

A BOATER'S GUIDE TO  
THE FEDERAL REQUIREMENTS  
FOR RECREATIONAL BOATS



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The following definitions apply to Notices, Cautions, Warnings, and Dangers found in this document.

Notice: Denotes information that is important to know prior to operation and/or maintenance but is not hazard related. They will appear italicized withing this document.

Caution: Denotes hazards or unsafe practices that COULD result in minor personal injury, product, or property damage.

Warning: Denotes hazards or unsafe practices that MAY result in severe personal injury or death.

Danger: Denotes an immediate hazard exists that WILL result in severe personal injury or death.

*Notice: The Code of Federal Regulations may be found at <https://www.ecfr.gov/>.*

We have formatted this document into segments and have provided reference to the Code of Federal Regulations (CFR) or US Code (USC).

Reference in this document to any specific commercial products, processes, or services, or the use of any trade, firm, or corporation name is for the information and convenience of the public, and does not constitute endorsement, recommendation, or favoring by the U.S. Coast Guard.

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## AHOY

As a boat operator, you are expected to make sure that your vessel carries the required safety equipment (Federal Carriage Requirement) and complies with federal and state regulations for such things as numbering, incident reporting, and operations.

This guide contains information about federal laws and equipment carriage requirements for recreational vessels of the United States. It is important that you understand that federal equipment requirements are minimum requirements and do not guarantee the safety of your vessel or its passengers.

In addition to the requirements stated in this document, the owner/operator may be required to comply with additional regulations and/or laws specific to the state in which the vessel is registered or operated. To ensure compliance with state boating laws, specifically boater education and operator requirements, you should check with the boating agency for your area. Click here for a complete listing of state boating agency contacts:

<https://www.nasbla.org/about-nasbla/boating-contacts>.

*Warning: Drowning is the #1 cause of boating fatalities, and it is in many cases preventable. The U.S. Coast Guard recommends that you always wear a personal flotation device (PFD) and require your passengers to do the same.*

## Operator's Responsibilities

Your degree of enjoyment on the water depends on you, your equipment, and other people who, like yourself, boat responsibly. As a boat operator, you should:

- Have a complete understanding of the operation and handling characteristics of your boat. Be familiar with manufacturer provided Warning Labels and Safety Precautions.
- Know your boat's load capacity and designated passenger locations.
- Take action to avoid a collision. Know and follow the "Rules of the Road" (Navigation Rules). Know and obey federal and state regulations and waterway markers.
- Make sure that everyone on board is always wearing a U.S. Coast Guard-approved PFD while on the water.
- Take a boating safety course. Courses are available on the web, home study, and in the classroom. On-water skills training is also available.
- Wear your engine cut off switch link if installed. This is a legal requirement as of 4/1/2021.
- Boat sober. Never operate a vessel while under the influence of alcohol or drugs; legal or otherwise.
- Make sure your boat is in top operating condition. It should be free of tripping hazards, fire hazards, and have clean bilges.

- Verify the required safety equipment is on board, maintained in good working order, and that you know how to use these devices.
- Always leave behind a float plan with a responsible person.
- Know your location, where you are going, and how to return.
- Check the weather before you depart. Keep an eye out for changing weather conditions and act accordingly.
- Be sure to maintain a proper lookout. Scan the water back and forth. Stay alert. Most boating accidents are caused by operator inattention.
- File a boating accident report with the State reporting authority when required.

*Notice: Make sure you and your boat meet all the legal requirements for the areas in which you operate.*

## **Numbering and Incident Reporting**

Recreational vessels equipped with propulsion machinery must be registered (numbered) in the state of principal use. A Certificate of Number (CON) will be issued upon registration and the number shown on the CON must be properly displayed on your vessel. The owner/operator of a vessel must also carry the valid CON whenever the vessel is in use. When a vessel is moved to a new state of principal use, the CON remains valid for 60 days. Check with your state boating authority for registration requirements.

Notice: Some states require all vessels to be registered, including vessels that are manually propelled and those that are Coast Guard documented.

**Registration (33 CFR 173) and Documentation (46 CFR 67)** <https://www.ecfr.gov/current/title-33/chapter-I/subchapter-S/part-173> and <https://www.ecfr.gov/current/title-46/chapter-I/subchapter-G/part-67>

There are two methods of registration for U.S. recreational vessels.

- Vessel Registration: state-issued CON.
- Vessel Documentation: federally documented with the U.S. Coast Guard.

### **Notification of Changes to a Numbered Vessel (33 CFR 173.29)**

The owner of a vessel must notify the agency that issued the CON within 15 days of:

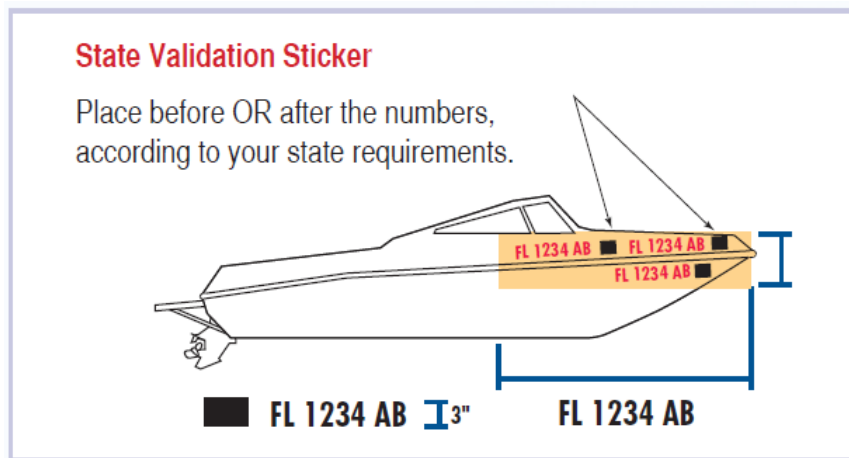
- Changes of address or ownership.
- Theft, recovery, destruction, or abandonment of the vessel.
- Loss or destruction of the certificate of number.

If the CON becomes invalid for any reason, it must be surrendered to the issuing authority within 15 days.



## Display of Numbers

Numbers must be painted or permanently attached to each side of the forward half of the vessel. The numbers must be read from left to right and be of a color that is contrasting with the background color (for example, black numbers on a white hull). The state-issued registration validation decal(s) must be affixed within six inches of the registration number (check your state regulations for specifics). No other letters or numbers may be displayed nearby.



Lettering must be in plain, vertical block characters of not less than 3 inches in height. Spaces or hyphens between letter and number groupings must be equal to the width of a letter or number other than a capital letter "I" or a number "1".

## Vessel Documentation

The U.S. Coast Guard Certificate of Documentation is a national form of registration dating back to the 11th Act of the First Congress. It serves as evidence of a vessel's nationality for international purposes, provides for unhindered commerce between the states, and admits vessels to certain restricted trades, such as coastwise trade and the fisheries. Since 1920, vessel financing has been enhanced through the availability of preferred ship mortgages on documented vessels.

Recreational vessels are eligible to be documented if they are wholly owned by a citizen or citizens of the United States and measure at least five net tons. Net tonnage is a measure of a vessel's volume.

*Notice: Most vessels more than 25 feet in length will measure five net tons or more.*

A documented vessel is not exempt from applicable state or federal taxes or for compliance with state or federal equipment carriage requirements.

A documented vessel may also be required to pay a registration fee and display a validation sticker from the state of principal use. Boat owners should check with their state boating agency.

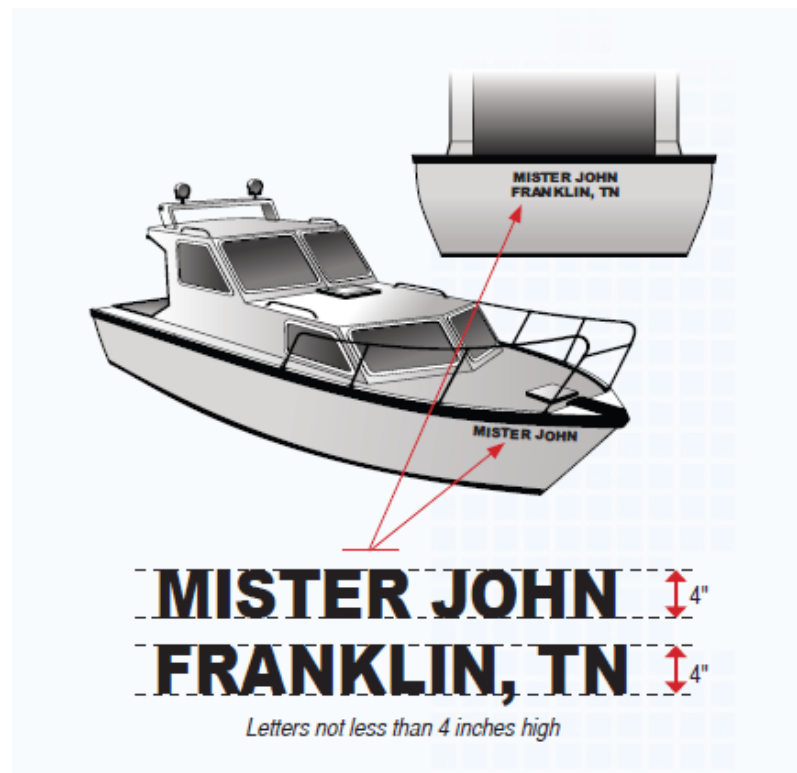
To comply with federal documentation requirements, a Certificate of Documentation must be:

- The original document (photocopy not acceptable).
- On board the vessel.
- Current (not expired).
- Signed by the Director of the National Vessel Documentation Center.

#### **Documented Vessel Marking Requirements and Hull Display (46 CFR 67.123)**

If you have documented your recreational vessel, then you must:

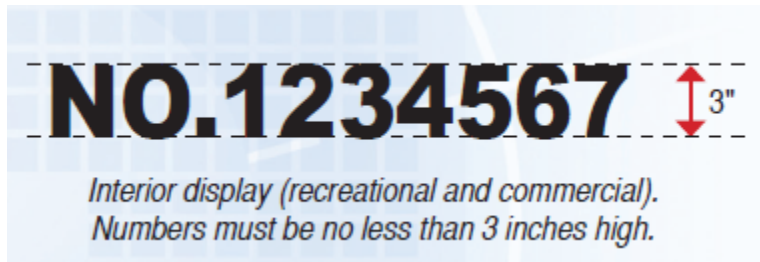
- Mark the name and hailing port of the vessel together in one place on the hull (usually on the stern).
- Use letters not less than 4 inches in height.
- Use letters that are clearly visible.



#### **Interior Display (Recreational and Commercial) (46 CFR 67.121)**

The vessel must have the official number permanently affixed in block-type Arabic numerals of not less than 3 inches in height, preceded by the letters "NO" on some clearly visible interior integral structural part of the vessel.

*Notice: Permanently affixed means that the numbers must be affixed to the vessel so that alteration, removal, or replacement would be obvious. Numbers may be painted, carved, or welded.*



Contact the National Vessel Documentation Center for more details:

USCG National Vessel Documentation Center  
792 T J Jackson Drive  
Falling Waters, WV 25419  
Email: [nvdc.w.webmaster@uscg.mil](mailto:nvdc.w.webmaster@uscg.mil)  
Toll Free: 1-800-799-8362, Main: 1-304-271-2400

## **Casualty and Accident Reporting (33 CFR 173.51)**

We hope that you're never involved in a boating incident. But if you are, federal law requires that in some instances you must immediately notify the reporting authority and that you also submit an incident report.

