2018

SPECIAL LOCAL NOTICE TO MARINERS

U.S. Department of Homeland Security

United States Coast Guard

Commander
Eleventh Coast Guard District

Coast Guard Island, Bldg 52
Alameda, CA 94501-5100
Staff Symbol: (dpw)
Phone: (510)437-2980
Fax: (510)437-5836
D11-PF-D11LNM@uscg.mil

APR 2 7 2018

To: All Mariners in the Eleventh Coast Guard District

I am pleased to announce the publication of the 2018 Special Local Notice to Mariners (SLNM). The Special Local Notice to Mariners is an annual Coast Guard Eleventh District publication. It contains important information for mariners transiting the seacoast from the California/Oregon border to the United States/Mexico border and all federally designated navigable waters in Nevada, Utah, Arizona and California.

I hope you find this publication a helpful guide for boater safety. Over the last year, this Special Local Notice to Mariners has received several modifications and updates. It includes tips and information for trip planning, local hazards and points of contact for obtaining further information or answering questions. We also provide excerpts from the various federal laws and regulations regarding vessel boarding, reporting marine pollution, aids to navigation and Vessel Traffic Service procedures.

The most basic responsibility of the U.S. government is to protect the lives and safety of its citizens. Coast Guard maritime safety activities save lives, minimize damage to property, protect the environment, and safeguard the U.S. economy. As the Eleventh District Commander, it is an honor to work with the maritime community and I am committed to keeping our waterways safe and secure.

If you wish to make comments or suggestions to this Special Local Notice to Mariners, please feel free to contact the Marine Information Specialist at the address above, or fill out the suggestion form located in enclosure (1).

Sincerely,

J. B. PRUETT
Captain, U.S. Coast Guard
Acting Commander, Eleventh Coast Guard District

Table of Contents

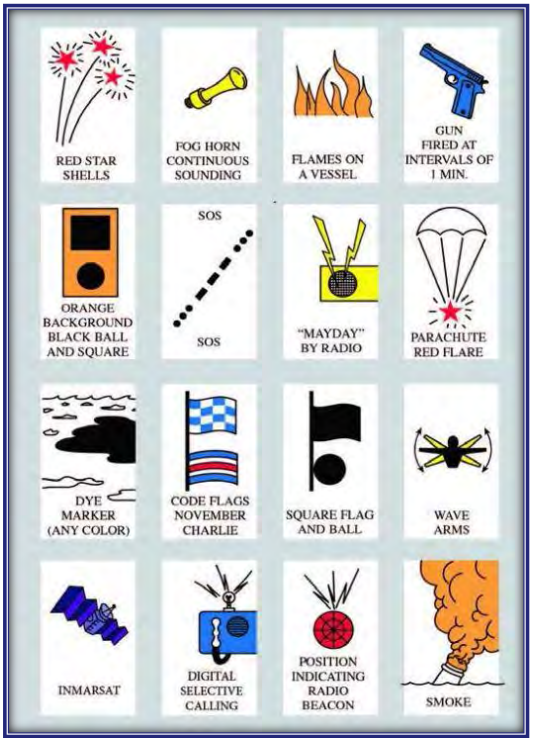
CHAPTER I

EMERGENCY PROCEDURES

INTERNATIONAL DISTRESS SIGNALS

All mariners should be familiar with the International Distress Signals and procedures, for recognition, self-reliance or in the event of distress where the captain and officers may have been incapacitated. The following is a pictorial plate showing the different types of distress signals to use or respond to in case of emergency. Remember, no person in a boat or vessel, shall display a distress signal under any circumstances except a situation where assistance is needed because of immediate or potential danger to all persons onboard.

Distress Signals



The preceding distress signals are contained in the NAVIGATION RULES AND REGULATIONS HANDBOOK Rule 37 and described in Annex IV. Available online at the United States Coast Guard Navigation Center website: https://www.navcen.uscg.gov/pdf/navRules/navrules.pdf

RENDERING OF ASSISTANCE

The master or person in charge of a vessel is obligated by law to render whatever assistance can be safely provided to any individual at sea in danger of being lost and is subject to a fine and/or imprisonment for failure to do so (Title 46 USC 2304).

MARITIME COMMUNICATIONS

1. DISTRESS PRACTICES

The Distress Call has absolute priority over all other transmissions and shall not be addressed to any particular station. Any mariner hearing a Distress Call shall immediately cease all transmissions which may interfere with the distress message and shall continue to listen on the frequency on which the call was heard. If your vessel is in

distress and abandonment is necessary, the radio transmitter should be set for continuous emission if possible, to provide rescue vessels and aircraft with a homing signal.

DO NOT USE MAYDAY TO REPORT THAT YOUR VESSEL IS OUT OF GAS, LOST, OR HAVING ENGINE TROUBLE UNLESS YOU ARE IN <u>IMMEDIATE DANGER</u>.

Periodically, mariners in distress or having knowledge of another vessel in distress do not give all the information required by the International Radio Regulations and by the Federal Communications Commission. This often makes it impractical to start a search and could very well lead to loss of life. Use of proper format is vital in the transmission of marine distress messages. The urgency of the situation places a premium on brevity and clarity. The Coast Guard strongly recommends that all mariners learn the distress message format and transmission procedures.

a. If you are the master, crew or passenger on board a vessel in DISTRESS (i.e.: when threatened by grave and imminent danger), contact assistance by the most rapid means available (radio, cell phone, signal device, etc). Effective 01 August, 2013, the U. S. Coast Guard terminated its radio guard of frequency 2182 kHz and the Digital Selective Calling (DSC) distress and safety frequency 2187.5 kHz. If available transmit a DSC Distress Alert on VHF-FM Channel 70 (156.525 MHz). Also, transmit an International Distress Call on VHF-FM Channel 16 (156.8 MHz) - MAYDAY MAYDAY MAYDAY THIS IS (your vessel's call sign and name repeated not more than THREE times).

   Be prepared to provide:
   i. LOCATION: Provide the GPS coordinates of your location. If these are not available, provide the most recently logged GPS position or the ship's position relative to a geographic point with as much detail as possible. For example, saying "80 nautical miles at 250 degrees true from the mouth of the Noyo River" is better than "due west of the Noyo River."
   ii. NUMBER OF POB (Persons on board): You will be instructed to get them into personal flotation devices (lifejackets).
   iii. VESSEL DESCRIPTION & NAME: Provide your vessel's physical description (length, type, cabin, masts, power and color of hull, superstructure and trim) and name.
   iv. NATURE OF DISTRESS: For what reason do you need assistance? This is critical in assisting responders with determining whether or not they need to bring specialized equipment such as pumps, firefighting foam, medical personnel, etc.

   Once this information has been passed, be prepared for the following:
   i. If you are calling in from a cell-phone you will be asked for that phone number and how much time you have left on your battery.
   ii. If able, you may be switched to a separate Coast Guard working frequency. You will likely be placed on a communications schedule while waiting for assistance to arrive.
   iii. You will be asked to confirm that all persons on board have donned personal flotation devices (life jackets).
   iv. You will likely be asked to report the seaworthiness of your vessel (leaking, compartments flooded, source of flooding, etc).

b. If observing another vessel in distress or showing signs of having difficulty - Be prepared to provide:
   i. Your position and (if possible) the bearing and distance or GPS readings if available of the vessel in distress or difficulty.
   ii. Nature of distress or difficulty.
   iii. Description of the vessel in distress or difficulty.
   iv. Your intentions, course and speed, etc.
   v. Your radio call sign, name of your vessel, listening frequency and schedule.

c. If you have a medical case – Be prepared to provide:
   i. Name of vessel and/or call sign.
   ii. Position.
   iii. Patient's name and age.
   iv. Nature of problem (symptoms, locations of pain or injury).
   v. Is patient conscious?
   vi. Is patient ambulatory (able to walk)?

vii. Patient's temperature and pulse. Difficulty breathing?
viii. Is patient bleeding? Is the bleeding controlled?
ix. Duration of pain.
x. Previous similar episode (if yes, treatment and diagnosis).
xi. Medicine taken and medicine available.
xii. Private physician's name and phone number.

2. DIGITAL SELECTIVE CALLING (DSC)

This system allows mariners to instantly send an automatically formatted distress alert to the Coast Guard or other rescue authority anywhere in the world. Digital selective calling also allows mariners 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 allow others to "ring" you, without having to listen to a speaker. Mariners in distress should initiate a DSC alert via MF, HF or VHF. New VHF and HF radiotelephones have DSC capability.

In the last year, the Coast Guard has received several DSC "alerts" that turn out to be accidental or uncorrelated because the owner/operator does not properly set-up/register their equipment. To avoid this incongruity, mariners should verify their equipment has been properly configured by either contacting the manufacturer or visiting a certified dealer.

3. EMERGENCY POSITION INDICATING RADIOBEACON (EPIRB)/ PERSONAL LOCATOR BEACON (PLB)

An EPIRB is a very useful piece of survival gear that has saved many lives in the Pacific in recent years. An EPIRB emits a radio signal that can be used to locate mariners in distress. Search and Rescue Satellite Aided Tracking (SARSAT) satellites can locate the position of a 406 MHz EPIRB which greatly increases a mariner's chances of survival. While orbiting the earth, the satellites continuously monitor EPIRB frequencies. When SARSAT receives an EPIRB signal, it can usually determine the beacon's position and ultimately relay that position to the nearest Coast Guard Rescue Coordination Center where rescue units are dispatched to the scene.

NOTE: Mariners should ensure that their EPIRB is in working condition and stowed properly at all times to avoid non-distress emissions. Mariners are required to register their 406 MHz EPIRBs for quicker confirmation of actual distress (see Chapter V or https://www.navcen.uscg.gov/?pageName=mtEpirb for more information). Mariners should ensure that EPIRB registration is current at all times. Registration can be accomplished online at www.beaconregistration.noaa.gov. In case of accidental activation, contact the nearest Rescue Coordination Center (RCC) to report that your vessel is not in distress and be ready to provide the beacon alpha numeric code, consisting of both letters and numbers.

EPIRB owners must check the class or type of their beacons carefully, since both the obsolete 121.5 MHz EPIRBs and the authorized 406 MHz EPIRBs contain a 121.5 MHz homing signal, which is used for direction finding purposes. Since 2009, the SARSAT System no longer receives 121.5/243 MHz Distress Alerts generated from obsolete Class A, B, & S EPIRBs. Also, 121.5 MHz Man Overboard Devices are not affected by these FCC regulations and are still legal for use.

4. USE OF CELLULAR PHONES IN AN EMERGENCY

Most cellular phones are designed for a land-based service. Their offshore coverage is limited and may change without notice. The Coast Guard does not advocate cellular telephones 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.

