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Homeland Security

United States
Coast Guard



Load Line Policy Notes

U.S. Coast Guard

**Naval Architecture Division
Office of Design and Engineering Standards
Washington, D.C.**



Load Line Policy Notes

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These "Load Line Policy Notes" (LLPN) were originally written and posted by the U.S. Coast Guard Naval Architecture Division in March, 2006. They consolidate into a single document current USCG load line policies that have evolved since the previous (1990) revision of Chapter 6.F, "Load Lines," of the Marine Safety Manual. The Notes also include expanded discussions and clarifications for both domestic U.S. and international (ICCL) load line regimes.

The LLPN will eventually form the basis of a future revision to MSM Chapter 6.F. In the meantime, any questions or comments concerning these Notes should be directed to the Naval Architecture Division (CG-5212) at (202) 372-1372.

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*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

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1. Overview of Load Line Assignment

a. Purpose. The most familiar load line feature is the well-known “Plimsoll mark” on each side of the hull amidships. The marks indicate the maximum waterline to which the vessel can be legally loaded. However, there is more to load lines than that: the purpose of load line assignment is to ensure the overall seaworthiness of the intact (undamaged) vessel. This is accomplished by:

- Ensuring a robust hull that can withstand severe sea conditions
(*i.e., structural design, construction, and maintenance*);
- Ensuring weathertight and watertight integrity of hull penetrations and superstructure openings
(*i.e., coamings around exposed openings, and that doors, hatches, vents, hull valves, etc. are fitted with covers or closures that are in good working condition*);
- Ensuring that the vessel has reserve buoyancy
(*by a requiring a minimum freeboard above the waterline*);
- Ensuring that the vessel is not overloaded
(*by limiting the maximum loaded draft*);
- Ensuring that the vessel has adequate stability and strength for all loading and operating conditions
(*by providing approved stability documentation and loading instructions for use by the master*);
- Ensuring rapid drainage of water on deck (from boarding seas)
(*by adequate arrangement of scuppers and freeing ports in bulwarks*);
- Ensuring safety of crew while working on deck
(*by increased freeboard to reduce boarding seas, and guardrails around deck edges*);
- Ensuring that modifications to the vessel do not compromise seaworthiness
(*modifications must be approved by the load line-assigning authority*); and
- Periodic inspections (afloat and drydocked) to verify that the above are properly maintained
(*by the load line-assigning authority*)

b. Applicability. Assignment of a load line is a requirement for most commercial U.S. vessels that operate on coastwise, Great Lakes, and ocean routes. With limited exceptions, most commercial U.S.-

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flag vessels more than 79 feet long that venture offshore (beyond the Boundary Line) or on the Great Lakes are required to have a load line assignment. Similarly, foreign-flag vessels in U.S. waters must also have a load line assignment. Evidence of assignment is the load line marks on the hull and a valid load line certificate carried on board.

c. Freeboard Assignment. By limiting the draft of the loaded vessel, the load line marks effectively reserve a portion of the hull's buoyancy above the waterline ("*freeboard*"). The location of the Plimsoll mark is measured vertically down the side of the hull from a reference deck (the "*freeboard deck*"). The specific vertical distance ("*freeboard assignment*") is determined by several physical characteristics of the hull (its length, proportions, block coefficient, etc.). Near to the Plimsoll mark is another set of marks that allow the vessel to load slightly deeper (or less) than the Plimsoll mark under certain circumstances.

d. Conditions of Assignment. The second part of load line assignment is less obvious than the hull marks, but is equally important. These are the requirements aimed at ensuring the watertight integrity of the vessel below the freeboard deck and the weathertight integrity above the freeboard deck, and provide for crew safety while working on deck. Collectively, all of these requirements are known as the "*conditions of assignment*." They include sill heights for doors, coaming heights for hatches, closing devices for exposed ventilators and air pipes, covers for exposed windows and deadlights, scuppers and freeing ports to allow rapid overboard drainage of decks in heavy weather, and railings to protect the crew so that they can move safely around deck while performing their duties.

e. Types of Load Lines. A vessel that is properly marked, and that meets the conditions of assignment, is assigned a load line. There are several types:

- an international (ICLL) load line (issued in accordance with IMO's International Convention on Load Lines);
- various domestic U.S. load lines (unrestricted, Special Service, and Great Lakes service);
- single-voyage exemption certificates (to permit a non-load line vessel to make a single, non-commercial "positioning" voyage that would normally require a load line); and
- a full exemption certificate (to completely exempt a vessel that would normally require a load line assignment).

The types of load lines required for various international and domestic U.S. voyages are summarized in [Figure 1-1: "Required Load Lines for U.S. Vessels"](#).

With respect to foreign vessels, the United States only recognizes ICLL certificates. Foreign vessels of non-ICLL countries must obtain a special U.S. "Form B" load line certificate in order to sail in U.S. waters (refer to [Section 8](#)).

f. Authority. Statutory authority and requirements are found 46 U.S. Code, Chapter 51 (sections 5101 thru 5116); note that certain relevant definitions are also found in Chapter 21. The responsibility and authority for the enforcement of load line laws has been delegated to the Commandant by the Secretary of the Department of Homeland Security (in accordance with DHS delegation #0170.1). The associated Coast Guard regulations are in 46 CFR Subchapter E (parts 41 thru 47).

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Figure 1-1
Required Load Lines for U.S. Vessels
According to type of voyage

Type of voyage	Route		Required Load Line
International voyages	Foreign ports <i>other than Canada</i>		ICLL
	Canadian ports <i>other than stipulated below</i>		ICLL
Domestic US voyages <i>other than stipulated below</i>	Ocean routes (<i>including to/from Hawaii, Alaska</i>)		ICLL or Domestic Service LL
	Intracoastal routes (<i>between East & West coasts via Panama Canal</i>)		ICLL or ICLL Exemption* (<i>PC transit is an int'l voyage</i>)
	Coastwise routes <i>other than stipulated below</i>		ICLL or Domestic Service LL
	Restricted coastwise <i>not more than 20 nm offshore</i>	Eastport, ME to Norfolk, VA	Special Service LL**
		Charleston, SC to Key West, FL	Special Service LL (<i>w/certain hurricane season restrictions</i>)**
		Key West, FL to Rio Grande River	
		San Francisco to San Diego, CA	Special Service LL**
	Inside the Boundary Line	Inter-island voyages	Special Service LL <i>with specific USCG approval</i> **
		Rivers; lakes, bays & sounds	No LL required
	US Gulf of Mexico coast	US Gulf of Mexico coast	No LL required <i>within 12 nm of coast</i>
Puget Sound & Inside Passage <i>(solely within US & Canadian waters defined by the 1934 Treaty)</i>		<i>Passenger vessels:</i> SOLAS subdivision LL <i>Other vessels:</i> No LL required	
“High-Speed Craft” (HSC) voyages	Between designated ports	International	No LL required <i>if vessel has valid HSC certificate</i>
		Domestic US	No LL required <i>if vessel has valid HSC endorsement on COI</i>
US territories & possessions voyages <i>Guam, Puerto Rico, US Virgin Islands, American Samoa, Northern Marianas, etc.</i>	To/from ports outside that territory or possession		ICLL
	Between ports within that territory or possession		ICLL or Special Service LL <i>with specific USCG approval</i> **
	Between Puerto Rico and US Virgin Islands		ICLL or Special Service LL <i>with specific USCG approval</i> **
	Between other adjacent territories or possessions		ICLL
Great Lakes voyages <i>including St Lawrence River west of Anticosti Island</i>	To/from foreign ports (<i>via St Lawrence River</i>)		ICLL
	To/from US coastal ports (<i>via St Lawrence River</i>)		ICLL or Domestic Service LL
	Between US & Canadian Great Lakes ports only		ICLL, Domestic Service LL, or Great Lakes LL
	Between US Great Lakes ports only	Unrestricted	Great Lakes LL
		Restricted	Great Lakes LL <i>with restrictions</i>
Exempted		No LL required <i>for certain vessels on certain routes</i>	
“Positioning” voyages <i>for non-LL vessels on voyage outside Boundary Line</i>	Single voyage (<i>a return trip is treated as a separate voyage</i>)		Single-voyage LL exemption, <i>with appropriate restrictions</i>
“Voyages to Nowhere”	Voyages outside Boundary Line that return directly to same port		ICLL, Domestic Service LL, or Special Service LL <i>as appropriate for route & distance offshore</i>

*Single voyage ICLL Exemption Certificate (issued by OCMI at departure port) for non-LL vessels on a domestic positioning voyage to the other coast.

**A Domestic Service LL assignment is also valid for this route.



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Section 2: References

Section contents:

[a. IMO Conventions and Codes](#)

[b USCG Marine Safety Manual \(MSM\)](#)

[Figure 2-1: Table of Load Line discussions in the MSM](#)

[c USCG Navigation and Vessel Inspection Circulars \(NVICs\)](#)

[Figure 2-2: Table of Load Line NVICs](#)

[d. "Load Line Technical Manual"](#)

[e. "Ship Design and Construction"](#)

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2. References

a. International Maritime Organization (IMO) Conventions and Codes:

[IMO web site \(www.imo.org\)](http://www.imo.org)

"International Convention on Load Lines, 1966"

"Protocol of 1988 relating to the International Convention on Load Lines, 1966"

"International Convention for the Safety of Life at Sea (SOLAS), 1974"

"Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989"
(1989 MODU Code)

"International Code of Safety for High-Speed Craft, 2000" (2000 HSC Code)

b. USCG Marine Safety Manuals (MSMs):

[Figure 2-1: Table of Load line discussions in the MSM](#)

[USCG MSM website \(www.uscg.mil/directives/listing_cim.asp?id=16000-16999\)](http://www.uscg.mil/directives/listing_cim.asp?id=16000-16999)

c. USCG Navigation and Vessel Inspection Circulars (NVICs):

[Figure 2-2: Table of Load line-related NVICs](#)

[USCG NVIC website \(www.uscg.mil/hq/cg5/nvic\)](http://www.uscg.mil/hq/cg5/nvic)

d. "Load Line Technical Manual" (Report USCG-M-1-90). This joint USCG/ABS publication provides an excellent in-depth explanation of load line assignments and interpretations of the Convention. The *Load Line Technical Manual* is posted on the USCG Naval Architecture Division's website at www.uscg.mil/hq/cg5/cg5212.

e. "Ship Design and Construction" (SNAME, 1980). Chapter IV of this book discusses load line assignment.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

Figure 2-1

Load Line discussions in the Marine Safety Manual

*The table below summarizes load line-related chapters in the USCG Marine Safety Manual.
 An index of all MSM volumes is at http://www.uscg.mil/directives/listing_cim.asp?id=16000-16999*

All files in Adobe .pdf format

MSM Volume	Chapter	Summary
MSM Volume II www.uscg.mil/directives/cim/16000-16999/CIM_16000_7A.pdf	Chapter B.4.A.5: Charters of Small Passenger Vessels	This MSM chapter discusses the criteria that qualify yachts as “bare boat” charters (which are exempt from load lines as recreational vessels).
	Chapter E.4: Int’l Convention on Load Lines	This MSM chapter discusses extension policies for load line certificates, and the use of non-exclusive surveyors to issue load line certificates.
MSM Volume IV www.uscg.mil/directives/cim/16000-16999/CIM_16000_9.pdf	Chapter 6.E: Stability	This MSM chapter has some special stability provisions when assigning load lines to certain vessel types (such as MODUs, open hopper barges, etc).
	Chapter 6.F: Load Lines	This is the primary MSM chapter for technical issues pertaining to load lines. However, it has not been updated since 1990, so the “ <i>Load Line Policy Notes</i> ” should be consulted for subsequent developments.
MSM Volume V www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf	Chapter 11: Load Line Violation Investigations	This MSM chapter sets forth procedures for investigating suspected load line violations. (Updated Apr 2008; this chapter replaces Chapter 7 which previously set forth LL investigation procedures).
MSM Volume VI www.uscg.mil/directives/cim/16000-16999/CIM_16000_11.pdf	Chapter 1.B.3.a: Detection of Load Line Violations	This MSM chapter provides guidance to COTP boarding parties and harbor patrols on how to look for possible load line violations.

Figure 2-2

Load Line NVICs

*The table below summarizes USCG load line-related NVICs.
 An index of all NVICs is at <http://www.uscg.mil/hq/cg5/nvic>*

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NVIC	Applicability	Summary
<p align="center"><u>NVIC 8-82</u> Load Line Certificates</p>	<p>Retention & filing of LL certificates by USCG</p>	<p>Policy concerning retention of LL certificate copies. Copies of all LL certificates are still to be forwarded to USCG, but only certain types will be kept on file.</p>
<p align="center"><u>NVIC 18-82</u> Form B Load Lines; Procedures for Issuance of Certificates</p>	<p>Foreign vessels of countries that are not signatory to ICLL</p>	<p>Procedures for obtaining and issuing Form B LL certificates.</p>
<p align="center"><u>NVIC 2-85</u> Notice to the US Coast Guard for Enforcement of Load Line Requirements</p>	<p>Load line assigning authorities and USCG personnel</p>	<p>Circumstances requiring notification of USCG with respect to LL violations (including overdue surveys).</p>
<p align="center"><u>NVIC 10-85</u> Oversight of Technical and Administrative Aspects of Load Line Assignment</p>	<p>USCG oversight of LL-issuing authorities</p>	<p>USCG oversight program of organizations authorized to issue LLs.</p>
<p align="center"><u>NVIC 10-86</u> Equivalence to Minimum Bow Height Requirements for Load Line Assignment</p>	<p>Bow height requirements for LL assignment</p>	<p>Methodology to calculate buoyancy for bluff-bowed vessels (such as liftboats or barges) to determine equivalency to the minimum bow height requirement for LL assignment.</p>

NVIC	Applicability	Summary
<p><u>NVIC 1-88</u> <u>NVIC 1-88 (Ch-1)</u> International Load Line Certificates for Small Passenger Vessels Operating Within 20 Miles of the Mouth of a Harbor of Safe Refuge</p>	<p>Small passenger vessels on international voyages</p>	<p>Small passenger vessels may be issued a restricted ICLL even if they cannot meet the full structural and stability standards for unrestricted ocean service. Such vessels must meet standards for “partially protected” waters, and operate within 20 miles of a harbor of safe refuge.</p>
<p><u>NVIC 8-91</u> Initial & Subsequent Inspection of Existing, Uncertificated Offshore Supply Vessels, including Liftboats</p>	<p>Offshore supply vessels (OSVs), including liftboats</p>	<p>Guidance for issuing COIs to OSVs, including liftboats, which were not previously inspected. Includes LL requirements.</p>
<p><u>NVIC 4-94</u> Elimination of Coast Guard Plan Review for Non-Critical Engineering Systems & Cargo Barges</p>	<p>All vessels</p>	<p>Establishes policy that eliminates USCG review of non-critical engineering systems for all vessels, as well as structural review of load-lined barges.</p>
<p><u>NVIC 7-94</u> Guidance on the Passenger Vessel Safety Act of 1993</p>	<p>Passenger vessels, particularly charter PVs, offshore “crew boats,” and passenger submersibles.</p>	<p>Among other things, the NVIC clarifies applicability of LL regulations to these passenger vessels.</p>
<p><u>NVIC 2-95 (Ch-2)</u> US Coast Guard’s Alternate Compliance Program</p>	<p>Certain US flag tank vessels, passenger vessels, cargo vessels, misc. vessels, and MODUs.</p>	<p>Establishes the ACP program. Mentions authority for class societies to issue ICLL certificates.</p>
<p><u>NVIC 3-97</u> Stability-related Review Performed by ABS for U.S. Flag Vessels</p>	<p>All US flag vessels (except certain novel vessels) subject to stability regulations</p>	<p>Extends authority of ABS to conduct stability reviews and issue stability letters on behalf of the USCG for all US flag vessels, including ACP vessels but excluding certain novel vessels.</p>

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Load Line Policy Notes

Section 3: Definitions and Explanations

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3. Definitions and Explanations

Several of the definitions below are taken from sections 2101 and 5101 of 46 US Code (USC), which contain the statutory definitions applicable to the U.S. load line regulations.

a. ***“Assigning Authority”*** - means the American Bureau of Shipping (ABS) or other similarly qualified organization to which the Commandant delegates load line assigning authority, as provided in 46 USC 5107. Refer to [Section 5\(b\)](#) for discussion of delegated assigning authorities.

b. ***“Boundary Line”*** - as specified in 46 CFR Part 7. In general, it is the line following the trend of seaward, high water shorelines, separating inland waters from high seas. However, some special situations may apply to specific locations, so the CFR must be consulted to determine the local Boundary Line. Vessels operating inside the Boundary Line are not subject to load line requirements. The Boundary Line should not be confused with the Demarcation Line, which separates the domestic U.S. “rules of the road” from the international COLREGS.

c. ***“Coastwise”*** - outside the Boundary Line, not more than 20 nautical miles offshore.

d. ***“Coastwise Load Line”*** - is no longer issued for new vessels entering service after January 1, 1986. However, existing vessels with a Coastwise load line certificate issued prior to that date may continue to have that certificate renewed.

e. ***“Domestic Service Load Line”*** – for vessels engaging solely on domestic US voyages. May be issued for unrestricted ocean and coastwise voyages, including Hawaii and/or Alaska, or may be issued with restrictions. Refer to [Section 12](#) for discussion of domestic service load lines. For certain vessels, a restricted version of domestic coastwise service is permissible with a “Special Service” load line (refer to [Section 13](#)).

f. ***“Domestic Voyage”*** (46 USCA 5101) means the movement of a vessel between places in (or subject to the jurisdiction of) the United States, except for movement between a territory or possession of the United States and a place outside that territory or possession. Refer to [Section 8](#) for further discussion of special domestic voyage situations.

g. ***“Economic Benefit of Overloading”*** (46 USCA 5101) – the freight revenue illicitly earned by overloading the vessel. Used in computing the penalty for overloading.

h. ***“Exemption”*** - a specific load line requirement is not required. Exemptions may be granted to an individual vessel or a particular type or class of vessels, or for a specified voyage, or in conjunction with an operating restriction whereby a load line exemption certificate is issued.

i. ***“Existing Vessel”*** (46 USCA 5101) – the definition in 46 CFR 42.05 has been superseded by the recodification of 46 US Code chapter 51 in 1986, which nominally establishes different threshold dates. However, “existing vessel” definitions in 46 CFR Part 45 (Great Lakes Load Lines) and Part 46 (Subdivision Load Lines for Passenger Vessels) are still applicable for those parts. An “existing vessel” means a vessel:

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- (1) On a domestic voyage, the keel of which was laid (or at a similar stage of construction) before January 1, 1986; or
- (2) On a foreign voyage, the keel of which was laid (or at a similar stage of construction), before July 21, 1968; or
- (3) Solely on Great Lakes voyages before April 14, 1973 (per 46 CFR part 45), the keel of which was laid or at a similar stage of construction, before August 27, 1936; or
- (4) Passenger vessel marked with subdivision load lines (per 46 CFR part 46), the keel of which was laid or was converted to such service before May 26, 1965.

j. “Freeboard deck” – the designated deck from which the freeboard is measured. It is normally the uppermost complete deck exposed to weather and sea; and has permanent means of closing all weather-exposed openings, and below which openings in the sides of the ship are fitted with permanent means of watertight closing. The freeboard deck is not necessarily the vessel’s Main Deck. In fact, because some deck designs may include recesses, steps, or other discontinuities, the determination of freeboard deck may require careful analysis; Regulation 3 of the ICLL has a comprehensive definition of “freeboard deck” which addresses a variety of possible arrangements. One of the purposes of load line assignment is to ensure the vessel’s weathertight integrity above its freeboard deck and its watertight integrity below the freeboard deck.

k. “ICLL” – refers to the International Convention on Load Lines, 1966, as modified by the Protocol of 1988.

l. “Length” (for load line purposes) – means 96 percent of the total length on a waterline at 85 percent of the least molded depth measured from the top of the keel, or the length from the fore side of the stem to the axis of the rudder stock on that waterline, if that is greater (note that Z-drive units are not considered to be rudder stocks). Regulation 3 of the ICLL has some additional discussions for determining the load line length of vessels without rudder stocks, or with unusual stem contours, or with keel rake.

m. “Special Service Load Line” – a restricted version of the domestic service load line, for certain vessels on coastwise voyages (not more than 20 nautical miles from shore) within designated sections of the U.S. coast, or between islands of the same group. Because of the restrictions, the load line requirements for this service do not have to be as stringent as for unrestricted domestic service. Refer to [Section 13](#) for discussion of Special Service load lines.

n. “Novel Vessel” - means any vessel with geometric ratios and proportions which are significantly out of the range of standard vessel considered in development of the Convention; or any vessel with features out of the range of the standards with regard to the conditions of assignment or determination of freeboards.

o. “Public Vessel” (46 USC 2101) is a vessel “owned, or demise chartered [“bareboat” charter] and operated by the United States government or a government of a foreign country, and that is not in commercial service.” This definition includes vessels under bareboat charter to the Military Sealift Command.

p. “Small Passenger Vessel” (46 USC 2101) means a vessel less than 100 gross tons—

- (1) carrying more than 6 passengers (including at least one passenger for hire); or
- (2) that is chartered with the crew provided (or specified by the owner or owner’s representative) and carrying more than 6 passengers; or
- (3) that is chartered without the crew provided (or specified by the owner or owner’s representative) and carrying more than 12 passengers; or
- (4) that is a submersible vessel [submarine] carrying at least one passenger for hire.

Refer to [Section 15](#) for discussion of small passenger vessels and load lines.

q. *“Watertight”* - means capable of preventing the passage of water through the structure in any direction under a head of water for which the surrounding structure is designed. One of the purposes of load line assignment is to ensure the watertight integrity of a vessel below its freeboard deck.

r. *“Weathertight”* - means that in any sea conditions water will not penetrate into the vessel. One of the purposes of load line assignment is to ensure the weathertight integrity of a vessel above its freeboard deck.

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Load Line Policy Notes

Section 4: Load Line Conventions, Statutes, and Regulations

Section contents:

[*a. IMO International Convention on Load Lines \(ICLL\), 1966*](#)

[*b. IMO Protocol of 1988 relating to the ICLL, 1966*](#)

[*c. 46 USC Chapter 21, "General Definitions"*](#)

[*d. 46 USC Chapter 51, "Load Lines"*](#)

[*e. 46 CFR Part 7, "Boundary Lines"*](#)

[*f. 46 CFR Parts 41-47, "Load Lines"*](#)

[*g. Marine Safety Manual, Vol IV, Chapter 6.F, "Load Lines"*](#)

[*h. Marine Safety Manual, Vol V, Chapter 11, "Load Line Violation Investigation"*](#)

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4. Load Line Conventions, Statutes, and Regulations

a. **IMO International Convention on Load Lines (ICLL), 1966.** This is the current international convention, drafted in 1966 for the purpose of replacing the previous International Load Line Convention of 1930. The ICLL was quickly ratified and went into force on July 21, 1968. The requirements of the original Convention are contained in 52 regulations that set forth the technical procedures for calculating freeboards, the conditions of assignment, and the various seasonal zones and areas. Countries signatory to the Convention agree to apply its regulations to their own vessels and accept the validity of ICLL certificates of foreign vessels. The United States is signatory to the ICLL; the list of other ICLL signatory countries can be found on the IMO website (www.imo.org).

b. **IMO Protocol of 1988 relating to the ICLL, 1966.** The Load Line Protocol is a separate IMO instrument that is associated with the ICLL. The purpose of the Protocol is to update the Convention regulations.¹ The ICLL Protocol was drafted in 1988, ratified in 1999 and went into force on February 3, 2000. It has been used to revise many of the original ICLL regulations, and has added several new regulations. IMO periodically publishes a consolidated edition of the ICLL which incorporates the Protocol revisions. Because the United States is signatory to the ICLL Protocol, it applies to US-flag vessels; the list of other Protocol signatory countries can be found on the IMO website (www.imo.org).

Throughout the LLPN, all references to the ICLL also include the ICLL Protocol.

¹ With respect to the ICLL, the evolution of ship design and construction over the years has moved in directions that were not anticipated by the original authors of the Convention, thereby creating the need for revision and modernization. However, because the process for amending the original Convention is awkward, and because a protocol can be amended more easily than the Convention, IMO adopted the Load Line Protocol to achieve that purpose. Regulations revised by the Protocol are substituted for the original ICLL regulations, otherwise the original regulations still apply. The Protocol required its own ratification; countries cannot ratify the Protocol unless they have also ratified the ICLL, and only countries that are signatory to the Protocol may actually apply it (countries that are signatory to the ICLL but *not* the Protocol, can only apply the original Convention regulations).

**The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2*

c. [46 USC Chapter 21, “General Definitions.”](#) This chapter of the U.S. Code contains several definitions that are used within the load line statutes and CFR regulations.

d. [46 USC Chapter 51, “Load Lines.”](#) This chapter is the primary statutory source of load line authority and requirements. The current provisions date back to its recodification in 1986 (Pub.L. 99-509) in which Congress substantially reorganized, modernized and reenacted the load line provisions of U.S. law. It replaced the previous load line laws (the International Voyage Load Line Act of 1973 and, for vessels on domestic voyages, the relevant portions of the Act of August 27, 1935). The legislative history associated with the recodification (which can be found at the back of *46 USC Annotated*) provides some additional insights into Congressional intent.

e. [46 CFR Part 7, “Boundary Lines.”](#) This part of the Code of Federal Regulations sets forth the Boundary Lines for the U.S. coast, which are used for a variety of regulatory purposes including applicability of load line regulations (U.S.-flag vessels operating inside the Boundary Line are not subject to load line regulations). Note that there are no boundary lines established for the Great Lakes, or for US territories or possessions.

f. [46 CFR Parts 41--47, “Load Lines.”](#) These parts (collectively comprising Subchapter E) are the primary load line regulations. Unfortunately, this subchapter has not yet been fully revised to reflect the above-mentioned recodification of 46 USC Chapter 51, so some of the regulations are effectively superseded. Therefore, when reviewing a regulation, it is also necessary to consult 46 USC Chapter 51. Furthermore, ICLL revisions that have entered into force since January 1, 2005, have not yet been incorporated into 46 CFR part 42. Refer to the discussion “*Specific USCG requirements with respect to certain ICLL regulations*” in [Section 11](#).

g. [Marine Safety Manual, Vol. IV, Chapter 6.F, “Load Lines.”](#)² This volume of the MSM was originally issued 22 Oct 1984. Chapter 6.F is the “Load Line” chapter; it was last revised on 24 Sept 1990 (Change 2). Therefore, the MSM is considerably out of date. These “Load Line Policy Notes” (LLPN) present updated load line policies, clarifications, and discussions that have developed since Chapter 6.F was last revised. The LLPN are intended to serve until the MSM itself can be officially revised at some time in the future.

h. [Marine Safety Manual, Vol. V, Chapter 11, “Load Line Violation Investigation.”](#)³ This chapter of MSM Volume V (updated April 2008) sets forth the procedures for investigation of suspected load line violations.

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² *MSM Vol IV* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_9.pdf

³ *MSM Vol V* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf



Load Line Policy Notes

Section 5: Administration of Load Lines

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- (7) Discrepancies
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5. Administration of Load Lines

a. USCG responsibilities. In general, the Coast Guard does not perform the duties of a load line assigning authority. The only exception to this is issuance of single-voyage exemption certificates. The load line responsibilities of the Coast Guard are:

(1) *Headquarters:* The principle Headquarters office for load line regulations and technical policy is the Naval Architecture Division (CG-5212). This also includes approval of waivers, exemptions and equivalencies (*except for those that have been delegated to the Marine Safety Center below*); interpretations, clarifications, first line of appeals, and policy determinations for unusual situations. Also at Headquarters, the Office of Vessel Activities (CG-543) is responsible for load line compliance, and administrative oversight of load line activities of the delegated assigning authorities.

(2) *Marine Safety Center:* Technical oversight of delegated assigning authorities. Approval of certain exemptions and waivers, as delegated by Headquarters (at present, these are approval of ICLL bow height waivers for liftboats, and approval of domestic load line hatch cover exemptions for open hopper barges and dredges).

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

(3) *District offices:* Detention of vessels; investigate and act on violations (see [Marine Safety Manual Volume V, Chapter 11, "Load Line Violation Investigations"](#)).⁴

(4) *Field units:* Field units are not ordinarily involved in load line issues except for special situations such as: issuing of single-voyage exemption certificates (see [Section 9](#)); local enforcement (ie, ensuring that vessels have appropriate load line certificate); and investigation of violations. [Marine Safety Manual Volume VI, Chapter 1.B.3.a, "Detection of Load Line Violations"](#)⁵ provides guidance to COTP boarding teams and harbor patrols on how to be alert for load line violations (*note that some of the "Vessel applicability" discussion has been superseded by the 1986 recodification; refer to [Section 7](#) for more-current applicability information*).

b. Assigning authorities.

Note: The term "recognized classification society" is used in the Marine Safety Manual and 46 CFR load line regulations to refer to a class society that is authorized by the Commandant to issue load lines. However, since the implementation of the Alternate Compliance Program (ACP), this term has taken on a very specific regulatory meaning that is much broader than just load line assignment. Therefore, the appropriate term for load line purposes is now "assigning authority."

(1) *General authorization:* The Commandant has delegated load line-assigning authority to several classification societies as follows:

(a) The American Bureau of Shipping (ABS) is the prime assigning authority for the Coast Guard. In this capacity ABS is:

- authorized to issue domestic load lines for U.S. vessels (ABS-classed or unclassified) and Form B load lines for foreign vessels of countries that are not signatory to the ICLL (regardless of class); and
- authorized to issue international (ICLL) load lines for U.S. vessels (ABS-classed or unclassified).

(b) The following class societies are authorized to issue international (ICLL) certificates to U.S. vessels without prior Coast Guard approval: Lloyds Register (LR), Germanischer Lloyd (GL), Det Norske Veritas (DNV), and Bureau Veritas (BV). Owners of unclassified U.S. vessels may use any of them for ICLL assignment.

(c) ABS and the above-delegated class societies are authorized to issue or reissue, under their own seals and signatures of their own officials, the appropriate load line and/or exemption certificates.

(2) *Case-by-case authorization:* At the request of a U.S. vessel owner, the Commandant (CG-5212) may appoint another classification society to act as an assigning authority for that vessel, provided the following conditions are met:

- (a) the vessel is issued a valid certificate of class by that classification society;
- (b) the vessel is not operating exclusively on domestic voyages; and
- (c) the vessel has a valid Certificate of Inspection issued by the Coast Guard.

To date, the following class society has been given case-by-case authority to issue international (ICLL) load lines for specific vessels: Registro Italiano Navale (RINA). Owners seeking such approval for one of their ships should submit their request to Commandant (CG-5212).

⁴ *MSM Vol V* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf

⁵ *MSM Vol VI* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_11.pdf

(3) *Change in Assigning Authority:* If the owner desires a change in assigning authority for a vessel, a special request must be made in writing to the Commandant (CG-5212) at least 90 days prior to the expiration date of the present certificate or annual endorsement. A change in the assigning authority does not presume any change in assigned load lines.

c. Assigning authority duties. The performance of necessary surveys relating to the condition of the vessel and correctness of markings, assignment of load lines, and the issuance of load line Certificates are functions performed by the load line assigning authority. The load line Certificate is required to be maintained in a current status by annual endorsement of the assigning authority. The issuance of the certificate and its validity are contingent upon annual surveys and inspections by the assigning authority, to verify compliance with the regulations as to correctness of the load line mark, the structural efficiency of the vessel, and the provision of effective protection to the vessel and crew. The assigning authority is responsible for the following:

(1) *Survey Report:* The assigning authority shall prepare a load line survey report for the vessel. The survey report must include the “*Record of Conditions of Assignment*” (IACS Form LL.11 is an acceptable form of the report).

(2) *Stability verification:* The assignment of load lines is conditioned upon the adequate stability of the vessel. The assigning authority shall verify that the stability of the vessel has been properly reviewed, and that the appropriate stability information or documentation has been furnished to the master.

(3) *Structural verification:* The assignment of load lines is conditioned upon adequate structural integrity of the vessel. The assigning authority shall verify that the general structural strength of the vessel is sufficient for the draft corresponding to the assigned freeboard. Loading information for the master, including a loading manual if required, shall be reviewed and approved by the assigning authority and furnished to the vessel.

(4) *Verification of Conditions of Assignments and hull markings:* The assigning authority shall not deliver any required load line certificate to the vessel until after its surveyor has ascertained that the vessel meets the applicable conditions of assignment, and that the correct placement of the marks on the vessel's sides has been confirmed.

(5) *Issuance of load line certificates:* On finding that a load line survey of a vessel is satisfactory and that the vessel's load lines are marked correctly, the assigning authority shall issue a load line certificate signed by the authorized surveyor and deliver it to the vessel owner or master.

(6) *Annual survey and validation:* The assigning authority shall annually survey the vessel to verify that the load line marks are correctly located on the hull, that fittings and appliances for protection of openings and crew have been maintained in effective condition, that there have not been alterations made to the hull or superstructure which would affect the freeboard assignment calculations, and the vessel is in compliance with any authorized conditions, restrictions, and/or exemptions. Upon satisfactory completion of this survey, the assigning authority shall endorse the load line certificate accordingly.

(7) *Discrepancies:* The senior local surveyor of the assigning authority shall notify the cognizant Officer in Charge, Marine Inspection (OCMI) in whose zone the vessel is located if any of the following are detected during a survey of a vessel for purposes related to the vessel's load line:

(a) Conditions of assignment have not been maintained as required in the load line regulations to the extent to require certificate cancellation.

(b) Repairs or alterations have been made to the vessel without approval of the assigning authority which require an assignment of increased freeboard.

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(c) The required fittings and appliances (guardrails, freeing ports, hatch covers, doors, bulkheads, securing and closing devices, etc.) are not maintained in an effective condition.

(d) The structural strength of the vessel has deteriorated or is lowered so as to question the safety of the vessel.

(e) The load line certificate has not been endorsed to show that the vessel has been surveyed annually or periodically in accordance with the requirements of the regulations.

(f) The surveyor is denied access to any part of the vessel that is required to be inspected or surveyed for load line purposes.

(g) Vessel deficiencies are not corrected so as to preclude the issuance, reissuance, extension, or endorsement of the load line certificate.

(8) *Correction of deficiencies:* During any survey made by the assigning authority, those items, fittings, etc., which are found to be in an unsatisfactory condition by the surveyor must be repaired or renewed in order to place the vessel in a satisfactory condition. No load line certificate may be issued, endorsed, extended, or reissued or delivered to a vessel subject to this subchapter unless unsatisfactory conditions have been corrected.

(9) *Cancellation of load line certificate:* Although the assigning authority can issue load line certificates, it does not have the authority to cancel or revoke them. Load line certificates can only be cancelled by the Coast Guard. Owners may voluntarily cancel load line assignment.

(10) *Periodic activity reports:* The assigning authority will submit an activity report every 6 months to Coast Guard (CG-5212), listing the load line-related activities it has performed. The report should list:

- Vessel name and official numbers (USCG, IMO)
- Type of vessel
- Principle characteristics (length, beam, depth) and freeboard assignment
- Type of load line (ICLL, Domestic, Special Service, Great Lakes, Type A, B, B-25, etc)
- Nature of load line activity (initial issuance, renewal)
- Issuance and expiration dates of certificate
- Special comments, if any (hatch cover exemption, bow height waiver, etc.)

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Load Line Policy Notes

Section 6: Enforcement of Load Line Regulations

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- (1) *Role of U.S. Customs*
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- (1) *Verification*
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- (4) *Investigation of load line violations*

[c. Detention of vessels](#)

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6. Enforcement of Load Lines Regulations

a. Introduction.

(1) *Role of U.S. Customs:* The enforcement of the load line regulations is the joint responsibility of the Coast Guard district commander and the district director of U.S. Customs. Collectors of customs will act as agents of the Coast Guard. As a means of enforcement, routine checks are made of vessels by customs officers in conjunction with their normal duties. By those checks, it is contemplated that customs officers will report any apparent violations to the Coast Guard.

NOTE: Full cooperation should be maintained between the district director of customs and the district commander so as to provide the most efficient and complete inspection possible.

(2) *Checks of vessels departing on or arriving from a foreign voyage:* These shall be the responsibility of the Coast Guard district commander but will normally be carried out by U.S. Customs Service officers in the course of their normal duties. Where customs officers are unable to carry out these checks or where violations come to the attention of the Coast Guard, the district commander will insure that the laws and regulations are complied with. Clearance may be refused to vessels found in violation of the load line regulations.

