

The American Waterways Operators

Safety Leadership & Continuous Improvement

Our Industry

- Safe, secure, and efficient part of U.S. transportation system
- 760+ million tons of cargo moved annually
- Nearly 75% of U.S. Merchant Marine fleet
- 25,000 miles of inland and intracoastal waterways, Great Lakes, and coasts
- 50,000+ Americans = family-wage jobs
 - Including 38,000 mariners



Legacy of Safety

- ❖ 1994 - AWO develops industry's first Safety Management System (SMS) – the Responsible Carrier Program (RCP)
- ❖ 1995 - AWO and USCG establishes formal marine safety partnership – National and Regional Committees with Pacific States/BC Task Force participation
- ❖ 2000 - RCP becomes a condition of AWO membership
- ❖ 2004 - Congress directs USCG to inspect towing vessels
- ❖ 2015 - AWO institutes Safety Statistics Reporting Program
- ❖ 2016 – Subchapter M published and AWO RCP accepted as approved SMS
- ❖ 2018 – Subchapter M enters into full force and effect

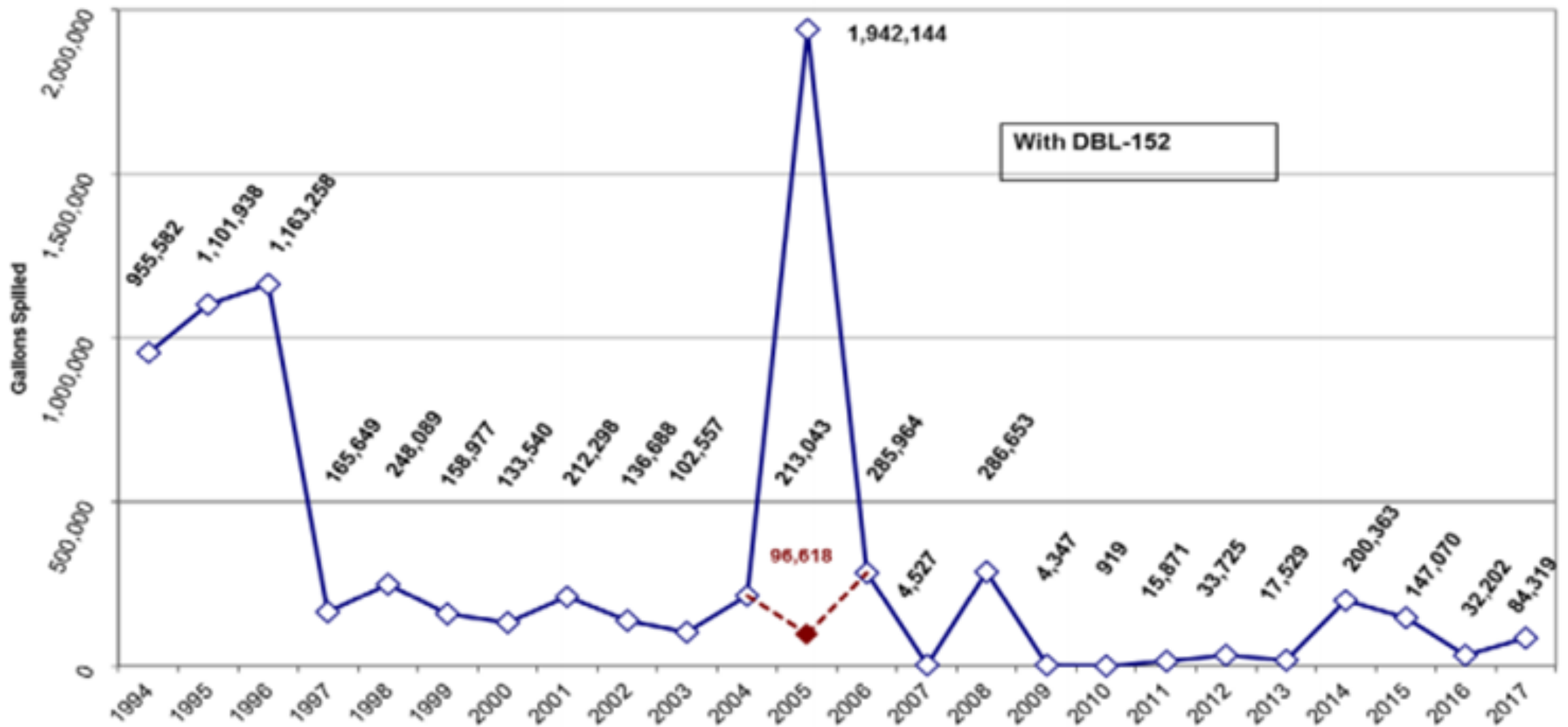


Environmental Stewardship

- ❖ 2019 - Implementation of AWO Environmental Stewardship Working Group
- ❖ Embrace Stewardship Role
- ❖ Exceed Regulatory Minimums
- ❖ Engage with Diverse and Collaborative Work Groups
- ❖ Consider Human Factors and Equipment
- ❖ Evaluate and Implement Technological Innovations
- ❖ Meet Challenge of National Membership