### **Immediate notification of death or disappearance: (33 CFR 173.53)**

Immediate notification is required to the nearest reporting authority for a death or disappearance. The following information must be provided:

- Date, time, and exact location of the accident.
- Name of each person who died or went missing.
- Number and name of the vessel.
- Name and address of the owner and operator.

### **Report of casualty or accident (33 CFR 173.55)**

The operator or owner of any recreational boat is required to file a Boating Accident Report if the boat is involved in an incident that results in any of the following:

- Loss of life.
- A person disappears from the vessel under circumstances that indicate death or injury.
- Personal injury that requires medical treatment beyond basic first aid.
- Damage to the boat and other property damage of \$2,000 or more.
- Complete loss of the boat.

*Notice: State requirements for reporting boating accidents may be more stringent than federal requirements. Some states, for example, may require that all boating accidents be reported immediately. Check with the local marine patrol or the Boating Law Administrator (<https://www.nasbla.org/about-nasbla/boating-contacts>) in the state where the accident occurred for the reporting procedures that apply.*

## **Equipment Requirements**

The United States Coast Guard sets minimum standards for recreational vessels and associated safety equipment. To meet these standards, required equipment must be U.S. Coast Guard “approved” or “certified.” This means that the equipment meets U.S. Coast Guard specifications, standards, and regulations for performance, construction, or materials. The Coast Guard does not regulate anchors, paddles, rearview mirrors, or diver/ski flags.

### **Engine Cut-Off Switches (46 USC §4301)**

Federal Law requires that the boat operator, of vessels less than 26’, shall use the installed engine cut-off switch link while operating on plane or above displacement speed.

*Warning: Remember to shut off your engines when approaching swimmers or other persons in the water. Keep those in the water on the operator’s side of the boat, always in view. Propeller guards are helpful but are not suitable for all types of boats. The best and safest action when people are in the water near your boat is to shut off your engine(s).*

*Warning: Never forget the danger to persons in the water of injuries that boat propellers can inflict. Most propeller injuries and fatalities involve open motorboats from 16 to 25 feet in length and result from operator inattention, inexperience, and carelessness.*

### **Personal Flotation Devices (33 CFR 175) <https://www.ecfr.gov/current/title-33/chapter-I/subchapter-S/part-175/subpart-B?toc=1>**

*Notice: Drowning is the leading cause of death while boating. Most deaths from drowning occur near shore in calm weather, not out at sea during a storm; 9 out of 10 drowning fatalities occur on inland waters, most within a few feet of safety. Many of these drownings may have been prevented if a PFD was worn.*

*Warning: It is recommended that you continue to wear your PFD anytime you enter the water unless while swimming in a designated swimming area. It is also recommended that you designate a responsible Water Watcher to monitor children and adults alike.*

You may have heard reference to Type I, II, III, IV, and V or Level 50, 70, 100, 150, and 275 “Personal Flotation Devices” (PFDs). PFDs fall within two main classes: (1) Those which provide face-up, in-water support to the user regardless of physical conditions (lifejackets), and (2)

those which require the user to make swimming and other postural movements to position the user with the face out of the water (buoyancy aid).

*Notice: Federal Regulations no longer mention type codes but instead uses wearable PFD and throwable PFD; this guide mentions type codes and level devices to assist the reader in comparing the old and new regulatory language.*



All recreational vessels must carry one wearable PFD for each person on board. Any boat 16 feet and longer (except canoes and kayaks) must also carry one throwable PFD (Type IV). You and all your passengers should always wear your PFD when the vessel is underway.

Always check and read the manufacturer's information booklet and label provided with all PFDs. They will provide valuable information, including performance, size, intended use, and Coast Guard approval information.

PFDs must be:

- In good and serviceable condition,
- Appropriate size and type for the intended user,
- Appropriate for the intended activity, and
- U.S. Coast Guard-approved (check the label).

Some items that are not required but are a good idea to have with your wearable PFD are a whistle and an emergency light.

### Stowage

- Wearable PFDs must be readily accessible.

- You should be able to put them on in a reasonable amount of time in an emergency (vessel sinking, on fire, etc.).
- They should not be stowed in plastic bags, in locked or closed compartments, or have other gear stowed on top of them.
- Throwable PFDs must be immediately available for use. They should be on the main deck within arm's reach, hanging on a lifeline, or other easily reached location.

### Child Life Jacket Requirements

On a vessel that is underway, children under 13 years of age must wear an appropriate U.S. Coast Guard-approved life jacket unless they are:

- Below deck, or
- Within an enclosed cabin.

*Notice: If a State has established a child life jacket wear requirement for children that differs from the Coast Guard requirement, the State's requirement will be applicable on waters subject to that State's jurisdiction.*

Child-size PFDs are often approved for specific weight ranges. Check the "User Weight" on the label and for an approval statement that will read something like: "approved for use on recreational boats and uninspected commercial vessels not carrying passengers for hire by persons weighing "less than 30, lbs.," "30 to 50 lbs.," "less than 50 lbs.," or "50 to 90 lbs."

*Caution: When trying to decide on the right size PFD, the fit, snug but not tight, is the most important characteristic.*

For more information on PFD selection please visit <https://www.uscgboating.org/recreational-boaters/life-jacket-wear-wearing-your-life-jacket.php> .

### Inflatable Life Jackets

Inflatable Life Jackets require regular maintenance and attention to the condition of the inflation mechanism.

- They must have a full cylinder.
- All status indicators must be green.

# ADULT UNIVERSAL

User Weight: >40 kg (>88 lbs)  
Chest Size: 76-132 cm (30-52 in.)

## PERFORMANCE LEVEL



## TURN ABILITY (SEE BELOW)



## WARNINGS (SEE BELOW)

Measured in **newtons**.

- Lower level number offers more mobility, comfort, and style with good flotation, and intended for near shore (calm water) activities.
- Higher level number offers greater flotation, turning, and stability in the water, and for offshore activities (greater time to rescue).
- There are areas where you may be boating near shore when rescue is hours away, and a higher level is needed.
- Be honest about your swimming ability. Poor swimmers may need a higher level to stay upright and easily tread water.



**NEAR SHORE (CALM)**

**OFFSHORE (WAVES)**

**INCREASING TIME TO RESCUE**

### WARNINGS

Some life jackets are **NOT APPROVED** for:



Water skiing



Tubing



Personal watercraft or wakeboarding



White water paddling

### TURN ABILITY



Life jacket will turn an unconscious wearer face up—test before use.



Life jacket will not turn an unconscious wearer face up.

USCG Approved 160.064/XXXX/X  
TC Approved XXXXXX-X  
ANSI/CAN/UL 12402-5

Model: XXXX Style: XXXX  
Lot No. XXXX

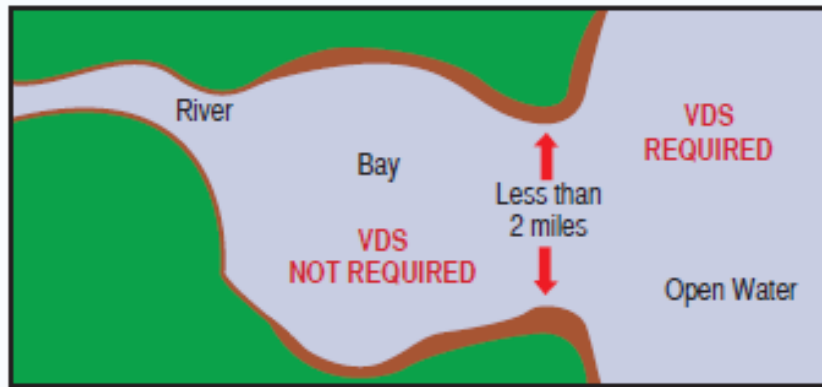
Approval conditions state that this device must be worn to be counted as equipment required by vessels meeting Transport Canada or USCG regulations.

**USCG APPROVED**

**APPROVED USE IN  
U.S. AND CANADA**

**Visual Distress Signals (33 CFR 175.101/140)** <https://www.ecfr.gov/current/title-33/chapter-I/subchapter-S/part-175/subpart-C?toc=1>

Vessels operating on U.S. coastal waters, the Great Lakes, and territorial seas, as well as those waters connected directly, up to a point where the waterway is less than two nautical miles wide, must be equipped with U.S. Coast Guard-approved visual distress signals (VDS).



The following vessels are not required to carry day signals, but must carry night signals when operating from sunset to sunrise:

- Recreational boats less than 16 feet in length.
- Boats participating in organized events, such as races, regattas, or marine parades.
- Open sailboats less than 26 feet in length that are not equipped with propulsion machinery.
- Manually propelled boats.

*Notice: Although the VDS carriage requirements are only enforceable in areas where VDS are required by law, signaling devices are recommended wherever you operate your boat.*

### Pyrotechnic Devices

Pyrotechnic visual distress signals must be U.S. Coast Guard-approved, not expired, in serviceable condition, and readily accessible.

Check the expiration date (42 months after the date of manufacture). Expired signals may be carried as extra equipment but cannot be counted toward meeting the visual distress signal requirement.

Launchers manufactured before January 1, 1981, and intended for use with approved signals, are not required to be U.S. Coast Guard- approved as long as they remain in serviceable condition.

If pyrotechnic devices are selected, a minimum of three signals are required for day use and three signals for night use. Some pyrotechnic signals meet both day and night use requirements (combination flares).



Pyrotechnic devices should be stored in a cool, dry place, if possible. A watertight container painted red or orange and prominently marked “DISTRESS SIGNALS” or “FLARES” is recommended.

U.S. Coast Guard-approved pyrotechnic visual distress signals and associated devices include:

- Pyrotechnic red flares, hand-held or aerial (day/night use).
- Pyrotechnic orange smoke, hand-held or floating (day use).
- Launchers for aerial red meteors or parachute flares.

*Notice: Each of these devices has a different operating/burning time. Check the label to see how long each pyrotechnic device will remain illuminated. Choose a device best suited to the conditions in the area where your vessel is typically used.*

### Non-Pyrotechnic Devices

Non-pyrotechnic visual distress signals must be in serviceable condition, readily accessible, and certified by the manufacturer as complying with U.S. Coast Guard requirements. These signals include:

#### Orange Distress Flag

- Used as a day signal only.
- Must be at least 3 x 3 feet with a black square and ball on an orange background.
- Must be marked with an indication that it meets U.S. Coast Guard requirements in 46 CFR 160.072.
- Most visible when attached and waved on a paddle or boat hook or flown from a mast.
- May be incorporated into devices designed to attract attention in an emergency, such as balloons, kites, or floating streamer.

#### Electronic Visual Distress Signal Device (eVDSD)



- Acceptable for night use only.
- Automatically flashes the international SOS distress signal (• • • — — • • •).

- Must be marked with an indication that it meets U.S. Coast Guard requirements in 46 CFR 161.013 or
- Must be marked with an indication it meets RTCM Std. 13200.0 for an eVDSD, Night Visual Distress Signal for Boats. For Emergency Use Only. USCG accepted for nighttime distress signal per 33 CFR 175.130 by CG-ENG Policy Letter 03-18.