5. RESCUE COORDINATION CENTERS (RCC) IN CALIFORNIA

Location	Telephone No.	Staffed By
Alameda, CA	(510) 437-3701	U.S. Coast Guard

6. ELEVENTH COAST GUARD DISTRICT SEARCH AND RESCUE STATIONS

A. ELEVENTH COAST GUARD DISTRICT	
1. District Command Center - Alameda	(510) 437-3701
B. SECTOR SAN FRANCISCO	(415) 399-3530
1. Station San Francisco	(415) 399-3478
2. Station Golden Gate	(415) 331-8247
3. Station Monterey	(831) 647-7300
4. Station Rio Vista	(707) 374-6477
5. Station Vallejo	(707) 643-2975
6. Station Lake Tahoe	(530) 583-4433
7. Station Bodega Bay	(707) 875-3596
C. SECTOR/AIR STATION HUMBOLDT BAY	(707) 839-6113
1. Station Humboldt Bay	(707) 443-2212
2. Station Noyo River	(707) 964-4072
D. SECTOR LOS ANGELES-LONG BEACH	(310) 521-3801
1. Station Los Angeles/Long Beach	(310) 521-3870
2. Station Morro Bay	(805) 772-1293
3. Station Channel Islands	(805) 985-9822
E. SECTOR SAN DIEGO	(619) 278-7033
1. Station San Diego	(619) 726-0121

FLARES

Flares are meant to signal assistance. Do not fire flares in order to dispose of them, these devices are meant to signal for assistance and are not to be used as fireworks. Contact the Coast Guard or Coast Guard Auxiliary for guidance on disposing of out-dated flares.

For more information on flares see Chapter XI of this notice.

PROCEDURES AND SIGNALS BETWEEN AIRCRAFT AND SURFACE CRAFT FOR DIRECTING SURFACE CRAFT TO SCENE OF DISTRESS INCIDENT

The following procedures performed in sequence by an aircraft mean that the aircraft is directing a surface craft toward the scene of a distress incident:

1. Circling the surface craft at least once.

2. Crossing the bow or projected course of the surface craft close ahead at low altitude, opening and closing the throttle or changing the propeller pitch.

3. Heading in the direction in which the surface craft is to be directed. The surface craft should acknowledge the signal by changing course and following the aircraft. If it is impossible for the surface craft to follow, hoist the international code flag NOVEMBER or use any other signaling means available to indicate so.

4. If you are radio equipped, you should attempt to communicate with the aircraft on VHF-FM Channel 16 (156.8 MHz) when the aircraft makes the above signals or makes any obvious attempt to attract your attention. In the event that you cannot communicate by radio, be alert for a message block dropped from the aircraft.

The following procedure performed by an aircraft means that the assistance of the surface craft is no longer required: Crossing the wake of the surface craft close astern at a low altitude opening and closing the throttle or changing the propeller pitch.

SEARCH AND RESCUE OPERATIONS

1. VESSEL IDENTIFICATION

Coast Guard search-and-rescue aircraft and surface craft use radar to assist in locating disabled vessels. Wooden and fiberglass vessels are often poor radar targets. Operators of disabled craft that are the object of a search are requested to hoist, as high above the waterline as possible, a radar-reflecting device. If no special radar-reflecting device is aboard, an improvised device can be used. This should consist of metallic objects of irregular shape. The more irregular the shape, the better will be the radar-reflective quality. For quick identification at night, shine spotlights straight up. If aircraft are involved, once you are identified, turn lights away so as not to blind aircraft crew.

2. PREPARATIONS FOR TOWING

a. All personnel put on personal flotation devices.
b. Have bow cleared.
c. If line-throwing gun is used, keep all personnel out of the way, until projectile clears boat.
d. Have material (rags) handy for use as chafing gear on towline/bridle.
e. Secure towline to a secure bitt or crucifix. Verify whether or not the fittings have backing plates.
f. Remove heaving line.
g. Make a drogue ready for use from your stern if your rudder cannot be controlled. Especially important when being towed in a following sea.
h. All persons remain topside, low and aft while under tow.
i. If in doubt, request additional briefing by Coast Guard boat operator.

3. OPERATING COAST GUARD DROPABLE PUMPS

a. Fill fuel tank at least half full of gas.
b. Keep pump filled with water through black one-inch plug on top of pump. DON'T RUN WITHOUT WATER.
c. Connect color-coded hoses. RED-to-RED, etc.
d. Pull speed control rod all the way out (L-shaped square rod under air cleaner).
e. Pull out choke (painted green on carburetor).
f. Crank engine by pulling starter cord rapidly.
g. When engine starts, push choke in gradually.
h. **IMPORTANT**: Most pumps are self-priming. If no water is pumped after one minute, however, remove filter plug allowing trapped air to escape. Then replace plug when engine starts to slow under load.
i. When finished, flush with FRESH water, return ALL gear to nearest Coast Guard unit.

4. HELICOPTER EVACUATION PROCEDURES

The following procedures are prescribed by the Coast Guard during helicopter evacuation from a vessel. If you have a radio aboard, further instructions may be given by the helicopter on the voice distress frequency. As Captain or Boat Operator, each person on board is under your care and although the Coast Guard, doctors and other agencies may assist you, each person is your responsibility. Helicopter evacuation is a hazardous operation to the patient and the helicopter crew, and should only be attempted in event of very serious illness or injury. Provide the doctor with all the information you can concerning the patient so an intelligent evaluation can be made concerning the need for evacuation. Today's helicopters have limited time to conduct the evacuation before fuel constraints require the helicopter to return to base. Therefore, if you have a victim on board and believe that an evacuation may be necessary, find a safe course and make best speed towards the closest Coast Guard air station. Coast Guard air stations in California are at the following locations: San Diego, California; San Francisco, California; Humboldt Bay, California.

a. WHEN REQUESTING HELICOPTER ASSISTANCE
   i. Give accurate position, time, speed, course, number of people onboard, weather conditions, sea conditions, wind direction, wind velocity, type of vessel and radio frequencies.
   ii. If not already provided, give COMPLETE medical information including whether or not patient is ambulatory (able to walk).
   iii. If you are beyond helicopter range, advise your intentions so that a rendezvous point may be selected.

iv. If there are any changes in any plans or information, advise immediately. Should the patient expire prior to arrival of the helicopter, be sure to advise.

b. PREPARATIONS PRIOR TO ARRIVAL OF HELICOPTER

i. Provide continuous radio guard on specified VOICE frequency if possible.

ii. Select and clear most suitable hoist area. This must include securing of loose gear, awnings and antenna wires. Lash up or stow running rigging and booms. The stern is highly preferred for the hoist area. The foredeck should be prepared only when the stern or amidships cannot possibly be used.

iii. If the hoist is at night, light the pickup areas as well as possible. Be sure you DO NOT SHINE ANY LIGHTS on the helicopter that might blind the pilot and crew. If there are obstructions in the vicinity, put a light on them so the pilot will be aware of their positions.

iv. Advise location of pickup area BEFORE the helicopter arrives so the pilot may adjust for and make the approach aft, amidships or forward as required.

v. Remember, there will be a high noise level under the helicopter, so voice communication is almost impossible. Arrange a set of hand signals among the crew who will assist.

c. HOIST OPERATIONS

i. If possible, have patient moved to, or as close to, the hoist area as his condition permits - **THIS IS IMPORTANT**.

ii. Normally, if a litter is required, it will be necessary to move the patient to the special litter that will be lowered by the helicopter. Be prepared to do this as quickly as possible. Ensure the patient is strapped in, face up. If patient's condition permits, ensure that s/he is wearing a lifejacket. Be sure patient is tagged to indicate what and when medication, if any, was given.

iii. Change course to permit the ship to ride as easily as possible with the wind on the bow, preferably on the port bow. Try to choose a course to keep engine exhausts clear of hoist area.

iv. Reduce speed to ease ship's motion but maintain steerageway.

v. If you do not have radio contact with helicopter, when you are in all respects ready for the hoist, signal the helicopter in with a "COME ON" by hand, or use flashlight at night.

vi. ALLOW BASKET OR STRETCHER TO TOUCH DECK PRIOR TO HANDLING TO AVOID STATIC SHOCK.

vii. IF A TRAIL LINE IS DROPPED by the helicopter, GUIDE BASKET or stretcher TO DECK WITH LINE; keep line clear at all times. Do not tie the line to anything. Line will not cause shock.

viii. Place patient in basket sitting with hands clear of sides, or in the litter, as described above. Signal helicopter hoist operator when ready for hoist. Patient nods head if he/she is able. DECK PERSONNEL GIVE THUMBS UP.

ix. If necessary to take litter away from hoist point, unhook hoist cable and keep free for helicopter to haul in. DO NOT SECURE CABLE TO VESSEL OR ATTEMPT TO MOVE STRETCHER WITHOUT UNHOOKING.

x. When patient is strapped in stretcher, signal helicopter to lower cable, and signal hoist operator when ready to hoist. Steady stretcher to prevent swinging or turning.

xi. If trail line is attached to basket or stretcher use to steady (keep feet clear of line).

ELEVENTH COAST GUARD DISTRICT - NON-EMERGENCY ASSISTANCE POLICY

Boaters who find themselves in need of assistance in non-emergency situations can contact the Coast Guard to coordinate or assist in obtaining commercial assistance or directing other resources (including Coast Guard and Coast Guard Auxiliary resources) to the scene. This policy addresses the needs of boaters in non-life-threatening situations and is designed not to interfere with the rights of the commercial towing/assistance industry. The policy provides that:

1. In any situation in which the mariner is in immediate distress, an immediate response will be initiated. The Coast Guard, the Coast Guard Auxiliary, state, local, commercial or private resources may provide this response.

2. If neither the mariner nor the vessel is in immediate distress and no commercial companies are known to be available in the area, a Coast Guard resource may be dispatched.

3. If commercial towing companies operate in the area, the Coast Guard may assist the mariner in contacting any specifically requested alternate assistance. If none is requested, an offer to issue a Marine Assistance Request Broadcast (MARB) will be made. This broadcast will help to determine if someone in the area can come to the assistance of the mariner.

4. If an acceptable response (capable of safely accomplishing the mission in a reasonable time) is received to the MARB, the Coast Guard Search and Rescue Mission Coordinator (SMC) shall ascertain the expected time of arrival (ETA) on scene and advise the mariner. The SMC shall continue to monitor the situation until it reaches a successful conclusion. A reasonable response time, from initial notification to time on scene, is considered one hour or less. In situations where the response time will exceed one hour, a Coast Guard resource, to include the Coast Guard Auxiliary, may be dispatched if it can provide a more timely response.

5. If no response to the MARB is received within ten minutes, the SMC will select and proceed with the course of action (listed below) that will result in the most effective and timely response to the mariner.

    a. Dispatch an Auxiliary resource.
    b. Issue another MARB.
    c. Make a telephone call to any resource (including commercial providers) that may be able to provide a timely response.
    d. Dispatch a Coast Guard resource.

6. The mariner may decline the assistance offered and the Coast Guard may make additional MARBs but if the first assisting resource on scene is a commercial provider, only one additional MARB will be made. A list of telephone numbers for commercial providers in the area will be given to the mariner, upon request, so that they may contact alternate responders through the marine operator. A Coast Guard resource will not be dispatched unless the situation deteriorates into an emergency.

7. Once a vessel is taken in tow by a Coast Guard or Coast Guard Auxiliary vessel, it will not be turned over to another resource unless all parties agree that the transfer can be accomplished safely or a more urgent situation requires the use of the Coast Guard vessel. A tow will normally be conducted to the nearest safe-haven. The Coast Guard reminds boaters that under the non-emergency policy, the operator of a vessel needing assistance will have to pay for commercial services. To help reduce the need for assistance, mariners are advised to ensure that all safety equipment is on board, the vessel in good operating condition, sufficient fuel and necessary charts are on board, the radio is operating properly and someone knows the sailing plan of the operator and will notify the Coast Guard if the vessel fails to return when expected.

