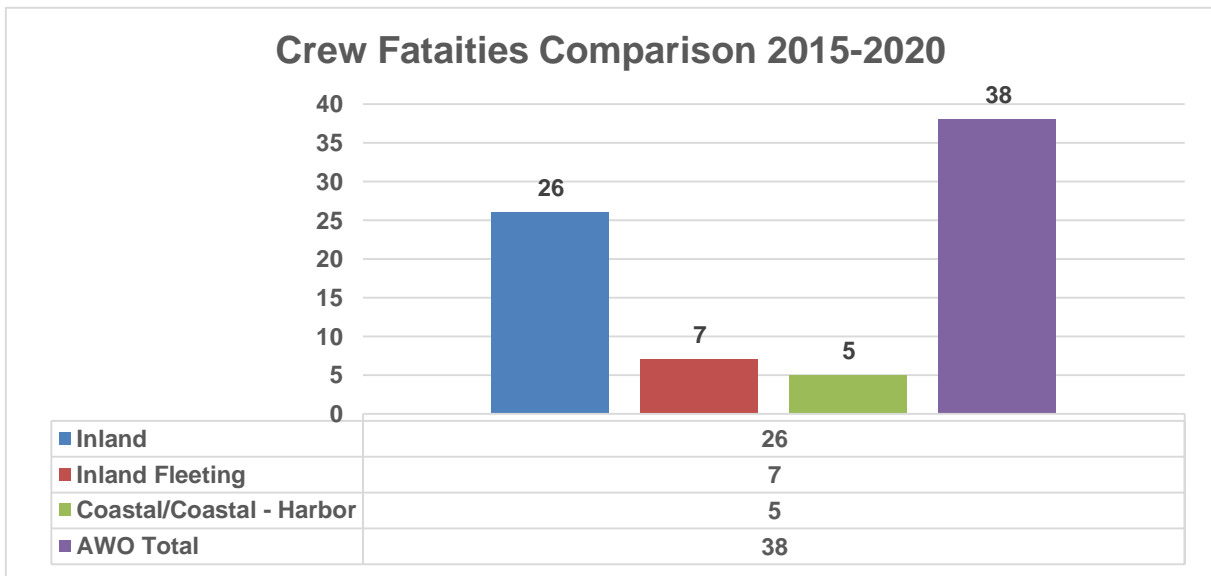
³ Coastal/Coastal Harbor denotes those companies and mariners navigating the Atlantic, Pacific and Gulf Coasts and operating in coastal harbor ports with many of these enterprises assisting with ships' mooring or berthing operations and transportation services.

represents 93.3% of all member-reported floating equipment. On average, 180 member companies have submitted data to the SSRP since its inception, with 119 companies reporting in the Inland Sector, 40 reporting in the Inland Fleeting Sector, and 59 reporting in the Coastal/Coastal Harbor Sector.

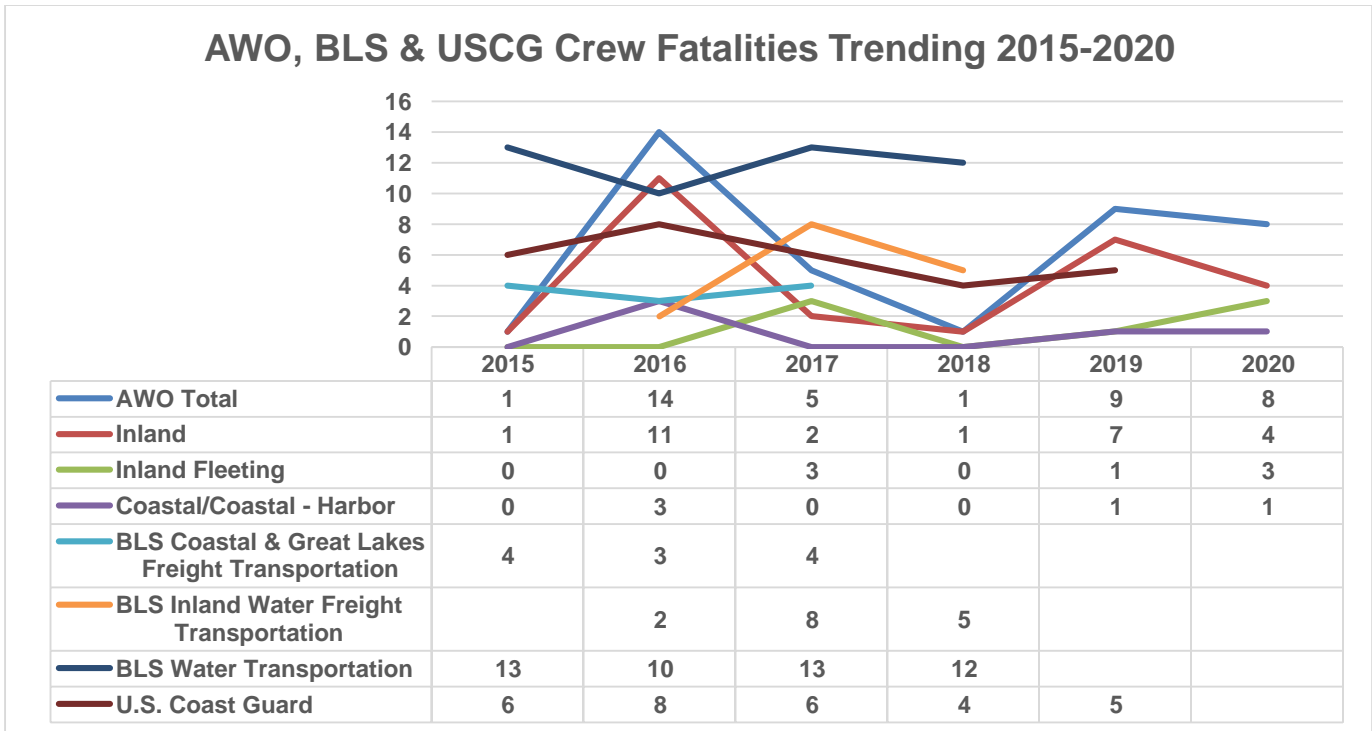
AWO does not have access to the company-specific safety statistics that are submitted quarterly; this information is accessible only to authorized users. The data presented in the following charts is aggregated by sector and by participating members as a whole.