#### Electric Distress Signals (night only)

Under the Inland Navigation Rules, a high-intensity white light flashing at regular intervals from 50-70 times per minute is considered a distress signal. Such devices, however, do not meet the Visual Distress Signal carriage requirement.

Regulations prohibit display of visual distress signals on the water except where assistance is needed because of immediate or potential danger to persons on board a vessel.

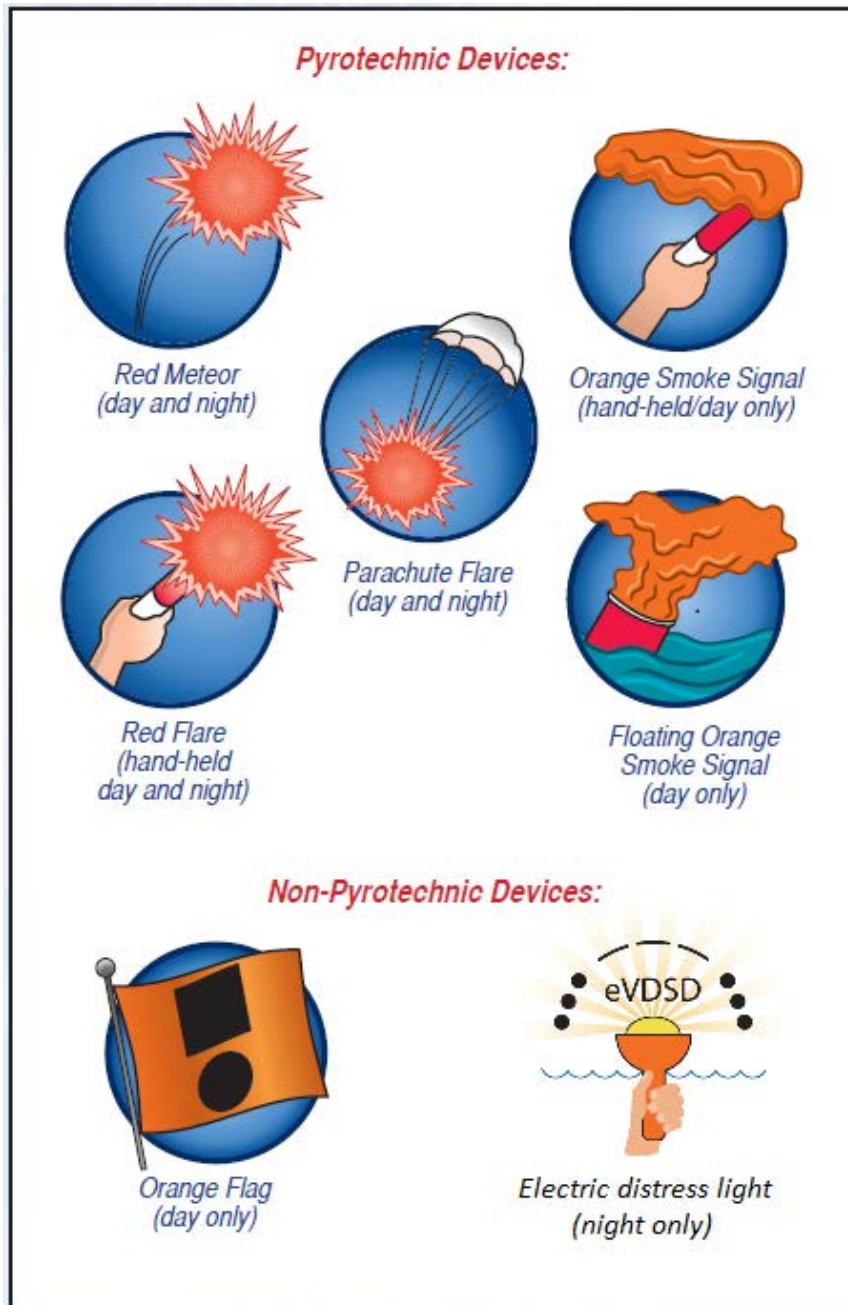
*Notice: All distress signals have distinct advantages and disadvantages. No single device is ideal under all conditions or suitable for all purposes.*

*Warning: Pyrotechnics are universally recognized as excellent distress signals, but there is potential for injury and property damage if not handled properly. These devices produce a very hot flame with the potential to cause burns and ignite flammable materials. Disposal of these devices can also be a problem depending on jurisdiction.*

Pistol-launched and hand-held parachute flares and meteors have many characteristics of a firearm and must be handled with extreme caution. In some states and Canada, they may be considered a firearm and prohibited from use. Be sure to check with your state boating agency.

The following are a few of the many combinations of devices that will meet the requirements:

- 3 hand-held red flares that are approved for day/night use.
- 1 hand-held red flare and 2 parachute flares for day/night use.
- 1 hand-held orange smoke signal and 2 floating orange smoke signals for day, and 1 electric distress light for night.

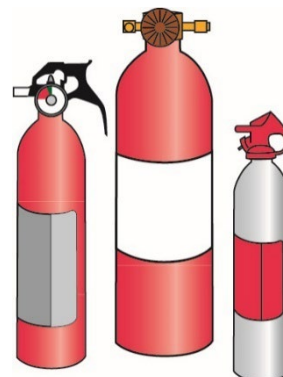
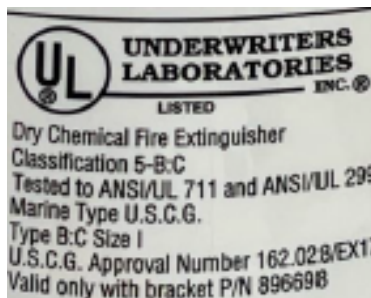


## Fire Extinguishers (33 CFR 175 Subpart E) <https://www.ecfr.gov/current/title-33/chapter-I/subchapter-S>

U.S. Coast Guard-approved, marine-type fire extinguishers are required on boats where a fire hazard could be expected from the engines or fuel system. Extinguishers are classified by a letter and number symbol. The number indicates the amount of the extinguishing agent contained in the extinguisher, the higher the number, the greater the amount of agent in the extinguisher. The letter indicates the type of fire the unit is designed to extinguish. Class B, for example, is designed to extinguish flaming liquids, such as gasoline, oil, and grease.

Approved extinguishers required for boats are Class B Marine type and hand portable. They are generally available as 5-B, 10-B, or 20-B, and must be provided with a mounting bracket. While not required, it is recommended that the extinguishers be mounted in a readily accessible location. Consider locations where the extinguisher can be reached easily (e.g., at or near the steering station or in the galley or engine room, but away from locations where a fire may likely start).

*Notice: If your vessel is model year 2017 or older, you may carry a B-I or B-II rated fire extinguisher instead, but you must replace them with the required 5 or 20-B when they are no longer good and serviceable.*



### Fire Extinguisher Markings

Extinguisher markings can be confusing because one extinguisher can be approved for several different types of fires (A, B, or C). For example, an extinguisher marked "1-A:10-B:C" is rated for A (trash, wood, and paper), B (liquids and gases), and C (energized electrical equipment). You want to ensure that the multipurpose fire extinguisher you buy is the proper size Class B, USCG Approved for your boat; 5-B, 10-B, or 20-B.

Fire extinguishers are required on boats when any of the following conditions exist:

- There are closed compartments and compartments under seats where portable fuel tanks may be stored.

- There are double bottoms not sealed to the hull or not completely filled with flotation material.
- There are closed living spaces.
- There are closed stowage compartments, in which combustible or flammable materials are stored.
- There are permanently installed fuel tanks. (Fuel tanks secured so they cannot be moved in case of a fire or other emergency are considered permanently installed. Also, if the weight of a fuel tank is such that persons on board cannot move it, the U.S. Coast Guard may consider it permanently installed).

Location identified in Figure 1 to § 175.320(a)(2)	Condition requiring fire extinguishers
1	Closed compartments under thwarts and seats wherein portable fuel tanks may be stored.
2	Double bottoms not sealed to the hull or which are not completely filled with flotation material.
3	Closed living spaces.
4	Closed stowage compartments in which combustible or flammable materials are stowed
5	Permanently installed fuel tanks.

**Figure 1 to § 175.320(a)(2)**



Figure 1 showing compartments where vapors may become trapped.

### Fire Extinguisher Maintenance

Inspect your fire extinguisher each time you get underway make sure that:

- Seals and tamper indicators are not broken or missing.
- Pressure gauges or other indicators, if so equipped, read in the operable range as described on the extinguisher.
- There is no obvious physical damage, rust, corrosion, leakage, or clogged nozzles.
- The extinguisher is not expired (for non-rechargeable extinguishers, 12 years from date stamped on bottom).

If the minimum weight is stated on the extinguisher label, weigh extinguishers annually to check.

*Notice: Fire extinguishers that do not satisfy the above requirements or that have been partially emptied must be replaced or if refillable taken to a qualified fire extinguisher servicing company for recharge.*

### Required Number of Fire Extinguishers

The following chart lists the number of fire extinguishers that are required on recreational vessels. If a U.S. Coast Guard-approved fixed fire extinguishing system is installed for the protection of the engine compartment, the required number of extinguishers may be reduced in accordance with the chart.

#### Minimum Number of Hand-Portable Fire Extinguishers Required

<b>Boat model year of 2018 and newer.</b>		
<b>NOTE - may carry only 5-B or 20-B rated fire extinguishers with date stamp</b>		
Length (feet)	Minimum number of 5-B rated portable fire extinguishers required <sup>1</sup>	
	If no fixed fire extinguishing system in machinery space	If fixed fire extinguishing system in machinery space
Under 16	1	0
16 but less than 26	1	0
26 but less than 40	2	1
40 up to 65	3	2
<sup>1</sup> One 20-B, rated portable fire extinguisher may be substituted for two 5-B portable fire extinguishers		

<b>Boat model year between 1953 and 2017</b>		
<b>NOTE - may carry either 5-B, 20-B rated extinguishers with date stamp or B-I, B-II rated fire extinguishers</b>		
Length (feet)	Minimum number of B-I/5-B, or B-II/20-B rated portable fire extinguishers required <sup>1</sup>	
	If no fixed fire extinguishing system in machinery space	If fixed fire extinguishing system in machinery space
Under 16	1	0
16 but less than 26	1	0
26 but less than 40	2	1
40 up to 65	3	2
<sup>1</sup> One 20-B/B-II, rated portable fire extinguisher may be substituted for two 5-B/B-I portable fire extinguishers		

**Ventilation** (33 CFR 175/183, 46 CFR 25.40) <https://www.ecfr.gov/current/title-33/chapter-I/subchapter-S/part-175/subpart-D?toc=1> and <https://www.ecfr.gov/current/title-46/chapter-I/subchapter-C/part-25/subpart-25.40?toc=1>

Boats that use gasoline for electrical generation, mechanical power, or propulsion are required to be equipped with a ventilation system.