(3) *Checks of vessels on coastwise and Great Lakes voyages:* These are the responsibility of the district commander, and will normally be carried out by Coast Guard personnel (commissioned or warrant officer, petty officer, or civilian) designated for this task and trained in the requisite procedures and calculations by the OCMI.

b. Detection and investigation of violations. On routine inspection duties, marine inspectors and other marine safety personnel will check for load line compliance as outlined below. Any violations should be referred to the OCMI for resolution.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

Section 6: Enforcement of Load Line Regulations

(1) *Verification*: During routine boardings, inspectors should verify that the vessel has a valid load line certificate, that load lines and draft marks are conspicuously marked on the hull, and that the proper log entries have been made.

(2) *Overloading*: An overloaded condition may be noticed (or suspected) during routine boardings by USCG inspectors or Customs officials, either upon the vessel's arrival, or when preparing to depart.

(3) *Material condition*: While the most common reason to detain a vessel is for overloading and submergence of the load line mark, it is equally important to look for deteriorations or modifications that might invalidate its conditions of assignment. There are number of items that should be examined at each boarding. These include the condition of hatches, coamings, air pipes, watertight doors, vent closures, and anything that affects the weathertight and watertight integrity of the vessel. Other things to look at include crew protection items, such as lifelines and rails; freeing ports; scuppers; side ports; side scuttles, ventilators, and hatches. Materiel deterioration in these items which would impair their operation or compromise the watertight integrity of the hull envelope are as much grounds for detention as overloading.

(4) *Investigation of load line violations*: Marine safety investigating officers are normally assigned to investigate suspected load line violations. Procedures are detailed in the [Marine Safety Manual Volume V, Chapter 11, "Load Line Violation Investigations"](#)⁶

c. Detention of vessels. 46 USC 5113 provides for the detention of vessels (US or foreign) for load line violations in U.S. waters.

(1) The District Director of Customs or the USCG District Commander may detain a vessel (U.S. or foreign) for survey if there is reason to believe that the vessel is proceeding on a journey in excess of the draft allowed by the regulations as indicated by the vessel's load line certificate (ie, it is overloaded), or that its material condition is so poor that the vessel is not seaworthy.

(2) If the District Director of Customs orders a vessel detained, he shall immediately inform the District Commander. Clearance will be refused to any vessel under detention order, which will be in effect until it is shown that the vessel is not in violation of the applicable law and the regulations.

(3) The detention of a vessel will be by written order of either the District Commander or the District Director of Customs. The District Commander will arrange for an independent survey to determine the condition of the vessel. If the survey confirms that the vessel is in violation of law or the applicable regulations, the owner of a vessel is liable for the cost incident to a petition for review and any survey.

(4) When a vessel has been detained for a load line violation it cannot be cleared until the violation is corrected. If a violation is discovered after departure clearance was obtained, the clearance shall be withdrawn and the vessel detained until the violation is corrected.

(5) When a vessel is detained, the owner, agent, or master may appeal the detention to the Commandant via the District Commander within 5 days of the order. The Commandant may order a further survey, and may affirm, set aside, or modify the order of the detaining officer.

(6) Vessels should be detained only as long as necessary to correct the violation.

d. Penalties. 46 USC 5116 prescribes the penalties for load line violations.

(1) The Secretary of Homeland Security has transferred to the Commandant authority to assess, collect, remit or litigate any monetary penalty imposed under the load line law and implementing regulations.

⁶ *MSM Vol V* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf

Section 6: Enforcement of Load Line Regulations

(2) Generally, the owner, charterer, managing operator, agent, master, and individual in charge of a vessel in violation of load line laws or regulations will be liable for the penalties as set forth in law, and the vessel will also be liable *in rem* for the penalty.

(3) The penalty for overloading includes an amount equal to “twice the economic benefit of overloading,” which is based on freight rate or \$50 per ton (whichever is less) for that voyage, multiplied by the weight of overload. In calculating the weight of overload, the vessel’s voyage must be analyzed to determine the most severe load line zone through which it passed (for example, Winter North Atlantic zone during the winter season). The overload should be computed as the maximum immersion of that load line mark (in inches), multiplied by the vessel’s “Tons per Inch Immersion” factor at that draft (the TPI can be found in the vessel’s stability booklet).

(4) Other load line penalties are also prescribed for failure to properly log vessel drafts, sailing in violation of a detention order, and tampering with the load line marks.

e. **Cancellation of certificates.** Load line certificates may be cancelled by proper U.S. authority (OCMI, District Commander, District Director of Customs, or Commandant, but *not* the issuing authority) for due cause, including one or more of the causes listed below. Such action may occur prior to the expiration date on the certificate. The cancellation of such certificate means that the correctness of load line marks and compliance with conditions of assignment for the vessel no longer are recognized by the United States and that the existing assigned load line marks are voided. The certificate should be removed from the vessel and delivered to the assigning authority with an explanation of the cancellation action. Causes for cancellation of certificates are:

(1) The conditions of assignment have not been maintained (ie, fittings and appliances have deteriorated and are not in an effective condition for the protection of openings or for the safety of crew on deck).

(2) Material alterations have taken place in the hull or superstructure of the vessel, which will necessitate re-calculation of the freeboard assignment.

(3) The structural strength of the vessel has deteriorated to such an extent that the vessel is unsafe.

(4) The load line certificate or International Load Line Exemption Certificate is not endorsed to show that the vessel has been surveyed annually by the issuing authority.

(5) The owner, master, or agent of the vessel has furnished false or fraudulent information in the application for a certificate.

(6) Voluntary action by the owner/operator.

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Load Line Policy Notes

Section 7: Applicability -- Vessels

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[*e. Foreign-flagged vessels in U.S. waters*](#)

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7. Applicability -- Vessels

a. Background. In 1986 Pub.L. 99-509 dramatically revised the load line statutes as part of the recodification of Title 46 of the United States Code (46 USC chapter 51, "Load Lines"). Previously, the load line statutes were applicable to "merchant vessels" more than 150 gross tons that engaged in various voyages (i.e., foreign voyages, domestic voyages, coastwise voyages, inter-island voyages, etc). Over the years, this became problematic as new types of vessels and operations evolved: for example, are oceanographic research ships considered "merchant vessels"? Is a "cruise to nowhere" considered a voyage? Although these situations were not anticipated by the original statutes, it was appropriate to bring these vessels under the seaworthiness regime of load lines because they are exposed to the perils of the high seas.

The 1986 recodification resolved these problems by adopting an entirely different strategy towards applicability: it did away with "voyages" (instead, it relies on "movements" that cross the Boundary Line), and made virtually all U.S. vessels subject to load lines except those that are statutorily excluded (by law) or regulatorily exempted (by regulation). Thus, future types of vessels are automatically subject to load line requirements unless specifically exempted.

b. General Applicability.

(1) All commercial U.S. vessels that are 79 feet (24 meters) or longer, and that cross outside the Boundary Line or onto the Great Lakes, are subject to load line requirements unless excluded or exempted. The 1986 recodification of the load line statutes made some significant changes in the application of load line requirements. The previous exclusion for vessels on inland waters has been retained. However, the old loophole for vessels on "voyages to nowhere" is no longer viable: as long as a vessel proceeds beyond the Boundary Line it is subject to load line requirements, even if it returns directly to the port of departure.

(2) Similarly, all commercial foreign-flag vessels of 79 feet (24 meters) or longer that are on the navigable waters of the United States, or waters otherwise subject to the jurisdiction of the United States, are subject to load line requirements.

**The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2*

c. Vessels Included. Vessels statutorily subject to load line regulations are specified in 46 USC 5102 as follows:

- (1) A vessel of the United States;
- (2) A vessel on the navigable waters of the United States;
- (3) A vessel—
 - (a) owned by a citizen of the United States or a corporation established by or under the laws of the U.S., and
 - (b) not registered in a foreign country.
- (4) A public vessel of the United States;
- (5) A vessel otherwise subject to the jurisdiction of the United States.

d. Vessels Excluded. The following vessels are statutorily excluded from load line requirements per 46 USC 5102:

- (1) A vessel of war;
- (2) A recreational vessel when operated only for pleasure, including bareboat-chartered yachts (provided that the charter provisions meet the criteria as a bonafide bareboat charter - refer to a thorough discussion on this in paragraph A.5, “*Charters of Small Passenger Vessels*” in [Marine Safety Manual Volume II, Chapter B.4.A.5](#))⁷;
- (3) A fishing vessel⁸,
- (4) A fish processing vessel⁸, if it meets the following criteria:
 - (a) is not more than 5,000 gross tons; and
 - (b) was constructed as a fish processor before August 16, 1974 (or converted to a fish processor before January 1, 1983); and
 - (c) is not on a foreign voyage.
- (5) A fish tender vessel⁸ that meets any of the following exclusions is exempted (fish tenders that do not meet an exclusion are subject to load line requirements):
 - (a) *Temporary exclusion for certain fish tenders*⁹: a fish tender engaged in the Aleutian trade¹⁰ is exempted from load line requirements until January 1, 2003 if it:
 - (i) operated in the Aleutian trade before September 8, 1990 (or was purchased before that date and entered into the trade before June 1, 1992); and
 - (ii) does not undergo a major conversion; and
 - (iii) did not have a load line assigned at any time before November 16, 1990.
 - (b) *Temporary exclusion for “Bowfin” (ON 604231)*¹¹: this vessel is exempted from load line requirements until December 31, 2006 when engaged in the Aleutian trade provided that the vessel does not undergo a major conversion.

⁷ *MSM Vol II* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_7A.pdf

⁸ The definitions of “*fishing vessel*,” “*fish processing vessel*,” and “*fish tender vessel*” are given in 46 USCA 2101.

⁹ This exclusion has expired, but is included here for historical reference (see the effective provisions for the 1990 Acts in the *Historical and Statutory Notes* at the end of 46 USCA 5102).

¹⁰ The definition of “*Aleutian trade*” is found in 46 USCA 2102(b).

¹¹ See the “*Aleutian Trade*” discussion in the *Historical and Statutory Notes* at the end of 46 USCA 5102.

(c) *Permanent exclusion*: a fish tender that meets the following criteria is excluded from load line requirements:

- (i) is not more than 500 gross tons; and
- (ii) was constructed (or under construction, or under contract to be constructed) as a fish tender before January 1, 1980, or converted to a fish tender before January 1, 1983; and
- (iii) is not on a foreign voyage, or is not engaged in the Aleutian trade (except a vessel in that trade that was assigned a load line at any time before June 1, 1992)

(6) A vessel that does not cross outside the Boundary Line¹² or onto the Great Lakes.

(7) A vessel less than 79 feet (24 meters) in length. The application of the new law is based solely on vessel length rather than tonnage and includes all vessels of 24 meters (79 feet) or more in length. Previously, the limit was 150 gross tons. In 1968, the International Convention on Load Lines changed its applicability basis from gross tonnage to length, although the U.S. continued using gross tonnage for its domestic load line regulations until 1986.

(8) A public vessel on a domestic voyage (ie, any public vessel of the U.S. on domestic voyage, even if it operates on the high seas).

(9) A vessel excluded by international agreement - This exclusion permits neighboring countries to enter into a bilateral agreement to exempt vessels on certain bodies of water from load line requirements. See [Section 8](#) for discussion of such agreements between the United States and Canada.

(10) Existing vessels less than 150 gross tons on a domestic voyage. – Existing vessels that were built before January 1, 1986, are less than 150 gross tons, and are on domestic voyages continue to be excluded (such vessels were previously excluded under the old U.S. load line regulations). Vessels on domestic voyages outside the Boundary Lines that were built after that date, and that are 79 feet (24 meters) or more in length, are required to have a load line even if they are less than 150 gross tons.

(11) Small passenger vessels on domestic voyages¹³ – “Small passenger vessels” are statutorily defined as less than 100 gross tons (46 USC 2101(35)). As such, they were previously excluded from load line regulations while on domestic voyages because they were below the previous threshold of 150 gross tons. The new provision continues the exclusion, regardless of length. Thus, Subchapter T and Subchapter K vessels are excluded if operated solely on domestic voyages (however, depending upon their length and build year they may be subject to ICLL if operated internationally).

(12) Working fleet of the Panama Canal Commission - This provision excludes vessels owned by the Panama Canal Commission that are used exclusively in the working of the canal. However, since the Panama Canal has been returned to Panamanian jurisdiction, this particular exclusion is essentially moot.

e. [Foreign-flag vessels in U.S. waters.](#)

(1) *Vessels of countries that are signatory to ICLL*: must have a valid ICLL certificate or ICLL Exemption certificate. Refer to the IMO website (www.imo.org) to find the current listing of signatory countries.

¹² The Boundary Line is specified in 46 CFR part 7; see also the discussion in [Section 8\(b\)](#)

¹³ Passenger vessels 24 meters in length (or longer) that are making international voyages have been required to have an ICLL load line since 1968, regardless of their gross tonnage.

(2) *Vessels of countries that are not signatory to ICLL:* must have a U.S. "Form B" load line certificate, regardless of what other load line certificates may have been issued by other countries. Refer to [NVIC 18-82, "Form B Load Lines; Procedures for Issuance of Certificates"](#)¹⁴

f. Vessels requesting a voluntary load line.

(1) *General:* Except for a vessel less than 24 meters (79 feet) in length, the assigning authority may, upon application of the owner, assign a load line to a vessel that is normally excluded from load line requirements. A vessel assigned a voluntary load line is subject to the same enforcement and control requirements as if it were required to have a load line until the surrender of its load line certificate and the removal of its load line marks.

(2) *Vessels less than 24 meters:* Vessels of less than 24 meters (79) feet in length are not required to obtain a load line. The United States will not, even upon request, authorize a load line certificate to a vessel of this size for several reasons, two of which are: (1) the seakeeping and stability characteristics of a vessel of this size may not be adequate for unrestricted ocean service; and (2) the geometric load line calculation and the conditions of assignment in the load line regulations were not developed considering a vessel of this size.

(3) *Commercial fishing industry vessels:* Certain commercial fishing industry vessels (ie, commercial fishing, fish processing, and fish tender vessels) built since September 15, 1991, may voluntarily obtain a load line assignment in lieu of meeting the damage stability requirements of 46 CFR 28.580 (refer to [Section 17](#) for further discussion).

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¹⁴ NVICs are posted on the USCG website at www.uscg.mil/hq/cg5/nvic



Load Line Policy Notes

Section 8: Applicability – International and Domestic Voyages

Section contents:

a. International voyages

- (1) *Definition of “international voyage”*
- (2) *Voyages to territories and island groups*
- (3) *Excluded waters*
- (4) *Special agreement waters*
 - (a) *Treaty between U.S. and Canada concerning Puget Sound and Inside Passage*
 - (b) *MOU between U.S. and Canada concerning LL reciprocity on the Great Lakes*

b. Domestic voyages

- (1) *Definition of “domestic voyage”*
- (2) *U.S. Boundary Line*
- (3) *Domestic voyages outside the Boundary Line*
- (4) *Great Lakes voyages*

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8. Applicability – International & Domestic Voyages

a. International voyages. The International Convention on Load Lines (ICLL) applies to vessels of signatory countries that are on international voyages. Because the United States is signatory to the ICLL, all U.S. vessels on international voyages must have a valid ICLL certificate (or ICLL exemption certificate).

- (1) *Definition of “international voyage:”* ICLL (Article 2) defines “international voyage” as a sea voyage from a signatory country to a port outside that country.
- (2) *Voyages to territories and island groups:* Territories (which may include island groups) of a signatory country are considered a separate country for international voyage purposes.
 - (a) Voyages between the continental U.S. and U.S. island territories (such as Puerto Rico, the Virgin Islands, Guam, the Mariana Islands, or the Marshall Islands) are international voyages.
 - (b) Voyages between islands of the same U.S. island group (such as among the Marshall Islands) are domestic voyages, but voyages between different island groups are international voyages. The only exceptions are voyages between Puerto Rico and the U.S. Virgin Islands: due to their proximity to each other, these are considered to be domestic voyages within the same island group.
- (3) *Excluded waters:* The ICLL does not apply to vessels navigating solely on certain waters, which are defined in Article 5. These include the St Lawrence River west of Anticosti Island, the Caspian Sea, and the Plate, Paraña and Uruguay Rivers west of a specified rhumb line between Argentina and Uruguay. However, vessels on international voyages through those waters must still have an ICLL assignment.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

(4) *Special agreement waters:* Article 6 of the ICLL allows two neighboring countries to enter into a mutual agreement that can exempt their respective vessels from ICLL requirements when in each other's waters, provided that both countries agree that the waters concerned are sheltered enough that the load line requirements are unreasonable or impracticable. In this regard, the United States and Canada have entered into two such agreements:

(a) *Treaty between the U.S. and Canada defining certain waters of the west coast of North America as sheltered waters (49 Stat. 2685; 46 CFR 42.03-35):* By this treaty, which was proclaimed on August 11, 1934, the United States and Canada agreed to mutually exempt Canadian and U.S. vessels from the provisions of the 1930 International Load Line Convention and from the provisions of existing load line statutes when engaged on international voyages originating on, wholly confined to, and terminating on the "sheltered waters" defined as follows:

"...The waters of Puget Sound, the waters lying between Vancouver Island and the mainland, and east of a line from a point one nautical mile west of the city limits of Port Angeles in the state of Washington to Race Rocks on Vancouver Island, and a line from Hope Island, British Columbia, to Cape Calvert, Calvert Island, British Columbia, the waters east of a line from Cape Calvert to Duke Point on Duke Island, and the waters north of Duke Island and east of Prince of Wales Island, Baranof Island, and Chicago Island, the waters of Peril, Neva, and Olga Straits to Sitka, and the waters east of a line from Port Althorp on Chicago Island to Cape Spencer, Alaska..."

Although the Treaty cites the 1930 Convention, it is still held to be valid with respect to all subsequent international and U.S. load line requirements.

Vessels navigating outside the designated boundaries on any portion of their voyage cannot claim the benefits of the Treaty and must meet applicable load line requirements.

Furthermore, passenger vessels must still meet applicable SOLAS subdivision load line requirements, even upon Treaty waters (*see [Section 15](#) for further discussion on subdivision load lines*).