Total number of crew fatalities

Crew fatalities are defined as those accidents or incidents which result in death.



We can also compare the AWO sectors' respective crew fatalities with those reported by the U.S. Bureau of Labor Statistics (BLS)⁴ and the U.S. Coast Guard.⁵ However, these comparisons require contextualization. While AWO data spans 2015 to 2020, BLS data is limited to 2018 for its Inland Water Freight Transportation and Water Transportation categories and to 2017 for its Coastal and Great Lakes Freight Transportation category. The Coast Guard has reported data each year through 2019, but it should be noted that those numbers are sometimes lower and sometimes higher than AWO's reported figures. The Coast Guard only considers fatalities directly attributable to towing vessel operations involving crewmembers as crew fatalities. AWO's crew fatality figures may include those non-operational deaths caused by pre-existing medical conditions, drug overdoses, suicides, or other circumstances that have been scrubbed from the Coast Guard data, resulting in a higher number. In contrast, Coast Guard and BLS figures higher than those reported by AWO members may be due to deaths of crewmembers employed by AWO members who do not participate in the SSRP or non-AWO members.

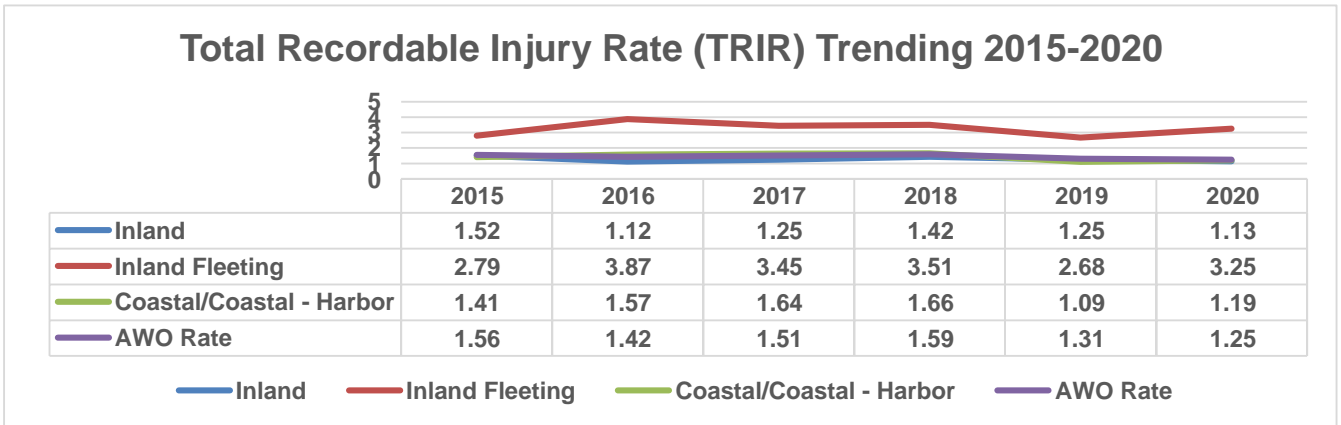
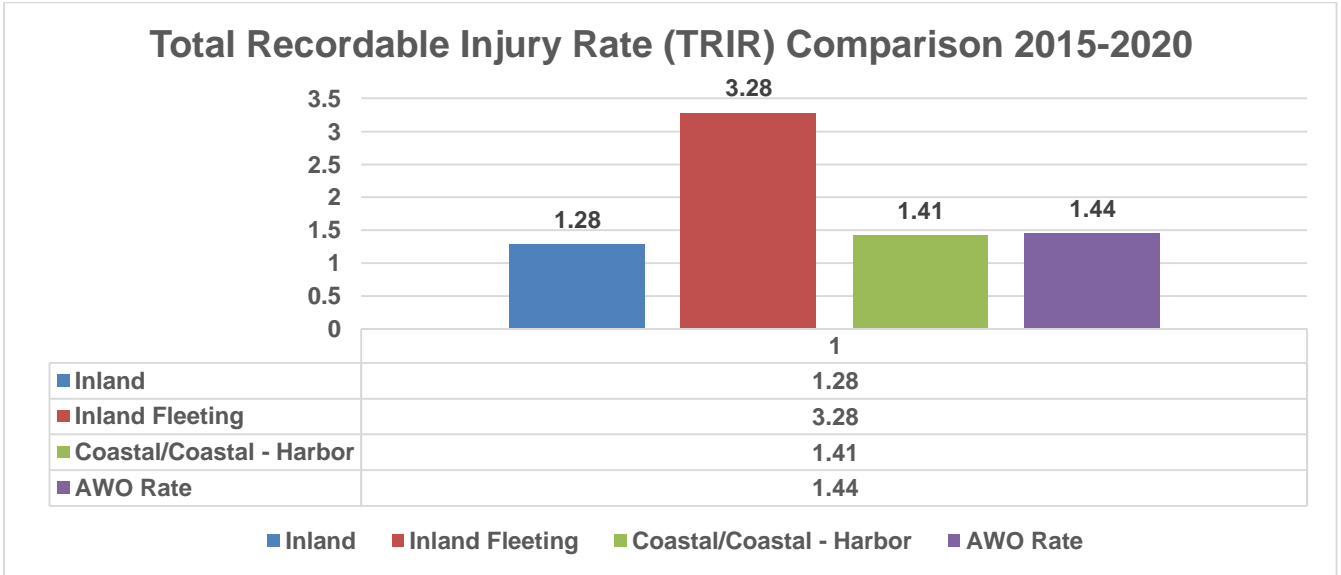