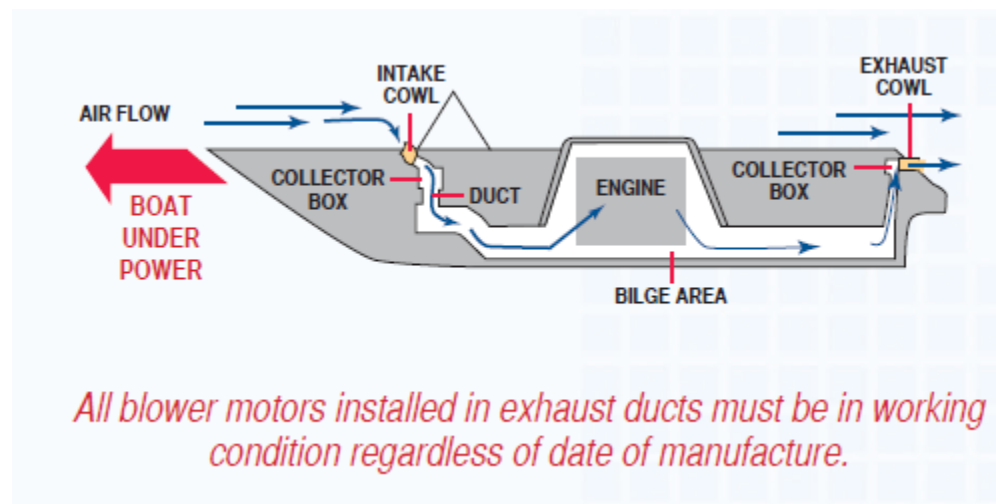
Boat owners are responsible for keeping their vessel's ventilation systems in operating condition. This means making sure openings are free of obstructions, ducts and ducting are not blocked or torn, blowers operate properly, and worn components are replaced with equivalent marine-type equipment.

A natural ventilation system is required for each compartment in a boat that:

- Contains a permanently installed gasoline engine.
- Has openings between it and a compartment that requires ventilation.
- Contains a permanently installed fuel tank and an electrical component that is not ignition-protected.
- Contains a fuel tank that vents into that compartment (including a portable tank).
- Contains a non-metallic fuel tank.

A natural ventilation system consists of:

- A supply opening (duct/cowl) from the outside air (located on the exterior surface of the boat), from a ventilated compartment, or from a compartment that is open to the outside air.
- An exhaust opening into another ventilated compartment or an exhaust duct to the atmosphere.



Each exhaust opening or exhaust duct must originate in the lower one-third of the compartment. Each supply opening or supply duct and each exhaust opening or duct in a compartment must be above the normal accumulation of bilge water.

A powered ventilation system is required for each compartment in a boat that has a permanently installed gasoline engine with a cranking motor for remote starting.

A powered ventilation system consists of one or more exhaust blowers.

Each intake duct for an exhaust blower must be in the lower one-third of the compartment and above the normal accumulation of bilge water.

For boats built prior to 1980, there was no requirement for a powered ventilation system; however, some boats were equipped with a blower.

The U.S. Coast Guard Ventilation Standard, a manufacturer requirement, applies to all boats built on or after August 1, 1980. Some builders began manufacturing boats in compliance with

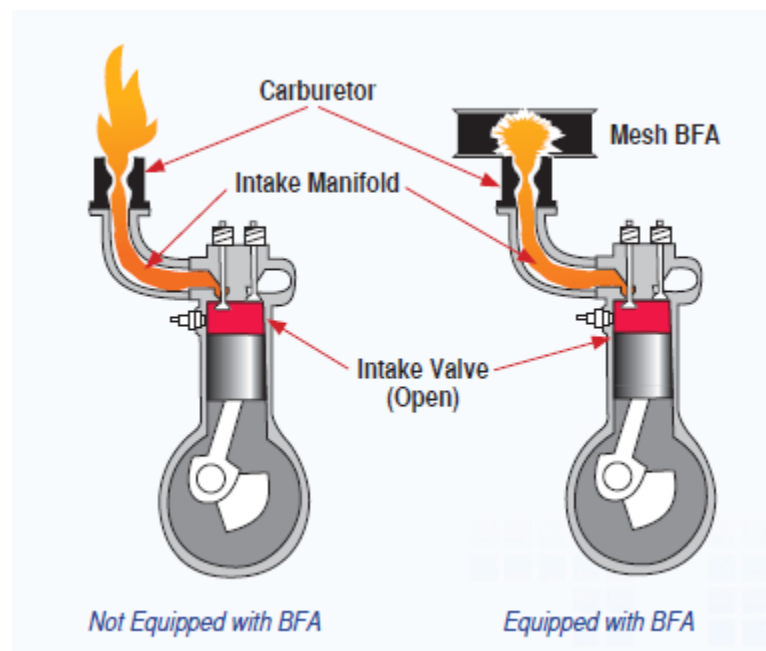
the Ventilation Standard as early as August 1978. If your boat was built on or after August 1, 1978, it might have been equipped with either (1) a natural ventilation system, or (2) both a natural ventilation system and a powered ventilation system. If your boat bears a label containing the words, "This boat complies with U.S. Coast Guard safety standards," you can assume that the design of your boat's ventilation system meets applicable regulations.

Boats built after 1980 with remote starters are required to display a label that contains at least the following information:

**"Warning: Gasoline vapors can explode. Before starting engine, operate blower at least four minutes and check the engine compartment bilge for gasoline vapors."**

#### **Backfire Flame Control (46 CFR 25/58)**

Gasoline engines installed in a motorboat or motor vessel after April 25, 1940, except outboard motors, must be equipped with an acceptable means of backfire flame control. The backfire flame arrestor (BFA) must be suitably secured to the air intake with a flame-tight connection and is required to be either U.S. Coast Guard-approved or comply with SAE J-1928 or UL 1111 standards and marked accordingly.



*Notice: Other acceptable means of backfire flame control include air and fuel induction systems usually found on personal watercraft, velocity stacks (attachments to carburetors), and reed-type (found in outboards.)*



## Navigation Rules (33 CFR 83)

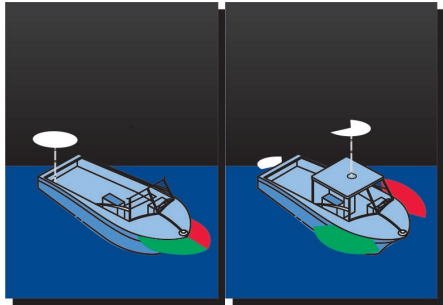
### Lights and Shapes (33 CFR 83, Subpart C)

Recreational vessels are required to display navigation lights between sunset and sunrise and during periods of restricted visibility (fog, rain, haze, etc.). The Amalgamated International and U.S. Inland Navigation Rules specifies lighting requirements for every description of watercraft. For more information, please visit <https://www.navcen.uscg.gov/navigation-rules-amalgamated>.

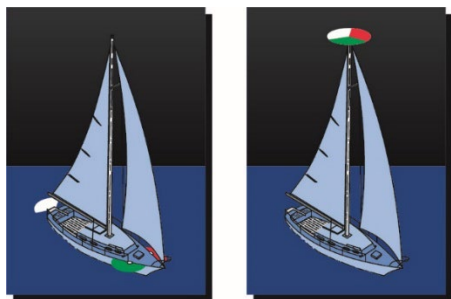
*Notice: A sailing vessel or human-powered vessel (Canoe/Kayak/SUP) under mechanical propulsion is considered a power-driven vessel.*

*Warning: What follows is not an all-inclusive list. As the operator you should be thoroughly familiar the Lights, Shapes, and Sounds you will encounter on the water.*

A Power-Driven Vessel less than 39.4 feet (12 meters) in length will display the following lights:



A Sailing Vessel will display the following lights:



A Vessel under oars will display the following lights:



### Sound Producing Devices (33 CFR 83, Subpart D)

Navigation Rules require sound signals to be made under certain circumstances. Meeting, crossing, and overtaking situations, described in the Navigation Rules beginning with Rule 32, are examples of circumstances in which sound signals are required. Recreational vessels are also required to use sound signals during periods of reduced visibility and while at anchor.

### **Pollution Regulations** (33 CFR 151/155)

Annex V of MARPOL 73/78 prohibits throwing, discharging, or depositing any refuse matter of any kind (including trash, garbage, oil, and other liquid pollutants) into the waters of the United States.

The Federal Water Pollution Control Act prohibits the discharge of oil or hazardous substances that may be harmful into U.S. navigable waters. Vessels 26 feet and greater in length, with machinery spaces, must display a placard at least 5 by 8 inches, made of durable material, fixed in a conspicuous place in the machinery spaces, or at the bilge pump control station, stating the following:

#### **Discharge of Oil Prohibited**

The Federal Water Pollution Control Act prohibits the discharge of oil or oily waste upon or into any navigable waters of the United States. This prohibition includes any discharge that causes a film or discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to substantial civil and/or criminal sanctions, including fines and imprisonment.

Regulations issued under the Federal Water Pollution Control Act require all vessels with propulsion machinery to have a capacity to retain oily mixtures on board and be equipped with a fixed or portable means to discharge these oily mixtures to a reception facility. On recreational vessels, a bucket, oil absorbent pads, and heavy-duty plastic bag, bailer, or portable pump are some of the suitable means that meet the requirement for retention on board until transferring the oily mixture to a reception facility. No person may intentionally drain oil or oily waste from any source into the bilge of any vessel.

*Notice: You must immediately notify the U.S. Coast Guard if your vessel discharges oil or hazardous substances in the water. Call the Coast Guard National Response Center's 24-hour hotline toll-free at (800) 424-8802.*

Be prepared to report the following information to the National Response Center:

- Location of the incident.
- Size/quantity (estimated amount of material released).

- Description, color, consistency, odor.
- Date and time observed.
- Source and cause of the release, if known.
- Substance, if known.
- Weather and any other information that may help emergency personnel respond to the incident.

### Discharge of Garbage and Waste Management Plans

The Act to Prevent Pollution from Ships (MARPOL ANNEX V) places limitations on garbage discharge from vessels. Discharging plastic is illegal everywhere. Discharging any garbage in the navigable waters of the United States, including the inland waters and Great Lakes, is also illegal. Beyond these waters, the discharge of garbage is permitted based on the garbage type and distance offshore (see table below).

*Notice: state and local laws may place further restrictions on the disposal of garbage.*

Garbage Type	Discharge
Plastics – includes synthetic ropes, fishing nets, and plastic bags	Prohibited in all areas
Comminuted or ground food waste, paper, rags, glass, etc.	Prohibited less than 3 miles from nearest land
Food waste, paper, rags, glass, metal, bottles, crockery, and similar refuse	Prohibited less than 12 miles from nearest land
Floating dunnage, lining, and packing materials	Prohibited less than 25 miles from nearest land

United States vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions.



United States ocean-going vessels of 40 feet or longer that are engaged in commerce or equipped with a galley and berthing must have a written waste management plan describing the procedures for collecting, processing, storing, and discharging garbage, and must designate the person in charge of carrying out the plan.

### **Marine Sanitation Devices (33 CFR 159)**

All recreational boats with installed toilet facilities must have an operable marine sanitation device (MSD) on board. Vessels 65 feet and under may use a Type I, II, or III MSD. Type I and Type II are “flow-through” devices, while a Type III is a holding tank. Vessels over 65 feet must install a Type II or III MSD. All installed MSDs must be U.S. Coast Guard certified, which are so labeled, except for some holding tanks, which are defined in regulation.

The discharge of treated sewage is allowed within 3 nautical miles of shore except in designated “No Discharge Zone” areas. (Untreated sewage may be discharged beyond 3 nautical miles.)