(b) *US/Canada MOU concerning Great Lakes reciprocity:* In a memorandum of understanding (MOU) dated November 21, 1977, the United States Coast Guard and the Canadian Coast Guard affirmed the reciprocal recognition of load line regulations that each has in force on the Great Lakes. Under the terms of the MOU, Canadian vessels in United States waters, or U.S. vessels in Canadian waters, of the Great Lakes with valid load line certificates issued under the authority of their respective Governments are recognized as meeting the equivalent of United States load line regulations.

b. Domestic voyages. For domestic voyages departing from the continental United States, Hawaii, and Alaska, load line applicability depends upon whether or not the voyage crosses seaward of the Boundary Line.

(1) *Definition of "domestic voyage:"* U.S. law (46 USCA 5101) defines a "domestic voyage" as the movement of a vessel between places in (or subject to the jurisdiction of) the United States, except for movement between a territory or possession of the United States and a place outside that territory or possession. Note that this definition is based on "movements," not "voyages."

(2) *U.S. Boundary Line:* The Boundary Line is specified in 46 CFR Part 7. It is used for a variety of domestic U.S. maritime regulations, such as the Vessel Bridge-to-Bridge Radiotelephone Act, and applicability of load line regulations; it is *not* a geopolitical boundary for international jurisdiction purposes.

(a) In general, the Boundary Line is the line following the trend of seaward, high water shorelines, separating inland waters from coastal and offshore waters. However, some special situations may apply to specific locations, so 46 CFR Part 7 must be consulted to determine the

exact local Boundary Line. For example, between the Marquesas Keys, FL, and Rio Grande, TX, the Boundary Line is 12 miles offshore.

(b) Vessels operating solely inside the Boundary Line are not subject to load line requirements.

(c) The Boundary Line should not be confused with the Demarcation Line, which separates the domestic U.S. “rules of the road” from the international COLREGS.

(3) *Domestic voyages outside the Boundary Line:* Unless otherwise exempted, load lines are required for U.S. vessels operating outside the Boundary Line, whether on international or domestic voyages. A domestic voyage may be coastwise, offshore, or even on the high seas.

(a) Voyages that depart from, and return directly to, U.S. ports are domestic voyages. Examples include excursion voyages, oceanographic research voyages, offshore supply voyages, “voyages to nowhere,” etc. Because the vessels cross outside the Boundary Line, they are subject to load line regulations.

(b) Voyages between the continental U.S. and Hawaii or Alaska are domestic voyages.

(c) Voyages between U.S. ports via the former Panama Canal Zone were previously considered domestic voyages. However, it is presently unknown if Panama now considers all vessels transiting the Canal to be on international voyages and therefore subject to ICLL. This is a moot point since most U.S. vessels on high seas voyages will have an ICLL certificate anyway. However, non-load line U.S. vessels on positioning or delivery voyages via the Panama Canal should have an international (ICLL) load line exemption certificate issued by the OCMI of the departure port (*refer to [Section 9](#) for single-voyage load line exemptions*).

(d) Voyages between ports of the same U.S. territory (including islands of that territory) are domestic voyages. Voyages between Puerto Rico and the U.S. Virgin Islands are also considered domestic voyages. The Boundary Line specification does not include territories; vessels are required to have a load line if operating outside harbors or inlets.

(4) *Great Lakes voyages:* The Great Lakes are defined in 46 CFR 42.03-15. Unlike the coastal waters of the United States, there is no Boundary Line specified for the Great Lakes. Therefore, either an ICLL or Great Lakes load line is required for operation beyond the breakwater or harbor entrance by all U.S. vessels that are not otherwise exempted from load line requirements (*refer to [Section 14](#) for specially-exempted routes on the Great Lakes*).

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Load Line Policy Notes

Section 9: General Load Line Requirements

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9. General Load Line Requirements

This section discusses basic requirements that are common to all of the load line regimes (ie, international, domestic U.S., Great Lakes, etc). Requirements that are applicable to specific regimes are discussed in subsequent sections. References to “load line regulations” means either the ICLL and/or Federal regulations in 46 CFR Subchapter E (parts 41 thru 47).

a. Operational regulations for U.S. vessels. The major load line statutes (per 46 U.S. Code Annotated, chapter 51) and regulations (per 46 CFR Subchapter E) are summarized below:

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

- (1) Vessels subject to (or excluded from) load line regulations are specified in 46 USCA 5102, which supersedes 46 CFR 42.03-5 and 42.03-10.
- (2) Vessels may not operate outside the Boundary Line or on the Great Lakes without a valid load line assignment, unless otherwise exempted (*46 USCA 5102, 46 CFR 42.07-1*).
- (3) A vessel may not be operated in violation of any specific limitations or restrictions on its load line certificate (*46 CFR 42.09-1(c)*).
- (4) A vessel may not be loaded deeper than the applicable load line mark at each point along its voyage. When loading for a voyage that will pass through several zones, measures must be taken so that the vessel will not submerge the associated mark when crossing into a less-favorable zone. Submersion of the marks is permissible only under the special circumstances discussed in [paragraph k](#) below (*46 CFR 42.07-10*).
- (5) Vessels with salt water load lines (international or domestic U.S.) may navigate on the Great Lakes and St Lawrence Seaway but cannot operate on their fresh water marks; they must operate on their salt water marks (*46 CFR 45.9; this is also discussed further in [Section 14](#)*).
- (6) Prior to departure, the master must log the vessel's observed drafts and position of load line marks (relative to water surface) (*46 CFR 42.07-20*).
- (7) Repairs or alterations to the vessel that affect the freeboard calculation or conditions of assignment cannot be done without the prior approval of the assigning authority (*46 CFR 42.09-50*).

b. Stability standards. Load line assignment is predicated on the vessel having adequate stability. However, apart from damage stability requirements for certain reduced freeboard vessels, the load line regulations do not impose any specific stability requirements. Therefore, U.S. vessels must comply with the appropriate requirements of 46 CFR Subchapter S (parts 170 thru 174) for the intended routes and service.¹⁵ Depending upon the vessel's status, stability review and approval might be accomplished by the Marine Safety Center, ABS, or the assigning authority. For purposes of load line assignment, the assigning authority must have evidence of satisfactory stability (*46 CFR 42.09-10*).

c. Structural standards. The general structural strength of the vessel must be sufficient for the draft corresponding to the freeboard assignment. The load line regulations do not establish any specific strength standards; instead, vessels must be constructed and maintained in accordance with the appropriate Rules of a classification society accepted by the Coast Guard (*46 CFR 42.13-5*).

d. Information for the master. The master must be provided with sufficient loading and stability information so that the vessel may be safely loaded (or ballasted) within the strength limits of its hull, and that its stability can be evaluated under various conditions of service. For some vessels, this may require nothing more than a simple set of loading directions; for others, this may require a detailed loading manual and a Trim and Stability Booklet (*46 CFR 42.15-1*).

e. Freeboard assignment and marks. The actual freeboard assignment (ie, the vertical distance from the freeboard deck mark to the Plimsoll mark) is calculated in accordance with ICLL or appropriate domestic U.S. regulations (special service, Great Lakes, etc). From this basic assignment, the various seasonal allowances (Tropical, Summer, Winter, and Winter North Atlantic) and density allowances (Fresh water and Tropical Fresh Water) are measured; these are marked on the hull just forward of the Plimsoll mark. An additional set of marks can be assigned for vessels that qualify to carry lumber (log) deck cargos; these are marked on the hull just aft of the Plimsoll mark. Calculation of the freeboard assignment is

¹⁵ Compliance with the appropriate requirements and recommendations of the *International Code on Intact Stability, 2008, (2008 IS Code)* is considered equivalent to 46 CFR Subchapter S.

done by the assigning authority (*refer also to the ["Load Line Technical Manual"](#)¹⁶ for calculation details*).

f. Conditions of assignment. The vessel must be periodically surveyed by the assigning authority to verify that other conditions for assignment have been met, such as sill heights for doors, coaming heights for hatches, ventilators and air pipes, guardrails, etc, and have been maintained in working condition.

g. Issuance of certificates, inspections, and surveys.

(1) The load line certificates for which the Government of the United States of America assumes full responsibility may be issued by the American Bureau of Shipping, or an authorized classification society when appointed as an assigning authority by the Coast Guard.

(2) On finding that a load line survey of a vessel is satisfactory and that the vessel's load lines are marked correctly, the assigning authority shall issue the vessel a load line certificate signed by the authorized surveyor and deliver it to the vessel owner or master.

(3) The certificate issued must also describe the applicable load line marks, conditions, restrictions, and/or exemptions, if any, the vessel must observe, according to the season of the year and the zone or area in which the vessel may operate.

(4) A load line exemption certificate must certify the special conditions the vessel shall observe. Where a vessel qualifies for and is issued a Form E1 International Load Line Exemption Certificate for foreign voyages but is also engaged on domestic voyages, this certificate is considered equivalent to a valid domestic load line certificate.

(5) The certificates must be drawn up in the form of the models given in [Section 18](#), with the name and logo of the assigning authority as appropriate.

h. Duration and extensions. Each international and domestic full term load line certificate is issued for 5 years. During that period, the vessel must undergo annual surveys by the assigning authority to verify that critical fittings and closing appliances are being maintained in working condition, and that the vessel has not been altered in any way that invalidates the freeboard calculations and assignment. The certificate is endorsed by the surveyor after each annual survey. By the end of the 5-year period, the vessel must undergo a renewal survey (both topside and hull) before the original certificate expires. However, under certain circumstances the certificate may be extended in accordance with the provisions set forth in [Marine Safety Manual Vol II, Chapter E.4.C.](#)¹⁷

i. Cancellation and invalidation. A load line assignment and certificate issued to any vessel will cease to be valid upon the circumstances specified in 46 CFR 42.07-55.

j. Removal of hull markings. Load line hull markings including Plimsoll, seasonal, and assigning authority identification must be removed if invalid, unauthorized, or when the load line certificate is cancelled.

k. Submersion of marks. A vessel may not be loaded in such a way that submerges the appropriate load line mark(s) at any time when the vessel proceeds beyond the Boundary Line, during the voyage or on arrival, except as discussed below:

(1) *Fresh & brackish water allowances:* When loading at a fresh water port (specific gravity of 1.000), the appropriate salt water mark for the impending voyage may be submerged by the amount of the fresh water allowance (FWA) recorded on its load line certificate. For example: if the voyage will be sailed on Winter marks, then the vessel may be loaded until that mark is submerged by its fresh water allowance. In brackish water (ie, specific gravity between 1.000 and 1.025), the fresh

¹⁶ The *LL Tech Manual* is posted on the USCG website at www.uscg.mil/hq/cg5/cg5212/lltechmanual.asp.

¹⁷ *MSM Vol II* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_7A.pdf

water allowance must be adjusted to the proportional difference between 1.025 and the actual specific gravity:

$$\text{BWA} = \text{FWA} * (1.025 - \text{s.g.}_{\text{actual}}) / 0.025$$

where: BWA = brackish water allowance

FWA = fresh water allowance (*which is specified on the load line certificate*)

s.g._{actual} = actual specific gravity of port water (*measured by a hygrometer*)

For example: in brackish water of 1.015 s.g., the BWA is 40% of the FWA. If the FWA for the vessel is 4 inches, then the BWA for loading in this water would be 1.6 inches.

[Volume V \(Chapter 11\) of the Marine Safety Manual](#)¹⁸ contains further discussions on these allowances, including brackish water allowances (BWAs) for various U.S. ports and harbors.

Note: fresh water and brackish water allowances are not permitted on the Great Lakes. See [Section 14](#) for further discussion.

(2) *Steaming allowances:* When a vessel departs from a port situated on a river or inland waters, deeper loading is permitted corresponding to the weight of fuel and other stores that will be consumed during the transit from the port of departure to the Boundary Line. The steaming allowance is in addition to the fresh/brackish water allowance.

Note: steaming allowances are not permitted on the Great Lakes. See [Section 14](#) for further discussion.

(3) *Float-on/float-off vessels:* A FLO/FLO vessel may submerge its load lines during cargo operations to the extent permitted by its approved stability and loading documentation (draft limits, limiting sea & weather conditions, etc). The voyage, however, must be in accordance with its load line marks. See [Section 17](#) for further discussion.

(4) *Voyages within the Boundary Line:* There are no load line regulations prohibiting a vessel from loading deeper than its marks for a voyage or movement wholly inside the Boundary Line. However, there may still be structural and stability issues. Stability and structural reviews of a vessel are not usually done for drafts deeper than the load line assignment; loading to a deeper draft may violate class society and/or stability authorizations.

1. Exemptions and equivalencies. An exemption is relief from a load line requirement that would otherwise apply to the vessel. An exemption is granted only in cases where the normal load line requirement is unworkable or inappropriate for the vessel. The discussion below applies to U.S. vessels, and foreign vessels in U.S. waters under an ICLL certificate.

(1) *General:* For U.S. vessels, the burden of justifying an exemption is the responsibility of the vessel owner/operator, who must work with the assigning authority to develop a proposal for submittal to the Coast Guard. The assigning authority will then submit the proposal along with its recommendation for/against approval.¹⁹ If approved, the assigning authority will be authorized to exempt the vessel from the particular load line requirement. Exemption requests should be submitted to the appropriate Coast Guard office as follows:

Marine Safety Center: Bow height waiver requests for liftboats; hatch cover exemption requests for hopper barges (dump scows) on domestic voyages.

Commandant (CG-5212): All other requests for exemptions.

¹⁸ MSM Vol V is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf

¹⁹ It is possible that the assigning authority and owner/operator will not come to mutual agreement on a proposal. In such a case, the proposal is still forwarded to the Coast Guard (CG-5212) for final determination.

Section 9: General Load Line Requirements

(2) *Neighboring waters*: an exemption may be granted for voyages between neighboring countries where a mutual agreement provides for exemption from load line requirements. Such exemptions are granted in accordance with 46 CFR 42.03-30(b)(1) for domestic US load lines, and ICLL article 6(1) for international load lines. The exemption is annotated on the load line certificate. (see [Section 8](#) for a discussion of such agreements between the United States and Canada).

(3) *Novel features*: an exemption may be granted for a vessel that embodies novel features for purposes of research and development of such features. Such exemptions are granted in accordance with 46 CFR 42.03-30(b)(2) for domestic US load lines, and ICLL article 6(2) for international load lines. For international service, an ICLL Exemption Certificate must be issued in conjunction with the normal ICLL certificate; for domestic U.S. service, the exemption should be annotated on the appropriate domestic load line certificate.

(4) *Equivalencies*: An equivalency is an alternative design or arrangement that provides an equivalent level of safety or seaworthiness to a load line requirement. Equivalencies are granted in accordance with 46 CFR 42.03-20 for domestic US load lines, and ICLL article 8 for international load lines. No exemption certificate is required, nor any particular notation on the normal load line certificate.

(5) *Experimental purposes*: An exemption may be issued to accommodate experimental installations, where such installations may interfere with a load line requirement. An example might be temporary installation of research equipment. Coast Guard approval must be obtained before such installation occurs. Such exemptions are granted in accordance with 46 CFR 42.03-25 for domestic US load lines, and ICLL article 9 for international load lines. No exemption certificate is required, nor notation on the normal load line certificate.

m. Single-voyage load line exemptions.

(1) *General*: There may be occasions when a non-load lined U.S. vessel needs to make a “positioning” voyage outside the Boundary Line (or on the Great Lakes) for which a load line assignment would normally be required. Examples of such occasions may be a delivery or scrapping voyage, shipyard overhaul in another port, or a change in employment venue. As stated in 46 CFR 42.03-30, single-voyage exemptions are intended for exceptional circumstances; this does not include regular movements along the coast associated with the normal operations or routine employment of the vessel. The local OCMI may issue a single-voyage load line exemption (either ICLL or domestic), taking into consideration the following guidelines:

(a) Requests for a single-voyage load line exemption should be made in writing by the vessel's owner/operator to the OCMI of the departure port.

(b) The OCMI must determine that the vessel is safe to make the voyage. The extent of the survey required to issue a single-voyage exemption should be limited to that necessary to ensure that the vessel can make the voyage safely, and need not follow the exact load line survey requirements found in 46 CFR subchapter E. Nevertheless, the OCMI should be guided by the general elements of seaworthiness found in the regulations (ie, general condition of the hull, integrity of closures, satisfactory stability for the voyage, etc.).

(c) The conditions under which the voyage may be made are stated on the exemption authorization. This includes the ports of departure and arrival, period of validity (dates), heavy weather limitations, etc.

(d) The vessel is not permitted to carry passengers or commercial cargo (however, it can carry company equipment).

(e) The return voyage, if needed, should be treated as a separate voyage; a new exemption must be requested from the OCMI of that port. This is because the return voyage might be made

several weeks or months later, and the original OCMI can no longer be certain of the vessel's material condition. Only the OCMI at the port of departure can verify its seaworthiness at the time of the return voyage.

(f) A copy of the exemption is forwarded to Commandant (CG-5212) for information.

(2) *International (ICLL) exemption voyages:* For a non-load lined U.S. vessel that must make a single international voyage, the OCMI may issue an international (ICCL) exemption authorization in accordance with Article 6(4) of the ICLL. The authorization may be in the form of the International Load Line Exemption Certificate (see [Section 18](#)) or a letter similar to [Figure 9-1](#).

(3) *Domestic coastwise/Great Lakes exemption voyages:* For a non-load lined U.S. vessel that must make a single domestic U.S. coastwise or Great Lakes voyages, the OCMI may issue a single-voyage load line authorization in accordance with 46 CFR 42.03-30(f). [Figure 9-2](#) is a sample single-voyage coastwise load line exemption certificate.

n. [Seakeeping analysis](#). A seakeeping analysis may be required for vessels of unusual form, vessels with a geometric freeboard less than that required; or vessels needing a variance to conditions of assignment or strength requirements. The analysis will address the performance of the vessel in the requested route and service. Depending on the route, items in the analysis would include; precautions against shifting of hold and deck cargo, freedom from impacts and shocks, steadiness and ease in roll, pitch and heave, dryness of decks, freedom from spray in working or passenger areas and the effect of extreme seas on the vessels operation.

