

In March-April 2018, the USCG/States/NASBLA ERAC Incident Reporting Policy Project Workgroup reviewed and proposed some modifications to entries in this Contributing Factors/Causes list as it developed recommendations regarding Data Elements/Fields/Definitions for national collection. In January 2020, in response to feedback from the second (external review) comment period conducted March-August 2019, the workgroup made an additional modification to the “Off Throttle Loss of Steering” entry (p. 5). The workgroup recommends adoption of the full list with modifications as presented. [Note: in line with other edits to these lists, the term “incident” would replace “accident” throughout.]

CONTRIBUTING FACTORS/CAUSES* (grouped†) –as approved Sept. 11, 2012

The list beginning page 2 presents the contributing factors/causes work product voted on and approved by the NASBLA membership at its annual Business Meeting conducted Tues., Sept. 11, 2012, Mobile, Alabama. Bracketed information at the end of each definition indicates whether the entry is a new one or will revise an existing term or definition currently used at the national level in BARD. All entries* were vetted through the project review process, including the project team’s refinement of items as a result of feedback received from NASBLA members during the open comment period conducted July 18-Aug. 7, 2012, and the NASBLA membership’s refinement of the Distraction Codes associated with the entry “Improper Lookout/Inattention” on Sept. 10, 2012. See **History**, below, and **Overview of Process** on page 7 of this document.

* **History:** All entries were vetted through the process involving the project team (subgroup of NASBLA Engineering, Reporting & Analysis Committee (ERAC) and since May 2011, additional U.S. Coast Guard subject matter experts); the full ERAC; the NASBLA Executive Board; Coast Guard initial, Office-level review; broader NASBLA community via comment solicitations in July/August 2012; and discussion at the BLA Workshop, conducted as part of the 53rd Annual NASBLA Conference. Sept. 10, 2012.

This list reflects **all changes made by the project team**, including the team’s resolution of feedback received (on the July 2012 proposed list) during the July 18-Aug. 7 open comment period, and resolution of feedback on the Distraction Codes for “Improper Lookout/Inattention” at the Sept. 10, 2012 BLA Workshop. Changes resulting from the feedback during the open comment period were: 1) revision of term label “Too Fast for Conditions” to include “Speed”; 2) amendment of definition for “Failure to Maintain Safe Distance” to reference “prevailing conditions” and indicate applicability to violations of distance or proximity restrictions (not solely “state-regulated” requirements as presented in earlier version); 3) complete revision of definition for “Failure to Take Adequate Evasive Action”; 4) addition of “legal” to the references to intoxication in both terms “Alcohol” and “Drugs”; 5) revision of term label “Standing/Sitting in Area Not Intended for Occupancy” to “Person in Area Not Intended for Occupancy,” addition of “lying” to the definition, and clarification of its application to a vessel’s “specific” operation; 6) addition of an anchor “being retrieved incorrectly” to definition for “Improper Anchoring”; 7) revision of definition for “Improper Loading” to reference “placement of any load or combination of loads”; 8) clarifying applicability of “Overloading” to include “loading beyond the manufacturer’s capacity specifications”; 9) for “Machinery Failure,” deletion of proposed drop-down selections regarding manufacturer/dealer or after-market installation and clarified description of drop-down item “propulsion system failure”; 10) revision of definition for “Off Throttle Loss of Steering” to include “reduced” throttle; 11) elimination of the phrase “from inadequate or improper ventilation” from the definition for “Carbon Monoxide”; 12) grammatical edit of “Weather” definition; 13) revision of definition for “Medical Condition” to clarify intent by excluding applicability to “physical impairments such as poor eyesight, hearing or mobility”; and 14) revision of definition for “Did Not Contribute” to clarify that it could be the operator, occupant(s) or vessel that did not contribute to the accident. Changes resulting from the feedback received during the Sept. 10, 2012 BLA Workshop affect the Distraction Codes for “Improper Lookout/Inattention” (see p. 2).

