



Assistant Commandant's Perspective

by Rear Adm. PAUL J. PLUTA

Assistant Commandant for Marine Safety, Security & Environmental Protection

The towing vessel industry has seen marked improvements in its safety record since the Amtrak Sunset Limited accident in 1993. That accident, which resulted in the death of 47 people, was one of the principal catalysts for formation of the Coast Guard-industry partnership and development of new regulations and programs aimed at improving the safety of the industry.

As we show in this issue of *Proceedings*, major changes were effected by the Coast Guard and industry; as a result of those efforts, we have seen notable improvements in the three main safety measurements: numbers of crew fatalities, oil spills, and vessel casualties. The most recent statistics for the period 1994-2000, which were compiled through the partnership of the Coast Guard and American Waterways Operators (AWO), show a downward trend in those three areas in recent years. The industry saw 14 fatalities per 100,000 workers in 2000, down from 23 in 1999 and 1998, and 35 in 1997. Oil spills continued to decrease from a high of 16.9 per million gallons transported in 1996 to 3.5 in 1998, 2.3 in 1999, and 1.9 in 2000. Towboat/tugboat casualties were also down. In 2000 there were 32.2 casualties per one million trip miles compared to 34.6 in 1999, 38.2 in 1998 and 37.7 in 1997.

Though direct correlation is not possible, it is difficult not to attribute these improvements to recent Coast Guard-industry initiatives. The Responsible Carrier Program, initiated by AWO in 1994, has become the most widely recognized safety management system for the U.S. tugboat, towboat and barge industry. The program, which is now a condition of AWO membership, requires members to establish and comply with operating principles, practices, and guidelines. The Coast Guard-AWO partnership has also been actively reaching out to the industry to make crewmembers aware of safe practices. In response to findings that falls overboard from barges and towboats have accounted for the majority of crew deaths during the last 10 years, the partnership developed the S.A.F.E. Decks Campaign to raise safety awareness in the barge and towing industry. Further, the Coast Guard, in partnership with industry, instituted a new system of licensing requirements for towing vessel officers. This initiative was designed to improve the way we qualify and train our mariners.

While these initiatives have gone far to improve the safety of the industry, it does not mean we no longer have any cause for concern. The recent incident in Oklahoma is yet another reminder of our need to continually be mindful of safety. Through the combined efforts of the Coast Guard and maritime community, we can look forward to continued improvement.

A handwritten signature in black ink that reads "Paul Pluta". The signature is written in a cursive, flowing style.

Champion's Point of View



by Capt. MICHAEL B. KARR
Chief, U.S. Coast Guard Office of Investigations & Analysis

Pursuing Towing Vessel Safety Through Casualty Analysis

We have made much headway in improving towing vessel safety for both crew and non-crewmembers, and though there is more work ahead, we have defined a course to help move us forward. One of the best efforts to effect towing vessel safety was the work performed by the Towing Vessel Crew Fatalities Quality Action Team (QAT). This November 1995–July 1996 effort was the first QAT under the then recently formed partnership of the Coast Guard and the American Waterways Operators (AWO). The team looked beyond annual statistics of crewmember deaths for more details that defined each fatality. It concluded that the majority of towing vessel crew fatalities resulted from crewmembers falling overboard during routine operations, with crewmembers under the age of 25 incurring the highest fatality rates. Several factors contributed to these fatalities, including lack of training, skill assessment, communication, safe work practices, supervision and teamwork.¹ The attention this effort focused on the problem resulted in the ongoing AWO S.A.F.E. Decks Campaign (Stay Alert For the Edge—www.uscg.mil/hq/g-m/moa/docs/falls/safe.htm), which, I believe, has helped to drive down the annual number of towing vessel fatalities. Though fatalities are down for the period 1994–2000 compared to the earlier period, we can still improve—almost all crew fatalities still result from the crewmember falling into the water.