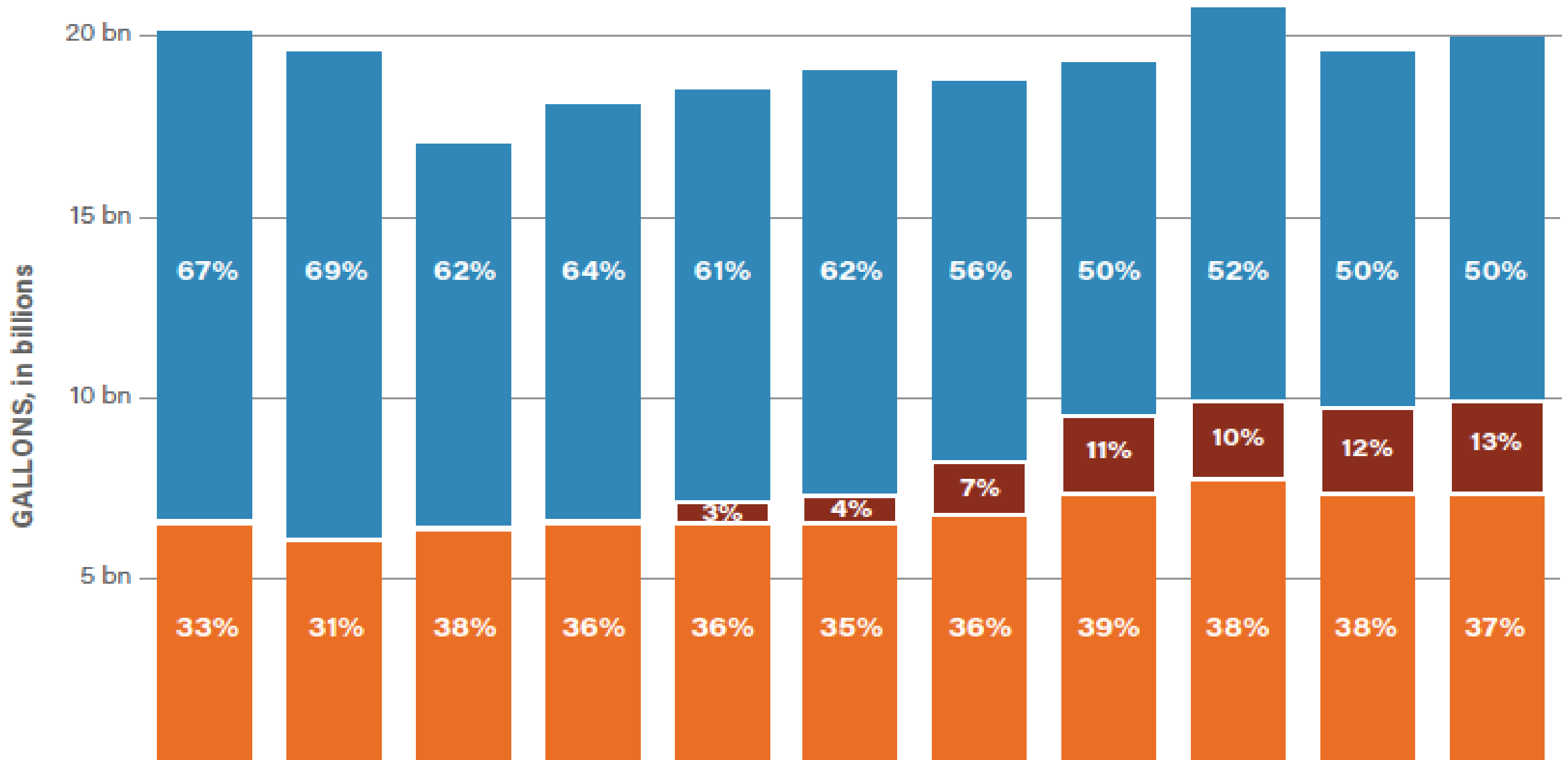


Chart 5 – Oil Spilled from Tank Barges



TOTAL OIL MOVED BY YEAR AND MODE*

Washington State, 2008-2018



MODE	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Vessel	13,489,096,404	13,406,380,470	10,556,937,762	11,489,223,816	11,359,982,970	11,716,994,562	10,516,130,310	9,691,929,014	10,786,931,736	9,845,272,248	10,048,573,500
Rail	0	0	0	0	509,176,752	691,808,250	1,378,094,256	2,105,479,236	2,100,000,000	2,285,077,536	2,496,842,670
Pipeline	6,551,744,766	6,139,363,356	6,393,628,374	6,603,628,374	6,606,600,000	6,639,091,452	6,772,845,156	7,445,220,258	7,821,949,800	7,429,803,906	7,402,487,652
TOTALS	20,040,841,170	19,545,743,826	16,950,566,136	18,092,852,190	18,475,759,722	19,047,894,264	18,667,069,722	19,242,628,608	20,708,881,536	19,560,153,690	19,947,903,822

