



2019-2020 NTSB

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS



Eliminate Distractions

What is the problem?

Distraction is a growing and life-threatening problem in all modes of transportation. Vessel operators don't always have their eyes or minds on the waterway, but we know that focusing on or thinking about anything other than vessel operation can lead to tragic consequences. Increased use of portable electronic devices (PEDs) among commercial transportation employees has made distractions more prevalent and is an increasing risk in vessel operations.

\$70M

Cost of environmental damage from marine accidents since 2010* in which distraction was cited in the probable cause

*Resulting in 2 fatalities and 5 injuries

In heavily regulated transportation industries like marine, communicating with crew and dispatchers, checking instruments and equipment, and completing scheduled tasks may be part of normal work duties, but engaging in tasks other than vessel operation impairs performance. Federal regulations should prohibit the nonoperational use of cell phones and other wireless electronic devices by on-duty crewmembers in safety-critical positions, but no such regulation exists.

In the last decade, we have investigated several marine accidents in which distraction was a cause or contributing factor. One of the most prominent accidents occurred in July 2010, when the 250-foot-long sludge barge *The Resource*, which was being towed alongside the 78.9-foot-long tugboat *Caribbean Sea*, collided with the anchored 33-foot-long amphibious passenger vehicle *DUKW 34* in the Delaware River in Philadelphia, Pennsylvania. As a result of the collision, *DUKW 34* sank in about 55 feet of water. Two passengers were fatally injured, and 26 passengers suffered minor injuries.



On July 7, 2010, the sludge barge *The Resource*, being towed alongside the tugboat *Caribbean Sea*, collided with the anchored amphibious passenger vehicle *DUKW 34* in the Delaware River in Philadelphia, Pennsylvania. We determined that this accident was due in part to distraction and inattention of the the *Caribbean Sea's* mate, which resulted from his repeated personal use of his cell phone and company laptop.

Contributing to the distraction problem is the widespread belief by many that they can multitask and still safely operate a vessel. But multitasking is a myth; humans can only focus cognitive attention on one task at a time.

Related reports:

MAB-17/30: Allision of Tanker *Nordbay* with Docks and Water Intakes; New Orleans, Louisiana; February 2, 2016; Accident ID DCA16FM023

MAB-17/01: Marine Accident Brief: Collision of Bulk Carrier *Aris T* with Tank Barge WTC 3019, Towing Vessel Pedernales, and Shoreside Structures; Norco, Louisiana; January 31, 2016; Accident ID DCA16FM022

MAB-13/18: Allision of Tanker Overseas *Reymar* with San Francisco–Oakland Bay Bridge; San Francisco, California; January 7, 2013; Accident ID DCA13LM004

MAR-11/02: Collision of Tugboat/Barge *Caribbean Sea/The Resource* with Amphibious Passenger Vehicle *DUKW 34*, Philadelphia, Pennsylvania; July 7, 2010; Accident ID DCA10MM025

For detailed investigation reports, visit www.nts.gov

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What can be done?

The consequences of visual, manual, cognitive, and auditory distractions can be seen in all modes of transportation. In commercial operations, all safety-critical personnel must commit to minimizing distractions, and vessel operators should develop policies to reduce distraction. Distraction must be managed—even engineered out—to ensure safe operations. A cultural change is needed for all marine personnel to understand that their safety and the safety of others depends on disconnecting from deadly distractions.

To address the problem of distraction, the following actions should be taken:

Vessel Operators

› Keep your eyes and mind on vessel operation; do not use PEDs inappropriately, and minimize other distractions, such as nonessential conversations. Vessel control and safe handling must be maintained at all times until the ship is safely anchored or moored. Remember, cell phone use while underway is a violation of the US Coast Guard Navigation Rules, which require mariners to maintain a proper “lookout” by sight and sound.

Owners/Safety Managers

› Establish policies and practices to combat distractions in commercial operations. For decades, the aviation mode has recognized the need for “sterile cockpit” procedures that restrict activities and conversations within the cockpit to the task at hand. The marine industry should recognize the benefits of this procedure and limit extraneous activities and conversation on deck by vessel operators. Prohibit the use of phones for nonoperational purposes and educate crewmembers on the degraded performance that comes with multitasking and cognitive distractions.



On February 2, 2016, the tanker *Nordbay* was southbound on the lower Mississippi River in New Orleans, Louisiana, with a pilot on board when it allided with a dock and water intakes on the left descending bank. Contributing to the accident was the *Nordbay* bridge team’s poor situational awareness of the vessel’s position in the waterway and the master’s distraction from his duties while making a phone call.



Regulators

› Prohibit the nonoperational use of cell phones and other wireless electronic devices by on-duty crewmembers in safety-critical positions.

› Continue to build technical understanding of auxiliary task distraction in regulated transportation, especially with regard to new vessel technologies that require real-time operator attention. Use the advances in these areas to support regulatory efforts that lead operators toward a cultural norm that encourages and supports a complete disconnect from distractions.

MWL
MOST WANTED LIST

Critical changes needed
to reduce transportation
accidents, injuries, and
fatalities

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The NTSB **MOST WANTED LIST** highlights safety issues identified from the NTSB’s accident investigations to increase awareness about the issues and promote recommended safety solutions.

For more information visit www.nts.gov/mostwanted or contact SafetyAdvocacy@ntsb.gov

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

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