As we began to analyze what to do about the continuing falls overboard fatalities, the second fatal bridge allision occurred within an eight-month period. The first resulted in the death of eight motorists following the allision of the towboat *Brown Water V* and its tow with the South Padre Island Queen Isabella Bridge on Sept. 15, 2001. The second allision resulted in the death of 14 motorists after the towboat *Robert Y. Love* and its tow struck the Interstate 40 bridge over the Arkansas River on May 26, 2002. Following the second fatal bridge allision, we redirected our evaluation efforts to bridge allisions. We have created a Coast Guard and AWO Bridge Allision Working Group to examine the non-conformities that lead to bridge allisions and particularly to those allisions that result in motorist deaths. Between 1992 and today 72 people in motor vehicles and trains have lost their lives as a result of a bridge allision (New Orleans Claiborne Bridge 1993—1; Amtrak Sunshine Limited 1993—47; New Orleans Claiborne Bridge [Freight Ship] 1996—2; Queen Isabella Bridge—8; I-40 Bridge—14). The working group will evaluate approximately 1,300 bridge allisions that have occurred since 1992. Their effort will include licensed captains and pilots experienced with transiting many of the bridges to help the work group assess what did and what can go wrong when passing through the bridges that have been struck. We plan to finish the report and make recommendations by the end of this year.

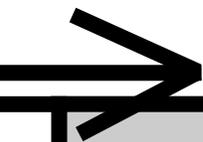
And there is still more to pursue to help drive down fatalities. Prior to these two bridge allision accidents, the Coast Guard's Compliance Analysis staff (G-MOA-2) intended to begin the assessment of non-crewmember deaths associated with towing vessels. These cases would most likely involve collisions and lookout issues, such as in the case of the collision of the 42-foot fishing vessel *Linda E*, with the 520-foot ITB *Michigan/Great Lakes* on Dec. 11, 1998 with the loss of the *Linda E* and the three fishermen onboard. The investigation (www.uscg.mil/d9/wmw/mso/milwaukee/lindae/lindaenra.htm) revealed that on a clear day both vessels failed to detect each other. Events such as this reinforce the importance of our continuing efforts to identify the causes of these accidents and appropriate safeguards to effect greater safety in the towing vessel industry.

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¹ The report includes a comprehensive review of previous literature and studies; an analysis of Coast Guard casualty data from 1985-1994; a review of specific cases; and conclusions and recommendations, including a discussion of the role of safety "culture" in the maritime industry. View the report online:
www.uscg.mil/hq/g-m/moa/docs/cafata.htm

Summary of Towing Vessel Crew Fatalities 1995-2000



Case	Year	Vessel	Service	Waterbody
MC95003953	1995	<i>Mary Claire</i>	Towboat/Tugboat	Kanawha River
MC95012692	1995	<i>Lucille II</i>	Towboat/Tugboat	Cumberland River
MC95012866	1995	<i>St. Marys Cement II</i>	Tank Barge	Rouge River
MC95013147	1995	<i>Fairweather</i>	Freight Barge	Bering Sea
MC95014821	1995	<i>Booster 48</i>	Freight Barge	Atlantic Harbor NOS
MC95017484	1995	<i>CC 75</i>	Freight Barge	Upper Mississippi River
MC95017703	1995	<i>Steven F. O'Hara</i>	Towboat/Tugboat	New York Harbor, Upper Bay
MC95018350	1995	<i>Carole Brent</i>	Towboat/Tugboat	Lower Mississippi River
MC95018731	1995	<i>Tongass</i>	Towboat/Tugboat	Lynn Canal
MC95019577	1995	<i>RF 825</i>	Freight Barge	Upper Mississippi River
MC95019994	1995	<i>Linda</i>	Towboat/Tugboat	Missouri River
MC95020056	1995	<i>Jackie B. Eymard</i>	Towboat/Tugboat	Lower Mississippi River
MC96004014	1996	<i>Tana Lynn</i>	Towboat/Tugboat	Lower Mississippi River
MC96004511	1996	<i>Anita Domino</i>	Towboat/Tugboat	Lower Mississippi River
MC96005539	1996	<i>Scarlet Gem</i>	Towboat/Tugboat	Lower Mississippi River
MC96009149	1996	<i>Harriet Ann</i>	Towboat/Tugboat	Lower Mississippi River
MC96009383	1996	<i>MM 7</i>	Tank Barge	Lower Mississippi River
MC96009688	1996	<i>Barge ZB303</i>	Freight Barge	Not Specified, Foreign
MC96011584	1996	<i>Florida Seahorse</i>	Towboat/Tugboat	Intercoastal Waterway—Gulf
MC96013296	1996	<i>Explorer II</i>	Towboat/Tugboat	Intercoastal Waterway—Gulf
MC96014042	1996	<i>W.B. Wood</i>	Freight Barge	Lower Mississippi River
MC96014882	1996	<i>OR 1166</i>	Freight Barge	Ohio River
MC96015602	1996	<i>CM6</i>	Freight Barge	Gulf of Mexico, Coastal
MC96016821	1996	<i>Donna Lee II</i>	Freight Barge	Monongahela River
MC96017601	1996	<i>PTC 194</i>	Freight Barge	Black Warrior River
MC96017931	1996	<i>S 13</i>	Tank Barge	Lower Mississippi River
MC96018094	1996	<i>Irene Lauritzen</i>	Towboat/Tugboat	San Francisco Bay
MC96018645	1996	<i>Ruth Marie</i>	Towboat/Tugboat	North Atlantic Ocean, 12-200MI
MC97001618	1996	<i>Cindy L. Erickson</i>	Towboat/Tugboat	Illinois River
MC97003324	1997	<i>Thunder</i>	Towboat/Tugboat	North Atlantic Ocean