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Figure 9-1

Sample single-voyage ICLL Exemption Certificate
for non-LL vessel that must make an international positioning voyage

Commanding Officer Marine Safety Unit <i>[MSU address]</i>		
INTERNATIONAL LOAD LINE EXEMPTION CERTIFICATE		
(Certificate No.)		
Issued in accordance with the provisions of the International Convention on Load Lines (ICLL), under the authority of the Government of the United States of America and the Commandant, U.S. Coast Guard:		
By U.S. Coast Guard Officer in Charge, Marine Inspection, <i>[MSO port]</i> , and duly authorized for assigning and exemption purposes under the provisions of the Convention.		
<i>[Name of ship]</i>	<i>[Official Number or distinctive letters]</i>	<i>[Port of registry]</i>
This is to certify that the above-named vessel is exempted from the provisions of the ICLL under the authority conferred by Article 6(4) of that Convention, and that this vessel has been surveyed accordingly.		
The voyage for which this exemption is granted under Article 6(4) is:		
From: <i>[departure port]</i> , U.S.A. To: <i>[destination port]</i>		
<u>Conditions:</u> <i>[as stipulated by the OCMI... For example: Weather restrictions (if any). All openings to the hull shall be closed and securely fastened. The vessel is to proceed without passengers or cargo.]</i>		
This Certificate is valid until <i>[date]</i> or until arrival at <i>[destination port]</i> .		
Issued at <i>[MSU port]</i> , on <i>[date]</i> .		
<i>[signature]</i> Officer in Charge, Marine Inspection		
Copy: Commandant (CG-5212)		

Figure 9-2

**Sample single-voyage domestic Load Line
Exemption Certificate**

*for non-load line vessel that must make a domestic positioning voyage on
the Great Lakes or U.S. coast*

	Officer in Charge U.S. Coast Guard Marine Safety Unit <i>[MSU address]</i>
	16711 <i>[date]</i>
<i>[vessel owner/operator] [address]</i>	
SINGLE VOYAGE LOAD LINE EXEMPTION AUTHORIZATION	
Issued in accordance with the provisions of Title 46, Code of Federal Regulations, 42.03-30(f) by U.S. Coast Guard Officer in Charge, Marine Inspection, <i>[MSU port]</i> , to:	
<i>[vessel name, official number]</i>	
This Certificate is valid only for a voyage from <i>[departure port]</i> to <i>[destination port]</i> , coastwise, to arrive not later than <i>[date]</i> .	
<u>Conditions:</u> <i>[As stipulated by the OCMI. For example: Weather restrictions (if any). No cargo or passengers, and unmanned except not more than four (4) maintenance persons allowed. All openings to the hull shall be closed and securely fastened.]</i>	
This Certificate is valid until <i>[date]</i> or until arrival at <i>[destination]</i> .	
Issued at <i>[MSU port]</i> , <i>[date]</i> .	
	<i>[signature]</i> Officer in Charge, Marine Inspection
Copy: Commandant (CG-5212)	



Load Line Policy Notes

Section 10: Load Line Marks

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10. Load Line Marks

a. Zones, areas, and seasonal periods. The ICLL and US load line regulations divide the high seas into various *zones* (such as Tropical, Summer, and Winter), which correspond to the special marks on the load line “ladder” forward of the Plimsoll mark. The boundaries for these zones were generally established on the following weather criteria (although some relaxation was found acceptable in certain areas):

Summer zone: Not more than 10 percent winds of Beaufort Force 8 (34 knots) or more;

Tropical zone: Not more than 1 percent of winds of Beaufort Force 8 (34 knots) or more. Not more than one tropical storm in 10 years within an area of 5° square in any one separate calendar month.

Some of the zones are *seasonal*: they are considered “summer” waters for part of the year and “winter” waters for the rest of the year. Some of the zones are further subdivided into *areas* that may have slightly different seasonal dates than the zone. A vessel passing through a zone or area cannot be loaded any deeper than the associated load line mark for that zone and season.

For vessels with international (ICLL) certificates, boundaries and seasonal dates are specified in ICLL Regulations 46 through 52. Originally, the United States also adopted the same boundaries, which are specified in 46 CFR 42.30. However, the ICLL Protocol of 1988 (which went into force on 1 Feb 2000) has periodically modified some of the ICLL boundaries, while the US regulations have not yet been revised. Therefore, the Convention should be consulted for the most-current ICLL boundaries.²⁰

b. Regular (salt water service) marks. ICLL load line marks are used on vessels on international voyages; the United States has also adopted the same marks for domestic ocean-going and coastwise load lines. The marks are located amidships, and consist of the deck line, the Plimsoll mark, and a “ladder” of special seasonal and freshwater marks:

(1) *Deck line:* A 12-inch (300 mm) horizontal line corresponding to the freeboard deck. Its upper edge is the reference line from which the freeboard assignment is measured.

²⁰ The most substantial boundary changes are on the northwest coast of Australia and southwest coast of South America (see ICLL Protocol Regs 47, 48(2) and 49(4)(b)).

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

(2) *Plimsoll mark*: A 12-inch (300 mm) diameter circle with an 18-inch (450 mm) horizontal line through the center. The upper edge of the horizontal line is the load line. Its position is measured vertically downward from the deck line. On either side of the circle are the initials of the load line-issuing authority (e.g., AB, LR, GL, etc.).

(3) *Seasonal and fresh water marks*: Positioned forward of the Plimsoll mark is a vertical "ladder" of additional marks for use in certain zones and areas, within specified seasonal periods. Marks pertaining to salt water service point forward from the ladder and fresh water marks point aft. The marks are:

(a) *Summer (S) mark*: This mark coincides with the horizontal line through the Plimsoll mark. It is the default load line except when loading to the other marks is permitted or restricted. For vessels subject to regulations based on their deadweight capacity (such as MARPOL regulations for tankers²¹), the summer load line displacement is used as the official displacement from which the light ship weight is subtracted to yield the deadweight.

(b) *Tropical (T) mark*: Because the tropical zones are based on milder weather conditions, tropical marks allow the vessel to load deeper than the summer marks. The tropical allowance is 1/48th of the summer load line draft, above the summer mark.

(c) *Winter (W) mark*: Winter marks are restrictive (i.e., the vessel cannot load as deeply as the summer marks). They apply in designated winter zones during specified winter season dates (the summer marks may be used during the summer season). The winter penalty is 1/48th of the summer load line draft, below the summer mark.

(d) *Winter North Atlantic (WNA) mark*: This is the most restrictive mark of all, which is applied to vessels less than 328 feet (100 m) in length. These vessels must sail on their WNA marks when in the North Atlantic Winter Seasonal Zones during the winter season (*which is specified in ICLL Reg 52 and 46 CFR 42.30-35*). The WNA mark is 2 inches (50 mm) below the winter mark. WNA marks are not applied to vessels that are longer than 328 feet; these vessels sail on their winter marks. There is no equivalent "Winter North Pacific" mark; all vessels in the northern and southern Pacific sail on their winter marks during the respective winter seasons.

(e) *Fresh water (F) and Tropical Fresh water (TF) marks*: Recognizing that many ports are located on fresh water rivers, these marks are provided to facilitate correct loading in those ports. Because fresh water is less dense than salt water, the vessel may load slightly deeper at a fresh water port. The extra loading margin, recorded on the load line certificate as the "fresh water allowance" (FWA), is calculated such that the vessel will naturally be rise to its summer or tropical marks, respectively, when it reaches salt water. The fresh water mark is located above the summer mark by the amount of the FWA, and the tropical fresh water mark is located above the tropical mark by the amount of the FWA. However, loading to these fresh water marks is only permissible in pure fresh water. Where a port is located in brackish water, the vessel may still load deeper than the salt water mark, but only by a margin that is proportional to the actual density of the port water (*see Section 9 for discussion of fresh water and brackish water allowances*).

c. Timber marks. Recognizing that properly-secured timber deck cargoes (i.e., logs, finished lumber, etc.) can provide additional buoyancy and deflect green seas off of the deck, the load line regulations allow such vessels to load to deeper drafts. Timber marks are on a second load line "ladder" located immediately aft of the Plimsoll mark. They are the same as the regular load line marks, except that they are prefixed by the letter "L" (ie, "LTF, LF, LS, LW, etc). Timber marks can only be used when the vessel is carrying the minimum required deck load of timber, and which is stowed in strict accordance

²¹ See definitions of "deadweight" in MARPOL Annex I, Reg 1(22) and 33 CFR 157.03.

with the requirements of ICLL Regulations 42 through 45 (also in 46 CFR 42.25). These regulations pertain to special stability considerations, lashing arrangements, etc.; vessels that are not carrying the minimum amount of deck cargo, or that cannot stow it in accordance with the regulations, must sail on their regular load line marks.

d. Great Lakes marks. U.S. vessels operating solely on the Great Lakes are assigned load lines in accordance with 46 CFR part 45. Great Lakes marks are domestic U.S. marks specially developed for the unique vessels that operate on the Great Lakes (*see [Section 14](#) for further discussion on Great Lakes load lines*).

e. Subdivision marks. Passenger vessels must meet damage stability requirements per SOLAS, based on the internal subdivision of the hull. These usually result in draft limits that are more-restrictive than the freeboard assignment under the load line regulations. The limiting draft is marked on the hull with "subdivision" marks in lieu of the normal load line marks. 46 CFR part 46 contains requirements for subdivision load lines on certain U.S. vessels and foreign passenger vessels in U.S. waters (*see [Section 15](#) for further discussion on subdivision load lines*).

f. Special Puget Sound marks for TAPS tankers. The Coast Guard has authorized ABS to add a special Puget Sound load line mark ("PS") for certain TAPS tankers; this mark corresponds to the 125,000 DWT draft. *Refer to [Section 16](#) for further discussion on Puget Sound load line marks for TAPS tankers.*

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Section 11: International Load Lines

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11. International Load Lines (ICLL and 46 CFR part 42)

a. General. International load line certificates are issued in accordance with the International Convention on Load Lines (ICLL), 1966, as modified by the Protocol of 1988 (*refer to [Section 4](#) for detailed discussion of these*). The United States is a signatory party to both the ICLL and the Protocol; therefore, they apply to U.S. vessels (subject to certain policies and interpretations discussed in [paragraph e](#) and [paragraph f](#) below).

b. Assigning authority. ICLL certificates may be issued by the American Bureau of Shipping (ABS) and other delegated classification societies as discussed in [Section 5](#).

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

c. **Routes.** An ICLL load line is valid for all domestic and foreign voyages, including Great Lakes voyages (however, refer to [Section 14](#) regarding use of ICLL marks and fresh water allowances on Great Lakes voyages).

d. **Applicable standards.** The standards for an ICLL load line assignment are as follows:

(1) *Load line standards:* ICLL freeboard assignment and conditions of assignment. Note that some revised ICLL Protocol regulations entered into force for vessels built on/after January 1, 2005. See the discussions below for USCG policy where the ICLL is subject to interpretation or leaves certain details “to the satisfaction of the Administration.”

(2) *Stability standards:* The ICLL requires vessels to “comply with an intact stability standard acceptable to the Administration,” but does not have any intact stability requirements itself (it only has damage stability requirements for certain reduced-freeboard vessels).²² U.S. vessels must meet the applicable stability requirements of 46 CFR Subchapter S (parts 170—174) for unrestricted ocean service.²³

(3) *Structural standards:* The appropriate ocean service Rules of the assigning class society. For vessel types for which the society does not have specific rules, the standards of another society or organization may be used upon approval of the Commandant (CG-5212).

(4) *Load line certificate:* An international (ICCL) load line certificate.

e. **Increased freeboards.** Vessels must normally meet all the Conditions of Assignment (per ICLL regulations 10 through 26, inclusive) to be eligible for the *minimum* freeboard assignment (ie, maximum operating draft). However, as stipulated in Reg 2(5) certain relaxations from these conditions may be granted if the vessel is assigned an *increased* freeboard that adequately compensates (to the satisfaction of the Administration) for the relaxed requirements. Such situations are reviewed and approved on a case-by-case basis by the Commandant (CG-5212). Some special cases of relaxed requirements and associated freeboard increases are discussed in the ["Load Line Technical Manual \(Chapter IV\)](#).²⁴

f. **Specific USCG requirements with respect to certain ICLL regulations.** For U.S.-flag vessels, the Coast Guard has established specific requirements where the ICLL is subject to interpretation or leaves certain details “to the satisfaction of the Administration.” These are summarized below; refer also to the USCG/ABS ["Load Line Technical Manual"](#) for more detailed discussions where indicated.

(1) *IACS Unified Interpretations for various ICLL regulations:* The International Association of Classification Societies (IACS) has issued several Unified Interpretations over the years concerning various ICLL regulations; these interpretations are used by all IACS member societies unless otherwise directed by a particular flag state. The Coast Guard accepts these interpretations, and therefore they are to be applied as appropriate.

(2) *Tonnage opening closures for load line purposes (ICLL Reg 12):* To be acceptable as a weathertight closing appliance for load line purposes, a tonnage opening in a superstructure end bulkhead should be secured by a steel plate as discussed in the ["Load Line Technical Manual," Chapter III](#) (“Tonnage Opening Closures” section).

(3) *Hatch cover exemptions for open hopper vessels (ICLL Reg 14):* Previously, the USCG exempted certain open hopper dredges and barges (dredge spoils barges, garbage scows, split hull hopper barges, etc) from the ICLL hatch cover requirements. However, effective October 8, 2002, the USCG has significantly revised this policy. Refer to [Section 17](#) for specific discussion.

²² However, other IMO conventions (such as SOLAS and MARPOL) may impose their own standards on the vessel.

²³ Compliance with the appropriate requirements and recommendations of the *International Code on Intact Stability, 2008, (2008 IS Code)* is considered equivalent to 46 CFR Subchapter S.

²⁴ The *LL Tech Manual* is posted on the USCG web at www.uscg.mil/hq/cg5/cg5212/lltechmanual.asp.

(4) *Partially-weathertight hatch covers for container ships (ICLL Reg 14)*: Certain container ships with high freeboards may be able to treat their hatch covers as being higher than Position 2, thereby not required by the Convention to be fully weathertight. IMO has issued guidelines per MSC/Circ.1087 for determining when hatch covers qualify for this consideration. Refer to [Section 17](#) for specific discussion.

(5) *Hatchways secured weathertight by tarpaulins and battening devices (ICLL Reg 15)*: Although originally permitted by ICLL, it has long been USCG policy that U.S. vessels may not generally use tarpaulins and battening devices to secure hatchways. The only exception is for historic sailing vessels, whose hatch cover arrangements are still subject to case-by-case review by the assigning authority. Since January 1, 2005, however, the amended ICLL Reg 14 now allows such tarps and battening devices only when specially approved by Administrations.

(6) *Coaming height relaxation and flush access hatches (ICLL Reg 16)*: Hatches and access openings which, for operational reasons, cannot comply with the standard coaming heights per Regulation 16 may be allowed lower coaming heights as provided in the ["Load Line Technical Manual," Chapter III](#)²⁵ ("Coaming Height Relaxation" section).

(7) *Hatchways closed by weathertight covers of steel or other equivalent material fitted with gaskets and clamping devices (ICLL Reg 16, Protocol 16-1)*: In addition to the requirements of ICLL Regulation 16/Protocol 16-1, the following shall apply:

(a) Sealing arrangements shall be weathertight if a coaming is fitted, and watertight for flush covers.

(b) The covers shall be hose-tested in position under a water pressure of at least 30 psi to demonstrate weathertightness at the time of construction and, if considered necessary by the assigning authority, at subsequent surveys.

(c) Gasketless hatch covers will be specially considered on a case-by-case basis.

(8) *Ventilators (ICLL Reg. 19)*: Where ventilators are required to have closing appliances, ICLL Reg 19 now requires such closures to be steel or equivalent material on vessels built on/after 1 January 2005. For U.S. vessels built before that date, the ["Load Line Technical Manual"](#) has additional discussion on ventilator closures.

(9) *Air pipes (ICLL Reg. 20)*: For vessels built on/after 1 January 2005, ICLL Reg 20 requires all air pipes to have automatic closing devices (P-V valves may be accepted on tankers). For U.S. vessels built before that date, the ["Load Line Technical Manual"](#) has additional discussion on air pipe closures.

(10) *Side scuttles and windows (ICLL Reg. 23)*: The ICLL did not originally address windows, and USCG policy was that they were to be treated as side scuttles. Since 1 Jan 2005, however, Reg 23 has been amended to include specific requirements concerning windows and skylights. Calculations and data shall be submitted to the assigning authority verifying that hydrodynamic pressures on side scuttles and windows do not exceed the glass design limits under all anticipated conditions of pitch and roll. The glass design pressures shall be determined in accordance with standards recognized by the assigning authority. The ["Load Line Technical Manual"](#) has additional discussion on side scuttle and window standards.

(11) *Freeing ports (ICLL Reg. 24)*: A "bulwark" is considered a vertical structure located on the weather or superstructure deck within 0.04B of the side of the vessel, with an average height exceeding 12 inches (300 mm), and that can entrap water on deck for an extended period of time (despite trim, rolling, pitching motions of the vessel). Vertical structures more than 0.04B inboard are

²⁵ The *LL Tech Manual* is posted on the USCG website at www.uscg.mil/hq/cg5/cg5212/alltechmanual.asp

considered to be “bins,” the ["Load Line Technical Manual \(chapter 3\)"](#)²⁶ has additional discussion on treatment of bins.

(12) *Protection of the crew (ICLL Reg. 25)*: At least three courses of guardrails shall normally be provided. The use of chains with portable stanchions may be allowed in limited lengths, subject to approval by the assigning authority. Proper step arrangements shall be provided in way of pipelines. For towing vessels exclusively engaged in towing operations, bulwark, railing, and vent heights may be relaxed in way of the towline sweep around the stern (see the “Crew Protection” section the ["Load Line Technical Manual \(chapter 3\)"](#) for details).

(13) *Special conditions for unmanned and permissively-manned barges (ICLL Reg. 27(14))*:

(a) Unmanned barges with small access openings may qualify for a 25% freeboard reduction in accordance with ICLL Regulation 27(14).²⁷ “Small” generally means less than 1.5 square meters (16 sq. ft.) on exposed freeboard decks or within adequately protected deckhouses. Larger openings may be specially considered by the assigning authority.

(b) Permissively-manned barges, such as crane or derrick barges, pipe laying barges, and oil spill recovery barges, may also receive the reduced freeboard *only* if the following requirements are met (barges that do not meet these requirements do not qualify for the reduced freeboard and must be treated as manned barges for load line purposes):

(1) There are no on-board overnight accommodations, cooking facilities, or resting facilities (off-duty personnel are expected to be provided for elsewhere).

(2) Whenever the barge is manned, suitable stand-by vessel(s) are in attendance that are capable of evacuating all personnel from the barge at any time.

(3) Crew protection measures (such as appropriate guardrails, life saving and fire safety provisions) are to the satisfaction of the cognizant OCMI. Portable rails with wire rope will generally be acceptable.