SHIP ABANDONMENT AND HYPOTHERMIA

If you are forced to abandon ship, your chances of rescue are increased if you have a pre-planned survival procedure and follow it. Historic records show that even the quickest sinking ship usually require 15 to 30 minutes for the vessel to fully submerge. This affords valuable time for preparation. Here are some sound pointers for you to remember in a situation of this type:

1. Don as much warm clothing as possible, covering head, neck, hands and feet.

2. If an immersion (exposure) suit is available put it on over warm clothing.

3. If the immersion suit does not have inherent flotation, put on a lifejacket.

4. All persons who know that they are likely to be affected by seasickness should, before or immediately after boarding the survival craft, take the recommended dose of a recommended preventative tablets or medicine. Incapacitation caused by seasickness interferes with your survival chances. Vomiting removes precious body fluid, while seasickness in general makes you more prone to hypothermia.

5. Avoid entering the water if possible. Board davit-launched survival craft on the embarkation deck. If davit-launched survival craft are not available, use ladders, or, if necessary, lower yourself by means of a rope or fire hose.

6. Unless it is unavoidable, do not jump from higher than five meters (16.4 feet) into the water. Try to minimize the shock of sudden cold immersion. Rather than jumping into the cold water, try to lower yourself gradually. A sudden plunge into the cold water can cause death or an uncontrollable rise in breathing rate may result in an intake of water into the lungs. On occasions it may be necessary to jump into the water; if so, you should keep your elbows at your sides, cover your nose and mouth with one hand holding the wrist or elbow firmly with the other hand

7. Once in the water, orient yourself and try to locate the ship, lifeboats, life rafts, other survivors or other floating objects. If you were unable to prepare yourself before entering the water, button up clothing as soon as possible before you lose full use of your hands. In cold water you may experience violent shivering and great pain. These are natural body reflexes that are not dangerous.

8. While afloat in the water, do not attempt to swim unless it is to reach a nearby craft, a fellow survivor or a floating object on which you can lean or climb on to. Unnecessary swimming will "pump" out any warm water between your body and the layers of clothing, thereby increasing the rate of the body-heat loss. In addition, unnecessary movements of your arms and legs send warm blood from the inner core to the outer layer of the body. This results in a very rapid heat loss. Hence, it is most important to remain as still as possible in the water, no matter how painful it may be. Remember, pain will not kill you, but heat loss will.

HOW HYPOTHERMIA AFFECTS MOST ADULTS

Water Temperature (° F)	Exhaustion or Unconsciousness	Expected Time of Survival
32.5	Under 15 min.	Under 15 to 45 min
32.5 to 40	15 to 30 min.	30 to 90 min.
40 to 50	30 to 60 min.	1 to 3 hrs.
50 to 60	1 to 2 hrs.	1 to 6 hrs.
60 to 70	2 to 7 hrs.	2 to 40 hrs.
70 to 80	2 to 12 hrs.	3 hrs. to indefinite
Over 80	Indefinite	Indefinite

9. Try to conserve body heat. Float as still as possible with your legs together, elbows close to your side and arms folded across the front of your lifejacket, minimizing the exposure of the body surface to the cold water. Try to keep your head and neck out of the water. Another technique is to huddle closely to one or more persons afloat, making as much body contact as possible. You must be wearing a life vest to be able to hold these positions in the water.

10. Try to board a lifeboat, raft or other floating platform or object as soon as possible in order to shorten your immersion time. Remember, you lose body heat many times faster in water than in air. Since the effectiveness of your insulation is seriously reduced by water soaking, you must now try to shield yourself from wind to avoid a wind-chill effect (convective cooling).

11. Do not use "drown proofing" in cold water. Drown proofing is a technique whereby you relax in the water and allow your head to submerge between breaths. It is an energy saving procedure to use in warm water when you are not wearing a life vest. However, the head and neck are high heat loss areas and must be kept above water. That is why it is more important to wear a life vest in cold water. If you are not wearing a vest, tread water only as much as necessary to keep your head out of the water.

Keep a positive attitude about your survival and rescue. This will improve your chances of extending your survival time until rescue comes. YOUR WILL TO LIVE, DOES MAKE A DIFFERENCE.

CHAPTER II

GUIDE TO HAZARDOUS BARS

COASTAL SEA SURFACE CONDITIONS

Tides (changes in water level) are caused mainly by the gravitational pull of the sun and moon. There are roughly two tides daily along the west coast. Tidal current is the flow of water. The California saltwater tidal currents can obtain considerable velocities. A flood current is the tidal movement of water towards shore and an ebb tide is the movement away from shore or downstream. Slack water is when there is no tidal current movement.

COASTAL BARS

The most dangerous condition occurs when swift ebb current meets heavy seas rolling in from the Pacific Ocean at a shallow river entrance (called a bar). At these coastal bars the water "piles up" and then "breaks". Even on calm days a swift ebb tide may create a bar condition that is too rough for small craft (any vessel under 65 feet). It is safest to transit from harbor to ocean only on slack water, flood tides or when the sea state is calm. IF YOU ARE INSIDE THE BAR WHEN ROUGH CONDITIONS EXIST, REMAIN INSIDE! If you are trapped outside a rough bar on an ebb current, wait a few hours until the current switches direction. In addition, waves build up at shallow areas such as sand spits and shoals. These areas are dangerous and should be avoided at all times. In a bar area, sea conditions can change rapidly and without warning. Always cross with caution!

Bar guides for the various rivers and bays along the California coast are contained in Coast Pilot 7 at https://nauticalcharts.noaa.gov/publications/coast-pilot/index.html and electronic charts, which can be viewed at http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml. The following non-exhaustive list provides information on locations that commonly experience hazardous bar conditions:

1. **Noyo River Entrance:** Information concerning prevailing conditions and bar crossing information for the entrance is detailed in Coast Pilot 7, Chapter 8 and the Light List Volume VI - Pacific Coast and Pacific Islands. Mariners should monitor VHF-FM Channel 16 for safety broadcast/advisories concerning Noyo River and are encouraged to contact the Coast Guard prior to transiting the entrance. The Coast Guard has established Small Boat Warning Lights on the north side of the river. Two quick flashing yellow lights MAY be activated when seas exceed 4 feet in height and are considered hazardous for small boats. Mariners are cautioned that if the lights are not flashing there is no guarantee that sea conditions are favorable. The two flashing yellow lights WILL be activated when seas exceed 8 feet in height and are considered hazardous for small boats.

2. **Morro Bay Harbor Entrance:** Information concerning prevailing conditions and bar crossing information for the entrance is detailed in the Coast Pilot 7, Chapter 6 and Light List Volume VI - Pacific Coast and Pacific Islands. Mariners entering the Harbor Bay Entrance should be aware that it is a safety zone when the Captain of the Port (COTP) of Los Angeles or a designated representative deems it necessary based on rough bar conditions. The Coast Guard has established Small Boat Warning Lights in the harbor on the North T-Pier in Morro Bay at position 35-22-15N 120-51-31W. Flashing yellow lights SHALL be activated when seas exceed 4 feet in height and are considered hazardous for small boats. Mariners are cautioned that if the lights are not flashing there is no guarantee that the bar is safe.

3. **Humboldt Bay Entrance:** Information regarding prevailing conditions and bar crossing information for the channels is detailed in Coast Pilot 7, Chapter 8 and the Light List Volume VI - Pacific Coast and Pacific Islands. The Coast Guard has established a harbor entrance warning sign at Coast Guard Station Humboldt Bay. The harbor entrance warning sign is equipped with two flashing yellow lights that will be activated when seas exceed 6 feet in height. However, boaters are cautioned that if the lights are not flashing there is no guarantee that sea conditions are favorable. The Humboldt Bay Bar Channel and Entrance Channel are designated as a regulated navigation area (RNA) per 33 CFR 165.1195. The RNA regulations apply to the owners and operators of tank vessels transporting oil or hazardous material as cargo within the Humboldt Bay Area. In addition to the arrival and departure notification requirements listed in title 33 CFR, part 160, Ports and Waterways Safety—General, subpart C—Notifications of "Arrivals, Departures, Hazardous Conditions, and Certain Dangerous Cargoes", the owner, master, agent or person in charge of a vessel to which this notice applies shall obtain permission to cross within four hours of crossing the Humboldt Bay Bar. For specific guidance, refer to 33 CFR 165.1195.

To increase the safety to the boating public, the Coast Guard is proposing to establish Regulated Navigation Areas (RNA) covering specific harbor entrances along the coast of Northern California, which would include procedures for restricting and/or closing those harbor entrances as well as additional safety requirements for recreational and small commercial vessels operating in the RNAs. The public is encouraged to follow the rulemaking process through the Federal eRulemaking Portal at http://www.regulations.gov by using Docket Number USCG-2017-0338.

JETTIES

In general, jetties continue seaward for several yards past the visible end. By all means AVOID CROSSING OVER A SUBMERGED JETTY. Navigate with extreme caution near jetties particularly when wind and sea are setting you toward the jetty.

Zuniga Jetty: Mariners operating in the vicinity of the entrance to San Diego Bay, specifically adjacent to the Zuniga Jetty, are reminded of the inherent hazards that exist along the semi-submerged break-wall. The outer two thirds of the jetty have only small sections visible at high water. The lights marking the jetty have a white day mark with orange border and the words "DANGER SUBMERGED JETTY". Follow all navigation charts for safe operating distance around the jetty, associated shoal waters and rock hazards. Do not navigate across or within any submerged portion of this jetty. For more details consult the most recent edition of the Coast Pilot 7, Chapter 4 or contact Coast Guard Sector San Diego Waterways Management Division via phone at 619-278-7656 or by email at D11-DG-M-SectorSD-Prevention-WaterwaysManagement2@uscg.mil.

RANGE MARKERS

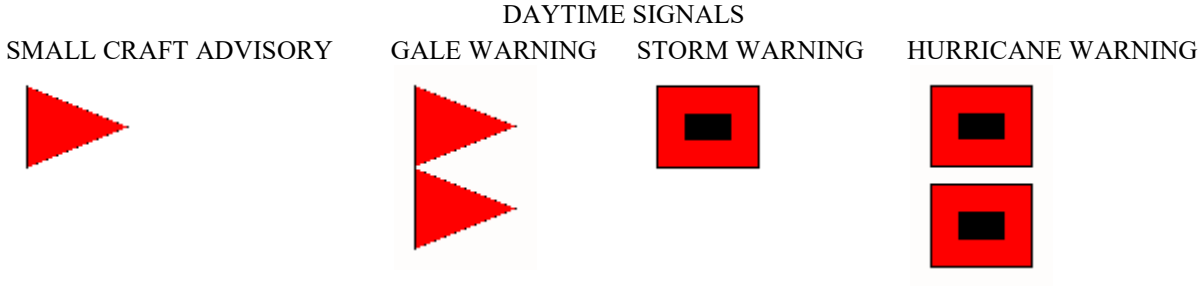
Front and rear range markers are rectangular-shaped dayboards, either are red, green, black or white with a contrasting colored center strip. For nighttime use most range markers are lighted. By steering a course which keeps the two range markers or their lights in line with one another, the mariner will remain within the approximate channel. Because entrance channels are constantly shifting, the range markers do not always mark best water. The mariner, however, will remain in the approximate channel by steering a course that keeps these range markers in line. For safe passage of coastal bars and waterways the prudent mariner should always consult the most recent edition of the Coast Guard Light List, Volume VI, Pacific Coast and Pacific Islands and an updated version of the area chart.

