Stability and Construction Requirements

What kind of “construction” considerations are there?

- Not every boat is constructed for offshore use. Examples are:
  - Lack of watertight integrity such as hatches and bulkheads.
  - Lack of fuel range to sustain ops in heavy weather delaying return to port.
  - Lack of shelter for occupants during inclement weather.
  - Undersized scantlings for ocean use.

- Survivability of the vessel is key to these requirements.
- NOAA uses comprehensive risk analysis when some areas of a vessel fall short.

STABILITY AND CONSTRUCTION

STABILITY INCLUDES:

1. Intact righting energy (resistance to tipping)
2. Ability to shed water after swamping
3. Ability to stay afloat after taking on water

CONSTRUCTION INCLUDES:

1. Watertight hatches
2. Watertight decks
3. Watertight bulkheads
4. Freeing ports to shed water

Version 3 vs. Version 4

Version 3

- Did not require a designated operating area in the SBOM which would trigger stability and construction criteria
- Did not define minimum stability requirements based on the operating area.
- Did not define operating areas with regards to construction or stability

Version 4

- All small boats have a designated operating area noted in the SBOM and operate within the established limitations associated with the designation.
- A small boat's operating area designation dictates the minimum stability and construction elements required.
- Stability and construction operating areas are now defined into 3 categories;
  - EXPOSED: Operation in waters more than 20 nautical miles from the mouth of a harbor of safe refuge
  - PARTIALLY PROTECTED: Operation in waters not more than 20 miles from the harbor of safe refuge.
  - PROTECTED WATERS: Operation in sheltered waters presenting no special hazards such as most rivers, bays, harbors except waters otherwise designated by the local Coast Guard Officer in Charge of Marine Inspection (OCMI)

Version 3 vs. Version 4

Version 3

- Did not recognize specific hazardous operating areas.

Version 4

- It is recognized that hazards presented by local, regional, and seasonal conditions require special designation. The OCMI determines areas of increased hazard due to prevailing conditions and can make them more restrictive.
  Examples are:
  - All waters off the Pacific Northwest from Chetco River, OR to Race Rocks, WA in the Strait of Juan de Fuca is EXPOSED WATERS. This is due to the dangers of the Pacific Ocean and its tributaries.
  - Operating on the Chesapeake Bay with the exception of selected tributaries is PARTIALLY PROTECTED WATERS.
  - Operating anywhere on Puget Sound is PARTIALLY PROTECTED WATERS with the exception of Elliot Bay which is PROTECTED WATERS.
  - Operating anywhere on Alaskan Waters is EXPOSED WATERS. Kachemek Bay, Auke Bay, and Tongass Narrows are PARTIALLY PROTECTED

Version 3 vs. Version 4

Version 3

- Did not recognize “Harbor of safe Refuge”

- What if the Coast Guard hasn’t designated a port in my operating area?

- Why is this important?

Version 4

- “Harbor of Safe Refuge” is defined in Title 46 CFR 175.400 as:
  - A port, inlet, or other body of water normally sheltered from heavy seas by land and in which a vessel can navigate and safely moor. The suitability of a location as a harbor of safe refuge shall be determined by the cognizant Officer in Charge, Marine Inspection, and varies for each vessel, dependent on the vessel's size, maneuverability, and mooring gear.
  - The VOC in conjunction with the VPC and LOSBO will identify “Harbors of Safe Refuge” for their operating area(s).
  - The distance from a harbor of safe refuge determines many risk factors for TTR (Time to Rescue) whether it be self rescue or another entity.

How does this apply to Class A vessels?

Small Boat	Operating Conditions	Operating Area
CLASS A	Operating without a support vessel and operates within the limitations set forth on the small boat loading plate	**PROTECTED and PARTIALLY PROTECTED WATERS NOT MORE THAN 3 MILES FROM LAND**
	Operating with support vessel evaluated for the applicable operational area, which can accommodate additional persons onboard.	**ALL WATERS**

This section defines a Class A vessel's *MAXIMUM* operating area without further consideration from the program. However, the VOC must ultimately determine the vessel's capability and appropriate operating area. Vessels required to operate beyond these definitions will require further review from the program.

How does this apply to Class I and II vessels?

CLASS I **And** **CLASS II**	Small boat carries more than six persons, **OR** conducts lifts over-the-side with static loads exceeding 200 lbs., **OR** conducts bottom trawls or dredges.	**PROTECTED WATERS ONLY**
	Small boat carries six or less persons **AND** does not conduct static lifting over-the-side of loads exceeding 200 lbs. **AND** does not conduct any bottom trawls or dredges.	**PARTIALLY PROTECTED WATERS**
	Operating with support vessel evaluated for the applicable operational area that can accommodate the additional persons onboard.	**ALL WATERS**

This section defines Class I or II vessel's *MAXIMUM* operating area without further consideration from the program. However, the VOC must ultimately determine the vessel's capability and appropriate operating area. Vessels required to operate beyond these definitions will require further review from the program.

How does this apply to Class III and SRV's?

CLASS III and SRV	Operating within the limits of the specific individual stability evaluation which defines the boat specific operational areas and limitations.	**WATERS DEFINED BY THE SMALL BOAT STABILITY EVALUATION**

This section defines Class III and SRV's *MAXIMUM* operating area without further consideration from the program. However, the VOC must ultimately determine the vessel's capability and appropriate operating area. Vessels required to operate beyond these definitions will require further review from the program.

My boat operates outside of these "predefined areas", now what?

Small boat operating conditions that fall outside of Tables require boat specific evaluation.

- The Stability Working Group is tasked with applying appropriate regulatory requirements, and evaluating mission details and practical small boat characteristics consistently. They are **YOUR** advocate in the process.
- The combined experiences of the NOAA small boat fleet and industry standards are used to quantify conclusions of the group.
- The Stability Working Group may require professional engineering evaluations or tests to determine small boat stability characteristics.
- Upon completion of a stability review, subsequent limitations on loading, mission conditions, or operating area are submitted to the SBSB for approval. Once approved, the stability review is documented in the SBOM.

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The NOAA Small Boat Standards and Procedures Manual

4th Edition

Created by
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with input from OMAO and other area experts
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