† Groups loosely based on categories of contributing factors/causes as presented in the annual *Recreational Boating Statistics* reports produced by the U.S. Coast Guard.

**Operation of Vessel Contributing Factors
Operational factors associated with key aspects of the Navigation Rules**

Navigation Rules Violation / Rules of the Road Infraction: *Reserved for data entry use at the national level in the U.S. Coast Guard Boating Accident Report Database (BARD). Term intended solely to capture accident report information that is not or cannot otherwise be captured under one or more of the following contributing factors: Speed Too Fast for Conditions; Lack of or Improper Navigation Lights; Failure to Maintain Safe Distance; Failure to Take Adequate Evasive Action; Improper Lookout/Inattention.* [Revises definition of the existing umbrella terms (“Navigation Rules Violation” / “Rules of the Road Infraction”) to direct and describe the intended use]

Speed Too Fast for Conditions: *Speed above that which a reasonable and prudent person would have operated under the circumstances that existed. It is not necessarily a speed in excess of a posted limit.* [Revises existing term label (“Excessive Speed”)]

Lack of or Improper Navigation Lights: *Insufficient and/or improper navigation lights shown by a vessel that indicate direction of travel, position, activity, or operation.* [Revises existing term labels (“Lack of or improper boat lights” and “Inadequate on board navigation lights”) and definition]

Failure to Maintain Safe Distance: *Operation too close to another vessel, object, or person, whether intentionally (horseplay) or without intent, given the prevailing conditions. This may include a violation of a distance or proximity restriction.* [New term and definition]

Failure to Take Adequate Evasive Action: *The operator observed a potentially dangerous situation and failed to take the action(s) a reasonable and prudent person would have taken to avoid an accident.* [New term and definition]

Improper Lookout/Inattention: *The operator failed to perceive danger, resulting in the accident. This could have been with respect to failure(s) to perceive dangers outside or inside the vessel. May apply to violations of the requirement to maintain a proper lookout.* [Combines existing terms (“Improper Lookout” or “No proper watch” and “Operator Inattention”), creates new primary definition, and creates “distraction codes.”]

Recommendation: Improper Lookout and Operator Inattention rank consistently among the top contributing factors to accidents. However, the factors (or factor, as combined in this revised list) do not provide detail as to why there was a failure to perceive danger. Use of the distraction codes, with further modifications described below, would provide additional detail and rationale for the officer/ investigator’s selection of the factor. Proposal is for mandatory collection of the distraction codes.

Distraction codes for Improper Lookout/Inattention (continue next page)

- **Onboard lighting** – Glare from lighted the objects onboard the vessel, such as improperly shielded navigation lights, onboard electronics, and other similar devices. Specify.
- **Background lighting** – Lights on docks, shorelines, or other vessels. Specify.
- **Onboard electronics or equipment** – Using, attempting to use, viewing or operating onboard electronics or equipment, such as a navigation device, mobile phone, VHF radio, audio device, radar, autopilot, spotlight. Specify. **Recommended: Distinguish between onboard electronics and handheld devices. Revise description of “Onboard electronics or equipment” to remove current reference to mobile phone.**
- **Recommended: Create “Wireless communication devices” code to capture mobile phones, tablets and other handheld devices from onboard equipment.**

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- **Operator or occupant activity** – **Recommended: include “pets” among the potential distractions.** Activity such as sightseeing, moving objects, eating, drinking, smoking, interacting with passengers, fixated on other vessels or persons being towed, or otherwise distracted by other persons, **pets**, or objects in or outside the vessel. Specify.
- **Other distraction** – Details regarding the distraction are known, but none of the specified codes is applicable. Specify.
- **Unknown** – Insufficient facts to make any specific distraction determination.