⁴ AWO corresponds members submitting data in the SSRP Inland and Inland Fleeting sectors with BLS' Inland Water Transportation category, and members submitting data in the SSRP Coastal/Coastal Harbor sector with BLS' Coastal and Great Lakes Freight Transportation category. BLS categories as taken from the North American Industry Classification System (NAICS).

⁵ [U.S. Coast Guard–American Waterways Operators Annual Safety Report](#), December 2020

Total number of recordable injuries

Recordable injuries are those which require more than first aid treatment and should be determined using Occupational Safety and Health Administration (OSHA) guidelines.⁶ The Total Recordable Injury Rate (TRIR) is defined as the number of work-related injuries per 100 full-time workers during a one-year period.⁷

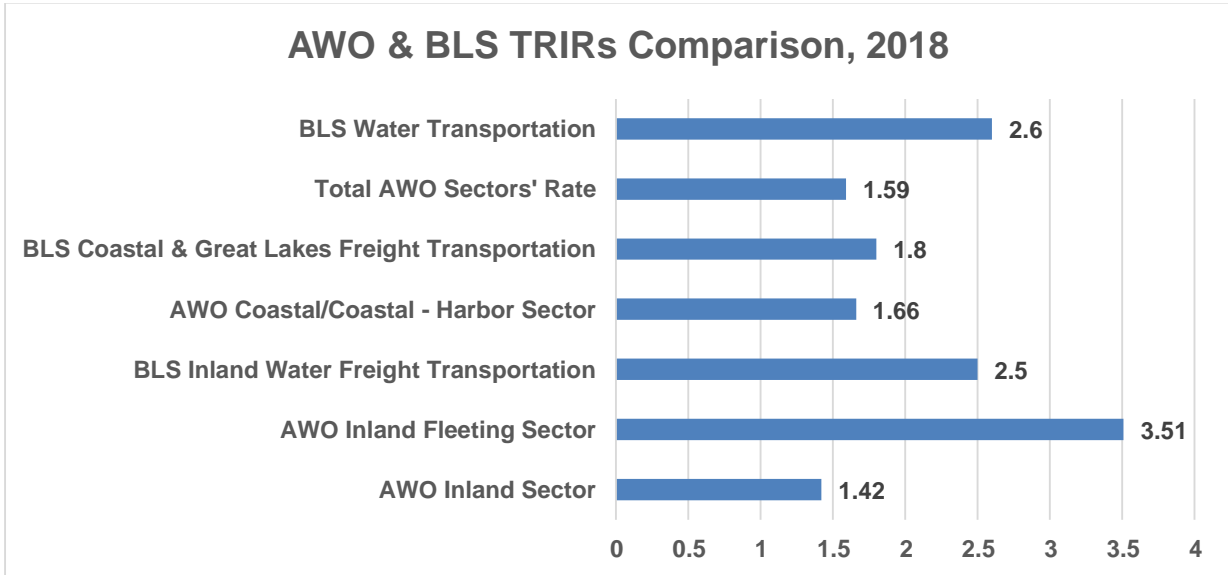


OSHA uses the TRIR to monitor high-risk industries and provides for the tracking of injury rates to discover patterns or trends. We can also compare the AWO sectors’ respective TRIRs with those calculated by BLS. In 2018, the last year with full data sets, the AWO

⁶ 29 CFR §1904.7(a)

⁷ To calculate the TRIR, the following OSHA formula is used: (Number of OSHA recordable injuries and illnesses X 200,000) / Employee total hours worked = Total Recordable Injury Rate). The 200,000 figure in the OSHA formula is the equivalent of 100 employees working 40 hours per week for 50 weeks per year and is used to give a standard base for the incidence rate. Since AWO members provide work hours when they are submitting data to the SSRP, shift length and rotation does not make a difference because the OSHA formula considers total work hours instead of length or number of employee shifts.

Coastal/Coastal Harbor Sector TRIR fell below the BLS Coastal and Great Lakes Freight Transportation TRIR of 1.8. The AWO Inland Sector TRIR fell below the BLS Inland Water Freight Transportation TRIR of 2.5 by nearly one point, while the AWO Inland Fleeting Sector TRIR was approximately a point above. The overall BLS Water Transportation TRIR is 2.6.⁸

