



## Marine Safety Center Technical Note

MTN 4-00  
16717/LIFTBOATS  
August 30, 2000

Subj: Weather Criteria for Liftboat Leg Strength

Ref: (a) 46 CFR 174.255(c) (*On-Bottom Stability of Liftboats*)  
(b) 46 CFR 134.140(a) (*Leg Strength of Liftboats*)  
(c) Final Rule pertaining to 46 CFR Subchapter L (Federal Register Volume 62, Number 182, September 19, 1997)

1. Purpose: This Technical Note provides clarification of the weather criteria requirements specified in 46 CFR 174.255(c), pertaining to the on-bottom (elevated) stability, and 46 CFR 134.140(a), pertaining to leg strength, of Subchapter L liftboats in restricted service. The regulations specify a 70-knot wind/wave/current criteria for normal operations, where “the waves and current must be appropriate for the place.”

2. Discussion:

a. As explained in the preamble to the Final Rule (ref (c)), the origin of the 70-knot wind criteria was the recognition that thunderstorms in the Gulf of Mexico could create short-term wind gusts of that magnitude. Because such storms are localized and cannot be reliably forecasted in advance, it is possible that elevated liftboats could be subjected to these gusts.

b. However, there is some uncertainty within the liftboat design community as to what associated wave conditions should be applied in conjunction with the 70-knot wind. Some designers are assuming that the regulation requires them to apply fully developed wave conditions resulting from 70-knot winds, even though the short duration of the gusts will not actually create such oversized waves.

c. The Coast Guard accepts that short-term gusts, such as thunderstorms, will not appreciably increase waves from pre-storm conditions. To meet the leg strength and on-bottom stability requirements of references (a) and (b), designers may assume normal wave and current conditions (appropriate to the location) in conjunction with a 70-knot wind speed.

3. Applicability: The guidelines provided in this Technical Note apply to all U.S. flag liftboats certificated under Subchapter L, and that have keel laying dates or contract dates for major modification after the date of issue of this guidance.

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