Other Operation of Vessel Contributing Factors

Alcohol: *In the investigating officer's judgment, use of alcohol by the operator or vessel's passengers contributed to the accident. This does not necessarily indicate legal intoxication, only that alcohol consumption contributed to the accident.* [Revises existing term label (“Alcohol use”) and definition]

Drug(s): *In the investigating officer's judgment, use of legal or illegal drug(s) by the operator or vessel's passengers contributed to the accident. This does not necessarily indicate legal intoxication, only that use of drug(s) contributed to the accident.* [Revises existing term label (“Drug use”) and definition]

Operator Inexperience:** *Lack of experience, familiarity or knowledge regarding the vessel, environmental conditions, or location.* [Revises existing primary definition and creates additional drop-down selections]

Recommended: Mandatory collection of the inexperience codes below to justify and detail the officer/investigator’s selection of this factor.

If you entered **Operator Inexperience, select which aspect applies:

- **This vessel** – its operation or controls
- **Environmental conditions** – prevailing conditions at the time of the accident (e.g., weather, waves, current, other types of environmental conditions)
- **Location** – the immediate area where the accident occurred (e.g., shallow water, shoals, wing dikes, other types of underwater obstructions or hazards)

Restricted Visibility – Environmental Conditions: *Visibility limited due to external conditions such as sun glare, fog, rain, snow, spray, limited night visibility or other environmental conditions.* [Revises existing term label (“Restricted Vision”) and creates two separate entries and definitions]

Restricted Visibility - Vessel Related: *Visibility limited due to the vessel's bow elevation, passengers, a dirty windshield, canopy top, or other obstruction in or on the vessel.* [Revises existing term label (“Restricted Vision”) and creates two separate entries and definitions]

Sharp Turn: *An immediate or abrupt change in the vessel's course.* [Revises existing definition]

Passenger or Gear Contributing Factors

Occupant Behavior: *The actions, lack of experience, familiarity or knowledge of the vessel occupant(s), other than the operator, contributed to the accident.* [Reinstates previously-used term (Passenger/Skier Behavior), but revises to separate into two entries (see also **Towed Watersport Participant Behavior**). Creates new definition for each term]

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Towed Watersport Participant Behavior: *The towed watersport participant(s)'s actions, lack of experience, familiarity or knowledge contributed to the accident. [Reinstates previously-used term (Passenger/Skier Behavior), but revises to separate into two entries (see also **Occupant Behavior**). Creates new definition for each term]*

Person(s) in Area Not Intended for Occupancy: *Standing, sitting, or lying in an area of a vessel not intended for occupancy during a vessel’s specific operation. Examples of areas not intended for occupancy during a vessel’s specific operation include, but are not limited to, the gunwale, a cabin top or other elevated platform, the bow, or the stern. [Revises existing term labels (“Standing/Sitting on Gunwales, Bow, or Transom” and “People on gunwale, bow or transom”) and definition]*

Improper Anchoring: *Where a vessel was in the process of being anchored incorrectly, the anchor was being retrieved incorrectly, or the vessel was incorrectly held in place in the water by an anchor. Includes being improperly moored to a buoy or anchored vessel. [Revises existing definition]*

Improper Loading: *The placement of any load or combination of loads on or within the vessel contributed to instability or limited maneuverability. This includes but is not limited to: inadvertent distribution or redistribution of weight. [Revises existing definition]*

Overloading: *Excessive loading of the vessel contributed to instability, limited maneuverability, or dangerously reduced freeboard. May include loading beyond the manufacturer’s capacity specifications. [Revises existing definition]*

Vessel or Vessel Equipment Contributing Factors

Equipment Failure:** *Failure of equipment, either carried or installed. This includes unsafe or improper installation. This does not include the failure to carry required equipment. [Revises existing definition and drop-down selections for which equipment failed; selections presented alphabetical order]*