SEASONAL AIDS TO NAVIGATION

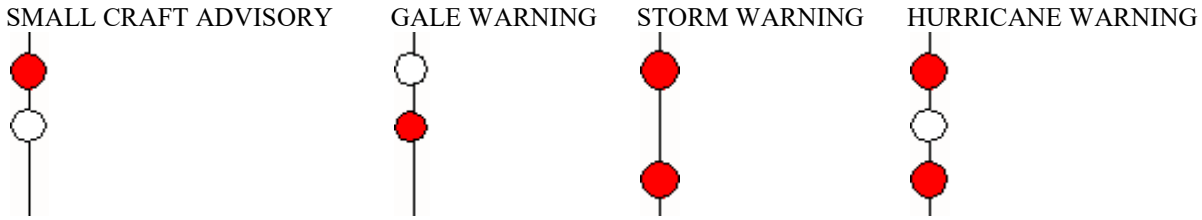
Due to severe weather conditions and reduced vessel traffic during the winter, numerous aids to navigation (i.e. lights, buoys, fog signals) are seasonally discontinued, withdrawn or replaced by smaller aids. These changes occur at regular intervals each year. The approximate dates are contained in the most recent edition of the Light List Volume VI - Pacific Coast and Pacific Islands, and on nautical charts produced by National Ocean Service. The actual dates may be changed due to adverse weather or other conditions. Mariners should consult the Coast Guard's Local Notice to Mariners and listen to Broadcast Notice to Mariners for the dates that seasonal changes take place.

COAST WEATHER WARNING DISPLAYS

DAYTIME SIGNALS



NIGHT (LIGHT) SIGNALS



EXPLANATION OF WARNING DISPLAYS

1. Small Craft Advisory: To alert mariners to sustain (more than two hours) weather or sea conditions, either present or forecast, that might be hazardous to small boats. Mariners learning of a Small Craft Advisory are urged to determine immediately the reason by tuning their radios to the latest marine broadcasts. The decision as to the degree of hazard is left up to the mariner, based on his/her experience and size and type of boat. The threshold conditions for the Small Craft Advisory are usually 18 knots of wind (less than 18 knots in some dangerous waters) or hazardous wave conditions.

2. Gale Warning: To indicate winds within the range of 34 to 47 knots are forecast for the area.

3. Storm Warning: To indicate winds 48 knots and above are forecast for the area. However, if the winds are associated with a tropical cyclone (hurricane) the Storm Warning displays indicates those winds 64 knots and above are forecast for the area.

4. Hurricane Warning: Issued only in connection with a tropical cyclone (hurricane) to indicate that winds 64 knots and above are forecast for the area.

NOTE: A "HURRICANE WATCH" is an announcement issued by the National Weather Service via press and radio and television broadcasts whenever a tropical storm or hurricane becomes a threat to a coastal area. The "Hurricane Watch" announcement is not a warning, rather it indicates that the hurricane is near enough that everyone in the area covered by the "Watch" should listen to their radios for subsequent advisories and be ready to take precautionary action in case “Hurricane Warnings” are issued. A SPECIAL MARINE WARNING BULLETIN is issued whenever a severe local storm or strong wind of brief duration is imminent and is not covered by existing warnings or advisories. Boaters will be able to receive these special warnings by keeping tuned to a NOAA or Coast Guard VHF-FM radio frequency and commercial radio stations that transmit marine weather information.

CHAPTER III

CAUTIONARY SITUATIONS

GENERAL ADVISORY

1. **Radio Checks / False Mayday**

Regrettably, boaters and anglers are increasingly testing their radios or maliciously transmitting the "mayday" distress signal over VHF-FM Channel 16. These offenses violate federal and state laws and put U.S. Coast Guard crews and others on the water at risk. Performing radio checks by broadcasting false maydays endangers the lives of those actually in danger. It diverts and depletes available Search and Rescue resources. It also endangers the lives of Coast Guard crews performing search and rescue for someone not in distress. The word "mayday" should only be used when a boat is sinking, when a boat is disabled and on the rocks, when there is a person overboard or when someone on a boat has a serious injury. It is against state and federal laws to transmit a false mayday. Doing so is a felony offense, punishable by up to six years in prison and a $250,000 fine and restitution to the Coast Guard for all costs incurred responding to the distress. The maximum civil penalty is $5,000. To test a radio, boaters are reminded to turn to a non-distress channel, use their call signs and announce that they are about to conduct a test.

2. **Whales**

The National Oceanic and Atmospheric Administration (NOAA) are asking the public's help in tracking whales. Please report the sighting through Whale Alert, a free application available at http://westcoast.whalealert.org

Also, please report collisions with whales, any observed injured whales or death of whales to NOAA at 877-SOS-WHALE (877-767-9425) or to the U.S. Coast Guard on VHF-FM Channel 16. Whales are federally protected under the Endangered Species Act (16 U.S.C. 1538 et seq.), the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.) and the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.).

3. **Coastal Tow Lane Charts**

Conflicts between ocean-going tugs and commercial crabbers in Washington, Oregon and California were a major problem in the late 1970s. Crab pots fouled tugs as they moved between coastal ports and the loss of their gear was a severe economic loss for crab boat owners.

Sea Grant programs on the West Coast helped broker an agreement that provided navigable towboat and barge lanes through the crabbing grounds between Cape Flattery and San Francisco. Washington Sea Grant took a leadership role in the late 1990s that remains pivotal in saving these industries hundreds of thousands of dollars each year.

There are currently two proposed changes to these lanes:

a. Off of San Francisco, CA to align with the Vessel Traffic Separation (VTS) Scheme Northern Approach boundary points, and

b. Off of Newport, Oregon to navigate around the proposed energy test site. The current Tow Lane charts and chartlets are a result of discussions and final agreements between the two groups mentioned above.

You can print out map-books and download electronic charts at https://wsg.washington.edu/crabber-towboat. For more information or copies of the Tow Lane charts or chartlet contact Kevin Decker, Marine Field Agent, Washington Sea Grant, at (360) 538-2521.

POTENTIALLY HAZARDOUS AREAS

1. **Regulated Navigation Areas and Limited Access Areas**

Coast Guard District Commanders and Captains of the Port (COTP) must be immediately responsive to the safety and security needs of the waters within their jurisdiction; therefore, District Commanders and COTPs have been delegated the authority to issue certain local regulations. Every District Commander may control vessel traffic in an area with hazardous conditions by issuing regulations that specify times of vessel entry, movement or departure to, from, within or through ports, harbors or other waters; establish vessel size, speed, draft limitations and operating conditions; and restrict vessel operation in a hazardous area or under hazardous conditions to vessels which have

particular operating characteristics or capabilities which are considered necessary for safe operation under the circumstances. Safety zones (stationary zones described by fixed points or a moving zone around a vessel in motion) may be established for safety or environmental purposes. Security zones limit access to safeguard vessels, harbors, ports and waterfront facilities from destruction, loss or injury from sabotage or other subversive acts, accidents or other causes of a similar nature in the United States. No person may enter a safety or security zone, bring or cause to be brought any vehicle, vessel or object, remain or allow any vehicle, vessel or object to remain there, unless authorized by the COTP or District Commander. Each person in a safety or security zone who has notice of a lawful order or direction shall obey the order or direction of the COTP or the District Commander. The Captain of the Port may take possession and control of any vessel and/or remove any person, vessel, article or thing from a safety or security zone. Any person who violates the regulations shall be liable under the provisions of 33 USC §1232 for a civil penalty. Each day of continuing violation shall constitute a separate violation.

The establishment of these limited access areas and regulated navigation areas is considered rulemaking. The procedures used to notify persons of the establishment of these areas vary depending upon the circumstances and emergency conditions. Notification may be made by marine broadcasts, local notice of mariners, local news media, distribution in leaflet form and on-scene oral notice as well as publication in the Federal Register. The Commandant may also direct the COTP to prevent access to waterfront facilities and port and harbor areas, including vessels and harbor craft therein. For more information about Regulated Navigation Areas and Safety/Security Zones see: 33 CFR 165. For specific Regulated Navigation Areas and Limited Access Areas in the Eleventh Coast Guard District see: 33 CFR 165.T11-504 – 165.1342.

Mariners operating in the vicinity of San Clemente Island are reminded of the restricted waterway access surrounding San Clemente Island (33 CFR 165.1131; 33CFR 165.1141). Since the inception of the regulations, numerous safety zone violations have been processed by Coast Guard Sector San Diego. Safety Zone Incursions put the public at risk and cause costly and unnecessary training delays, as well as range cancellations. Violators of the San Clemente Island Safety and Security Zones are subject to monetary penalties. Criminal penalties may also be issued for repeated Safety and/or Security Zone violations. Failure to comply with the federal regulations could result in civil penalties. Furthermore, if a mariner holds a Merchant Mariner Credential, suspension or revocation action may be pursued against the mariner's credential.

2. **Firing Danger Areas**

Firing and bombing practice exercises take place in numerous areas established for those purposes along the coast of California. Responsibility to avoid accidents rests with the authorities using the areas. National Ocean Service charts show firing and bombing practice areas in United States waters. Similarly, as new editions of NOAA Charts are published, firing and bombing practice area limits will be shown when they are extending from or adjacent to the coastline. Firing Danger Areas in the open sea normally will not be shown. Any aid to navigation that may be established to mark a danger area; and/or any target, fixed or floating, that may constitute a danger to navigation will be shown on the appropriate charts. Warning signals, usually consisting of red flags or red lights, are customarily displayed before and during the practice but the absence of such warnings cannot be accepted as evidence that a practice area does not exist or is not in use. Vessels should be on the lookout for local warnings and signals and should whenever possible, avoid passing through an area in which practice is in progress but if compelled to do so should endeavor to clear it at the earliest possible moment.

3. **U.S. Navy Operating Areas**

The U.S. Navy advises that hazardous operations may take place at any time on the Pacific Missile Test Range, Point Mugu, CA. The test range extends for 180 miles in a SW direction from Point Mugu and is up to 210 miles wide. Boundaries of the Pacific Missile Test Range are depicted on NOAA charts 18020 and 18720.

For information regarding current hazardous operations status contact “PLEAD CONTROL” on VHF-FM channels 11 or 16 or at (805) 989-8841 /8843 from 0600-1800 or at (805) 816-0792 after 1800. A recorded message is available at (805) 989-1470. If PLEAD CONTROL cannot be reached, contact “San Pedro Traffic” on VHF-FM channel 14 or (310) 832-6411.