Position	Accident Type	Resulting Injury	Activity
Deck Crew	Fall into water	Drowning	Line Handling
Deck Crew	Fall into water	Multiple	Walking on stern of tow vessel
Deck Crew	Fall into water	Drowning	Making rounds on deck
Deck Crew	Workplace, Other	Crushed	Picking up lashing gear on deck
Deck Crew	Fall into water	Drowning	Painting
Deck Crew	Fall into water	Crushed	Fall from deck of barge
Deck Crew	Fall into water	Drowning	Fell off underway vessel
Deck Crew	Fall into water	Drowning	Walking to towboat for flashlights
Master	Fall into water	Hypothermia	Vessel operator
Deck Crew	Fall into water	Multiple	Relaying distances; Line handling
Deck Crew	Fall into water	Drowning	Boarding M/V <i>Linda</i> from small aluminum craft (WKGJO781L990)
Deck Crew	Fall into water	Drowning	Working as deckhand, no witness to accident
Deck Crew	Workplace, Other	Crushed	Reaching from tug to barge to place marker light
Deck Crew	Fall into water	Drowning	Just finished attaching the facing wire to a barge
Deck Crew	Fall into water	Drowning	Preparing to tie a head wire
Eng. Officer	Fall into water	Drowning	On deck of vessel for break
Deck Crew	Fall into water	Drowning	Placing facing wires on tow
Employee	Fall, same level	Drowning	Securing pipe equipment
Eng. Officer	Caught in lines	Cut	Standing on aft deck
Deck Crew	Fall into water	Drowning	
Deck Crew	Fall into water	Drowning	Unknown at time of accident, no witness
Deck Crew	Fall into water	Drowning	Finishing installation of navigational lights on head of tow
Employee	Workplace, Other	Crushed	Moving valves
Deck Crew	Fall into water	Fracture	Line handling
Employee	Fall into water	Drowning	Deck operations, pumping water from barge
Deck Crew	Fall into water	Drowning	Line handling
Deck Crew	Fall into water	Drowning	
Deck Crew	Fall into water	Fracture	Servicing the lights on a partially submerged dredge pipeline
Deck Crew	Fall into water	Drowning	Working cable on barge and fell into water
Deck Crew	Fall into water	Drowning	Working on deck equipment

Summary of Towing Vessel Crew Fatalities 1995-2000 cont. ...