Recommended: Modifications below

** If you entered **Equipment Failure**, indicate which equipment failed

- **Auxiliary or accessory equipment failure** -- Stoves, heaters, refrigerators, generators, battery chargers, hot water heaters. **Divide entry to distinguish auxiliary equipment that is portable from equipment installed by the manufacturer or marine yard.**
- ~~**Communication equipment failure** – Radio, cell phones, CBs, Emergency Locator Beacons (ELBs), Emergency Position Indicating Radio Beacons (EPIRBs), Digital Selective Calling (DSC) technology.~~ **Remove due to anticipated limited use.**
- ~~**Day Shapes or Flags** – Includes correct placement, size, and visibility.~~ **Remove; as defined it does not reflect an equipment failure.**
- **Fire extinguisher failure.** **Retain entry but add definition indicating it is limited to the failure of an extinguisher that was considered to be serviceable.**
- ~~**Life jacket failure.**~~ **Remove due to anticipated limited use.**
- **Navigation equipment failure** – GPS, radar, depth finder **Retain, but note that this is more likely to be used as a secondary contributing factor.**
- **Navigation light equipment failure lights** -- Improper display; includes required intensity, arc of visibility, and placement. **Rename entry and revise definition to represent Failure of the lights (blown fuse, faulty wire, etc.)**
- ~~**Sail dismasting** – Mast fell down, either onto the vessel or into the water.~~ **Remove due to anticipated limited use.**
- **Seat broke loose** -- Includes the back of the seat or the seat itself, or the base structure that is fixed to the area of the vessel deck supporting the seat.

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- **Sound producing equipment failure.** Create a definition to indicate the failure is limited to the equipment itself, not to the lack of use or lack of carriage.
- **Other (describe).** Add entry to accommodate a failure that does not fit any of the above or to accommodate any of the infrequently used entries that are proposed for removal from the permanent list.

Hull Failure: **Recommended definition revision:** *Defect or failure of the structural body of a vessel. This includes the hull material, design, or construction. It does not include the superstructure, masts, or rigging. **This term also includes lack of or inadequate vessel flotation.*** [Revises existing definition]

Machinery Failure:** *Defect or failure in the machinery, material, design, construction, or any installed components involved in the mechanical propulsion of the vessel (e.g., engine, transmission, fuel system, electric system, and steering system). This does not include vessels starting in gear (see **Starting in Gear**).* [Revises existing definition and drop-down selections]

Recommended: Modification below

**Indicate which part of the vessel’s machinery failed:

- **Electric system failure** -- Shock hazard; system shorted out; battery failure; failure of ignition protection.
- **Engine failure** -- Engine would not start; engine stalled.
- **Fuel system failure** -- Fuel tank or fuel lines leaked; clogged fuel lines.
- **Propulsion system failure** – Failure of the propulsion system to operate properly; includes propeller, lower unit gearcase, **and water jet braking system.**
- **Shift failure** -- Shifting mechanism would not operate properly. Drive system would not go into gear, went into gear by itself without warning, or would not disengage.
- **Steering system failure** -- Failure of the assembly, including all components necessary to transmit remote manual effort to the rudder, sterndrive, water jet drive or outboard engine (includes cable, pulleys, fittings, hydraulic components).
- **Throttle failure** -- Throttle mechanism would not operate properly.
- **Ventilation system failure** -- Failure of the ventilation system that exchanges air and expels gasoline vapors from the engine compartment.

Off Throttle Loss of Steering: **Recommended addition of note for appropriate selection of term:** *The operator released or reduced throttle, or there was loss of engine power, which resulted in little or no steering capability. This is usually associated with water jet propulsion units or airboats. **[NOTE: If this incident occurred primarily as a result of the operator’s inexperience, select “Operator Inexperience” with “Off Throttle Loss of Steering” as a secondary or tertiary contributor.]*** [Revises existing term label (“Off Throttle Steering”) and definition]

Starting in Gear: *The vessel’s engine was started with the drive system in forward or reverse.* [Revises existing definition]

Carbon Monoxide: *The accumulation of carbon monoxide contributed to the accident.* [Creates definition for CO as a contributing factor]

Ignition of Fuel or Vapor: **Recommended definition revision:** *Accidental ~~combustion~~ **ignition** of **combustible gases**, vessel fuels, or fuel vapors.* [Revises existing term label (“Ignition of Spilled Fuel or Vapor”) and definition]