(4) The barge is not operated more than 20 miles from shore, and is manned in fair weather only.

(14) *Minimum bow height and reserve buoyancy (ICLL Reg. 39)*: Vessels which, due to design or operational requirements, do not meet the minimum ICLL bow height requirements might still qualify for a reduced bow height penalty in accordance with [NVIC 10-86, "Equivalence to Minimum Bow Height Requirements for Load Line Assignment"](#)²⁸ (also known as “trim resistivity”). It is also USCG policy to entirely waive the bow height requirement for liftboats that accept a 12-hour operational restriction; refer to [Section 17\(k\)](#) for specific details. On January 1, 2005, a new ICLL requirement concerning reserve buoyancy entered into force; it is USCG policy that all vessels (including liftboats) must meet this requirement; no international (ICLL) exemption will be granted.

g. Special provision for small passenger vessels operating within 20 miles of land. Recognizing that many small passenger vessels may operate on international routes of a sheltered nature, SOLAS allows flag administrations to exempt these vessels from regulations that are unreasonable or unnecessary provided that they do not operate more than 20 nautical miles from the nearest land.²⁹ Where a small U.S.-flag passenger vessel has been granted such a SOLAS exemption, the Coast Guard is also willing to relax stability, hull strength, and certain conditions of assignment for load line purposes. Refer to [NVIC 1-88, "International Load Line Certificates for Small Passenger Vessels Operating Within 20 Miles of the](#)

²⁶ The *LL Tech Manual* is posted on the USCG website at www.uscg.mil/hq/cg5/cg5212/lltechmanual.asp

²⁷ Prior to the 1 Jan 2005 amendments, these provisions were originally in ICLL Reg 27(11).

²⁸ NVICs are posted on the USCG website at www.uscg.mil/hq/cg5/nvic

²⁹ SOLAS Chapter II-1, Regulation 1(4)

Mouth of a Harbor of Safe Refuge” (as revised by [Change 1](#)) for details. Note that the Coast Guard restricts the vessels to within 20 miles from the mouth of a harbor of safe refuge, not merely the nearest land.

h. [Vessels of unusual form and service](#). Several special load line regimes have been established for U.S. vessels of unusual form and service; these are discussed in [Section 17](#).

i. [Single-voyage exemptions](#). Non-load lined vessels that must make a “positioning” voyage to a foreign port may obtain a single-voyage international (ICLL) load line exemption from the local OCMI of the departure port (*refer to [Section 9](#) for procedures*).

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12. “Domestic Service” Load Lines (46 CFR part 42)

a. General. Unless otherwise exempted, a U.S. vessel operating outside the Boundary Line or on the Great Lakes is required to have a valid load line assignment. If it does not have an international (ICCL) certificate, it must have a domestic U.S. load line assignment: either for “domestic service” (*as discussed in this section*), “special service” (*refer to [Section 13](#)*), or Great Lakes service (*refer to [Section 14](#)*).

b. Assigning authority. The American Bureau of Shipping (ABS) is fully authorized to issue domestic load lines for all U.S. vessels.

c. Routes. Domestic load lines can only be used for voyages between U.S. ports. A domestic U.S. load line is valid for all voyages (coastwise, by sea, and Great Lakes) except where operational restrictions are noted on the certificate.

d. Applicable standards. Because domestic voyages by sea can go far enough offshore that the vessel is fully exposed to high seas conditions (such as voyages to/from Hawaii), the requirements and freeboard assignment for an *unrestricted* domestic service load line are the same as for an international (ICCL) assignment. Some relaxations may be permitted in conjunction with a *restricted* domestic service load line. Unless otherwise approved by the Commandant (CG-5212), the standards for all domestic service load lines are as follows:

- (1) *Load line standards:* The requirements for a domestic service load line are in 46 CFR part 42. Where appropriate, IACS Unified Interpretations (UIs) for the ICLL are applied.
- (2) *Stability standards:* The applicable stability requirements of 46 CFR Subchapter S (parts 170—174) for ocean (exposed waters) service.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

(3) *Structural standards*: The appropriate ABS Rules for ocean service. If ABS does not have specific rules for a particular vessel type, the standards of another society or organization may be used upon approval of the Commandant (CG-5212).

(4) *Load line certificate*: A "domestic service" load line certificate (ABS form LL-19A) annotated with restrictions (if any).

e. Increased freeboards. Vessels must normally meet all the Conditions of Assignment (per 46 CFR 42.15-1 to 42.15-80, inclusive) to be eligible for the *minimum* freeboard assignment (ie, maximum operating draft). However, as stipulated in 46 CFR 42.13-10(e) and (f), certain relaxations from these conditions may be granted if the vessel is assigned an *increased* freeboard that adequately compensates for the relaxations. Such situations are reviewed and approved on a case-by-case basis by the Commandant (CG-5212). The relaxed requirements and associated freeboard increases are discussed in the "[Load Line Technical Manual \(Chapter IV\)](#)."³⁰ Vessels that meet the relaxed conditions in conjunction with an increased freeboard are seaworthy enough for an unrestricted domestic load line.

f. Vessels of unusual form and service. Several special load line regimes have been established for U.S. vessels of unusual form and service; these are discussed in [Section 17](#).

g. Differences from ICLL. The U.S. load line regulations for domestic service (in 46 CFR part 42) were promulgated in 1968. Because they were intended to allow unrestricted voyages by sea, they essentially duplicated the international standards of the original ICLL, which were developed in 1966. However, the ICLL has been modified by the Protocol in several substantive ways³¹ whereas 46 CFR part 42 has not been revised to incorporate the modifications. Therefore, the U.S. regulations are beginning to diverge from the ICLL. U.S. vessels seeking only a domestic load line are not required to meet the new/modified ICLL regulations; however, their ability to be assigned an ICLL load line (if ever desired) may be compromised. To date, the substantive differences are:

(1) *IACS Unified Interpretations (UIs)*: Approximately 38 UIs were formally incorporated into the ICLL as part of the Protocol modifications. Most of the UIs are concerned with interpretations, clarifications, or details that are left "to the satisfaction of the Administration." Although the UIs have not been formally incorporated into 46 CFR part 42, the USCG considers them suitable for purposes of unrestricted domestic US load line assignment.

(2) *Hatch cover design loads (ICLL Reg 16-1, 46 CFR 42.15-30)*: The revised ICLL has substantially upgraded the design loads not only for Position 1 and Position 2 locations, but has also added a third design load for Position 1 hatch covers within the forward 0.25L. Critical buckling strength in compression must now also be taken into consideration. The original design requirements in 46 CFR part 42 have not been changed.

(3) *Garbage chutes (ICLL Reg 22-1)*: A new requirement has been incorporated into the ICLL concerning the design of garbage chutes. There is no equivalent US requirement in 46 CFR part 42.

(4) *Spurling pipes and cable lockers (ICLL Reg 22-2)*: A new requirement has been incorporated into the ICLL concerning the design of spurling pipes and cable lockers. There is no equivalent US requirement in 46 CFR part 42.

(5) *Minimum bow height (ICLL Reg 39(1), 46 CFR 42-15.70)*: The ICLL formula for calculating the minimum bow height in Reg 39(1) has been replaced with a new formula, whereas 46 CFR 42-15.70 still uses the original formula.

³⁰ The *LL Tech Manual* is posted on the USCG website at www.uscg.mil/hq/cg5/cg5212/lltechmanual.asp

³¹ The Protocol entered into force on February 3, 2000, and has been amended periodically since then. The amendments have modified some original ICLL requirements, and added some new ones as well.

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(6) *Reserve buoyancy (ICLL Reg 39(5))*: A new requirement has been incorporated into the ICLL concerning reserve buoyancy distribution. There is no equivalent US requirement in 46 CFR part 42.

h. Single-voyage exemptions. Non-load lined vessels that must make a domestic “positioning” voyage outside the Boundary Line to another U.S. port may obtain a single-voyage exemption from the local OCMI of the departure port (*refer to [Section 9](#) for procedures*).

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Section 13: “Special Service” Load Lines

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13. “Special Service” Load Lines (46 CFR part 44)

a. General. Normally, U.S. vessels operating outside the Boundary Line, even on domestic coastwise voyages, are required to meet the conditions of assignment and freeboard assignment for ocean service. However, a “Special Service” load line may be assigned in accordance with 46 CFR Part 44, which relaxes certain freeboard and conditions of assignment. This special service load line is available for:

- certain vessels on specific domestic coastwise routes, not more than 20 NM offshore;
- vessels on inter-island voyages, such as Puerto Rico and the U.S. Virgin Islands; and
- self-propelled open hopper dredges.

b. Historical background. In 1936, the Coastwise Load Line Act was amended to allow special load line consideration for “...*steam colliers, tugs, barges, and self-propelled barges engaged in special service on inter-island voyages and on coastwise voyages from port to port in the continental United States.*” 46 CFR Part 44 implemented the load line regulations for this special service by establishing specific geographical limits along the U.S. coast, limiting these vessels to not more than 20 nautical miles offshore, and assigning load lines as though the vessels are on the Great Lakes rather than ocean (it did this by invoking the freeboard requirements and conditions of assignment of 46 CFR Part 45 for Great Lakes service, rather than Part 42 for ocean service³²). In 1989, a provision was added (Subpart C) for assigning a special “working freeboard” for self-propelled open-hopper dredges.

³² However, in 1973 the Great Lakes regulations in Part 45 were substantially revised and completely renumbered. Unfortunately, Part 44 was not amended to reflect the new numbers; therefore, Part 44 still cites Part 45 regulations that no longer exist.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

c. Discussion. The vessels and circumstances for which this special consideration was conceived in 1936 have largely become obsolete. In practice today, the only vessels availing themselves of this special load line regime are manned tank barges operating around Puerto Rico and the U.S. Virgin Islands. This is because the Special Service load line does not impose a minimum bow height, so these barges can obtain a more-favorable manned freeboard assignment than they would get from ICLL assignment.

d. Assigning authority. Because this is a domestic U.S. load line regime, only the American Bureau of Shipping (ABS) is authorized to issue these load line certificates.

e. Routes and voyage limits. Vessels are limited to a distance offshore not to exceed 20 nautical miles. For continental U.S. ports, Special Service load lines may be issued for coastwise operation on these routes:

(1) *Central and Northern Atlantic coast:* from Eastport, Maine to Norfolk, Virginia.

(2) *Southeast Atlantic coast:* from Charleston, South Carolina to Key West, Florida, except that manned vessels must be operated in accordance with a USCG-approved weather contingency plan during the hurricane season (July 1st to November 15th, inclusive)(see [paragraph i below](#)).

(3) *Gulf of Mexico coast:* from Key West, Florida to the mouth of the Rio Grande River, Texas, except that manned vessels must be operated in accordance with a USCG-approved weather contingency plan during the hurricane season (July 1st to November 15th, inclusive)(see [paragraph i below](#)).

(4) *Pacific coast:* from San Diego, California to San Francisco, California.

f. Inter-island voyages. A Special Service load line may be issued for voyages between the islands of a group (or between adjacent groups) over which the United States has jurisdiction. However, issuance can only be made only upon authorization by the Commandant (CG-543) after submittal of substantiating information. Weather contingency plans (*described in [paragraph i below](#)*) may be required.

g. Applicable standards.

(1) *Load line standards:* The Special Service conditions of assignment (§44.05-20) and freeboard assignment (§44.05-25) presently cite various Great Lakes requirements in §45.10, §45.15, and §45.20. However, because of the 1973 revisions and re-numbering of Part 45, these cites are now misdirected. The proper cites are as follows:

(a) *Freeboard assignment (§44.05-25(c), (d), (f), (g) and (h)):* now found in Part 45 subpart C, except that barges are exempted from the minimum bow height requirement of §45.69 (*this is consistent with the forecastle exemption in the original §45.20-15(b)*).

(b) *Conditions of assignment (§44.05-20(b) and (c)):* now found in Part 45 subpart D.

(2) *Stability standards:* The applicable stability requirements of 46 CFR Subchapter S (parts 170-174) for unrestricted ocean service.

(3) *Structural standards:* The appropriate ABS Rules for unrestricted ocean service.

(4) *Load line certificate:* A "special service" load line certificate (ABS form LL-18e).

h. Self-propelled open hopper dredges. Dredges meeting the requirements of 46 CFR 44.300 can be issued a Special Service or Great Lakes load line, annotated to allow operation at a "working freeboard" under certain conditions; refer to [Section 17](#) for further discussion.

i. Weather contingency plan (heavy weather plan). Some of the limited service routes may require weather contingency plans. Such plans are to be prepared by the owner or operator, and submitted for approval to the local OCMI. Evidence of approval must be furnished to ABS before it can issue a load line for those routes (the OCMI may copy ABS on the approval response letter, citing title and date of the

approved plan). The plan should provide guidance to the vessel master for all heavy weather seasons that may occur along the routes specified on the load line certificate. The exact contents of the weather contingency plan will vary according to vessel and local conditions, and therefore must be determined on a case-by-case basis. However, in general the plan should include information for monitoring weather forecasts (ie, radio frequencies), and guidance on weather and sea condition limits beyond which the voyage must be postponed or broken off. It should contain information on harbors of safe refuge. A single weather contingency plan may be accepted for more than one vessel operating at a single work site or on a single route. A copy of the USCG-approved weather contingency plan must be placed on each vessel, or towing vessel in the case of barges.

j. Requesting a Special Service load line. Requests are to be submitted to ABS. The request should identify which of the special geographic coastwise or inter-island route(s) are desired. For the Southeast Atlantic and Gulf of Mexico routes, and possibly for an inter-island route, evidence of USCG approval for the weather contingency plan must also be furnished. For self-propelled open hopper dredges seeking a "working freeboard" assignment, additional information must be submitted to the Marine Safety Center and ABS demonstrating compliance with the requirements of Part 44 subpart C (§44.300 *et seq*).

k. Freeboard assignment and load line marks. The Special Service load line freeboard will be determined in accordance with 46 CFR part 44. Hull marks will normally be the circular Plimsoll mark and seasonal marks (except that seasonal marks that are not applicable to the route, such as the "Winter North Atlantic" mark, should be omitted) and the initials "SS" are to be centered above the vertical line of the seasonal marks. However, a Special Service load line might be issued along with another load line (such as ocean or Great Lakes). In cases where the vessel receives multiple load line assignments, the non-applicable marks must be painted out.

l. Voyages outside the Special Service routes. The Special Service load line certificate will specify the voyage limits and seasonal restrictions governing the validity of the load lines. The vessel is limited to the routes and conditions described on the certificate. If the approved routes are not contiguous, it will require either a domestic service load line, or a "positioning voyage" exemption (*refer to [Section 9](#) for procedures*), to move from one route to another.

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Load Line Policy Notes

Section 14: Great Lakes Load Lines

Section contents:

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[b. Extent of Great Lakes waters](#)

[c. Load line requirements](#)

- (1) US-flag vessels
- (2) Self-propelled open hopper dredges
- (3) Canadian-flag vessels
- (4) Foreign-flag vessels
- (5) Salt water portion of the St Lawrence River

[d. Use of ocean service \(ICLL or domestic US\) marks on the Great Lakes](#)

[Figure 14-1: "Applicable Load Line Marks"](#)

[e. Special load line provisions on certain Great Lakes routes](#)

- [\(1\) Vessels operating between Detroit River Light and Port Huron, MI](#)
- [\(2\) Great Lakes bulk carriers operating between Toledo, OH and Port Huron, MI](#)
- [\(3\) Inspected river barges operating between Chicago, IL and Burns Harbor, IN](#)
- [\(4\) Uninspected dry cargo river barges operating between Chicago IL & Burns Harbor, IN](#)
- [\(5\) Dry cargo river barges between Chicago, IL and Milwaukee, WI](#)
- [\(6\) Dry cargo river barges between Chicago, IL and St. Joseph, MI](#)
- [\(7\) Covered river hopper barges operating between Chicago IL and Michigan City, IN](#)
- [\(8\) River towboats operating between Chicago, IL and Whiting, IN](#)
- [\(9\) Great Lakes dump scows operating within 10 miles of a port of refuge](#)

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14. Great Lakes Load Lines (46 CFR Part 45)

a. General. U.S.-flag vessels that operate solely on the Great Lakes must have a Great Lakes load line assignment per 46 CFR part 45. Such load lines are valid for unrestricted service on the Great Lakes and St Lawrence River west of Anticosti Island. However, because the Great Lakes load line regime was developed for vessels with dimensional proportions typical of Great Lakes designs, it is not suited for ocean or coastwise service. Therefore, vessels may not sail outside the Great Lakes on a Great Lakes load line assignment.

b. Extent of Great Lakes waters. All of the Great Lakes (including their bays, sounds, straits, and those harbors that are beyond breakwaters that form complete protection against heavy seas and other rigors of the lakes), and the St. Lawrence River west of Anticosti Island (specifically, west of a straight line drawn from Cap de Rosiers to West Point, Anticosti Island, and west of a rhumb line along longitude 63 degrees west from Anticosti Island to the north shore of the St. Lawrence River). Montreal (Victoria Bridge) is considered the dividing point between the fresh water and salt water portions of the St Lawrence River.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

c. Load line requirements. Except as provided in [paragraph e](#) below, all vessels operating on the Great Lakes are required to have a load line, as follows:

- (1) *U.S.-flag vessels:* must have a Great Lakes or ocean service (ie, ICLL or domestic US) load line. A “Special Service” load line assignment alone is *not* valid for the Great Lakes; however, a vessel may be assigned a joint Special Service/Great Lakes load line (*refer to 46 CFR 44.05-10*).
- (2) *Self-propelled open hopper dredges:* Dredges meeting the requirements of 46 CFR 44.300 can be issued a Great Lakes load line annotated to allow operation at a “working freeboard” under certain conditions; *refer to Section 17 for further discussion.*
- (3) *Canadian-flag vessels:* must have an appropriate Canadian load line assignment (*refer to Section 8 for a discussion of the 1977 US/Canadian MOU concerning mutual acceptance of load lines*).
- (4) *Foreign-flag vessels:* must have an international (ICCL) assignment.
- (5) *Salt water portion of the St Lawrence River:* Great Lakes vessels operating on the salt water portion of the St Lawrence River (ie, east of Montreal) must also be marked with Great Lakes “salt water” marks.

d. Use of ocean service (ICLL or domestic US) marks on the Great Lakes. Vessels having an ocean service load line (ICLL or domestic US) may navigate on the Great Lakes. However, even though the Great Lakes are fresh water bodies, U.S. regulations (per 46 CFR 45.9) require them to sail on their seasonal salt water marks as indicated in [Figure 14-1: “Applicable Load Line Marks.”](#) “Brackish water” and “steaming allowances” may be applied for transits down river from Montreal to the ocean (*refer to the “Submersion of Marks” discussion in Section 9*), but may not be applied west of Montreal.

e. Special load line provisions for certain Great Lakes routes. For the routes specified below, certain Great Lakes load line requirements are relaxed or waived in return for strict limitations on route, cargo, seasonal dates, or other restrictions. Vessels not meeting the specified conditions are operating in violation of load line regulations.