Further information concerning the Pacific Missile Test Range is published in Chapter 4 of U.S. Coast Pilot 7, Pacific Coast in the Section under Chart 18720 (http://www.nauticalcharts.noaa.gov/nsd/coastpilot_w.php?book=7).

4. **Submarine Operations**

Boundary limits and designations of submarine operating areas are shown on nautical charts in magenta lines (for details see Chart No. 1, Section N - see Chapter 9 for information on obtaining Chart No.1). As submarines may be operating in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep well clear of naval target vessels flying a large red flag. In the past a number of potentially dangerous situations have occurred when ships have entered fleet operating areas in which underwater (and air) operations were being conducted. Mariners are urged to navigate with caution when transiting an operating area and to listen to Broadcast Notices to Mariners.

5. **Explosive Ordnance**

The continental shelf of the United States contains many forms of unexploded ordnance (military weapons), the locations of which are not known. The types most likely to be encountered are underwater ordnance such as torpedoes, mines, depth charges and aerial bombs, but other ordnance items may be found. Any metallic object having fins, vanes, propellers, horns or possibly plates screwed or bolted to an external surface should be regarded as dangerous. This warning is published for all shipmasters, trawlers, fishermen or persons conducting operations on or near the ocean bottom and provides instructions on the action to be taken when ordnance items or suspicious objects are encountered:

a. OBJECTS SNAGGED OR NETTED: Any object which cannot be immediately identified as a non-explosive (inert) item MUST BE TREATED AS AN EXPLOSIVE ITEM. If there is any doubt about its identity, TREAT IT AS EXPLOSIVE. Non-explosive naval ordnance items such as practice torpedoes and practice mines will normally be painted bright orange, for ready identification. Any object which is not painted bright orange may be dangerous and possibly can explode if brought on board or bumped in any way. If an object is brought to the surface of the water and it cannot be immediately identified as an inert item, DO NOT ATTEMPT TO BRING IT ON BOARD OR ALONGSIDE. If possible, release the object immediately and radio the nearest Navy or Coast Guard activity, giving the position and description of the object. If the object cannot be released, or freed by cutting the net or line, the following actions are advised:
   i. Stream the object as far aft as possible.
   ii. Position the crew at the forward end of the vessel keeping the deckhouse between them and the object astern.
   iii. Notify the nearest Coast Guard or Navy activity and stand by for instructions or help. The Coast Guard can be notified on VHF Channel 16 or at (510) 437-3701.
   iv. Maintain steerageway as necessary to stay in the area until help or instructions arrive.

b. OBJECTS BROUGHT ON BOARD: If a suspected explosive object is not detected until the trawler net contents have been discharged on board the vessel, take the following actions:
   i. Avoid any bump or shock to the object.
   ii. Secure it in place.
   iii. Keep it covered up and wetted down.
   iv. Radio the nearest Coast Guard or Navy unit and stand by for instructions.

c. FLOATING OBJECTS: If a floating object cannot be readily identified as non-explosive, IT MUST BE CONSIDERED TO BE EXPLOSIVE. DO NOT APPROACH OR ATTEMPT TO RECOVER OR BRING IT ON BOARD. Report the location immediately to the nearest Coast Guard or Navy activity and warn all other ships or craft in the vicinity. Try to keep the object in sight until instructions are received.

d. REPORTING OF SUSPICIOUS OBJECTS RESEMBLING MINES: Ships frequently report objects resembling mines, but often give insufficient information to properly evaluate the reports. As a result, needless time and expense is incurred only to find that they are not mines but other floating objects. HOWEVER, VESSELS SHOULD NOT ATTEMPT TO RECOVER OBJECTS RESEMBLING MINES OR PASS CLOSE ABOARD FOR POSITIVE IDENTIFICATION, KEEP WELL CLEAR. Since mines are a danger to life and property at sea, masters of ships observing unidentified or suspicious objects are requested to furnish the following information to the nearest Coast Guard or unit:
   i. Position of object and how closely it was approached.
   ii. Size, shape, condition of painting and the presence of marine growth.
   iii. Whether or not horns or rings are attached.
   iv. Whether or not definite identification is possible.

6. **Danger from Unlabeled Drums**
With the many exotic chemicals being transported in drums as deck cargo, reports are frequently received of loss overboard of these potentially dangerous containers. Even empty drums may contain residues which are extremely hazardous to touch or smell, and some vapors may be highly explosive. When coming upon derelict drums, whether afloat or from the sea bottom, this danger should be considered. Identifying labels will give adequate warning but containers are more than likely to be found with caution labels washed off. Avoid direct contact and notify the Coast Guard of any sightings in U.S. coastal waters (**24 HOUR TOLL FREE NUMBER IS 800- 424-8802**) or government authorities of the nearest port state if sighting is near any foreign shores.

7. **Submarine Cables and Pipelines**
Submarine cables and pipelines pass beneath various navigable waterways of the U.S. and on the Continental Shelf. Installation of new submarine cables and pipelines is reported in the Local Notice to Mariners. Their locations may not be charted. When feasible, warning signs are often erected to warn the mariner of their existence. In view of the serious consequences resulting from damage to submarine cables and pipelines, vessel operators should take special care when anchoring, fishing or engaging in underwater operations near areas where these cables or pipelines may exist or have been reported to exist. Certain cables carry high voltages; many pipelines carry natural gas under high pressure or petroleum products. Fire or explosion with injury or loss of life, or a serious pollution incident, could occur if they are breached. Vessels fouling a submarine cable or pipeline should attempt to clear without undue strain. Anchors or gear that cannot be cleared should be slipped; no attempt should be made to cut a cable or pipeline.

8. **Submerged Objects in Shallow Waters**
Mariners are cautioned against the hazard of snags and other submerged objects; particularly in shallow waters where even a small object may lie near the surface. Even in familiar waters, new obstacles may be encountered, and known obstacles may move. Good seamanship dictates low speed and alertness when transiting areas of shallow water.

9. **Marine Construction Sites**
When the Coast Guard is advised, information concerning marine construction projects involving dredging, breakwaters, piers, pipelines and oil drilling platforms is disseminated via Local and Broadcast Notices to Mariners. Until these projects are completed, the sites are generally listed as displaying construction lights. This lighting serves both to light the site for purposes of construction and to warn the mariner of its existence. Barges and equipment operating in the area are usually held in place by mooring systems extending some distance from the equipment. Mariners should not rely on all this equipment or moorings being well marked, but should pass all such construction sites with caution. The Vessel Bridge to Bridge Radiotelephone Act and Federal Communications Commission (FCC) regulations require dredges and floating plants engaged in or near a channel or fairway, in operations likely to restrict or affect navigation of other vessels, to have a radiotelephone capable of operation from its navigational bridge or main control station and capable of transmitting and receiving VHF-FM Channel 13 (156.65 MHz).

VESSEL SIGNALS

1. **Submarine Emergency Identification Signals**
U.S. submarines are equipped with signal ejectors which may be used to launch identification signals, including emergency signals. Two general types of signals may be used: smoke floats and flares or stars. The smoke floats, which burn on the surface, produce a dense, colored smoke for a period of fifteen to forty-five seconds. The flares or stars are propelled to a height of three hundred to four hundred feet from which they descend by small parachute. The flares or stars have to ability to burn for about twenty-five seconds. The color of the smoke or flare/star has the following meanings:

a. GREEN OR BLACK: Used under training exercise conditions only to indicate that a torpedo has been fired or that the firing of a torpedo has been simulated.
b. YELLOW: Indicates that submarine is about to come to periscope depth from below periscope depth. Vessels should not stop propellers. This is important to insure that the submarine knows where you are located.
c. RED: Indicates an emergency condition within the submarine and that it will surface immediately, if possible.

Look for submarine marker buoys consisting of 2 spheres 3 feet in diameter painted international orange with connecting structure. The buoy is a messenger buoy with a wire cable to the submarine. A submarine on the bottom in distress and unable to surface will, if possible, release this buoy. The submarine may employ any or all of the following additional means to attract attention and indicate their position while submerged:

a. Release of dye marker.
b. Release of air bubble.
c. Ejection of oil.
d. Pounding of the hull.

If any of these attempts to attract attention are noted, contact the U.S. Coast Guard on VHF-FM Channel 16.

2. **Signals for Coast Guard Vessels while Handling or Servicing Aids to Navigation**

a. Day: Three dayshapes not less than 6 feet apart and each not less than 2 feet in diameter, of which the highest and lowest shall be ball-shaped and black in color, and the middle one diamond shaped and black.

b. Night: Three lights in a vertical line not less than 6 feet apart, the highest and lowest being red and the middle one being white in color.

Vessels, with or without tows, passing Coast Guard vessels displaying this signal, shall reduce their speed sufficiently to insure the safety of both vessels, and when passing within 200 feet of the Coast Guard vessel displaying this signal, their speed shall not exceed 5 miles per hour.

3. **Diver's Flag**

RULE 27(e)(ii) of the Navigation Rules - Inland and International states that small vessels restricted in their ability to maneuver and engaged in diving operations shall exhibit a rigid replica of the International Code Flag "A" (ALPHA) at least one meter in height. Many individuals and diving organizations have interpreted the International Code Flag "A" to mean that this has replaced the traditional diver's flag. THIS IMPRESSION IS INCORRECT. A vessel engaged in diving operations, whether underway or at anchor is usually considered restricted in its ability to maneuver if divers are attached to the vessel while diving. If divers are swimming free, it is the responsibility of the operator to determine if the vessel's movements are restricted by operations. If dive vessel cannot keep out of the way of other vessels as required by the Navigation Rules, the vessel must exhibit, by day, the "A" flag. At night this vessel must exhibit three lights is a vertical line, the highest and lowest being red and the middle one being white. If the operator of a vessel tending free-swimming divers determines that the diving itself does not restrict the maneuverability of the vessel, the "A" flag signal is not required.

VESSEL OPERATIONS

1. Geophysical Surveying Vessels

In the last few years operations conducted by geophysical survey vessels have increased off the California seacoast. Survey vessels can pose a hazard to navigation when towing a submerged seismic cable. The cable is generally towed at a depth of 15 to 40 feet below the surface, with a length up to two miles. The end of the cable, if depth and length warrant, is marked by a "tail buoy" displaying either a fixed or flashing white light and is often equipped with a radar reflector. Survey vessels towing a submerged cable are required to exhibit lights and day shapes as prescribed in Rules 24 (Towing and Pushing) and 27 (Restricted Maneuverability) of the Inland and International Navigation Rules as appropriate. Seismic cables can be slacked to allow increased clearance to another vessel crossing over the cable. However, proposal and agreement for such a maneuver should be first made between the two vessels via radiotelephone.

2. Caution Regarding Approach of Vessels Toward Naval Formations and Convoys

A formation of warships or convoy is more difficult to maneuver than a single ship. All vessels are cautioned to employ the customary manners of good seamanship and where there is ample sea room, adopt early measures to keep out of the way of a formation of warships or convoy.