A “No Discharge Zone” is a body of water where the discharge of treated or untreated sewage is prohibited. When operating a vessel in a No Discharge Zone, the operator must secure the device in a manner that prevents any discharge. Some acceptable methods are padlocking overboard discharge valves in the closed position, using a non-releasable wire tie to hold overboard discharge valves in the closed position, closing overboard discharge valves and removing the handle, and locking the door to the space enclosing the toilets.

*Notice: these methods for preventing the overboard discharge are only required when operating in a No Discharge Zone. State and local laws may place further restrictions on overboard discharges.*

## **Operating Procedures**

### **Navigation Rules**

*Warning: Operators should have a good working knowledge of the Navigation Rules before venturing out on the water.*

Boaters call navigation rules, which are the basic laws governing the steering or sailing of a boat, “The Rules of the Road.” These Rules define the roles and responsibilities of vessel operators. If all operators followed these rules, most accidents could be avoided.

The Amalgamated International and U.S. Inland Navigation Rules is provided in a single page layout that clearly sets out the difference between each set of Rules. A print friendly version of the USCG Navigation Rules and Regulations Handbook may be found at <https://www.navcen.uscg.gov/> under the “Nav Rules” tab.

The operator of a vessel 39.4 feet (12 meters) or greater is responsible for having and maintaining a copy of the Navigation Rules on board while operating on U.S. inland waters.

*Notice: The Amalgamation or similar facsimiles of the Navigation Rules, such as those published by the United States Coast Pilot®, may be used to meet the “copy of these Rules” requirement of Inland Rule 1(g)/33 CFR 83.01(g). For the USCG policy on the use of electronic charts and publications to meet U.S. carriage requirements see the USCG Navigation and Vessel Inspection Circular [01-16-Ch-2](#).*

The Rules vary slightly depending on whether you are boating on inland or on international waters. As an example, when operating on inland waters, sound signals are signals of intent; when operating on international waters, they are signals of action.

### **Aids to Navigation**

Navigation buoys and beacons are placed along coastal and navigable waters as guides to mark safe water and hidden dangers, as well as to assist boat operators in determining their position in relation to land. Each aid to navigation provides specific information.

Several Aids are usually used together to form a local system that helps the boat operator follow natural and improved channels. Such Aids also provide a continuous system of charted markers for coastal piloting.

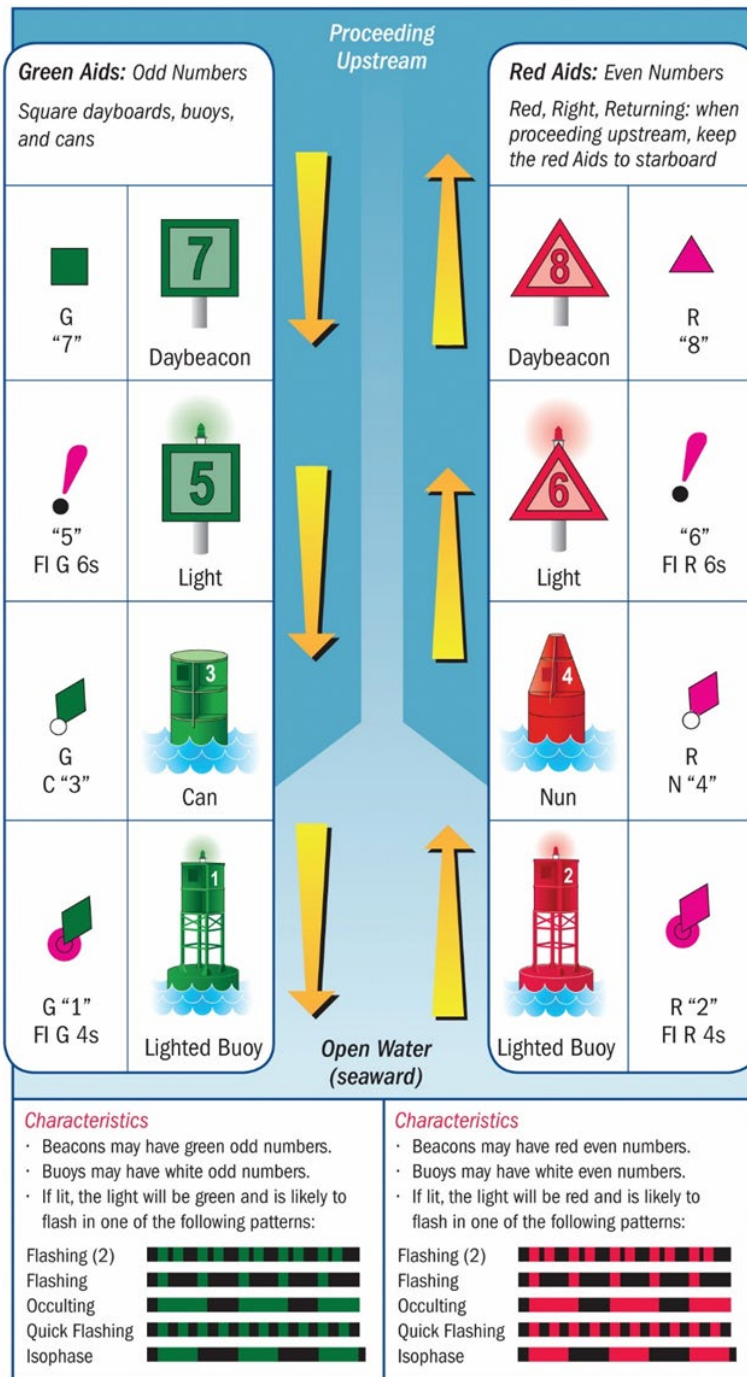
Individual Aids are used to mark landfall from seaward and to mark isolated dangers.

Lateral markers are buoys or beacons that indicate the port and starboard sides of a route to be followed. Virtually all U.S. lateral marks follow the traditional 3-R principle of “Red, Right, Returning.” This means that when returning from seaward, keep the red markers on the right-hand (starboard) side of the vessel.

Boat operators should not rely on Aids to Navigation alone for determining their position. Storms and wave action can move buoys out of place.


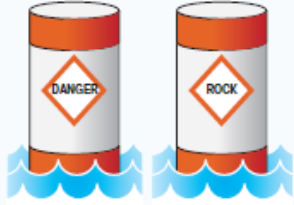

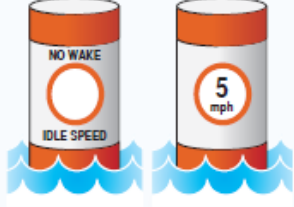

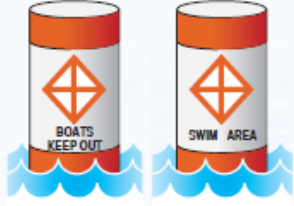


## Lateral Aids

Lateral aids marking the sides of channels, as seen when entering from seaward.



## Information and Regulatory Markers

These orange-and-white aids are used to alert vessel operators to various warnings and regulations. These aids are maintained by the states, not the USCG.

Symbol	Meaning	Examples
	<b>Danger</b> A diamond shape alerts boaters to hazards	
	<b>Restricted Operations</b> Marks with a circle indicate areas with regulated operations	
	<b>Exclusion</b> A diamond shape with a cross means boats are prohibited from the area	
	<b>Information</b> Marks with a square provide helpful information such as directions, distances, and locations	

### Characteristics

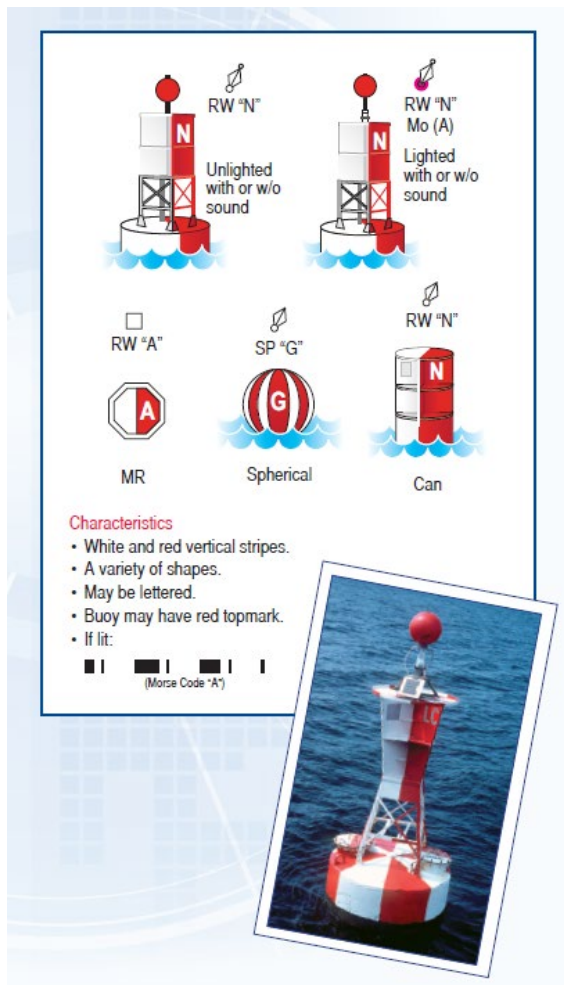
- White with an orange horizontal band at both top and bottom.
- Black text within or around an orange square, circle, or diamond; or black text outside a diamond with an orange cross.
- May be buoys or beacons.
- If lit, the light will be white and may have any light rhythm except quick flashing, flashing (2), or Morse code "A."
- The chart symbol for this type of buoy is:





## Safe Water Markers

These Aids are used to mark fairways, mid-channels, and offshore approach points. They have unobstructed water on all sides. A buoy, lighted or unlighted, may show a red topmark. An appropriate nautical chart must be consulted to determine exact position.



## Nautical Charts

One of the most important tools for safely navigating waterways is a Nautical Chart. Today, many recreational boaters use GPS receivers and perform electronic waypoint navigation. Although a GPS can tell you where you are in terms of latitude and longitude, it cannot show what is around or beneath the boat, or what obstacles may be in the way.

Nautical charts show the nature and shape of the coast, including water depths, marine hazards, general configuration and character of the bottom, and Aids to Navigation, as well as prominent landmarks, port facilities, and other relevant information. Changes brought about by people and nature require that nautical charts be constantly maintained and updated to aid safe navigation.



To meet the needs of the boating public, the National Oceanic and Atmospheric Administration's National Ocean Service (NOS) produces a variety of nautical charts and related products. Having the most current chart is vital. NOAA maintains more than 1,000 NOAA ENC® datasets over U.S. coastal waters and the Great Lakes. The U.S. Army Corps of Engineers produces a similar product, called Inland ENC (IENC) for many U.S. Rivers. NOAA ENC® may be found at <https://nauticalcharts.noaa.gov/charts/noaa-enc.html>.