Case	Year	Vessel	Service	Waterbody
MC97003817	1997	<i>Pat McBride</i>	Towboat/Tugboat	Ohio River
MC97005678	1997	<i>Ace G</i>	Towboat/Tugboat	Lower Mississippi River
MC97005976	1997	<i>RW-430B</i>	Freight Barge	Ohio River
MC97006769	1997	<i>Suzanne McAllister</i>	Towboat/Tugboat	Elizabeth River
MC97006857	1997	<i>Dutch</i>	Towboat/Tugboat	Ohio River
MC97007885	1997	<i>Barge Bell 157</i>	Freight Barge	San Francisco Bay
MC97007885	1997	<i>Barge Bell 157</i>	Freight Barge	San Francisco Bay
MC97009096	1997	<i>Marie-M</i>	Towboat/Tugboat	Gray's Harbor
MC97009224	1997	Crane Barge <i>Bucyrus</i>	Barge, Other	Connecticut River
MC97009442	1997	<i>LL 21</i>	Freight Barge	Upper Mississippi River
MC97009442	1997	<i>LL 21</i>	Freight Barge	Upper Mississippi River
MC97009442	1997	<i>LL 21</i>	Freight Barge	Upper Mississippi River
MC97010935	1997	<i>Rosedale</i>	Towboat/Tugboat	Lower Mississippi River
MC97011391	1997	<i>RW 822B</i>	Freight Barge	Upper Mississippi River
MC97011477	1997	<i>Gail S</i>	Towboat/Tugboat	Bering Sea
MC97012072	1997	<i>PB 1691</i>	Freight Barge	Lower Mississippi River
MC97012371	1997	<i>Vicksburg</i>	Towboat/Tugboat	Missouri River
MC97013693	1997	<i>James R. Hines</i>	Towboat/Tugboat	Lower Mississippi River
MC97014176	1997	<i>M-6625</i>	Freight Barge	Lower Mississippi River
MC97016213	1997	<i>Ted B</i>	Towboat/Tugboat	Gulf of Mexico River NOS
MC97017243	1997	<i>Martin Expolrer</i>	Towboat/Tugboat	Gulf of Mexico, 12-200 miles
MC98000189	1997	<i>Cape Charles</i>	Towboat/Tugboat	Chesapeake Bay
MC98001349	1997	<i>Rig14</i>	Barge, Other	Gulf Outlet—Mississippi River
MC98001134	1998	<i>SCNO 8148</i>	Freight Barge	Ohio River
MC98001459	1998	<i>Margaret O</i>	Towboat/Tugboat	Ohio River
MC98002931	1998	<i>Triple M</i>	Towboat/Tugboat	Upper Mississippi River
MC98003036	1998	<i>SER 211</i>	Freight Barge	Lower Mississippi River
MC98004937	1998	<i>River Wolverine</i>	Towboat/Tugboat	Ohio River
MC98005672	1998	<i>DXE 3057T</i>	Tank Barge	Houston Ship Channel
MC98008331	1998	<i>Hampton Roads</i>	Towboat/Tugboat	Chesapeake Bay

Position	Accident Type	Resulting Injury	Activity
Deck Crew	Fall into water	Drowning	
Deck Crew	Line handling	Crushed	Placing mooring line on barge <i>Cave/</i>
Deck Crew	Fall into water	Drowning	Walking on barge deck
Engine Crew	Workplace, other	Fracture	Securing fallen fender
Deck Crew	Fall into water	Missing	Presumed rigging nav. lights; last seen on deck at last light
Employee	Casualty:capsizing	Drowning	Working inside machinery space on barge
Deck Crew	Casualty:capsizing	Drowning	Working inside machinery space on barge
Deck Crew	Casualty:capsizing	Drowning	Preparing/eating lunch
Employee	Fall into water	Drowning	Standing
NEC	Casualty:firewks exp.	Drowning	Launching fireworks
NEC	Casualty:firewks exp.	Multiple	Launching fireworks
NEC	Casualty:firewks exp.	Drowning	Launching fireworks
Deck Crew	Fall into water	Drowning	
Deck Crew	Fall into water	Drowning	Making preparations to drop tow off at loading dock
Deck Crew	Casualty:capsizing	Drowning	Abandoned vessel
Deck Crew	Fall into water	Drowning	Building a tow of barges
Master	Fall into water	Drowning	Assisting in mooring small work boat
Deck Crew	Fall into water	Crushed	Making up tow of two barges
Employee	Fall into water	Drowning	Taking barge soundings
Deck Crew	Workplace, other	Crushed	Unfacing tow boat from barge
Deck Crew	Fall into water	Drowning	
Deck Crew	Line handling	Multiple	Casting off lines on dredge barge <i>Super Scoop</i>
Platform Work	Workplace, other	Crushed	Securing mooring line at cleat
Deck Crew	Fall into water	Drowning	SNM fell into Ohio River from a barge
Eng. Officer	Fall into water	Drowning	Presumed walking about aft deck area of vessel
Deck Crew	Fall into water	Drowning	Boarding vessel from work flat
Deck Officer	Fall into water	Drowning	Walking on deck of grain/freight barge
Deck Crew	Fall into water	Drowning	Preparing to moor barges in fleeting area.
Tankerman	Fall into water	Drowning	Loading product
Deck Crew	Confined space entry	Asphyxiation	Attempting to rescue fallen crewmember