*All oil of any kind including crude oil, petroleum, gasoline, fuel oil, diesel oil, oil sludge, oil refuse, biological oils and blends. Cargo only. Does not include fueling transfers.

COMPARING TRANSPORTATION MODES

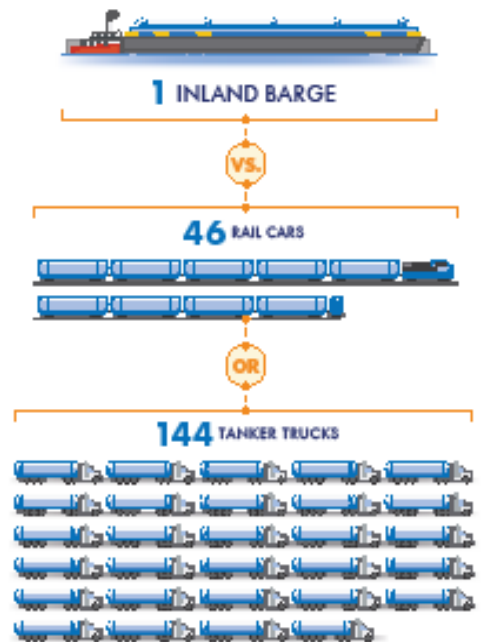
The tugboat, towboat and barge industry not only provides the most efficient method for transporting large amounts of a broad range of commodities, but is also safer, more fuel efficient and has a lower environmental footprint.¹

Dry Cargo Transportation: 1,750 tons



Key = 5 bulk rail cars = 5 tractor trailers

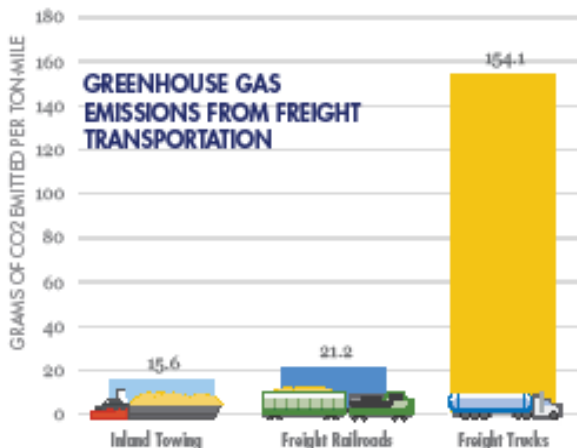
Liquid Cargo Transportation: 27,500 BBL



Key = 5 rail cars = 5 tanker trucks

The U.S. tugboat, towboat and barge industry is more efficient, cleaner, and safer for the public than other modes of cargo transport.

CLEANER FOR THE ENVIRONMENT



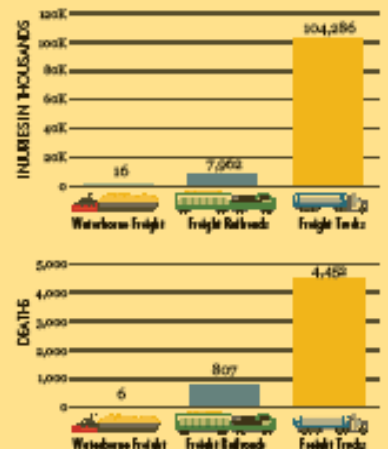
¹ All Figures adapted from Texas Transportation Institute, "A Modal Comparison of Domestic Freight Transportation Effects of the General Public: 2001-2014," January 2107, as reflected in the PricewaterhouseCoopers industry study.