3. Protection of Naval Vessels

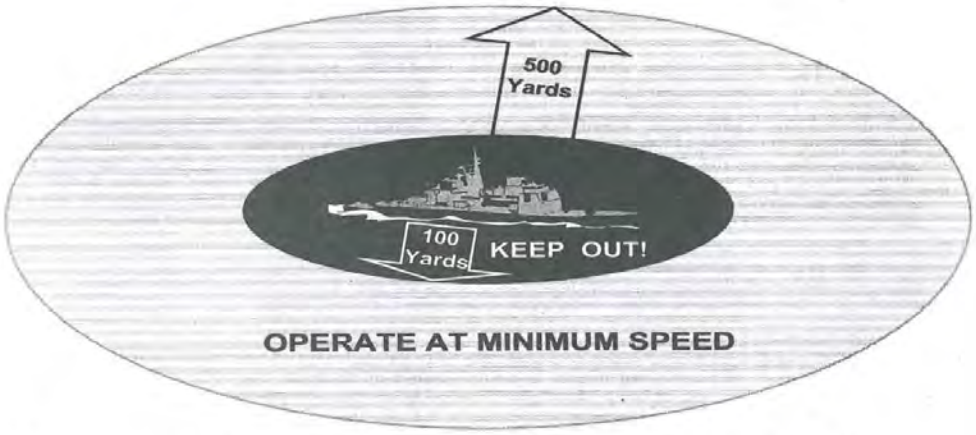
Naval Vessel Protection Zones provide for the safety and security of United States naval vessels in the navigable waters of the United States, under the authority in 14 U.S.C. §91 and §633. A naval vessel protection zone exists

500 yards around U.S. naval vessels greater than 100 feet in length overall, at all times in the navigable waters of the United States, regardless of whether the large U.S. naval vessel is underway, anchored, moored or within a floating dry dock, except when the large naval vessel is moored or anchored within a restricted area or within a naval defensive sea area. U.S. naval vessel means any vessel owned, operated, chartered, or leased by the U.S. Navy; any pre-commissioned vessel under construction for the U.S. Navy, once launched into the water; and any vessel under the operational control of the U.S. Navy or a Combatant Command. Any vessel other than Naval Vessels means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, except Coast Guard or U.S. naval vessels. The Navigation Rules shall apply at all times within a naval vessel protection zone. Although naval vessels traverse all navigable waters of California, transits of San Diego Harbor, Del Mar Boat Basin, Anaheim Bay and Port Hueneme occur with particular frequency. Mariners must remain alert for the approach of transiting naval vessels and their security escorts. Mariners should also be aware of the existence of their surrounding naval vessel protection zones and avoid entering the protection zone when practicable. When circumstances preclude avoidance and it becomes necessary to enter a naval protection zone, mariners must first establish contact with the naval vessel or its security escort and make their intentions known. When within a naval vessel protection zone, all vessels shall operate at the minimum speed necessary to maintain a safe course, unless required to maintain speed by the Navigation Rules, and shall proceed as directed by the Coast Guard, the senior naval officer present in command, or the official patrol. Unauthorized approach to a large naval vessel within 100 yards is extremely hazardous and must be avoided. When within a naval vessel protection zone, no vessel or person is allowed within 100 yards of a large U.S. naval vessel unless authorized by the Coast Guard, the senior naval officer present in command, or the official patrol. To request authorization to operate within 100 yards of a large U.S. naval vessel, contact the Coast Guard, the senior naval officer present in command or the official patrol on VHF-FM Channel 16.

When conditions permit, the Coast Guard, the senior naval officer present in command, or the official patrol should: (1) Give advance notice on VHF-FM Channel 16 of all large U.S. naval vessel movements; (2) Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass within 100 yards of a large U.S. naval vessel in order to ensure a safe passage in accordance with the Navigation Rules (3) Permit commercial vessels anchored in a designated anchorage area to remain at anchor when within 100 yards of passing large U.S. naval vessels (4) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of a moored or anchored large U.S. naval vessel with minimal delay consistent with security. The listed actions are discretionary and do not create any additional right to appeal or otherwise dispute a decision of the Coast Guard, the senior naval officer present in command, or the official patrol. To read the Final Rule, see the Federal Register Vol. 67, No. 107, 38391-38394 or 33 CFR 165.2030 Pacific Area.

WARNING!

Do not approach within 100 yards of any U.S. naval vessel. If you need to pass within 100 yards of a U.S. naval vessel in order to ensure a safe passage in accordance with the Navigation Rules, you must contact the U.S. naval vessel or the Coast Guard escort vessel on VHF-FM channel 16.



You must operate at minimum speed within 500 yards of any U.S. naval vessel and proceed as directed by the Commanding Officer or the official patrol.

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

POLLUTION PREVENTION

1. **Ocean Dumping**

The Marine Protection, Research, and Sanctuaries Act of 1972 (40 CFR Subchapter H) regulate the dumping of all material into ocean waters. The Army Corps of Engineers issues permits for the disposal of dredged spoils; the Environmental Protection Agency is authorized to issue permits for all other dumping activities. The Act provides civil penalties of up to $50,000 and criminal penalties of up to $50,000 and/or one-year imprisonment, for persons violating the provisions of the Act.

The International Convention for the Prevention of Pollution from Ships (MARPOL) was developed by the International Maritime Organization in an effort to minimize pollution of the oceans and seas, including dumping, oil and air pollution. The objective of this convention is to preserve the marine environment in an attempt to completely eliminate pollution by oil and other harmful substances and to minimize accidental spillage of such substances

2. **Water Pollution Prevention**

The Refuse Act of 1899 and the Act to Prevent Pollution from Ships (33 USC: 1901-1911) prohibit the throwing, discharge, or depositing of any refuse matter of any kind (including trash, garbage, oil, and other liquid pollutants) into the waters of the U.S. (from the shoreline to a distance of three miles). The Federal Water Pollution Control Act or Clean Water Act prohibits the discharge of oil or hazardous substances in quantities that may be harmful into U.S. navigable waters, the contiguous zone, and waters within 200 miles.

a. REPORTING REQUIREMENTS
   A person in charge of a vessel or an onshore or offshore facility is required to immediately report by telephone, radio telecommunication, or other similar means, any discharge of oil or other hazardous substance into the water. Reports should be made by calling toll-free to the National Response Center at (800) 424-8802. Penalty for discharging harmful oil is a maximum of $5,000 assessed against the person-in-charge of the source. Failure to notify the Coast Guard is a criminal penalty with a maximum $10,000 charge and/or one-year imprisonment. The owner/operator of the vessel or shore facility is liable for removal costs. Limits of liability are determined by vessel tonnage.
b. MARINE SANITATION DEVICE REGULATIONS
   Certified marine sanitation devices (MSDs) are required on all vessels with installed toilet facilities. Direct discharge toilets are illegal unless the vessel is operating under a waiver granted by Commandant, Domestic Vessel Division (CG-CVC-1), 2703 Martin Luther King Jr. Ave. SE, Washington, DC 20593-7501. This includes any equipment for installation on board a vessel that is designed to receive, retain, treat, or discharge sewage and any process that treats such sewage. It does not include portable toilets which can be carried on and off the vessel. The discharge of untreated or inadequately treated sewage inside 3NM is prohibited for all vessels, including foreign, federal, and state-owned vessels operating in U.S. waters. Noncompliance will result in civil penalties of up to $2,000. Manufacturers who sell MSDs or manufacturers of vessels with MSDs aboard that do not comply with these regulations are subject to fines of up to $5,000. More specific information concerning water pollution is contained in Title 33 Code of Federal Regulations, Parts 153, 155, and 159. All boaters must help to ensure that others obey the law and are encouraged to report polluting discharges to the nearest Coast Guard Office or call toll-free 1-800-424-8802. Please report the following information: 1) location 2) source 3) size 4) color 5) substance and 6) time observed. DO NOT attempt to take samples of any chemical discharge. If uncertain as to the identity of any discharge, avoid flame, physical contact, or inhalation of fumes.
c. OIL POLLUTION REGULATIONS
   i. Any facility that transfers oil in bulk to or from a vessel with a capacity of 250 or more barrels of oil must comply with equipment regulations, submission requirements, and transfer procedures set forth in 33 CFR §154.
   ii. Vessel owners and operators should follow the regulations outlined in 33 CFR §155. This section deals with vessel design, operations, and equipment requirements. Of note, no person may drain oil sumps, filters, strainers, or purifiers into a vessel's bilge. Personnel qualifications and oil transfers procedures are to be stringently followed. Also, all U.S. vessels of 26 ft or greater MUST display a placard of at least 5 by 8 inches, made of durable material, fixed in a conspicuous place in each machinery space, or at the bilge and ballast pump control station, stating the following:

DISCHARGE OF OIL PROHIBITED

THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES, OR THE WATERS OF

THE CONTIGUOUS ZONE, OR WHICH MAY AFFECT NATURAL RESOURCES BELONGING TO, APPERTAINING TO, OR UNDER THE EXCLUSIVE MANAGEMENT AUTHORITY OF THE UNITED STATES, IF SUCH DISCHARGE 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 PENALTIES AND/OR CRIMINAL FINES AND IMPRISONMENT.

iii. Vessel's expecting to conduct oil transfer operations should follow the procedures, equipment tests, and supervisory responsibilities established in 33 CFR §156.

iv. Owners and operators of tank vessels shall follow the regulations outlined in 33 CFR §157. These regulations govern the design and operation of seagoing U.S. tank ships and barges of 150 gross tons and over that carry oil in the U.S. domestic trade. These regulations should help reduce pollution from tank cleaning and deballasting operations. Copies of these regulations may be obtained from the nearest Government Printing Office or marine supply store. For any questions concerning these regulations contact your nearest Coast Guard Captain of the Port.

d. GARBAGE DISCHARGE REGULATIONS

As of July 31, 1990, certain U.S. vessels are required to post garbage discharge placards for their crews and passengers. Certain other U.S. vessels are required to develop waste management plans and post garbage discharge placards for their crew and passengers.

i. Placards are required for all manned U.S. vessels 26 feet or more in length. One or more placards must be placed in prominent locations and in sufficient numbers so they can be read by the crew and passengers. The placard locations must be readily accessible to the intended reader. Locations may include embarkation points, food service facilities, garbage handling spaces, and common spaces on deck. Coast Guard boarding officers must be satisfied that placards are located in such a manner, and in sufficient quantity, that every crew member and passenger aboard the vessel would have access to a placard. Boarding officers will have an ample supply of placards for public distribution during boardings.

ii. A waste management plan and placard are required for all manned, ocean-going U.S. vessels greater than 40 feet in length that are engaged in commerce, or equipped with a galley and berthing. The waste management plan must be in writing and meet the garbage discharge requirements of Title 33 Code of Federal Regulations subparts 151.51 through 151.77. Any person handling garbage on board the vessel must follow the provisions of the plan. The plan must describe procedures for collecting, processing, storing, and discharging garbage. The plan must designate the person who is in charge of carrying out the plan. The following is an example of a waste management plan for a vessel operating inside three nautical miles from shore:

WASTE MANAGEMENT PLAN

SOLID WASTE MANAGEMENT PROCEDURES. ALL GARBAGE GENERATED ON THE VESSEL IS PUT IN A GARBAGE BAG AND DISPOSED OF IN A TRASH CONTAINER LOCATED AT THE PORT OF CALL (OR GIVEN TO A TENDER VESSEL TO TAKE A SHORE FOR DISPOSAL). ALL CREWMEMBERS ARE TO BE ORIENTED TO THE REQUIREMENTS OF MARPOL ANNEX V BY THE CAPTAIN. ALL NEW CREWMEMBERS WILL BE SPECIFICALLY SHOWN THE GARBAGE DISCHARGE PLACARD AND TOLD TO KEEP ALL REFUSE STOWED ON BOARD. PASSENGER ORIENTATION TO THE VESSEL SHOULD INCLUDE BEING SHOWN THE LOCATION OF THE TRASH RECEPTACLE, MENTION OF REFUSE DISCHARGE REGULATIONS, AND THE NAME OF THE PERSON CHARGED WITH THE RESPONSIBILITY FOR CARRYING OUT THE PLAN." VESSELS OPERATING BEYOND THREE NAUTICAL MILES FROM SHORE MUST DEVELOP A PLAN THAT MEETS THE REQUIREMENTS OF MARPOL 73/78 ANNEX V, GARBAGE DISCHARGE RESTRICTIONS.

e. DISPOSAL OF PLASTICS AND OTHER GARBAGE IN U.S. WATERS

New Federal regulations controlling disposal of garbage from vessels prohibit the discharge of plastic garbage anywhere in the marine environment. Plastic includes, but is not limited to: Plastic bags, Styrofoam, cups and lids, six pack holders, bottles, caps, buckets, shoes, milk jugs, egg cartons, stirrers, straws, synthetic fishing nets, ropes, lines, and "bio- or photo-degradable" plastics. These regulations also restrict the disposal of other types of garbage within specified distances from shore.

f. DEFINITIONS OF ADDITIONAL TYPES OF WASTE

i. GARBAGE - all kinds of food, cargo, and maintenance waste, ashes or clinkers, and domestic waste (generated in living spaces aboard the vessel -- what we normally call trash). "Garbage" does not include fresh fish or fish parts, dishwater, and gray-water.

ii. DISHWATER - the liquid residue from the manual or automatic washing of dishes and cooking utensils which have been pre-cleaned to the extent that any food particles adhering to them would not normally interfere with the operation of automatic dishwashers.
iii. DUNNAGE - cargo associated waste.
iv. GRAYWATER - drainage from a dishwasher, shower, laundry, bath, or washbowl and does not include drainage from toilets, urinals, hospitals, and cargo spaces. All U.S. vessels, wherever they operate, and foreign vessels operating in U.S. waters out to and including the Exclusive Economic Zone (200 miles) must comply with Annex V of MARPOL 73/78.

3. **National Ballast Water Management (BWM) Program**

The unintentional introduction of Aquatic Nuisance Species (ANS) into U.S. waters via the discharge of vessels' ballast water has had significant negative effects on the nation's marine and freshwater resources, biological diversity and coastal infrastructures. The Coast Guard is responding to these concerns through a comprehensive national BWM program. This program (1) requires mandatory ballast water management on all vessels equipped with ballast tanks that operate on waters of the U.S. (2) establishes additional practices for vessels entering U.S. waters after operating beyond the Exclusive Economic Zone (EEZ) and (3) requires the reporting and recordkeeping of ballasting operations whenever a vessel equipped with ballast water tanks enters a U.S. port or place to anchor or moor. Since November 1, 2004, the Coast Guard has enforced mandatory ballast water management practices for all vessels equipped with ballast tanks bound for ports or places within the U.S. and/or entering U.S. waters, regardless of whether a vessel operated outside of the EEZ of the U.S. or equivalent zone of Canada. This includes those ships that declare No Ballast On Board (NBOB), and for transits that occur between all Captain of the Port zones, including zones in the Great Lakes.

Mandatory Practices (33 CFR §151.2035(a)) include avoiding ballast operations in or near marine sanctuaries, marine preserves, marine parks or coral reefs; avoiding or minimizing ballast water uptake: where known infestations, harmful organisms and pathogens are located, near sewage outfalls, near dredging operations, where tidal flushing is poor or when a tidal stream is known to be more turbid, in darkness when organisms may rise up in the water column, in shallow water or where propellers may stir up the sediment, areas with pods of whales, convergence zones and boundaries of major currents; cleaning ballast tanks to remove sediment regularly; only discharging minimal amounts of ballast water in coastal and internal waters; rinsing anchors and anchor chains during retrieval to remove organisms and sediments at their place of origin; removing fouling organisms from hull, piping and tanks on a regular basis and dispose of any removed substances in accordance with local, state and federal regulations; maintaining a vessel specific ballast water management plan, train vessel personnel in ballast water and sediment management and treatment procedures.

Additional mandatory practices for all vessels arriving in U.S waters with ballast water that was taken on within 200 NM of any coast after operating beyond the U.S. EEZ must do one of the following: Conduct mid-ocean ballast water exchange prior to entering U.S. waters; retain the ballast water on board while in U.S. waters or use a Coast Guard - approved method to treat the ballast water.

BWM practices shall not jeopardize the safety of a vessel, its crew or its passengers. Therefore, the master of a vessel will not be prohibited from discharging unexchanged ballast, in areas other than the Great Lakes and the Hudson River, if the master decides that the practice would be a threat to safety, stability, or security because of adverse weather, vessel design, equipment failure, or any other extraordinary condition. All vessels, however, must discharge only the minimal amount of ballast water operationally necessary and ensure ballast water records accurately reflect any reasons for not complying with the mandatory requirements.

The only vessels that are exempt from the mandatory BWM reporting and record keeping requirements of 33 CFR §151.2060 are:

- DOD/Coast Guard/Armed Service Vessels,
- Crude oil tankers engaged in coastwise trade,
- Vessel that operate exclusively within ports or places within a single COTP zone,
- Seagoing vessel operates on voyages between ports or places in more than a single COTP Zone, does not operate outside of EEZ, and ≤1600 gross register tons or ≤3000 gross tons (ITC),
- Non-seagoing vessels,

- Vessels that operate in more than one COTP zone, but conduct all ballast operations (uptake and discharge) exclusively in one COTP zone, regardless of the number of voyages the vessel makes, are also not required to report of maintain BWM records under 33 CFR §151.2025 and §151.2060.

Vessels engaged in the foreign export of Alaskan North Slope Crude Oil: These vessels must ensure compliance with the reporting and record keeping provisions of 33 CFR §151.2060 and §151.2025 in addition to the requirements of 15 CFR§ 754.2(j)(3).

Penalties for failing to comply with the Mandatory BWM Requirements:
Maximum: $35,000 per day.
Willful violations = Class C Felony

The master, owner, operator, or person-in-charge of any vessel that is equipped with ballast water tanks**,** and that is bound for ports or places in U.S. waters, must ensure complete and accurate BWM reports are submitted in accordance with 33 CFR §151.2060 and signed BWM records are kept on board the vessel for a minimum of two years (33 CFR §151.2025). Shipping agents of vessels operating in U.S. water should where possible, facilitate efforts to submit complete, accurate and timely reports. All required information is to be sent to the National Ballast Information Clearinghouse (NBIC) using only one of the following means (online reporting via the NBIC website, or e-mail attachments downloadable from the NBIC website are the preferred methods for submitting Ballast Water Reporting Forms):

- internet, at : http://invasions.si.edu/NBIC/bwform.html
- email to NBIC@BALLASTREPORT.ORG,
- fax to 301-261-4319 or
- mail to the United States Coast Guard c/o Smithsonian Environmental Research Center
- P.O. Box 28, Edgewater, MD 21037-0028.

If the information submitted in accordance with this section changes, an amended form must be submitted before the vessel departs the waters of the U.S. Reporting forms, instructions, regulations and additional educational material can be obtained by contacting the U.S. Coast Guard Environmental Standards Division at:

Commandant, (CG-OES-3)
2703 Martin Luther King Jr. Ave. SE
Washington, DC 20593-7509
(202) 372-1413

NOTE: State laws/regulations may be more restrictive than federal regulations, and mariners operating in a state's jurisdiction are subject to state laws/regulations. California has passed several mandatory ballast water exchange and management laws. In 1999, California passed the Ballast Water Management for Control of Non-Indigenous Species Act, which addressed the threat of species introductions through ships' ballast water. In 2003, the Marine Invasive Species Act (MISA) was passed, reauthorizing and expanding the 1999 Act. Subsequent amendments to MISA and additional legislation has further expanded the scope of the Ballast Water Management Program to include research, management and policy development related to vessel fouling and ballast water treatment technologies. For more information on these regulations see: http://www.slc.ca.gov/Laws-Regs/Laws-Regs.html

4. **North American Emission Control Area (ECA)**

The United States is signatory to the International Maritime Organization (IMO) MARPOL Annex VI, Regulations for the Prevention of Air Pollution from Ships. MARPOL Annex VI entered into force internationally on 19 May 2005 and the U.S. became signatory to the regulation in January 2009. The purpose of these standards is to dramatically reduce air pollution from ships and deliver substantial air quality and public health benefits that extend hundreds of miles inland. MARPOL Annex VI sets limits on sulfur oxide (SOx), nitrogen oxide (NOx), and particulate matter emissions from ships, as well as ozone depleting substances and volatile organic compounds. In the United States, the Coast Guard and the Environmental Protection Agency (EPA) work together in implementing MARPOL Annex VI.

MARPOL Annex VI also establishes Emission Control Areas (ECA) for more stringent standards over SOx and NOx emissions in areas closer to land. Under the direction of EPA, the United States and Canada collaborated to

create a 200 NM ECA around much of the North American coastline. After final IMO approval in March 2010, the North American ECA entered into force on 1 August 2012.

With limited exceptions, including for certain "public vessels" (as defined in 40 C.F.R. § 1043.20), all vessels that operate in the North American ECA are required to be in compliance with the MARPOL Annex VI ECA fuel oil sulfur standard. Most vessels under 400 gross tonnage are likely already in compliance with the standard as the majority of these vessels operate using solely distillate fuel oil that meets the MARPOL Annex VI ECA fuel oil sulfur limit. All vessels powered by propulsion boilers (steamships) which were not originally designed for continued operation on marine distillate fuel or natural gas are exempt from the ECA's sulfur requirements beginning on 1 January 2013 through January 1, 2020.

The North American ECA encompasses the U.S. (including Hawaii and the southwestern coast of Alaska) and Canada, extending 200 NM out to sea from the coast. Along with the North American ECA, the U.S. Caribbean ECA was also established to further restrict SOx and NOx emissions from ships affecting the United States. The U.S. Caribbean ECA encompasses Puerto Rico and the U.S. Virgin Islands.

Under MARPOL Annex VI, Regulation 14, which discusses the SOx and particulate matter emission limits, the current ECA fuel sulfur limit for any fuel oil used onboard ships within 200 NM of the coast shall not exceed the following limit:

- 0.10% m/m on and after 1 January 2015.

The regulation also lists a global sulfur cap for any fuel oil used onboard ships, which shall not exceed the following limits:

- 3.5% m/m on and after 1 January 2012; and
- 0.50% m/m on and after 1 January 2020.

Furthermore, vessels may also use alternative technology, such as exhaust scrubbers, to comply with MARPOL Annex VI, Regulation 4, Equivalents.