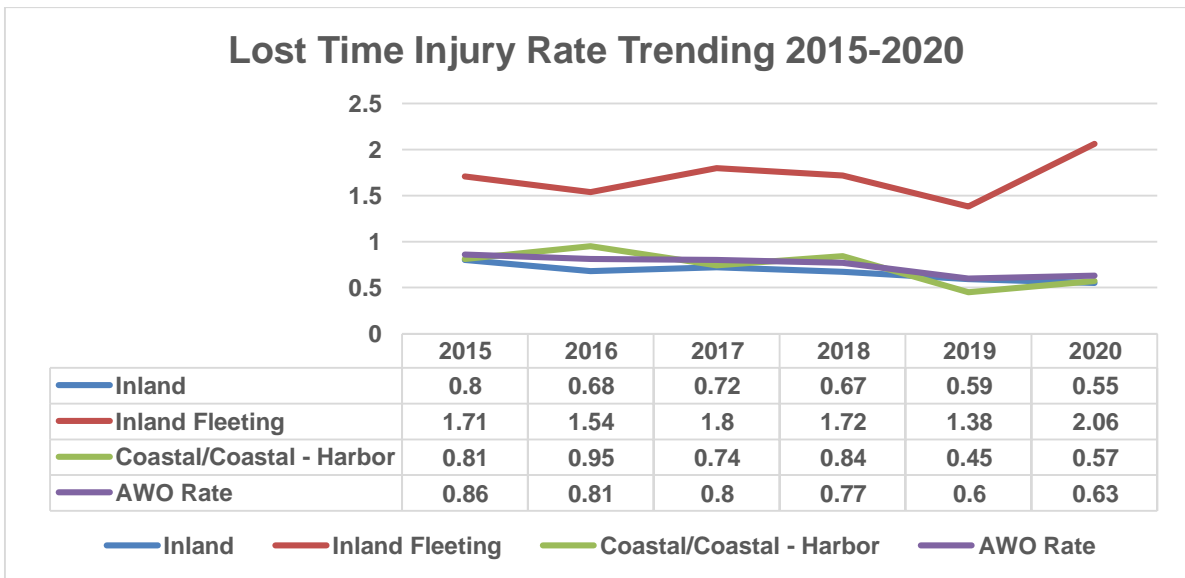
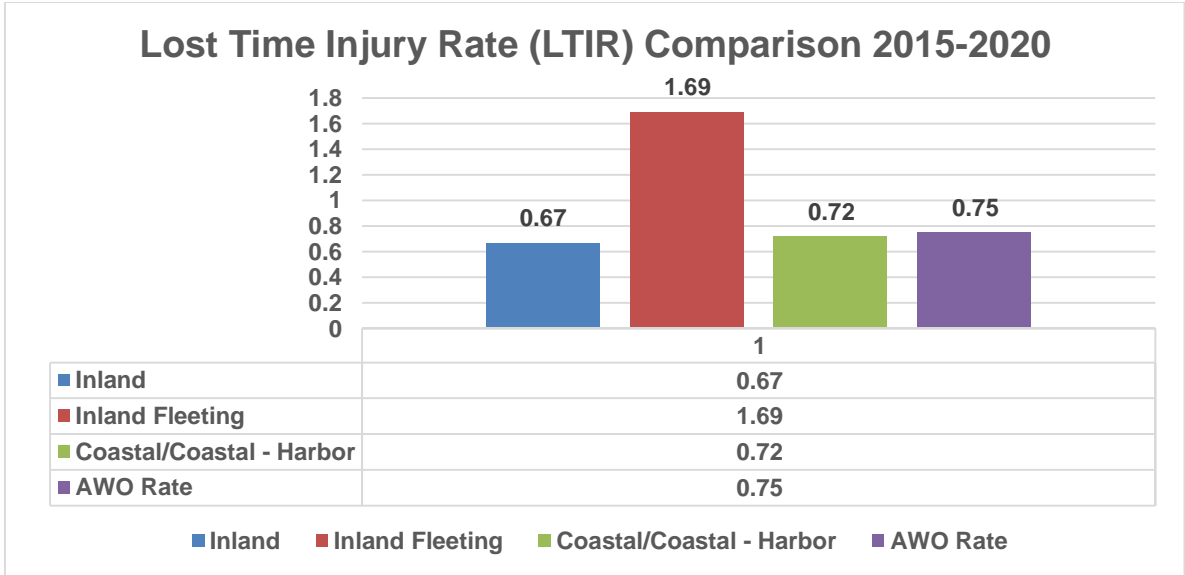


Total number of lost-time injuries

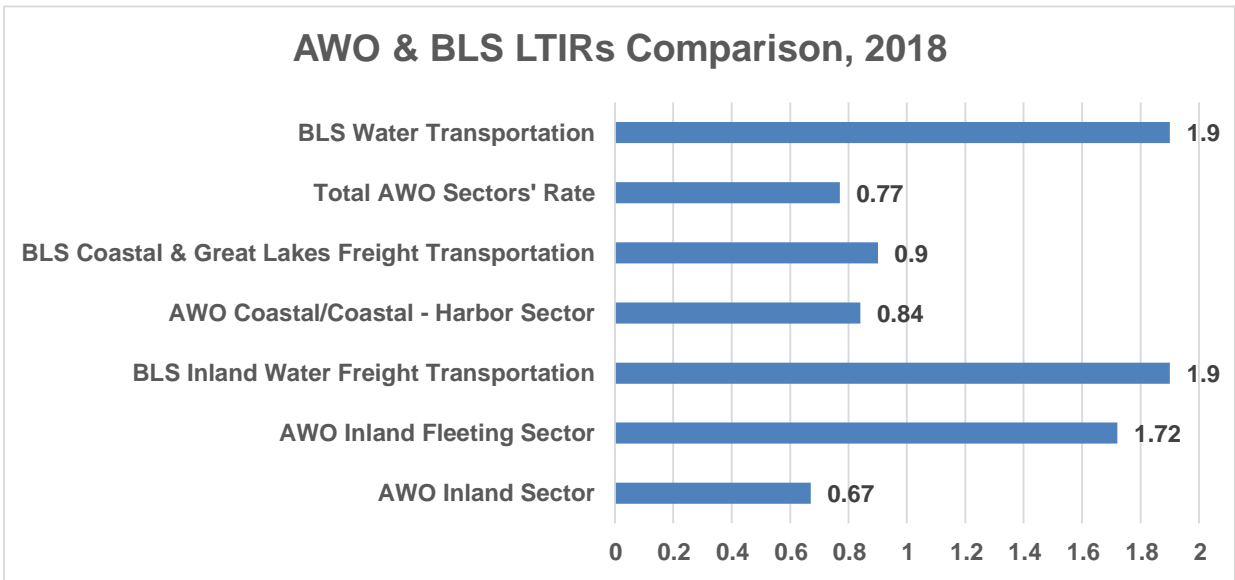
A Lost Time Injury refers to incidents that result in a disability or an employee missing work due to an injury. Only injuries deemed to be work-related are counted as a Lost Time Injury. The Lost Time Injury Rate (LTIR) is defined by OSHA as the number of work-related injuries per 100 full-time workers during a one-year period.⁹