*Caution: Some providers do not update their charts as often as others.*

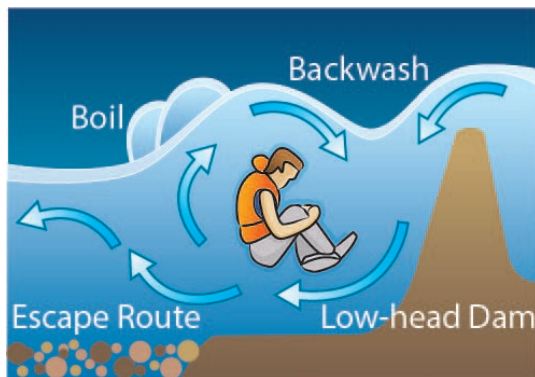
To purchase a paper nautical chart, contact a NOAA certified chart Agent.  
<https://nauticalcharts.noaa.gov/>.

## **Dams and Navigation Locks**

### Low-Head Dams

*Danger: Low-Head Dams are extremely dangerous and have led to fatalities.*

Those boating on rivers need to be aware of the location of dams in their boating area. Low-head, or “fixed crest” dams can be difficult to see from small vessels moving downriver. These dams can be extremely dangerous to small boats and swimmers, so much so they have been nicknamed “drowning machines.” Be aware that buoys are not in the river year-round and, even when they are, the current can move them off station. Keep a lookout for “Danger Dam” signs. It is strongly recommended that boaters use navigation charts, which provide valuable information on the location of dams and other hazards in the river.



### Navigation Locks

A lock is an engineered structure that enables vessels to move between waterways of differing heights. There are specific procedures in place for navigating through locks, which may vary by region, but in general the following applies:

- Stay between the red and green buoys that mark the river's navigable channel.
- Request an opening using your marine radio, cell phone, or sound signal (sound one prolonged blast, 4-6 seconds, and one short blast, 1 second, within one mile of the lock).

A boater can use the lock's pull-cord or a whistle, horn, megaphone, or hailer to make a sound signal.

- Wait for the lock operator to signal you with horn blasts; additional signals may include traffic lights or flashing lights.
- Enter the lock at reduced speed.
- Make sure all passengers remain seated and wear their life jackets.
- Tie your craft to the mooring devices after entering; a minimum of 50 feet of line is recommended.
- Use fenders to avoid damage to your vessel and the lock walls.
- To exit the lock, wait for the lock operator's signal (horn and/or lights), and then leave the lock at idle speed.

There is a specific order of lockage priority among vessels. Military and most commercial vessels have priority over recreational vessels.

## **Interacting with Law Enforcement**

A vessel underway when hailed by a Coast Guard vessel is required to heave to or maneuver as directed to permit a boarding team to come aboard.

*Notice: "Heave-to" means to come to a stop.*

Other federal, state, and local maritime law enforcement officials may also board and examine your vessel, whether it is numbered, unnumbered, or documented. U.S. Coast Guard law enforcement personnel work with and may also be found aboard other agencies' enforcement vessels.

The U.S. Coast Guard may impose a civil penalty for failure to:

- Comply with equipment requirements.
- Report a boating accident.
- Comply with other federal regulations.
- Comply with Navigation Rules.

## **Negligent Operation (46 USC §2302 (a) (b))**

Federal law prohibits the negligent or grossly negligent operation of a vessel and/or interference with the safe operation of a vessel so as to endanger lives and/or property. The U.S. Coast Guard may impose a civil penalty for negligent operation. Grossly negligent operation is a criminal offense, and an operator may be fined up to \$5,000, imprisoned for one year, or both.

Some actions that may constitute negligent or grossly negligent operation are:

- Operating a boat in a designated swimming area.
- Excessive speed in the vicinity of other boats or in regulated waters.
- Hazardous water skiing or other water sports practices.
- Bow riding or riding on a seatback, gunwale, or transom.
- Operating a boat while under the influence of alcohol or drugs.

*Notice: The legality of a substance does not alter the penalties for operating under the influence.*

### **Boating Under the Influence (BUI) (46 USC §2302 (c)/33 CFR 95)**

*Warning: Alcohol use is the leading known contributing factor in fatal boating incidents.*

Operating a vessel while under the influence is dangerous and a federal and state offense. If an operator of a recreational boat has a blood alcohol content of .08 (.10 in some states) or greater, the operator is subject to a civil penalty not to exceed \$1,000 a criminal penalty not to exceed \$5,000, or a one-year imprisonment, or both. Intoxicated operators who are cited by the Coast Guard may also be cited by other state or local law enforcement officials. State criminal penalties may vary and could include arrest, fines, and/or loss of motor vehicle driving privileges.

### **Termination of Use (46 USC §4308/33 CFR 177.05)**

A U.S. Coast Guard Boarding Officer who observes a vessel being operated in an unsafe condition, specifically defined by law or regulation, and determines that an especially hazardous condition exists that cannot be corrected on the spot may terminate the vessel's voyage and direct the operator to return to port.

Termination for unsafe use may be imposed for:

- Insufficient lifesaving devices.
- Insufficient fire extinguishers.
- An overloaded vessel.
- Improper display of navigation lights.
- Improper ventilation of fuel tanks and engine spaces.
- Fuel leak or accumulation of fuel in the bilges.
- Inadequate backfire flame control.
- Operating in regulated boating areas during predetermined adverse conditions (applies only to Thirteenth USCG District: Idaho, Montana, Oregon, and Washington).
- A manifestly unsafe voyage.

An operator who refuses to comply with the directions of a U.S. Coast Guard Boarding Officer to terminate the unsafe use of a recreational vessel can be cited for failure to comply with the Boarding Officer's instruction, as well as for the specific violation that was the basis for the

termination order. Violators may be fined up to \$1,000, or imprisoned for up to one year, or both.

### **Rendering Assistance (46 USC §2304)**

The master or person in charge of a vessel is obligated by law to provide assistance that can be safely provided to any individual in danger at sea. The master or person in charge is subject to a fine and/or imprisonment for failure to do so.

### **Requesting Assistance (Non-Distress Call)**

If a boater contacts the U.S. Coast Guard on Channel 16 VHF-FM or Digital Select Calling Channel 70 and the situation is determined to be non-distress, the Coast Guard will offer to contact any assistance provider (commercial or friend) the boater requests. If the boater has no preference, the Coast Guard will issue a Marine Assistance Request Broadcast (MARB). The boater may then be contacted directly by another boater ("Good Samaritan") or by a commercial assistance provider with an offer of help.

### **U.S. Coast Guard Boarding Policy**

Title 14, Section 89, of the United States Code authorizes the U. S. Coast Guard to board vessels subject to the jurisdiction of the United States, anytime upon the high seas and upon waters over which the United States has jurisdiction, to make inquiries, examinations, inspections, searches, seizures, and arrests.

### **What to Expect**

The Coast Guard may board any vessel, including kayaks, canoes, and personal watercraft, at any time to ensure the safety of those aboard and others nearby. The U.S. Coast Guard conducts nearly 55,000 boardings a year in its multiple roles: enforcing the law, providing search and rescue services, promoting boating safety, preventing damage to marine environments, and helping to secure the nation's borders. The more time a boater spends on the water, the more likely he or she will experience a U.S. Coast Guard boarding.

During law enforcement boardings, the scope of the vessel inspection is to determine the vessel's status (commercial, recreational, passenger, cargo, and/or commercial fishing) and to check for compliance with all applicable federal laws and regulations.

The decision to board may be based on a vessel's activity, location, and, in some circumstances, obvious violations, such as operating at night without navigation lights or improper display of registration numbers. The Coast Guard vessel will usually radio a series of pre-boarding questions, such as: What was the vessel's last port of call and what is its next port of call? How many persons are on board? What is the purpose of your voyage?

If the Coast Guard decides to board, consider it an important opportunity to learn something new about safety equipment and safe boating practices. Typically, a uniformed U.S. Coast

Guard Boarding Team of two to four officers will come aboard, introduce themselves, and state the reason for the boarding. Like all law enforcement officers, they will be armed. The officer will ask if you have any weapons aboard; if so, the officer will usually secure all weapons for the duration of the boarding. They will conduct an initial safety inspection to identify any obvious safety hazards and to verify the general seaworthiness of your vessel.

The officer will then ask to see the vessel's registration or other documentation and proceed to a more detailed inspection of your required safety equipment: life jackets, fire extinguishers, visual distress signals, etc. You should know that the Boarding Officer will check every aspect of each item on the list. For example, with personal floatation devices, the item most frequently cited for violations, the officer will check to see if you have U.S. Coast Guard approved life jackets on board, in good and serviceable condition, properly stowed, and of the correct size for each person onboard the boat.

When the boarding is complete, the officer will provide you with a report of the boarding, noting the results of the inspection of your vessel. In the event of a violation, the officer will explain the results and the procedures you will need to follow to bring your vessel into compliance. If you have any questions, ask the officer before the team departs or call the phone number listed on the report of boarding.

## **Vessel Safety Check (VSC)**

The U.S. Coast Guard would like to see all vessels safely operated, including compliance with equipment carriage requirements. If you are uncertain about the safety requirements for your vessel, one way to ensure compliance is to schedule a Vessel Safety Check (VSC), which is offered as a free public service by the United States Coast Guard Auxiliary and the United States Power Squadrons®/America's Boating Club®, two volunteer organizations dedicated to assisting the U.S. Coast Guard in promoting boating safety. Other federal and state agencies may also conduct these VSCs.

A VSC is not a law enforcement action; however, in some states, qualified marine law enforcement personnel may conduct VSCs. Qualified examiners will come to your vessel and conduct a courtesy examination of safety equipment carried or installed and certain aspects of the vessel's overall condition. VSC requirements parallel federal and state requirements regarding equipment and vessel condition. Those vessels that pass will be awarded a VSC decal indicating a successful check.

During the VSC, the vessel examiner will discuss with the recreational boater the purpose of specific marine safety equipment, will clarify federal and state regulations, will discuss certain safety procedures, and will answer any boating-related questions.

To schedule a VSC, or for more information on the VSC Program, contact your local U.S. Coast Guard Auxiliary or United States Power Squadrons/America's Boating Club or state boating agency, or visit the Vessel Safety Check website at [www.safetyseal.net](http://www.safetyseal.net).

## **Safety and Survival Tips**

### **Boat Operator Training**

Boating safety is no accident. To further develop your boating knowledge, proficiency, and confidence, take a boating safety course that meets the American National Standard for knowledge based and on-water skills training.

*Warning: On average, 74 percent of boating incidents involving fatalities occur on boats where the boat operator has had no formal instruction on how to operate the vessel.*

*Notice: To locate local course offerings or for more information on recreational boating and boating safety, contact your state boating agency or U.S. Coast Guard District office.*

### **Carbon Monoxide Hazards**

Carbon Monoxide (CO) can be a silent killer on houseboats and other recreational vessels. Each year, boaters are injured or killed by carbon monoxide. Virtually all such poisonings are preventable.

Always monitor people swimming near and around your boat. Keep people clear of the rear deck area and swim platform of the boat while the generator or engines are running.

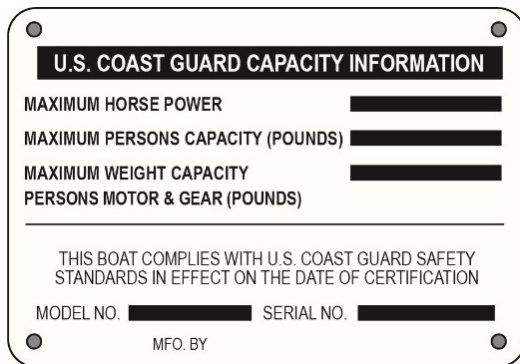
Do not confuse carbon monoxide poisoning with seasickness or intoxication. If someone on board complains of irritated eyes, headaches, nausea, weakness, or dizziness, immediately move the person to fresh air, investigate the cause, and take corrective action. If necessary, seek medical attention.