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Failure to Ventilate: *Prior to starting the engine, failure to take action to expel gasoline vapors from a machinery space or enclosed compartment.* [Revises existing term label (“Failure to Vent”) and definition]

Environment Contributing Factors

Congested Waters: *Vessels operating in close proximity to one another as a result of high density of vessel activity in the immediate area at the time of the accident.* [Revises existing definition]

Dam / Lock: *A vessel(s) operated in, near, on or over a dam or lock and the structure contributed to the accident.* [Revises existing definition]

Hazardous Waters:** **Recommended definition revision:** *Water conditions such as currents, rapids, or rapid tidal flows, **or unseen underwater hazards** contributed to the accident.* [Revises existing primary definition and creates follow-up selections]

Recommended: Mandatory selection of a subcategory below to detail the officer/investigator’s selection of this factor. Addition of a third subcategory.

** If you entered **Hazardous Waters**, indicate:

- **Weather-related hazardous water conditions.**
- **Inherent to location.**
- **Hazard in the water**

Weather: **Recommended definition revision:** *One or more atmospheric conditions, such as thunderstorms, lightning, wind, rain, sleet, fog or snow, created an adverse environmental situation that contributed to the accident. **If water conditions were caused by the weather, then select “Hazardous Waters” factor with subcategory “Weather-related hazardous water conditions.”*** [Revises existing definition]

Recommended term label and definition revisions: Wake/Wash: *The wake **or wash** created by a vessel(s) contributed to the accident.* [Revises existing term label (“Force of Wave/Wake”) and definition]

**Recommended term label and definition revisions: ~~Missing or Inadequate Navigation Aids~~
Authorized Navigation Aid Failed or is Missing:** *The ~~absence of~~, ineffective presence of, ~~missing~~, or off-station navigation aid(s) **This does not include navigation aids that should have been in place but were not authorized.*** [Revises existing definition]

Miscellaneous Contributing Factors

Language Barrier: *A limited English proficiency with regard to understanding or comprehending navigation rules, buoys, signs, laws, regulations, or instructions contributed to the accident.* [Creates definition for a term presented on current version of the U.S. Coast Guard BAR form (expires 7/31/14)]

Recommended term label revision and clarification of intent: Medical Event ~~Condition~~: *A person on a vessel or a towed watersport participant experienced a medical condition(s) that contributed to but was not the result of the accident. This does not include physical impairments such as poor eyesight, hearing, or mobility.* [Revises existing term label (“Sudden medical condition”) and definition] **Revision intended**

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to reflect a spontaneous, unexpected event versus a pre-existing condition. The various physical impairments and other health-related issues specifically excluded from this factor could be collected by a state, but would not be mandated for national collection.

Did Not Contribute: *The operator, occupant(s), or vessel did not contribute to the accident.* [New term and definition]

Other / Describe: *Contributing factors(s) that are not described. Provide brief description.* [Creates definition] **Recommended: Mandatory completion of the description field.**

Unknown / Explain: *Insufficient information to determine the contributing factor(s) of the accident. Provide brief explanation.* [Creates definition] **Recommended: Mandatory completion of the description field.**

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Overview of Process: The review process for this Accident Reporting Terms and Definitions Project was accepted by the NASBLA Executive Board and the USCG Office of Auxiliary and Boating Safety in mid-June 2011. For each category of report terms:

- Achieve project team consensus on terms/definitions through series of teleconferences and interim work;
- Share team consensus list with and get feedback from full ERAC committee and NASBLA Executive Board and the U.S. Coast Guard (for initial, Office-level review);
- Share the resulting, refined list with and get feedback from the States/Territories using a structured, open comment period;
- Review responses to assess need for additional team refinements to the entries;
- Submit final consensus list to the NASBLA Executive Board for delivery to and vote by the NASBLA membership;
- Transmit to the U.S. Coast Guard for final review and clearance through its appropriate internal channels.