⁸ The North American Industry Classification System (NAICS) code for Water Transportation is 483.

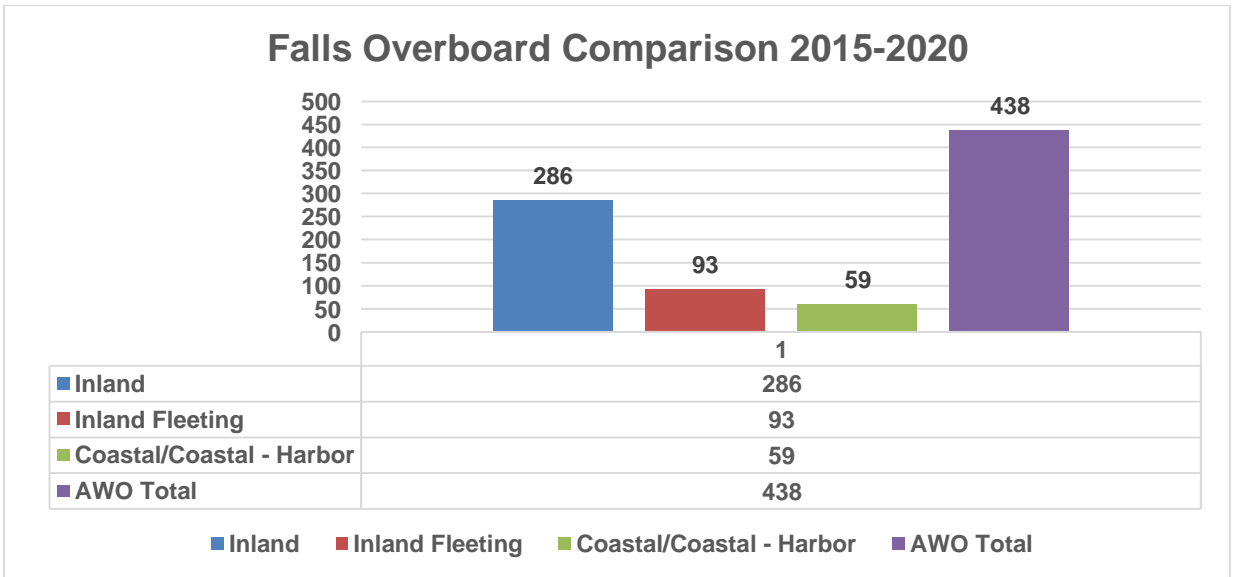
⁹ To calculate the LTIR, the following OSHA formula is used: (Number of OSHA Lost Time injuries X 200,000) / Employee total hours worked = Total Lost Time Injury Rate). See footnote 7 for more information.

