

To the USCG,

12 June 2022

In what follows are my comments on Fire Safety of Small Passenger Vessels Docket No. USCG-2021-0306.

On two occasions I have been a passenger on a "SoCal" (Southern California) dive boat that is similar in nature to the ill-fated M/V Conception. On one occasion I occupied the "escape" bunk and in fact exited through the hatch as a drill. As an agile person, in daylight, and with no urgency I had no problem exiting. However, at night and in an emergency situation is a different situation. Upon reflection I have serious doubts that in an emergency that many people would be able to negotiate an "escape" bunk. As such, new rules are needed.

In reviewing the interim rule several areas need to be improved.

Fire Detection. This section focuses specifically on "fire detection." However, carbon monoxide is also known to be an issue on water craft. Such passenger vessels have multiple sources of carbon monoxide; engines, generators, space and water heaters, and cooking ranges.

As such, this section should be revised to require inner-connected fire, smoke, and carbon monoxide detection.

Construction and Arrangement. The interim rules state "overnight accommodations for passengers will maintain at least *two* independent means of escape that allow for free and unobstructed egress from any point in a vessel to an embarkation station or area of refuge." This rule is too general and wholly insufficient.

A passenger vessel may have multiple overnight accommodation areas. As such, the rule must apply on a per overnight accommodation area basis. Under the interim rule, a passenger craft that has two separate overnight accommodation areas would only be required to have two exits, obviously one per area. If either exit were blocked there would be no escape. That is wholly unacceptable.

The rule must apply on a per overnight accommodation area.

A passenger craft that has two separate overnight accommodation areas at a minimum must be required to have two separate exits for each overnight accommodation area. A minimum of four exits.

Further, there must be a definition of an overnight accommodation area. For instance, does a private cabin constitute an overnight accommodation area that must have two exits? Or would a series of private cabins with a common hallway on one deck be considered an overnight accommodation area requiring two exits?

While the rule rightly provides flexibility in the type of exits, the primary exit will be the existing stairwell whereas the secondary exit(s) will in all likely be a ladder as demonstrated by the reconfiguration of the M/V Vision which was a sister ship the M/V Conception. Such ladder exits are a bottleneck.

The interim rules applies to passenger vessels that have overnight accommodations for 49 or less passengers. In a scenario such as fire with an immediate need evacuate a *single* overnight accommodation area with 49 passengers with the primary exit blocked a *single* secondary ladder exit will not be sufficient to evacuate all passengers in a reasonable amount of time to prevent injuries or deaths.

Two exits could be sufficient for a vessel with 9 passengers in a single overnight accommodation area but not for a vessel with 49 passengers in single overnight accommodation area. In the case of the M/V Vision which accommodates 30 passengers in a single overnight accommodation area it has been reconfigured with three secondary ladder exits in addition to the primary stair exit.

The rule must apply on a per overnight accommodation area with a maximum number of passengers per overnight accommodation area.

Currently the interim rule requires no maximum evacuation time. The Coast Guard should augment the rules and implement exits requirements based the number of passengers as well as a maximum time for evacuation. The FAA has promulgated similar rules in 14 CFR Part 25.807 and 14 CFR Part 25.803 for commercial aircraft.

The rule must apply on a per overnight accommodation area with a maximum number of passengers per overnight accommodation area with a maximum time for evacuation.

For instance, a minimum of two independent exits for a single overnight accommodation area with 12 or less passengers. For each additional 12 passengers in the same area there must be at least one additional exit. In addition it must be shown that each accommodation area can be evacuated within an allotted time. For instance:

Passengers	Minimum number of exits per accommodation area	Minimum evacuation time (seconds)	Number of blocked exits - primary exit must be blocked.
0-12	2	90	1
13-24	3	90	2
25-36	4	90	2
37-49	5	90	2
37-49	5	120	3

For example, a passenger craft that has two separate overnight accommodation area each holding 12 passengers would be required to have two separate exits for each area. A total of four exits. Each accommodation area having 12 passengers would need to be fully evacuated within 90 seconds with the primary exit blocked.

For the purposes of this section crew members who sleep in the overnight accommodation area must be counted as a passenger.

In summary, the number of exits must be base on the number passenger on per accommodation area with a maximum time for evacuation with at least one exit blocked.

The interim rules do not address emergency lighting and the lighting of exits. Overnight accommodation area should have independent emergency lighting and all exits should be lighted at all times. Again I referred to CFR Part 25.812 for an example in commercial aviation.

I look forward to the revised rules as such vessels are the bread and butter of the diving and fishing in the United States.

Thank you,

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