Summary of Towing Vessel Crew Fatalities 1995-2000, cont. ...

Case	Year	Vessel	Service	Waterbody
MC98008567	1998	<i>White Wing</i>	Towboat/Tugboat	Lower Mississippi River
MC98010005	1998	<i>Lily M. Friedman</i>	Towboat/Tugboat	Lower Mississippi River
MC98010569	1998	<i>Mac</i>	Freight Barge	North Pacific Ocean--Coastal
MC98012144	1998	<i>VL 81441</i>	Freight Barge	Lower Mississippi River
MC98013257	1998	<i>Jim Pierce</i>	Towboat/Tugboat	Gulf of Mexico River NOS
MC98014351	1998	<i>T 3091</i>	Freight Barge	Lower Mississippi River
MC98015717	1998	<i>Donald C. Hannah</i>	Towboat/Tugboat	Lake Michigan
MC98016333	1998	<i>Rusty Flowers</i>	Towboat/Tugboat	Chicago Ship Canal
MC98017067	1998	<i>Albert Cenac</i>	Towboat/Tugboat	Atlantic Harbor NOS
MC98017094	1998	<i>New York</i>	Towboat/Tugboat	St. Croix River
MC99000452	1998	<i>American Heritage</i>	Towboat/Tugboat	Lower Mississippi River
MC00000354	1999	<i>Juneau</i>	Freight Barge	Puget Sound
MC00001817	1999	<i>B No. 95</i>	Tank Barge	Delaware Bay
MC99000237	1999	<i>Lady Cindy</i>	Towboat/Tugboat	Gulf of Mexico--Coastal
MC99002501	1999	<i>Jane A. Mulzer</i>	Towboat/Tugboat	Ohio River
MC99004727	1999	<i>Girlie Knight</i>	Towboat/Tugboat	Ohio River
MC99005835	1999	<i>Kentucky</i>	Towboat/Tugboat	Intercoastal Waterway--Gulf
MC99006125	1999	<i>Bouchard Girls</i>	Towboat/Tugboat	Tampa Bay
MC99007055	1999	<i>Woody Dumas</i>	Towboat/Tugboat	Lower Mississippi River
MC99007276	1999	<i>Ralph E. Bouchard</i>	Towboat/Tugboat	Pacific Coastal Waters NOS
MC99007339	1999	<i>Katie-Chase</i>	Towboat/Tugboat	Intercoastal Waterway--Gulf
MC99008134	1999	<i>Brown 820</i>	Tank Barge	Intercoastal Waterway--Gulf
MC99008136	1999	<i>Sue Chappell</i>	Towboat/Tugboat	Tombigbee River
MC99009215	1999	<i>Woody Dumas</i>	Towboat/Tugboat	Lower Mississippi River
MC99010985	1999	<i>Jonathan B.</i>	Towboat/Tugboat	Upper Mississippi River
MC99013264	1999	<i>Bree Tessa</i>	Towboat/Tugboat	North Pacific Ocean
MC99014147	1999	<i>Cavalier State</i>	Towboat/Tugboat	St. Marys River (Fla.)
MC99014161	1999	<i>Steven Joseph</i>	Towboat/Tugboat	Lower Mississippi River
MC99015711	1999	<i>M/V Elizabeth Marie</i>	Towboat/Tugboat	Ohio River
MC99015968	1999	<i>David K. Wilson</i>	Towboat/Tugboat	Cumberland River