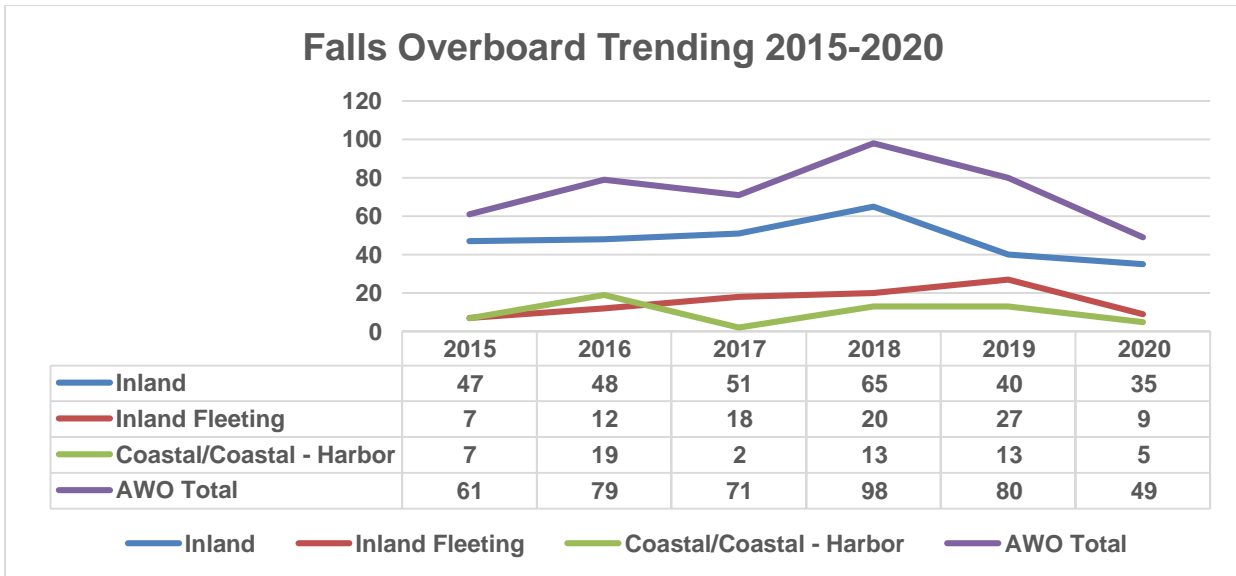


We can also compare the LTIRs of AWO members submitting data in their respective sectors with those calculated by BLS for 2018, the last year with full data sets. The AWO Coastal/Coastal Harbor Sector LTIR fell below the BLS Coastal and Great Lakes Freight Transportation LTIR of 0.9. The AWO Inland Sector and Inland Fleeting Sector LTIRs also fell below the BLS Inland Water Freight Transportation LTIR of 1.9, with the Inland Sector outperforming the BLS category by nearly one point. The overall BLS Water Transportation LTIR is 1.9.



Total number of falls overboard





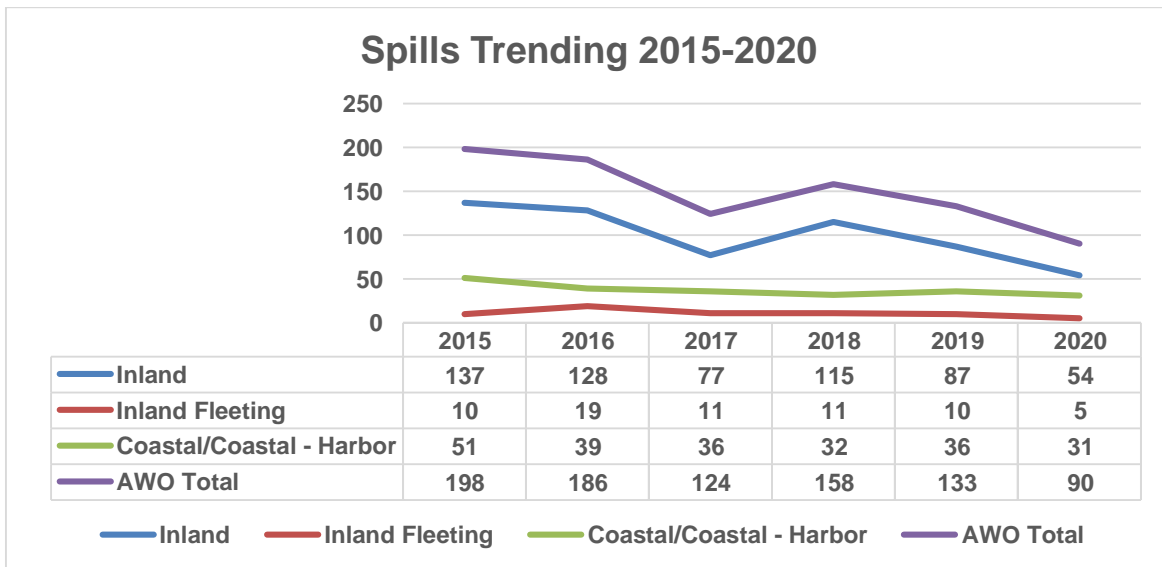
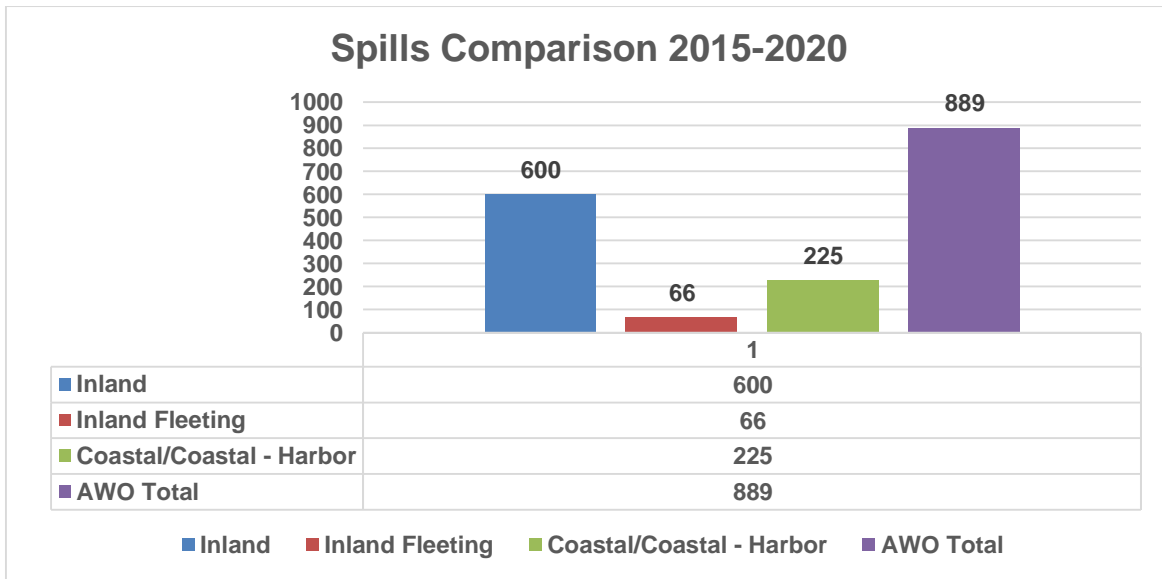
Falls overboard are the most common cause of crew fatalities in the maritime industry, generally, and the potential hazards and risk factors associated with them are numerous. Recently, some companies have taken to training mariners in the trailing hand technique so that they can descend ladders and other structures in a more controlled manner. It can take up to a year of training and additional reinforcements, such as signage on the vessels, for this change to take hold and for long-term modification of the safety culture and employees’ muscle memories.