Regular maintenance and proper operation of the boat are the best defenses against poisoning from carbon monoxide. To find out more about how you can prevent carbon monoxide poisoning on recreational boats, visit the U.S. Coast Guard Boating Safety Division website at [www.uscgboating.org](http://www.uscgboating.org).

## Safe Loading (33 CFR 183, subpart C)

Never load your boat with passengers and cargo beyond its safe carrying capacity. Too many people and/or too much gear can cause the boat to become unstable. Always balance the load so that the boat maintains proper trim. When loading your boat:

- Distribute the load evenly fore and aft and from side to side.
- Keep the load low in the boat.
- Keep passengers seated, caution them to avoid standing.
- Secure gear to prevent its shifting.



A rectangular plate with rounded corners and four mounting holes. The title "U.S. COAST GUARD CAPACITY INFORMATION" is at the top. Below it are four fields: "MAXIMUM HORSE POWER", "MAXIMUM PERSONS CAPACITY (POUNDS)", "MAXIMUM WEIGHT CAPACITY", and "PERSONS MOTOR & GEAR (POUNDS)", each followed by a blacked-out box. A horizontal line separates this from the text "THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION". Below that are "MODEL NO." and "SERIAL NO." followed by blacked-out boxes, and "MFG. BY" at the bottom.

U.S. COAST GUARD CAPACITY INFORMATION	
MAXIMUM HORSE POWER	
MAXIMUM PERSONS CAPACITY (POUNDS)	
MAXIMUM WEIGHT CAPACITY	
PERSONS MOTOR & GEAR (POUNDS)	
THIS BOAT COMPLIES WITH U.S. COAST GUARD SAFETY STANDARDS IN EFFECT ON THE DATE OF CERTIFICATION	
MODEL NO.	SERIAL NO.
MFG. BY	

If your boat does not have a capacity plate:

- Check with the manufacturer if they are still in business.
- If the manufacturer is not in business, look online to find a sister vessel.
- Hire a Naval Architect/Marine Engineer.
- Use this rule of thumb to estimate capacity, which does not account for displacement/volume. The rule is based on a 150-pound person.

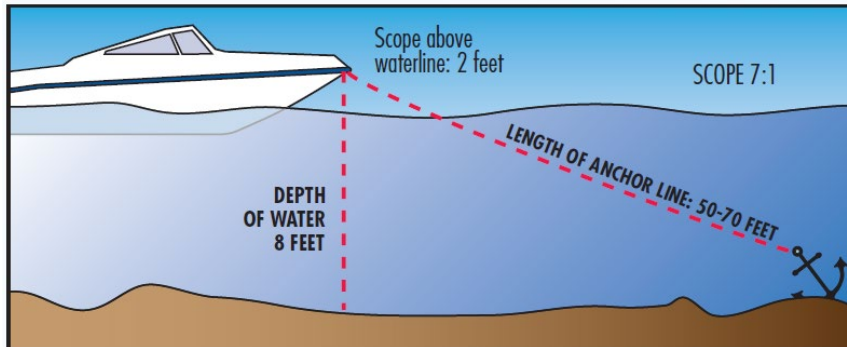
Maximum Number of Persons = Boat Length X Boat Width/15.

*Warning: Do not exceed the load specified on your boat's capacity plate.*

## Anchoring

It is recommended that you become familiar with anchoring before you ever need to do so.

Calculate the amount of anchor line you will need to let out. The general rule is five to seven times as much line as the depth of water plus the distance from the surface of the water to where the anchor will attach to the bow. For example, if the water is eight feet deep and it is two feet from the surface of the water to your bow cleat, you would multiply 10 feet by 5 or 7 to get the amount of anchor line to put out.



*Warning: Do not anchor from the stern as this could swamp the boat.*

## Vessels Operating Offshore

If you operate your vessel offshore, you should consider carrying additional safety equipment beyond the minimum federal requirements. This equipment should include appropriate communications gear, an inflatable life raft, an Emergency Position Indicating Radio Beacon (EPIRB), and a means of accurately determining your location. In cold waters, you should also consider carrying an immersion suit for everyone on board.

## Maritime Telecommunications

It is recommended you always carry a means of sending distress alerts and communicating with other boats. A VHF marine radio is the most common.

*Notice: The Coast Guard does not advocate cellular phones as substitute for the regular maritime radio distress and safety systems recognized by the Federal Communications Commission and the International Radio Regulations particularly VHF maritime radio. However, cellular phones can have a place on board as an added measure of safety.*

Channel 16 is the primary VHF-FM marine radio calling and distress channel. It should not be used for general conversation or radio checks. Such traffic should be conducted on another authorized working channel. For more information on maritime communications please visit <https://www.navcen.uscg.gov/maritime-telecommunications>



## Life Rafts

If you are planning to boat offshore or in an area where rescue is not close at hand, you may want to consider carrying a U.S. Coast Guard approved life raft. The life raft should be large enough for everyone on board. It should have the appropriate emergency equipment pack, and it should be professionally serviced according to the manufacturer's instructions.

## EPIRBs and PLBs

406 MHz Satellite Emergency Position Indicating Radio Beacons (EPIRBs) and Personal Locator Beacons (PLBs) are designed to quickly and reliably alert rescue personnel, indicate an accurate distress position, and guide rescue units to the distress scene, even when all other communications fail. They must be properly registered with NOAA.

## Immersion Suits

Immersion suits will delay the effects of hypothermia in cold water. They should be properly stowed and maintained in accordance with the manufacturer's instructions.

## Determining Your Location

It is advisable to carry on board a device to determine your position, such as a Global Positional System (GPS) device. These devices can be mounted or hand-held and will provide the boater with an accurate location to aid rescue agencies in the event of an emergency.

## **Hunters, Anglers, and Paddlers**

Yes, the boating regulations apply to hunters, anglers, and paddlers who are on a boat. Operators need to be fully aware of their boat's limitations, paying particular attention to loading and stability. Semi-V hull vessels, flat-bottom Jon boats, or canoes, kayaks and Stand-Up Paddleboards tend to be less stable and can easily capsize. Standing in a boat raises the center of gravity and risks capsizing the boat. Practice casting from seated and standing positions from your boat before venturing out into unsheltered waters. Are you sure you can climb back into the boat when you fall out. With all your gear on? Have you practiced?

## Staying Afloat

If the boat capsizes, or you fall overboard, follow these tips to stay afloat:

- Remain calm: do not thrash about or try to remove clothing or footwear. It is a common belief that persons dressed in heavy clothing or waders will sink immediately if they fall overboard. This is not true. Air trapped in clothing provides buoyancy, and bending the knees will trap air in waders, providing additional buoyancy. Thrashing in the water leads to exhaustion and increases the loss of air that keeps you afloat.
- If you are wearing a PFD, keep it on.
- Keep your knees bent.

- Float on your back and paddle slowly to safety.

### Cold-Water Survival

Sudden immersion in cold water can induce rapid, uncontrolled breathing, cardiac arrest, and other physical conditions that can result in drowning. In an unexpected plunge, or in situations where you must enter cold water, here are a few guidelines to follow:

- Button up clothing.
- Cover your head if possible; about 50 percent of body heat is lost from the head.
- If entering the water voluntarily, enter slowly.
- Keep your head out of the water if possible.
- If you cannot immediately get out of the water and rescue is not imminent, draw your knees to your chest and wrap your arms across your chest, hugging your life jacket in the Heat Escape Lessening Posture (H.E.L.P.); this will protect the major areas of your body from heat loss.
- If your boat has capsized and there are others in the water with you, huddle together with your arms around each other. These huddles are good for morale, keep everyone together, and make a larger target to spot in the water, all of which increase your chances of being seen and rescued.

### Cold-Related Injury

Immersion in cold water speeds the loss of body heat and can lead to hypothermia.

Hypothermia is the abnormal lowering of internal body temperature. If your vessel capsizes, it will likely float on or just below the surface. Smaller outboard powered vessels, built after 1978, are designed to support you even if full of water or capsized. To reduce the effects of hypothermia, get in or on the boat. Try to get as much of your body out of the water as possible. If you do not get in the boat, a life jacket will enable you to keep your head out of the water. This is important because about 50 percent of body heat loss is from the head.

Cold water survival can be broken down into three phases:

- Cold Shock: an initial deep and sudden gasp followed by hyperventilation. Cold shock will pass in about one minute.
- Cold Incapacitation: in the next 10 minutes you will lose the effective use of your fingers, arms, and legs for any meaningful movement. Concentrate on self-rescue.
- Hypothermia: Depending on the temperature of the water, loss of consciousness may occur in as little as one hour.

For more information, see Cold Water Boot Camp at <http://www.coldwaterbootcampusa.org/>.

*Notice: It may be possible to revive a drowning victim who has been under water for considerable time and shows no signs of life. Numerous documented cases exist where victims have been resuscitated with no apparent harmful effects after long immersions, especially in*

*cold water immersions. Start CPR immediately and get the victim to a hospital as quickly as possible.*

## **Fueling Precautions**

Most fires and explosions happen during or shortly after fueling. To avoid an accident, follow these safety guidelines.

- Refuel any portable tanks ashore.
- Close all hatches and other openings before refueling. Extinguish all smoking materials. Turn off engines, all electrical equipment, radios, stoves, and other appliances. Remove all passengers.
- Keep the fill nozzle in contact with the tank and wipe up any spilled fuel.
- After fueling, open all ports, hatches, and doors to ventilate. Run the blower for at least four minutes. Check the bilges for fuel vapors before starting the engine. Do the “sniff test” to make sure there is no odor of gasoline anywhere in the boat.

*Warning: Do not start the engine until all traces of fuel vapors are eliminated!*

## **Fuel Management**

Practice the “One-Third Rule” by using:

- One-third of the fuel to go out.
- One-third to get back.
- One-third held in reserve.

## **Weather**

You should never leave the dock without first checking the local weather forecast. You can get the weather information from the TV, online, or from one of the weather channels on your VHF-FM radio.

At certain times of the year, weather can change rapidly, and you should continually keep a “weather eye” out. While you are out in a boat, here are a few signs you can look for that indicate an approaching weather change:

- Flat clouds getting lower and thicker.
- Puffy, vertically rising clouds getting higher.
- Dark, threatening clouds, especially to the west/southwest.
- A sudden drop in temperature.
- A halo around the sun or moon.
- Increasing wind or a sudden change in wind direction.
- Flashes on the horizon.
- Seas becoming heavy.

- Heavy AM radio static, which can indicate nearby thunderstorm activity.

If you have a barometer on board, check it every two to three hours. A rising barometer indicates fair weather and a rise in wind velocity; a falling barometer indicates rain approaching.

#### What to Do in Severe Weather

- Reduce speed, keeping just enough power to maintain headway.
- Make sure everyone on board is wearing their life jacket.
- Turn on your running lights.
- If possible, head for the nearest shore that is safe to approach.
- Head the boat into the waves at a 45-degree angle.
- Keep the bilges free of water.
- Seat any passengers on the bottom of the boat, near the center line.
- If the engine fails, trail a sea anchor from the bow of the boat to keep it headed into the waves (a bucket can work as a sea anchor in an emergency).
- Anchor the boat, if necessary.