SAFER FOR THE PUBLIC

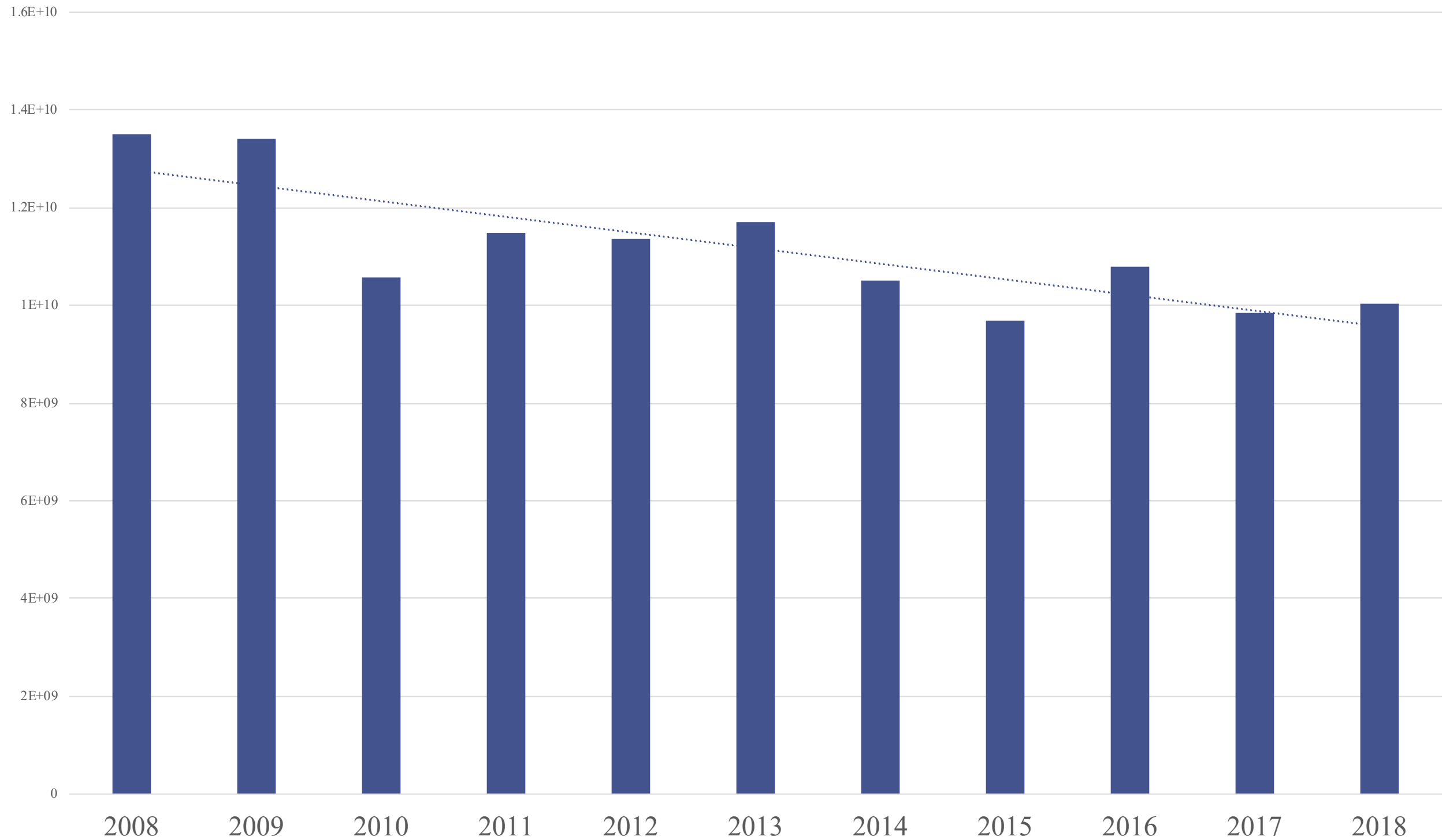
The tugboat, towboat and barge industry poses the lowest risk to the safety of the public compared to other forms of cargo transport.

Average Annual Injuries to the Public
 Freight Truck-104,286
 Freight Railroad-7,962
 Waterborne Freight-16

Average Annual Fatalities to the Public
 Freight Truck-4,452
 Freight Railroad-807
 Waterborne Freight-6



Washington Oil Volumes by Tank Vessel 2008 - 2018



Areas of Greatest Risk

- ❖ Transfer spills are most common
- ❖ Most commonly caused by human factors
- ❖ Human factors include:
 - Experience
 - Fatigue
 - Situational awareness
 - Maintenance
- ❖ Oil Transfer – Standards of Care
- ❖ Allisions, collisions, and groundings are not ignored



Looking Ahead

- ❖ ESHB 1578 – Tug Escort Rulemaking
- ❖ Puget Sound Bollard Pull Testing Standard of Care
- ❖ Bunkering Standard of Care
- ❖ Canada Proactive Vessel Management Initiative
- ❖ Navigation Safety
- ❖ Maritime Infrastructure
- ❖ Workforce Development



Thank You

Charles Costanzo
The American Waterways Operators

ccostanzo@americanwaterways.com