The U.S. Coast Guard does not track falls overboard unless they result in a recordable injury or a fatality. While falls overboard fatalities had been declining from three in both 2014 and 2015 to two in both 2016 and 2017 and one in 2018, it increased to three in 2019.¹⁰

¹⁰ [U.S. Coast Guard–American Waterways Operators Annual Safety Report](#), February 2020

Total reportable spills of all types

Recordable spills include spills (or discharges) to the environment of oil or other hazardous substances, in any volume. Discharges which do not impact the environment (e.g., spills to deck) do not need to be reported. The Environmental Protection Agency has promulgated regulations for companies responsible for a release or spill of oil or hazardous substances. Specific definitions of oil and hazardous substances are included in the Clean Water Act.¹¹

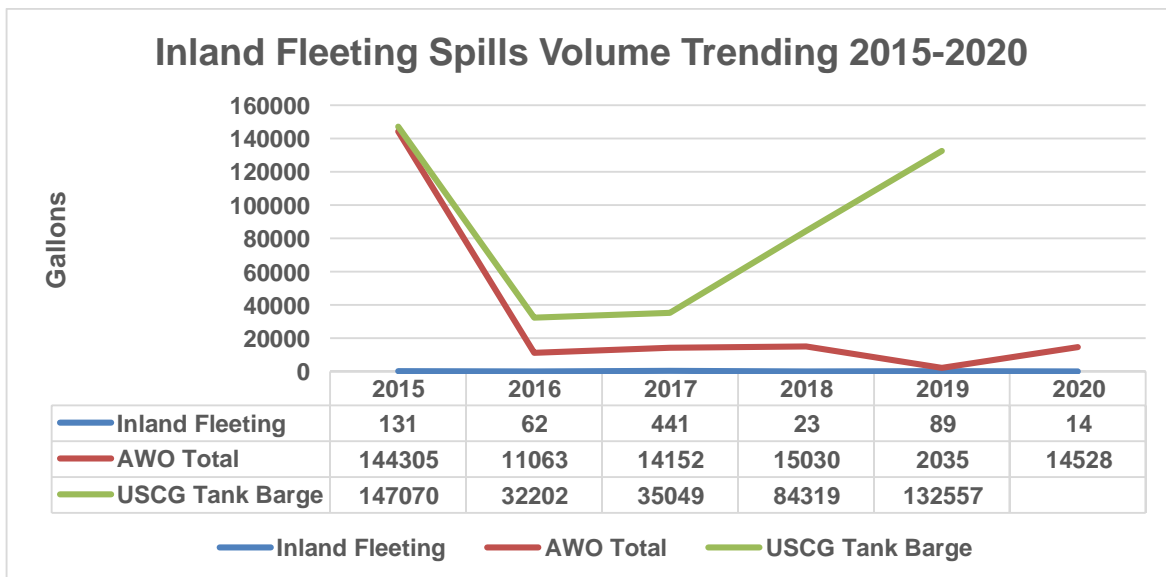
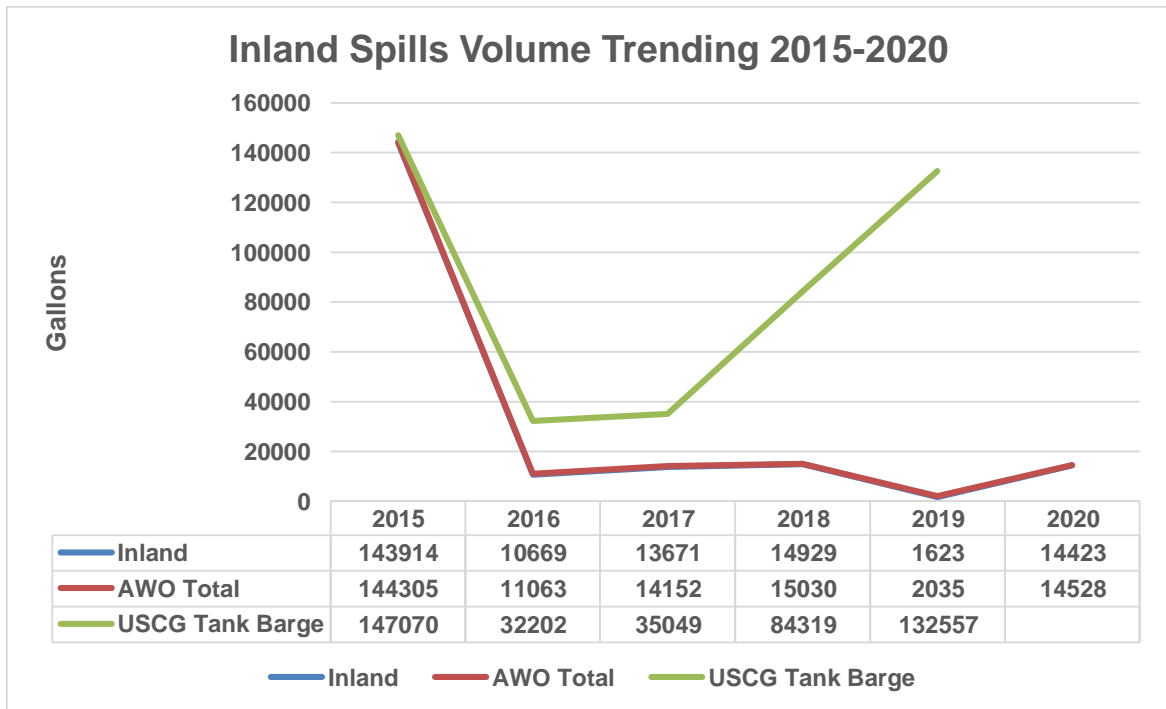