(1) Vessels operating between Detroit River Light and Port Huron, MI.

Route: between Detroit River Light and Port Huron, Michigan	
1. Applicability:	Vessels operating solely on the Detroit River, Lake St. Clair and the St. Clair River
2. Voyage limits:	Between Detroit River Light and Port Huron, MI
3. Markings:	None
4. Stability:	No additional stability requirements
5. Strength:	No additional strength requirements
6. Freeboard:	No requirement
7. LL certificate:	No load line assignment required
8. Operating restrictions:	None

(2) Great Lakes bulk carriers operating between Toledo, OH and Port Huron, MI.

Route: between Toledo, OH and Port Huron, MI	
1. Applicability:	Great Lakes bulk carriers carrying coal. or bulk cargo of similar density, may operate with open hatches.
2. Voyage limits:	Toledo, Ohio and Detroit, Michigan
3. Markings:	Great Lakes markings
4. Stability:	No additional requirements
5. Strength:	No additional requirements
6. Freeboard:	Vessel's depth to the weather deck must be at least 31 feet, and must maintain at least 8 feet of freeboard
7. LL certificate:	Great Lakes Load Line Certificate with the following notation: <i>"At the discretion of the Master, this vessel may operate without hatch covers between the limits of Toledo, Ohio to Detroit, Michigan including Monroe, Michigan from 1 April to 31 October."</i>
8. Operating restrictions:	(i) Fair weather only; (ii) Between April 1 and October 31, inclusive; (iii) Cargo and tank vessels above 300 feet in length may be loaded to their <u>intermediate</u> marks between October 1 and April 30 inclusive; and (iv) Vessels above 400 feet in length may load to their <u>summer</u> marks between September 16 and April 30, inclusive.

(3) Inspected river barges operating between Chicago, IL and Burns Harbor, IN.

Route: between Chicago, IL and Burns Harbor, IN	
1. Applicability:	Unmanned inspected river barges.
2. Voyage limits:	Calumet Harbor, Chicago, Illinois to Burns Harbor, Indiana and intermediate ports on Lake Michigan
3. Markings:	Great Lakes diamond without seasonal marks.
4. Stability:	Applicable Subchapter S requirements.
5. Strength:	ABS Rules for Rivers and Intracoastal Waterways. Tank barges over 300 feet in length must to have loading information per 46 CFR 31.10-32.
6. Freeboard:	Dry cargo and tank barges are to comply with the freeboard requirements of 46 CFR Part 45. Dry cargo barges will not be assessed penalties for hatch coaming or hatch cover deficiencies.
7. LL certificate:	Great Lakes certificate with the following notation: <i>"This certificate is valid only for unmanned fair weather voyages between Calumet Harbor, Chicago, Illinois and Burns Harbor, Indiana."</i>
8. Operating restrictions:	(i) Fair weather only; and (ii) Not more than 5 miles from shore.

(4) Uninspected dry cargo river barges operating between Chicago, IL & Burns Harbor, IN

Route: between Chicago, IL and Burns Harbor, IN	
1. Applicability:	Unmanned uninspected dry cargo river barges.
2. Voyage limits:	Calumet Harbor, Chicago, Illinois to Burns Harbor, Indiana and intermediate ports on Lake Michigan.
3. Markings:	None
4. Stability:	No additional requirements
5. Strength:	No additional requirements
6. Freeboard:	Not less than 24 inches. For open-hopper barges, the actual freeboard plus coaming height must always be at least 54 inches.
7. LL certificate:	Exempted from load lines in accordance the operational restrictions
8. Operating restrictions:	As stipulated in 46 CFR 45.171 to 45.197

(5) Dry cargo river barges between Chicago, IL and Milwaukee, WI.

Route: between Chicago, IL and Milwaukee, WI	
1. Applicability:	Unmanned dry cargo river barges.
2. Voyage limits:	Calumet Harbor, Chicago, Illinois to Milwaukee, Wisconsin and intermediate ports on Lake Michigan
3. Markings:	None
4. Stability:	No additional requirements
5. Strength:	ABS Rules for Rivers and Intracoastal Waterways
6. Freeboard:	Not less than 24 inches. For open-hopper barges, the actual freeboard plus coaming height must always be at least 54 inches.
7. LL certificate:	Exempted from load lines in accordance the operational restrictions
8. Operating restrictions:	As stipulated in 46 CFR 45.171 to 45.197

(6) Dry cargo river barges between Chicago, IL and St. Joseph, MI.

Route: between Chicago, Illinois and St. Joseph, Michigan	
1. Applicability:	Unmanned dry cargo river barges.
2. Voyage limits:	Calumet Harbor, Chicago, Illinois to St. Joseph, Michigan and intermediate ports on Lake Michigan.
3. Markings:	Limited Service Domestic Load Line Marks.
4. Stability:	No additional requirements.
5. Strength:	ABS Rules for Rivers and Intracoastal Waterways.
6. Freeboard:	Not less than 24 inches. For open-hopper barges, the actual freeboard plus coaming height must always be at least 54 inches.
7. LL certificate:	Limited service domestic load line.
8. Operating restrictions:	As stipulated in 46 CFR 45.171 to 45.197

(7) Covered river hopper barges operating between Chicago IL and Michigan City, IN.

Route: between Chicago IL and Michigan City, IN.	
1. Applicability:	Unmanned uninspected covered river hopper barges.
2. Voyage limits:	Chicago, Illinois to Michigan City, Indiana and intermediate ports on Lake Michigan.
3. Markings:	The load line marks on the vessel's side must be in accordance with 46 CFR Part 44 Subpart B. Seasonal marks will not be applied.
4. Stability:	No additional requirements.
5. Strength:	ABS Rules for Rivers and Intracoastal Waterways.
6. Freeboard:	The load line shall be placed where, in the judgment of the assigning authority, the draft will be such that no unusual hazard will be experienced. In general, drafts assigned will be such that the barge will remain afloat with a reasonable freeboard after flooding of the net available open space.
7. LL certificate:	Limited service domestic load line.
8. Operating restrictions:	(i) Hatch coamings of at least 30 inches in height; and (ii) Steel weathertight hatch covers with means of securing in the closed position.

(8) River towboats operating between Chicago, IL and Whiting, IN.

Route: between Chicago, Illinois and Whiting, Indiana	
1. Applicability:	River towboats.
2. Voyage limits:	Calumet Harbor, Chicago, Illinois to Whiting, Indiana.
3. Markings:	Great Lakes marks
4. Stability:	Intact stability requirements contained in 46 CFR Subchapter S, Towline Pull Criterion and the Special Rules Pertaining to Deck Cargo Barges.
5. Strength:	ABS Rules for Rivers and Intercoastal Waterways.
6. Freeboard:	Freeboard requirements will be determined on a case-by-case basis. Assignment will be consistent with the level of safety required for the particular service. Vessels engaged in towing are to meet the minimum bow height requirements contained in 46 CFR 45.217.
7. LL certificate:	Great Lakes certificate with the following notation: <i>"This certificate is valid only for only fair weather voyages between Calumet Harbor, Chicago, Illinois and Whiting, Indiana not more than 5 miles a harbor of safe refuge."</i>
8. Operating restrictions:	(i) Fair weather only; and (ii) Not more than 5 miles offshore.

(9) Great Lakes dump scows operating within 10 miles of a port of refuge.

Route: within 10 miles of a port of refuge	
1. Applicability:	Unmanned Great Lakes dump scows.
2. Voyage limits:	Routine operations within 10 miles of a harbor of safe refuge, or on an occasional repositioning movement (without cargo) from one port to a different port of operation.
3. Markings:	None.
4. Stability:	If a draft limitation is imposed by the OCMI, a standard of ten foot-degrees of righting energy to the maximum righting arm will be used to determine the required freeboard.
5. Strength:	No additional requirements
6. Freeboard:	A draft limitation may be imposed if the OCMI believes it necessary.
7. LL certificate:	None. OCMI-issued Letter of Authorization is acceptable.
8. Operating restrictions:	(i) Within ten miles of a harbor of safe refuge; and (ii) Fair weather only.

Figure 14-1
Applicable Load Line Marks
For vessels operating on the Great Lakes
 46 CFR 45.5 & 45.9

U.S. and foreign vessels assigned either a Great Lakes or an ocean service load line (ICLL or domestic US) that are navigating on the Great Lakes and St. Lawrence River must sail on their seasonal marks during the dates indicated in this table:

Seasonal dates:	Great Lakes marks <i>46 CFR 45.5</i>	Ocean service marks	
		<i>“New” vessel</i> <i>46 CFR 45.9(a)</i>	<i>“Existing” vessel</i> <i>46 CFR 45.9(b)</i>
January	Winter	Winter	Winter
February			
March			
1-15 April	Intermediate	Summer	Summer
16-20 April	Summer		
21-30 April	Mid-summer	Tropical	Tropical fresh water
May			
June			
July			
August			
1-15 Sept	Summer	Summer	Tropical
16-30 Sept			
October	Intermediate	Summer	Summer
November	Winter	Winter	Winter
December			

Notes:

- 1) Great Lakes load lines are assignable only to U.S. vessels operating solely on the Great Lakes and St. Lawrence River west of Anticosti Island. Montreal (Victoria Bridge) is the dividing point between the fresh water and salt water portions of the St. Lawrence River; Great Lakes vessels operating east of Montreal must also be marked with seasonal salt water marks.
- 2) Even though the Great Lakes are fresh water, all ocean service vessels (ICLL or domestic US) must sail on their salt water marks except for “existing” vessels as indicated. No fresh water or steaming allowances are allowable on the St. Lawrence River west of Montreal.
- 3) For U.S.-flag vessels, “new” vessels are those built on/after 21 July 1968 (“existing” vessels were built before that date).
- 4) For foreign-flag vessels, “new” or “existing” status is indicated on their ICLL certificate.

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Load Line Policy Notes

Section 15: Subdivision Load Lines for Passenger Vessels

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(1) *Small "T-Boat" passenger vessels*

(2) *Small passenger boats operating within 20 miles of a safe refuge*

(3) *Hull marks*

[e. Subdivision marks](#)

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15. Subdivision Load Lines for Passenger Vessels (46 CFR Part 46)

a. General. In addition to applicable load line regulations (domestic or ICLL), passenger vessels are also subject to intact and damage stability requirements per SOLAS or 46 CFR Subchapter S. It is possible that the damage stability requirements may impose draft limits that are more strict than the load line assignment. In such cases, the actual load line assignment is based on the limiting stability draft rather than the normally-calculated freeboard.

b. Background. Except for certain vessels (ie, type A vessels, and type B vessels with reduced freeboards), load line assignment does not take into account the ability of a vessel to survive flooding damage, nor does it make any special distinction for passenger vessels. However, other safety regulations (such as SOLAS) require passenger vessels to have sufficient internal subdivision to survive flooding, and the allowable draft of these vessels is frequently governed by their subdivision rather than their load line. It is therefore possible that the calculated freeboard assignment can result in a deeper draft than the passenger vessel can actually survive. However, the subdivision draft cannot be exceeded even if the normal load line marks would permit a greater draft.

c. Subdivision load lines for passenger vessels. These are specified in 46 CFR part 46 and SOLAS Chapter II-1. The subdivision load lines assigned to passenger vessels must be noted on the vessel's load line certificate (ICLL or domestic US), and on the vessel's Passenger Ship Safety Certificate if it is subject to the SOLAS Convention.

d. Subdivision load lines for small passenger vessels.

(1) *Small "T-boat" passenger vessels:* These are passenger vessels less than 24 meters (79 feet) in length and regulated under 46 CFR, Subchapter T. Because they are less than 24 m, they are *not* required to have an ICLL certificate, even if on an international voyage. However, if they carry more than 12 passengers then they must have a SOLAS subdivision load line per Regulation 13 of SOLAS Chapter II-1.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

Section 15: Subdivision Load Lines for Passenger Vessels

(2) *Small passenger vessels operating within 20 miles of refuge*: Normally, vessels on international voyages must meet SOLAS stability and structural standards for ocean service. However, some international routes (such as inter-island voyages in the Caribbean) might be short voyages on sheltered (partially-protected) waters. SOLAS contains a provision whereby Administrations can relax SOLAS standards where vessels are operating within 20 miles of land. [NVIC 1-88, "International Load Line Certificates for Small Passenger Vessels Operating Within 20 Miles of the Mouth of a Harbor of Safe Refuge"](#) (as revised by [Change 1](#))³³ discusses relaxation of stability and structural requirements for such vessels with respect to issuance of an ICLL certificate.

(3) *Hull marks*: Since these vessels are not subject to the ICLL load line regulations, no "Plimsoll" is assigned. Therefore no details regarding the marking of the subdivision draft(s) on the sides of the vessel are specified. Marking is, therefore, at the discretion of the OCMI. For uniformity, however, the following is recommended:

- (a) The subdivision "load line" marks should be horizontal lines, 9 inches in length and 1 inch in breadth, placed amidships on both sides of the vessel.
- (b) The lines should be painted in white or yellow on a dark background, or in black on a light background.
- (c) Based on the subdivision study, the MSC will determine the proper placement for the marks and relay this information to the OCMI accordingly.

e. Subdivision marks. If the subdivision draft governs, then the corresponding load line is indicated with a SOLAS subdivision mark ("C"), and any "higher" load line marks (ie, which would allow a deeper draft) are omitted. The Plimsoll mark is aligned with the subdivision draft. Because the SOLAS subdivision requirements depend upon the number of passengers, it is possible for a vessel to have more than one subdivision draft (depending upon how many passengers it is certified to carry for the voyage). In such cases, a series of subdivision marks can be assigned: "C₁" for the principal passenger condition, and "C₂," "C₃," etc., for alternative passenger/cargo conditions. A freshwater mark is permitted in conjunction with a subdivision mark.

f. Conditions of assignment. For passenger vessels subject to ICLL and SOLAS, the normal ICLL conditions of assignment must be met. For non-ICLL passenger vessels subject to SOLAS only, the SOLAS conditions of assignment (which essentially mimic the ICLL requirements) are specified in Regulations 17 and 20 of SOLAS Chapter II-1.

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³³ NVICs are posted on the USCG website at www.uscg.mil/hq/cg5/nvic/



Load Line Policy Notes

Section 16: Multiple Load Line Assignments

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16. Multiple Load Line Assignments

a. General. Depending upon business circumstances, some vessels might need different load line assignments for service on the same route. An example would be an ocean service tank barge that makes both manned and unmanned voyages (unmanned freeboards may be reduced by 25 percent from manned freeboards, a significant increase in cargo capacity for that voyage).

Note that this is not the same situation as vessels seeking multiple load lines for voyages on different service routes (such as special service coastwise and unrestricted coastwise; refer to [Section 13](#) for further discussion).

b. Marking. The presence of multiple visible load line marks applicable to the same geographic route would confuse both compliance and enforcement efforts. Therefore, both freeboard assignments may be calculated and marked (with weld beading) on the hull, but only one set can be actually “painted in” at a time. The in-service marks shall be painted a contrasting color to the background; all other marks shall be painted the same color as the background.

c. Changing the load line assignment. The assigning authority shall verify the correctness of the visible marks and ensure that the corresponding certificate is prominently displayed. The survey should be conducted before the marks are changed, or at the first port call after the marks are changed. The load line certificate pertaining to the out-of-service marks shall be stored in sealed envelopes in the vessel's safe.

d. Application of other laws and regulations. For purposes of other laws and regulations (for example, strength, inspection, manning, tonnage, and pollution prevention), the draft corresponding to the deepest mark should be used. Stability must be shown to be adequate in all conditions of loading and operation.

e. Special case: Puget Sound TAPS tankers.

(1) Current U.S. regulations limit the size of tankers in Puget Sound to 125,000 DWT (*see 33 CFR 165.1303*). To facilitate compliance for tankers larger than this, the Coast Guard has authorized ABS to add a special Puget Sound load line mark (“PS”) to the domestic U.S. load line “ladder” for certain TAPS tankers. This mark corresponds to the 125,000 DWT draft, taking into consideration each tanker's light ship displacement, bunker capacity, etc.

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

(2) Although it would have been more convenient to add this special “PS” mark to the ICLL marks (which would allow the tanker to sail internationally without changing its load line certification), the ICLL does not allow the use of any marks other than those stipulated in the Convention. The Coast Guard, however, can authorize any marks for domestic U.S. load lines. Therefore, these tankers need both ICLL and domestic US load line assignments.

(3) Thus, these tankers can sail on ocean voyages between Alaska, California, and Puget Sound under their domestic load line assignment, and internationally under their ICLL assignment.

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Load Line Policy Notes

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17. Load Lines for Vessels of Unusual Form and Service

a. High-speed craft (HSC). A “high-speed craft” is one that meets the definition in the IMO “*International Code of Safety for High-Speed Craft*,” (which is based on its maximum speed and displacement), and is constructed and operated in accordance with the requirements of the HSC Code. The Code is intended to be an equivalent substitute for SOLAS and ICLL; vessels that meet the HSC

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

Section 17: Load Lines for Vessels of Unusual Form and Service

Code³⁴ are relieved of the ICLL requirements in exchange for substantial operating restrictions and contingency planning.³⁵

(1) *Evidence of compliance with the HSC Code:* The HSC Code has its own construction standards, which relax several load line construction standards that are fundamental to seaworthiness (such as sill and coaming heights). Therefore, HSC vessels are only allowed to operate on carefully-evaluated routes, where shoreside rescue assistance and other safety arrangements have been pre-planned. Compliance with the construction requirements is demonstrated by a *High-Speed Craft Safety Certificate*. The areas or routes of operation are specified in a *Permit to Operate*.