#### Float Plan

Did you break down, capsize, or stop in for a cold beverage? How long would it be until someone noticed and followed up? In a survival situation, time is of the essence. Play it safe; let a responsible person know where you are going and when you will be back. A Float Plan contains critical information about you whereabouts for local marine police or the Coast Guard. A sample Float Plan Form may be found at <https://floatplancentral.cgaux.org/>

*Notice: It is a best practice to include a photo of your boat.*

#### Boater's Pre-Departure Checklist

Have you ever forgotten something? Before departure, always be sure your vessel is in good working order and properly equipped for emergencies. Avoid inconvenience and potential danger by taking a few minutes every time to verify you haven't forgotten something critical, like putting in the drain plugs.

#### Emergency Alert/Communications

##### SARSAT - How the System Works

EPIRBs and PLBs operate as part of a worldwide distress system. An international satellite constellation maintains a vigilant, global "listening" watch for satellite EPIRB distress signals. The National Oceanic and Atmospheric Administration (NOAA) operates satellites, ground stations, and an alert distribution system serving the United States and a large segment of the international community.

When activated, the satellite EPIRB transmits a distress signal with a beacon-unique identifying code. The system detects the signal, calculates an accurate distress position, checks the unique identifying code against the EPIRB registration database (vessel and point of contact information supplied by the owner) and routes the distress alert with registration information to the responsible U.S. Coast Guard (or international) Rescue Coordination Center (RCC).

406 MHz EPIRBs with GPS capability either internally or externally supplied positional information also provide an immediate GPS position in the information passed to the RCC, and geostationary satellites make detection almost immediate. If the EPIRB does not have the ability to provide a GPS position, the process to determine a position takes about one hour on average and almost always less than two hours.

Satellite EPIRBs also include a homing beacon and strobe to help rescue forces quickly locate the distress scene. Satellite beacons have significant coverage, with alerting timeliness, position accuracy, and signaling advantages over other devices. Before purchasing or using other than a 406MHz EPIRB, be sure you understand its capabilities and limitations.

Mount the EPIRB to float free, according to the manufacturer's instructions, if possible. Otherwise, make sure it is readily accessible. Register the EPIRB with NOAA, according to the instructions provided with the beacon or at the NOAA website: [www.sarsat.noaa.gov](http://www.sarsat.noaa.gov). Registration is mandatory, improves response time, and reduces false alarms.

## **Radio Regulations**

Most recreational vessels less than 65.6 feet (20 meters) in length are not required to carry a marine radio. Any vessel that carries a marine radio must follow the rules of the Federal Communications Commission (FCC).

### Licensing

The FCC does not require most operators of recreational vessels to carry a radio or to have an individual license to operate VHF-FM marine radios, EPIRBs, or any type of radar. Operators must however follow the procedures and courtesies that are required of licensed operators specified in the FCC rules. You may use the name or registration number of your vessel to identify your ship station.

Recreational Vessels that may be required to be licensed:

- Power-driven vessels more than 65 feet (20 meters) in length.
- Any vessel, including a recreational vessel, on an international voyage.

### Radio Listening Watch

Vessels not required to carry a marine radio for example, recreational vessels less than 65.6 feet (20 meters) in length, but which voluntarily carry a radio must maintain a watch on

Channel 16 (156.800 MHz) or VHF Channel 9 (156.450 MHz), the boater calling channel, whenever the radio is operating and not being used to communicate.

### **Boater Calling Channel (VHF Channel 9)**

The Federal Communications Commission established VHF-FM channel 9 as a supplementary calling channel for noncommercial vessels (recreational boaters) at the request of the Coast Guard. A ship or shore unit wishing to call a boater would do so on channel 9, and anyone (boaters included) wishing to call a commercial ship or shore activity would continue to do so on channel 16. Recreational boaters would continue to call the Coast Guard and any commercial facility on channel 16. For a complete listing of VHF channels and frequencies visit the U.S. Coast Guard Navigation Center website at <https://www.navcen.uscg.gov/us-vhf-channel-information>.

### **Digital Selective Calling (DSC)**

Digital Selective Calling (DSC) allows boaters to instantly send an automatically formatted distress alert to the Coast Guard or other rescue authority anywhere in the world. DSC also allows boaters to initiate or receive distress, urgency, safety, and routine radiotelephone calls to or from any similarly equipped vessel or shore station, without requiring either party to be near a radio loudspeaker.

DSC acts like the dial and bell of a telephone, allowing you to “direct dial” and “ring” other radios, or allowing others to “ring” you without having to listen to a speaker. New VHF and HF radiotelephones have DSC capability.

All DSC-equipped radios, and most GPS receivers, have a data interface connector. The interface allows most models of GPS to be successfully interconnected to DSC-capable radios, regardless of manufacture. The Coast Guard recommends that you interconnect your GPS and DSC-equipped radio. Doing so may save your life in an emergency situation.

Users of a VHF-FM marine radio equipped with Digital Selective Calling will also need to obtain a Maritime Mobile Service Identity (MMSI) number. Vessels not required to carry a marine radio (e.g., recreational boaters) that operate in U.S. waters can obtain an MMSI through approved organizations such as BOAT US (1-800-563-1536), the U.S. Power Squadrons/America’s Boating Club, and Shine Micro (primarily for AIS).

### **Sending a Distress Call**

**DSC MAYDAY:** If your vessel is equipped with a DSC-capable radio and it is properly connected to a GPS receiver, and if you have obtained and registered an MMSI number, you need only press the red DSC Emergency Call Button for 5 seconds. Your vessel information and position will automatically be transmitted, including the nature of the distress (if entered), and you should receive a DSC reply. Upon receipt of this acknowledgement, your radio should automatically shift to Channel 16 to continue voice communications with rescue assets. If no

reply is received, switch the Channel 16 and use the VHF MAYDAY procedure. More information on Digital Selective Calling is available online at <https://www.navcen.uscg.gov/dsc-distress>.

VHF MAYDAY: Channel 16 is the primary radio channel for ships in distress. To make a distress call on marine VHF-FM tune to Channel 16:

1. Make sure radio is on and tuned to Channel 16.
2. Distress signal "MAYDAY" spoken three times.
3. The words "THIS IS" spoken once.
4. Name of vessel in distress spoken three times and the call sign or boat registration number, spoken once.
5. Repeat "MAYDAY" and name of vessel, spoken once.
6. Give the position of vessel by latitude or longitude or by bearing (true or magnetic, state which) and the distance to a well-known landmark, such as a navigational aid or small island, or in any terms that will assist a responding station in locating the vessel in distress. Include any information on vessel movement such as course, speed, and destination.
7. Number of persons onboard.
8. Nature of distress (e.g., sinking, fire).
9. Kind of assistance desired.
10. Any other information that might facilitate rescue, such as length or tonnage of vessel, number of persons needing medical attention, hull color, cabin, masks, etc.
11. The word "OVER".

### **Maritime Search and Rescue**

To report Maritime Search and Rescue Emergencies, call the following numbers:

For the Great Lakes, Gulf and East Coasts: Atlantic Area Command Center: (757) 398-6700

For the Hawaiian, Alaskan and Pacific Coasts: Pacific Area Command Center: (510) 437-3701.

False Distress Alerts: It is unlawful to intentionally transmit a false distress alert or to unintentionally transmit a false distress alert without taking steps to cancel that alert. Boaters who transmit a false distress alert are required to immediately cancel the alert.

If you inadvertently transmit a false DSC alert:

1. Reset the equipment immediately.
2. Tune for radiotelephony on the associated distress and safety frequency in each band in which a false distress alert was transmitted.
3. Transmit a broadcast message to "All Stations" giving the ship's name, call sign, time the alert was transmitted and MMSI, and cancel the false alert on the distress and safety frequency in each band in which the false distress alert was transmitted.

## **Other Responsibilities**

### **Regulated Navigation Areas/Limited Access Areas (33 CFR 165)**

In the aftermath of the September 11, 2001, terrorist attacks on the World Trade Center and the Pentagon, and the earlier attack on the USS Cole in Aden Harbor, Yemen, the United States Coast Guard established Safety and Security Zones to prevent further attacks on U.S. Naval vessels, cruise ships, commercial vessels, and critical infrastructure such as petroleum facilities and nuclear power plants situated on or near the water. As a boater, not knowing how to act in certain areas or situations may put you in legal jeopardy or, worse, at risk of personal injury.

### **Naval Vessel Protection Zones (14 USC §91, 33 CFR 165Subpart G)**

Do not approach within 100 yards, and slow to minimum speed within 500 yards, of any U.S. Naval vessel. If you need to approach within 100 yards to ensure a safe passage in accordance with the Navigation Rules, you must contact the U.S. Naval vessel or the U.S. Coast Guard escort vessel on your VHF radio (Channel 16) for authorization.

If a Naval vessel is passing near where you are operating your boat, you may be asked to move your vessel to maintain the 100-yard distance. The U.S. Coast Guard will make an announcement ahead of time to alert boaters in the area.

Violations of the Naval Vessel Protection Zone are a felony offense punishable by up to 6 years in prison and/or up to \$250,000 in fines.

*Warning: Be aware that both the U.S. Navy and the U.S. Coast Guard are authorized to use deadly force to protect themselves.*

### **Commercial shipping safety zone**

In addition to the Naval Vessel Protection Zone requirements, you must also avoid operating your vessel near all military vessels, cruise ships, and certain commercial vessels.

Observe and avoid all security zones and commercial port operations. Areas that have large marine facilities including military, commercial/cruise, or petroleum facilities should be avoided. There are also restrictions near most dams, power plants, and other facilities located near water.

### **Bridges and Shipping Channels**

Do not stop or anchor beneath bridges or in shipping channels. If you do, you can expect to be asked to move and/or be boarded by law enforcement officials.

*Caution: Do not raft up in a channel.*



## **America's Waterway Watch**

If you operate a towboat, marina, recreational vessel, fishing vessel, or otherwise live, work, or engage in recreational activities on or near the nation's waterways, the United States Coast Guard would like your help in keeping these areas safe and secure. You can do this by participating in America's Waterway Watch (AWW), a nationwide initiative, similar to the well-known and successful Neighborhood Watch program, that asks community members to report suspicious activities to local law enforcement agencies.

You are NOT expected to patrol any particular area. Your expertise in recognizing suspicious activity is derived from your familiarity with surroundings you operate within while engaged in your normal work or recreation around the waterfront under and around bridges, tunnels, or overpasses.

Watch for suspicious activities of vessels and individuals in locations such as:

- Near commercial areas or services like ports, fuel docks, cruise ships, or marinas.
- Near industrial facilities like power plants and oil, chemical, or water intake facilities.
- Near military bases and vessels, other government facilities, or security zones.
- In and around passenger terminals, ferries, and day cruise lines.
- Near railroad lines serving any of the above listed facilities.

Report suspicious activity: Call the National Response Center at 1-877-24WATCH. If there is immediate danger to life or property, call 911 or the U.S. Coast Guard on Channel 16.

**BOAT SAFE, SMART AND RESPONSIBLE**

[www.uscgboating.org](http://www.uscgboating.org)