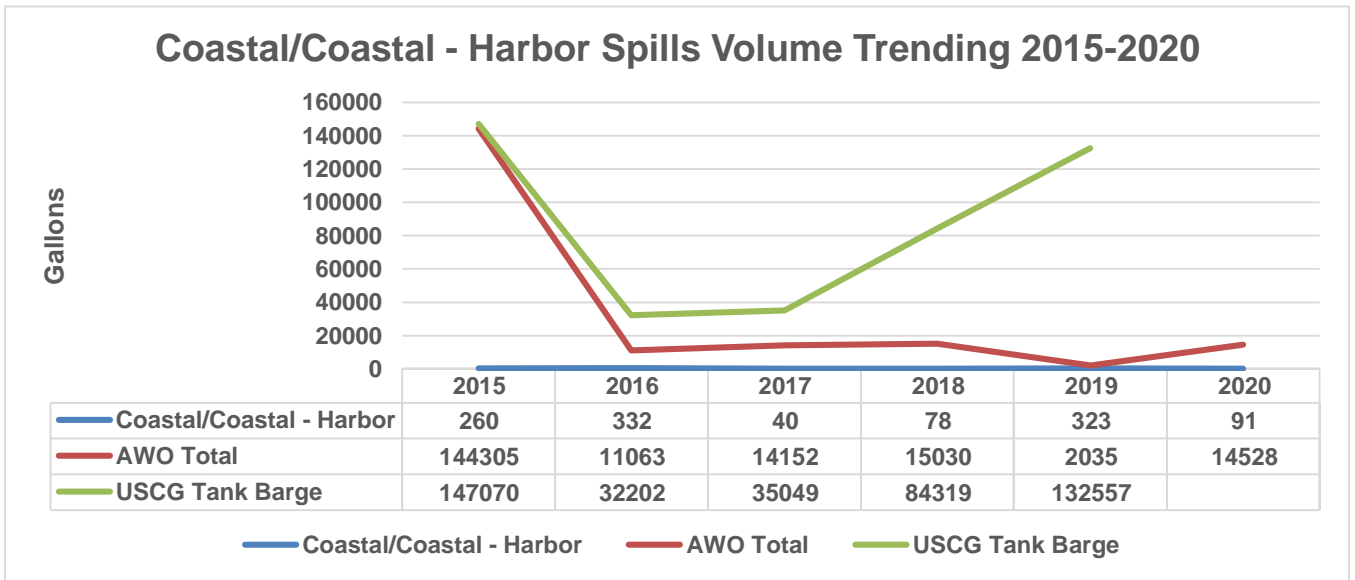
¹¹ 33 U.S.C. §1321

Total volume of spills in gallons

Spill volumes are captured in gallons and fractions thereof. For example, one (1) U.S. cup equals 0.065 U.S. gallons, and one (1) tablespoon equals 0.0039 U.S. gallons.

As part of the U.S. Coast Guard–American Waterways Operators Annual Safety Report, the Coast Guard tracks gallons of oil spilled as a result of operational tank barge pollution incidents, with the most recent available data coming from 2019.





Safety Leadership Advisory Panel Observations

The safety performance of a specific sector in a particular category can tell us about risk factors in that sector. For example, data shows that the Inland and Inland Fleeting sectors have higher incidences of falls overboard than the Coastal/Coastal Harbor sector (which leads to higher numbers of crew fatalities). This may be attributable to the much more frequent movement between vessels and barges, or work close to the side of barges, of crewmembers in the inland industry. Crewmembers in the Coastal/Coastal Harbor sector may only experience exposure to the risk of falling overboard when boarding or disembarking the vessel or working close to the gunwale. It can be reasoned that the more often the exposure to a risk occurs, the likelihood of that risk increases.

The SSRP tracks oil spills by number and by volume and does not distinguish between types of spills. However, Safety Leadership Advisory Panel members in the liquid business observed that they track spills at a more granular level, drawing distinctions between operational fuel spills and cargo spills caused by collisions. Unfortunately, one or two large-scale cargo spills can mask other improvements in the data.

Future Work

The data points reported to and tracked by the SSRP are lagging indicators, measuring only past occurrences or failures. By contrast, leading indicators, such as near misses, can help identify weak areas where incidents could possibly occur and enable those areas to be proactively addressed. The inclusion of leading indicators in SSRP could help member companies monitor and assess the effectiveness of their safety management systems and processes and provide benchmarking opportunities. Furthermore, the collection and analysis of leading indicators could help AWO to develop safety tools, resources, and meeting content, including lessons learned. The Safety Leadership Advisory Panel is interested in exploring the possibility of expanding the SSRP to include leading indicators.

The Safety Leadership Advisory Panel has also arranged for improvements and updates to the SSRP platform in response to recent member feedback and will continue to investigate system improvements to ensure user-friendliness.

AWO appreciates the participation of members in the SSRP. We will continue produce annual reports to demonstrate to members the value of participating in the program and to demonstrate to government stakeholders and the public that AWO members are committed to continuous improvement in safety, security, and environmental stewardship, with the goal of zero harm to people, the environment and property.