(2) *Requirements for load line equivalency:* HSC vessels in international service are considered compliant with the ICLL only if *both* of the following conditions are met: the vessel has a valid *High-Speed Craft Safety Certificate*, and it has a valid *Permit to Operate* on the specific route. A vessel with a HSC Safety Certificate, but which is not operated on a properly-permitted route, is not fully compliant with the Code and therefore is in violation of the equivalency conditions. For domestic US service, the COI must state that the vessel was designed, constructed and outfitted in accordance with the HSC Code, and it must specify the route and operational restrictions (*refer to [NVIC 6-99, "Plan Review, inspection and Certification Guidance for Vessels built to the HSC Code and Additional Information Regarding Non-Code HSC Vessels"](#)*).³⁶

(3) *ICLL exemption certificates for fully compliant HSC vessels:* Recognizing that some port states might not be familiar with the ICLL/HSC Code equivalency, IMO's MSC/Circ.1028 recommends that fully compliant HSC vessels may still be issued an international (ICLL) Exemption certificate. However, the Coast Guard does not consider it necessary to issue an exemption certificate to fully-compliant US-flag HSC vessels.

b. Submersibles (submarines). Although 46 USC 5110 includes submersibles under load line regulations, the Coast Guard does not require submarines to have a load line assignment. Instead, the seaworthiness objectives are accomplished by other regulations and requirements governing submarine design and operation. The statutory definition of "submersible" is found in 46 USC 2101(37a).

c. Float-on/float-off (FLO/FLO) vessels. These are special transport ships that are designed to ballast down and submerge their cargo decks for loading/offloading floating cargo. FLO/FLOs are required to have a load line assignment, and the marks cannot be submerged while the vessel is at sea.

(1) *Load line exemption policy:* Some countries apparently have issued their FLO/FLO vessels an ICLL Exemption certificate because of the need to immerse the load line marks during cargo loading/unloading. The U.S. Coast Guard has determined that cargo operations are not part of a sea voyage, and therefore immersion of the marks is not a violation of load line regulations. Accordingly, no load line exemption is required and the Coast Guard will not issue any for US-flag FLO/FLOs. However, adequate loading and stability information must be available to the master, and cargo operations must be conducted within the allowable wind/wave conditions.

³⁴ There are two versions of the HSC Code: 1994, and 2000. The HSC 2000 supersedes HSC 1994; vessels built after 1 July 2002 must comply with HSC 2000.

³⁵ In accordance with IMO resolution MSC.97(73), vessels that are fully compliant HSC 2000 are deemed to meet all ICLL requirements. ICLL Reg 2(9) states that "*The certificates and permits issued under the 2000 HSC Code shall have the same force and recognition as certificates issued under this Annex.*"

³⁶ NVICs are posted on the USCG website at www.uscg.mil/hq/cg5/nvic

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(2) *Special stability requirements*³⁷ In addition to normal stability requirements, U.S. FLO/FLO vessels must meet the following stability standards for cargo operations outside the protected confines of sheltered waters:

(a) *General:* During the submersion procedure the lower edge of non-watertight openings shall have a distance above the final waterline of 1.0 meter (3.28 ft) or a distance corresponding to a heel angle of 5 degrees, whichever is greater. Openings which may become immersed during the submersion procedure shall have closing appliances to be closed effectively watertight and having the same strength as the unpierced bulkhead.

(b) *Intact stability:* The intact stability of a FLO/FLO shall comply, during all intermediate conditions of the submersion procedure, with the following requirements:

(i) Heel angle less than 5 degrees.

(ii) Range of stability not less than 20 degrees.

(iii) Area under the righting arm curve not less than 14.1 ft-degrees (0.075 m-radians)

(c) *Damage stability:* During submersion operations the vessel shall meet a one-compartment damage stability standard with an assumed length of damage of 16.4 ft (5.0 m). Watertight bulkheads may be considered to be intact, provided that the distance between adjacent bulkheads exceeds 16.4 ft (5.0 m). The damage penetration shall be assumed to be 2.5 ft (0.76 m) and the vertical extent of damage shall be from the exposed deck upwards without limit.

(i) The vessel shall have positive stability during all intermediate stages of flooding.

(ii) The flooding of any damaged compartment shall not result in rendering the vessel completely or partially inoperative.

d. Mobile Offshore Drilling Units (MODUs). Special requirements for load line assignment to self-elevating and column stabilized mobile offshore drilling units are contained in the IMO "Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989."

e. Multi-hull vessels. When determining the geometric freeboard, the vessel is to be considered as one entire unit. When calculating the block coefficient and superstructure credit, the full beam of the entire vessel is used (not the beam of the individual hulls). If the procedures and interpretations given in the applicable requirements contained in 46 CFR Part 42 and/or Part 45, result in a minimum geometric freeboard that is unreasonable for the operation of the vessel, special consideration can be given by the Commandant (CG-5212) on a case by-case-basis. Such consideration will be predicated on the attributes of the configuration in question. In such cases, a freeboard may be assigned based on demonstration that the vessel meets a level of safety equivalent to the level of safety required by the applicable regulations.

f. Integrated tug/barge (ITB) units. ITBs are to be assigned load lines as follows:

(1) *Push mode units:* the tug and the barge are each assigned load lines, to allow independent operation.

(a) The tug's load line is to be calculated and assigned independently. Submergence of the tug's load line is acceptable in the ITB push mode provided no portion of the tug's freeboard deck is submerged.

³⁷ These standards were adopted from Netherlands national guidelines for issuing an international (ICCL) Exemption to "submersible pontoons" (as submitted to the SLF subcommittee in paper SLF 30/17/6 of 8 Jan 1985)

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(b) The barge's load line is to be calculated twice: as an independent vessel, and as part of the combined ITB unit, each time taking into account the applicable intact and damage stability requirements for the cargo to be carried. Whichever load line assignment that results in the greater freeboard is the one to be assigned to the barge.

(c) The barge of a push mode ITB is *not* considered an "unmanned barge" for the purposes of freeboard reduction per 46 CFR 42.20-13.

(2) *Dual mode units*: both the tug and the barge have independently calculated and assigned load lines. An unmanned barge of a dual mode ITB combination may be considered for freeboard reduction.

g. Permanently-moored vessels (PMVs) and floating structures. These include drydocks, piers, accommodation and detention facilities, floating restaurants and museums, and other floating structures designated as "substantially a land structure." As long as they are in this status, they are not subject to load line regulations. On occasions when they need to be moved from one port to another on a transit outside the Boundary Line, a single-voyage load line exemption certificate may be appropriate (especially if the structure is being relocated to a foreign port).

h. SPARs, tension-leg platforms (TLPs) and production semi-submersibles. As defined in 33 CFR 140.10, these are floating OCS facilities that are securely and substantially moored such that they cannot be moved without a special effort. They are not required to have a load line certificate. Movement from the fabrication yard to the mooring site is conducted like any other controlled movement under the jurisdiction of the local OCMI (but subsequent movement to a new mooring site will require a domestic US or international (ICCL) exemption certificate issued by the cognizant OCMI).³⁸

i. Self-propelled open hopper dredges – "working freeboard." Hopper dredges meeting the requirements of 46 CFR 44.300, "*Subpart C: Rules for Assigning Working Freeboards to Hopper Dredges,*" can be issued a domestic Special Service or Great Lakes load line, annotated to allow operation at a reduced "working freeboard" under certain conditions. The freeboard reduction is up to 50% of the normal freeboard assignment (provided the dredge meets structural and stability requirements at that working draft). The freeboard assignments on this certificate (and hull marks) would be the same as the freeboards that would normally be assigned for that service (ie, ocean or Great Lakes), but would also indicate the "working freeboard" draft and the operational restrictions. To qualify for a working freeboard assignment, the dredge must be equipped with remote draft indicators on its bridge, operate within 20 miles of a safe refuge, and operate under allowable weather and sea conditions. Because of these special operational requirements, dredges are not restricted to the geographic voyage limits of 46 CFR 44.01-12.

j. Open hopper vessels (dredges and barges) – hatch cover exemptions. Normally, U.S. and ICLL load line regulations require vessels to be fitted with weathertight hatch covers (in accordance with 46 CFR 42.15-20 and ICLL Reg 14, respectively). However, USCG policy exempts open hopper dredges and barges (such as spoils barges, garbage scows, etc) from the hatch cover requirements if they can meet applicable stability criteria with flooded hoppers as follows:

(1) *Stability*: as provided in 46 CFR 42.03-30(b)(4), self-propelled hopper dredges may be exempted if they meet the intact and damage stability requirements of 46 CFR 174.310. Unmanned hopper barges may be exempted if they meet the intact stability requirements of 46 CFR 174.015 under "flooded hopper" conditions as stipulated in [MSM \(Vol IV\) Chapter 6.E, paragraph 5\(b\)\(6\)](#).³⁹

³⁸ per USCG (G-MVI-4) policy letter to Conoco Inc. (16710/CONOCO TLWP, 15 July 1988)

³⁹ *MSM Vol IV* is posted on the USCG website at www.uscg.mil/directives/cim/16000-16999/CIM_16000_9.pdf

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(2) Open hopper vessels on international (ICLL) voyages:

(a) Open hopper dredges: self-propelled hopper dredges meeting the above-discussed stability criteria may be exempted from the hatch cover requirements of ICLL Regulation 14. In addition to the normal ICLL certificate, an ICLL Exemption certificate must also be issued (citing ICLL Article 6(2), “novel features,” as the basis for the exemption), and the Coast Guard (CG-5212) must notify IMO of the exemption as required by ICLL Article 6(3). ICLL hatch cover exemption requests must be submitted by the load line assigning authority to Commandant (CG-5212) for approval; requests must confirm that the appropriate stability requirements are met.

(b) Open hopper barges: effective October 8, 2002, the Coast Guard no longer authorizes international (ICLL) hatch cover exemptions for hopper barges.⁴⁰ Existing ICLL hatch cover exemptions for in-service barges will lapse upon expiration of their current ICLL certificate, and the exemption cannot be renewed. These barges may still be exempted from the hatch cover requirement under a domestic U.S. load line assignment.

(3) *Open hopper vessels on domestic U.S. voyages*: open hopper dredges and barges in domestic service (including Great Lakes) that meet the above stability criteria may be exempted from hatch cover requirements. The exemption should be noted on the load line certificate, citing 46 CFR 42.03-30(e) as the authority. Domestic exemption requests must be submitted by ABS to the Marine Safety Center for approval⁴¹; requests must confirm that the appropriate stability requirements are met.

(4) *Reduced “B-25” freeboard assignment for certain open hopper barges*: unmanned open hopper barges/dump scows that have small bolted/gasketed steel access covers may be assigned an unrestricted domestic ocean service “B-25” load line in accordance with 46 CFR 42.20-13(d). The barges must have a hatch cover exemption (based on the “flooded hopper” criteria discussed above) and must meet stability and structural requirements for unrestricted ocean service at the reduced freeboard. This regime applies only to domestic U.S. load line assignments; it does not extend to international (ICLL) load line assignments.

k. Liftboats. Liftboats are a unique category of specialized vessels. They are self-propelled, self-elevating work platforms that originally evolved for industrial support and servicing of offshore oil platforms. They are now finding non-oil industry work, such as salvage platforms, harbor facilities maintenance, etc. When they operate outside the Boundary Line, they are required to have load lines. There are two special load line issues for liftboats:

(1) *Minimum bow height*: Both international (ICLL) and domestic US load line regulations have a minimum bow height requirement for all vessels. However, for liftboats willing to accept certain operational restrictions, the bow height requirement may be reduced, or waived on a case-by-case basis.⁴² Because of its long association and familiarity with assigning load lines to liftboats, ABS has been authorized to waive liftboat bow heights directly (but must notify CG-5212);⁴³ all other assigning authorities must submit a bow height waiver request to the Marine Safety Center for approval.⁴⁴

(2) *Reserve buoyancy distribution*: On January 1, 2005, a new ICLL requirement for reserve buoyancy went into force (per ICLL Reg 39(5)). It is USCG policy that all vessels (including liftboats) must comply with this requirement; no international (ICLL) exemption will be granted. However, the reserve buoyancy requirement is not incorporated into domestic U.S. load line

⁴⁰ per USCG (G-MSE-2) hopper barge hatch cover policy letter to ABS (9 June 2003)

⁴¹ per COMDT (G-MSE) hatch cover delegation memo to the Marine Safety Center (8 Oct 2002)

⁴² per COMDT (G-MSE-2) bow height policy memo (14 Aug 2002)

⁴³ per USCG (G-MSE-2) bow height authorization letter to ABS (12 Aug 1998)

⁴⁴ per COMDT (G-MSE) bow height delegation memo to the Marine Safety Center (8 Oct 2002)

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regulations; therefore, exemptions will be considered on a case-by-case basis for domestic load lines only. Exemption requests must be submitted to Commandant (CG-5212).

l. Commercial fishing industry vessels. Commercial fishing industry vessels⁴⁵ more than 79 feet long and built on/after September 15, 1991 must normally meet the “unintentional flooding” requirements of 46 CFR 28.580. However, as provided in part 28.580(i), they may obtain and maintain a load line certificate in lieu of meeting some of those requirements.

m. Container ships – partially-weather-tight hatch covers. Certain container ships with high freeboards may be able to treat their hatch covers as being higher than Position 2, thereby not required by the Convention to be fully weather-tight. IMO has issued guidelines per MSC/Circ.1087 for determining when hatch covers qualify for this consideration.

n. Tank barges engaged in lightering/bunkering operations – special guard rail provisions. Load line regulations (per ICLL Reg 25(2) and 46 CFR 42.15-75) require guard rails around the exposed parts of freeboard and superstructure decks of manned vessels. As set forth in the *Load Line Technical Manual*, Coast Guard policy normally requires the rails around the deck edge periphery (or the adjacent flat of deck where vessels have rounded gunnels), regardless of the vessel’s service. However, on tank barges engaged in lightering or bunkering operations, such deck edge guard rails are vulnerable to damage from hull-to-hull contact, and can interfere with walking the mooring lines fore and aft along the barge side. Therefore, in conjunction with a domestic U.S. load line assignment, the guard rails can be set inboard from the sides of the barge in accordance with the following provisions:

- (1) Activities requiring crew access outside the guard rails (such as bunkering operations, or inspection of double side voids) are restricted to sheltered waters inside the Boundary Line (such as harbors, bays, and sounds), where load line regulations do not apply;
- (2) The guard rail arrangement must ensure that all other on-deck crew activities while underway (navigational and operational) will be performed within the boundaries of the guard rails;
- (3) The guard rails are located as close to the double side manholes as practicable;
- (4) To provide for safe line handling, the guard rail location should provide a sufficient, but not excessive, walkway (at least 28 inches between the guard rails and mooring cleats, but not more than 48 inches from the side of the barge);
- (5) Placards restricting crew access outside the guard rails while the vessel is operating in load line waters (i.e., outside the Boundary Line) are hung at each guard rail opening;
- (6) This same restriction is noted on the face of the load line certificate; and
- (7) Verification of the placard installations is included in the barge’s annual load line survey.

The above provisions apply only to manned tank barges operating under a domestic U.S. load line certificate. Manned tank barges operating on international voyages must comply with the normal peripheral location requirements for ICLL assignment.

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⁴⁵ As defined in 46 CFR 28.50, “commercial fishing industry vessels” includes fishing vessels, fish tender vessels, and fish processing vessels. These are further defined in 46 USC 2101.



Load Line Policy Notes

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18. Load Line Certificates

a. **Load Line Certificate Data** A valid load line certificate includes the following information:

- (1) The issuing Government and issuing authority (typically a class society authorized by that Government);
- (2) Several details describing the particulars of the ship, including its name, official number, port of registry, length; whether it is a "new" or "existing" vessel with respect to the ICLL, and what type of vessel it is (ie, a Type "A," "B," "B with reduced freeboard," or "B with increased freeboard");
- (3) The vertical locations of the load line marks (measured from the Deck Line and from the Plimsoll Mark), and a diagram illustrating the applicable marks;
- (4) The Fresh Water Allowances for normal & timber marks (for determining allowable immersion of marks when in fresh or brackish water);
- (5) The location of the Deck Line;
- (6) Any route or operational restrictions;
- (7) Reference to the approved stability & loading documentation;
- (8) The expiration date of the certificate;
- (9) The date and place of issuance, and signature of the authorized official. The anniversary dates for the annual endorsements are based on the issuance date;
- (10) Endorsements for annual surveys, showing the date and place where the annual load line inspections were carried out. The certificate may be cancelled if the inspections are not made (see 46 CFR 42.0755). If a vessel's Load Line Certificate is not endorsed to show that it has been surveyed annually, due to it operating in areas where a load line is not required, the load line assignment and certificate become invalid. The Load Line Certificate can be revalidated by the assigning authority's performing the annual survey. The endorsing official should sign and seal the line for the current year in the "Annual Survey" portion on the back of the certificate. One signature line should be left blank for each year in which no survey was made.
- (11) A statement that the certificate is issued under the authority of the Commandant of the Coast Guard. ABS is the prime load line assigning and issuing authority for the U.S. Assigning authorities other than ABS obtain this authority through a separate letter for each specific vessel.
- (12) On Special Service Load Line Certificates, the character of cargo and conditions of operation are also defined (see 46 CFR 44.0111, 46.1030, and 46.1510).
- (13) A statement referring to the applicable stability information.
- (14) Endorsement of load line extension, if applicable (on reverse side of certificate).

*The Naval Architecture Division office designation was previously G-MSE-2 and CG-3PSE-2

b. Sample Load Line Certificates.

- (1) [International \(ICCL\) Certificate](#). For vessels on international voyages, issued in accordance with the International Convention on Load Lines, 1966 (ICLL) as amended by the Protocol of 1988.
- (2) [International \(ICCL\) Exemption Certificate](#). For vessels on international voyages, but exempted from some or all of the ICLL regulations.
- (3) [Domestic Service Load Line Certificate](#). For vessels on domestic voyages (unrestricted coastwise or ocean service) outside the U.S. Boundary Line (*this is the form issued to new vessels entering service since 1 January 1986*)
- (4) [Coastwise Load Line Certificate](#). For vessels on domestic U.S. voyages outside the Boundary Line (*this is the form used for vessels in service prior to 1 January 1986*)
- (5) [Special Service Load Line Certificate](#). For vessels on restricted coastwise voyages (within certain geographic limits, not more than 20 miles offshore) or interisland voyages (such as Puerto Rico and US Virgin Islands, not more than 20 miles from shore).
- (6) [Great Lakes Load Line Certificate](#). For vessels operating solely on the Great Lakes.

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