Position	Accident Type	Resulting Injury	Activity
Deck Crew	Fall into water	Drowning	Crew change
Deck Crew	Fall into water	Drowning	Handling barge make up cables; misjudged relative position, fell
Master	Fall into water	Drowning	Nook was on deck walking along rail on port side
Deck Crew	Fall into water	Crushed	Walking on deck of barge
Deck Crew	Fall into water	Drowning	Housekeeping chores aboard towboat
Employee	Fall into tank/hold	Multiple	Assist in handling barge covers
Deck Crew	Fall into water	Drowning	Boarding vessel
Deck Crew	Fall into tank/hold	Multiple	Walking on top of hatch covers on barge
Deck Crew	Caught in lines	Crushed	
Deck Crew	Line handling	Fracture	Line handling during mooring evolution
Master	Fall into water	Unknown	
Deck Officer	Fall into water	Crushed	Mate from control tug, in charge of docking barge
Master	Casualty:explosion, fire	BURN	Resting in cabin of <i>Barge B95</i>
Master	Casualty:capsizing	Drowning	Operator of vessel when it capsized
Deck Crew	Fall into water	Unknown	Conducting housekeeping duties onboard M/V <i>Jane A. Mulzer</i>
Deck Crew	Fall into water	Drowning	See MCNS
Deck Crew	Casualty:capsizing	Drowning	SNM was sleeping when vessel was struck, capsized. Mr. Vega
Deck Crew	Line handling	Crushed	Line handling
Deck Crew	Fall into water	Drowning	Moving between underway towboat and moored barges
Deck Officer	Line handling	Multiple	Observing port tow wire being reeled on to towing winch drum
Deck Crew	Fall into water	Drowning	Either on dingy or getting off dock
Deck Crew	Fall into water	Drowning	SNM was walking along the edge of the barge to fill bucket with water
Deck Crew	Fall into water	Drowning	Cleaning exterior of tug
Deck Crew	Fall into water	Drowning	Securing barges in fleeting area
Deck Crew	Fall into water	Drowning	Working on securing fleet barges
Deck Crew	Workplace, other	Crushed	Working as a deck hand on a crane barge
Master	Casualty:capsizing	Drowning	Acting as Master of UTV <i>Cavalier State</i> , which tripped and sank
Deck Crew	Fall into water	Drowning	Assembling tow
Deck Officer	Fall into water	Drowning	Off watch; unknown
Deck Crew	Fall into water	Drowning	Fell overboard while inspecting barge, counting rigging while underway

Summary of Towing Vessel Crew Fatalities 1995-2000, cont. ...

Case	Year	Vessel	Service	Waterbody
MC00000324	2000	<i>Delmar Jaeger</i>	Towboat/Tugboat	Upper Mississippi River
MC00004476	2000	<i>C.I.S. 4</i>	Towboat/Tugboat	Ohio River
MC00006418	2000	<i>Bill Rodgers</i>	Towboat/Tugboat	Lower Mississippi River
MC00008231	2000	<i>RH Huffman</i>	Towboat/Tugboat	Lower Mississippi River
MC00009980	2000	<i>Timmy</i>	Towboat/Tugboat	Ohio River
MC00013640	2000	<i>City of Vicksburg</i>	Towboat/Tugboat	Lower Mississippi River
MC00016373	2000	<i>Kent Island</i>	Towboat/Tugboat	Chesapeake Bay
MC01003495	2000	<i>George W. Lenzie</i>	Towboat/Tugboat	Chicago Ship Canal
MC01004666	2000	<i>Delos Case</i>	Towboat/Tugboat	Lower Mississippi River



USCG photo
by Ken Olsen

Position	Accident Type	Resulting Injury	Activity
Deck Crew	Fall into water	Drowning	Fleeting barges (Securing barges to make up tow)
Employee	Workplace, other	Burn	Welding-clothes caught fire, died from 2nd & 3rd degree burns
Deck Crew	Fall into water	Drowning	Reconfiguring tow
Deck Crew	Fall into water	Drowning	Uncoupling barge
Deck Crew	Fall into water	Drowning	Line handling of barges
Deck Crew	Fall into water	Unknown	Not known
Employee	Fall into water	Drowning	Stepping onshore
Deck Crew	Fall into water	Drowning	Connecting barges together, working with wire rope/turnbuckle
Deck Crew	Fall into water	Crushed	Configuring barge in fleet

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