If utilizing low sulfur fuel oil (0.10% m/m) for compliance with the ECA:

- Vessels that enter/exit the ECA shall:
    - Record in a logbook the volume of low sulfur fuel oils in each tank, date, time and position of the ship when any fuel oil changeover operation is completed prior to the entry into or commenced after exit of an ECA.
    - Carry written fuel oil changeover procedures showing how and when changeover is completed.
- All vessels over 400 gross tonnage operating internationally must receive and maintain bunker delivery notes or similar documentation, provided by their fuel supplier upon bunkering, that contains the specifications of the fuel loaded.
- Vessels operating domestically using marine distillate fuel purchased in the U.S. are considered in compliance with the ECA**.**

Under MARPOL Annex VI, Regulation 13, NOx emissions limits are regulated through marine diesel engine standards. For those ships constructed prior to 1 January 2000, Tier I standards apply. For those ships built on or after 1 January 2000, the standards in force at the time the ship was constructed apply. Currently, NOx Tier III limits apply to engines installed on a ship constructed on or after 1 January 2016.

MARPOL Annex VI inspections or exams are part of the regularly scheduled Coast Guard inspections for certification or PSC exams. During the scope of an exam, if a vessel is found not burning compliant fuel and does not have a valid exemption, equivalency, or exception, enforcement actions may be taken. The EPA does not

accompany the Coast Guard on routine boardings, but there may be circumstances that warrant EPA attendance, such as for the purpose of obtaining fuel samples for testing.

Vessels arriving without compliant fuel oil (non-availability) will be expected to purchase compliant fuel oil at the first U.S. port of call where compliant fuel oil is available. EPA has launched an electronic portal through which owners and operators of vessels can electronically submit a disclosure of fuel oil non-availability using a Fuel Oil Non-availability Disclosure (FOND) form. The electronic portal for submitting a FOND is managed through EPA's Central Data Exchange (CDX) at https://cdx.epa.gov/. Vessels will not be compelled to purchase compliant fuel oil, however the responsible party is subject to penalties under APPS [33 U.S.C. 1908] for each violation. Each day of a continuing violation shall constitute a separate violation.

The ECA requirements in MARPOL Annex VI regulations 13 and 14 are implemented domestically in the U.S. through the Act to Prevent Pollution from Ships, as amended (APPS) (33 U.S.C. §§1901 – 1913). In 2010 EPA published regulations in 40 CFR Parts 80, 1042, and 1043 related to MARPOL Annex VI and the ECA. The Coast Guard is currently developing a notice of proposed rulemaking to implement its portions of MARPOL Annex VI regulations.

Additional information regarding MARPOL Annex VI and the North American ECA is available at http://www.uscg.mil/hq/cgcvc/cvc/marpol.asp and https://www.epa.gov/enforcement/marpol-annex-vi.

NOTE: State laws/regulations may be more restrictive than federal regulations, and mariners operating in a state's jurisdiction are subject to state laws/regulations. The California Air Resources Board (ARB) implemented the Ocean-Going Vessels (OGV) Fuel Regulation on July 1, 2009, that requires ocean going vessels to switch to low-sulfur distillate fuel while in regulated state waters. On January 1, 2014, ARB mandated a 0.1% MGO/MDO sulfur limit. The low-sulfur fuel regulation applies to ocean going (i.e. deep draft) vessels in regulated state waters, defined as those extending 24 miles out from the baseline. For more information on these regulations see: http://www.arb.ca.gov/ports/marinevess/ogv.htm.

CHAPTER IV

COMMUNICATIONS

IMPORTANT RADIO PROCEDURES TO FOLLOW:

1. VHF-FM Channel 16 may ONLY be used for Distress and Calling. Keep all calls as short as possible.

2. Before transmitting, listen long enough to be sure there is not a distress in progress and to also ensure you will not interfere with another station making a call.

3. Adults and children should be instructed how to operate the radio in case of an emergency. Remember that the radio is **NOT** a toy or a land telephone or CB circuit.

4. Use low power or one watt to avoid interference to other users (mandatory on Channels 13, 14, & 67).

5. If assigned, use your Federal Communications Commission (FCC) assigned call letters at the beginning and end of each transmission sequence.

6. Do **NOT** call Marine Operators on Channel 16. Use their working channel.

7. Never provide Credit Card information on your VHF to the Marine Operator. Other people can hear your number. Use only a Marine Telephone Identification Number (MIN).

8. To determine whether or not your vessel's VHF radio MUST be licensed go to the following website: http://wireless.fcc.gov/marine/.

RADIOTELEPHONE VOICE URGENT CALLS

These calls consist of three repetitions of the word PAN-PAN (pronounced PAWN-PAWN). The signal indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle or the safety of a person.

RADIOTELEPHONE VOICE SAFETY CALLS

These calls consist of the word SECURITE (pronounced SECURITAY) spoken three times. This signal indicates that the station is about to transmit a message concerning the safety of navigation or giving important weather warnings. The safety call is transmitted on VHF-FM Channel 16 together with a request to shift to a working frequency where the safety message will be given.

COMMUNICATIONS ON VHF-FM Channel 16 (156.8 MHz)

The authorized use of VHF-FM Channel 16 (156.8 MHz) is limited to distress, safety and calling communications. The Coast Guard and the FCC are renewing efforts to reduce the congestion and misuse of these frequencies. Mariners are reminded that the following operating procedures are in effect:

1. 156.8 MHz if required must be continuously monitored unless you are participating in the Vessel Traffic System or exchanging communications on another frequency.

2. Do not attempt to make routine radio calls on Channel 16 (156.8 MHz) while distress communications are in progress.

3. For routine communications, switching to an appropriate working frequency is required once communications are established on Channel 16 (156.8 MHz).

For further information write to: Federal Communications Commission
Field Operations Bureau, San Francisco Field Office
San Francisco, CA 94112
Or call: (925) 416-9717

COMMUNICATIONS ON VHF-FM CHANNEL 22A (157.1 MHz)

The voice frequencies of VHF-FM Channel 22A (157.1 MHz) are Coast Guard frequencies reserved for Coast Guard Marine Information Broadcasts and for use as Coast Guard/non-government vessel liaison frequencies. The use of 157.1 MHz by non-government licensees is restricted exclusively to communications with the Coast Guard. Coast Guard stations do not guard these frequencies; however, they can be shifted to these frequencies after an initial call on VHF-FM Channel 16 (156.8 MHz) as appropriate.

BROADCAST NOTICES TO MARINERS (BNM)

The United States Coast Guard broadcasts marine safety information on VHF-FM Channel 22A (157.1 MHz). These safety broadcasts contain information such as notices to mariners, storm warnings, distress warnings and other pertinent information that is vital for safe navigation.

Following a preliminary call on VHF-FM Channel 16 (156.8 MHz), mariners are instructed to shift to VHF-FM Channel 22A simplex (157.1 MHz). Operators of vessels who plan to transit U.S. waters and who do not have VHF radios tunable to the United States Channel 22A are urged to obtain the necessary equipment. The stations Broadcast Notice to Mariners (BNM) information upon receipt and on the following scheduled times and frequencies:

Eleventh Coast Guard District **VHF Voice Weather and BNM Broadcast CH 16/22A**	
Sector Humboldt Bay	1615z, 2315z
Sector San Francisco	1630z, 1900z, 2130z
Sector Los Angeles/Long Beach	0200z, 1800z
Sector San Diego	0100z, 1900z

GENERAL VHF MARINE RADIO INFORMATION

You do not need a license to operate a marine VHF radio, radar or EPIRBs aboard voluntary ships operating domestically. The term "voluntary ships" refers to ships that are not required by law to carry a radio. Generally, this term applies to recreation or pleasure craft. The term "voluntary ships" does not apply to the following:

1. Cargo ships over 300 gross tons navigating in the open sea;

2. Ships certified by the U.S. Coast Guard to carry more than 6 passengers for hire in the open sea or tidewaters of the U.S.;

3. Power driven ships over 20 meters in length on navigable waterways;

4. Ships of more than 100 gross tons certified by the U.S. Coast Guard to carry at least one passenger on navigable waterways;

5. Tow boats of more than 7.8 meters in length on navigable waterways;

6. Uninspected commercial fishing industry vessels required to carry a VHF radio.

7. Ships required to carry an Automatic Identification System (AIS) transceiver by the U.S. Coast Guard regulations enacted pursuant to the Maritime Transportation Security Act of 2000.

Ships are considered as operating domestically when they do not travel to foreign ports or do not transmit radio communications to foreign stations. Sailing in international waters is permitted, so long as the previous conditions are met. If you travel to a foreign port (e.g., Canada, Mexico, Bahamas, British Virgin Islands), a license is required. Additionally, if you travel to a foreign port, you are required to have an operator permit. For more information on licensing, visit the FCC Maritime Mobile Services website. http://wireless.fcc.gov/services/index.htm?job=service_home&id=maritime contains information covering the basics of using and licensing a VHF radio on a boat. For more information contact the FCC at (888) 225-5322.

VESSEL BRIDGE-TO-BRIDGE RADIOTELEPHONE REGULATIONS

Bridge-to-bridge radiotelephone regulations are contained in 33 Code of Federal Regulations Part 26 and are included in the Coast Guard publication Navigation Rules, International-Inland, available from the U.S. Government Printing Office or from the website http://navcen.uscg.gov/?pageName=navRuleChanges. Briefly, the regulations provide that all of the following vessels must maintain a continuous listening watch on VHF-FM Channel 13 (156.65 MHz) for the exchange of navigational safety information when underway:

1. 300 gross tons and over,

2. 100 gross tons and over carrying passengers for hire,

3. 26 feet in length or more while engaged in towing,

4. All dredges and floating plants engaged in or near a channel or fairway in operations likely to restrict or affect navigation of other vessels.

NOAA WEATHER RADIO BROADCASTS

For the nearest NOAA weather radio station, please go to: http://www.nws.noaa.gov/nwr/coverage/station_listing.html.

The National Weather Service manages several VHF-FM weather radio stations. Broadcast tapes are updated at a minimum of every 6 hours but are usually updated every 3 hours during the day. Contents vary, but generally contain the following information:

1. Marine forecasts and warnings for coastal waters (out 60 miles),

2. Offshore waters forecast (60-250 miles offshore),

3. State forecasts and local forecasts,

4. Selected weather observations from Coast Guard, buoys, and other stations in California.

Whenever severe weather warnings are necessary, the tape will be updated and the transmission devoted to "up-to-the-minute" information on storm dangers. For more information concerning weather broadcasts go to: https://www.weather.gov/wrh/.

The chart below summarizes FCC rules 47 CFR 80.371(c) and 80.373(f)

Type of Message	Appropriate Channel(s)
DISTRESS SAFETY AND CALLING - Use this channel to get the attention of another station (calling) or in emergencies (distress and safety).	16
INTERSHIP SAFETY – Required for all VHF-FM equipped vessels. Use this channel for ship-to-ship safety messages and for search and rescue messages and ships and aircraft of the Coast Guard.	6
COAST GUARD LIAISON - Use this channel to talk to the Coast Guard (but first make contact on Channel 16).	22A
VTS PORT OPERATIONS –VTS Los Angeles - Long Beach and VTS San Francisco are both located along the California Coast. These channels are used to make passing arrangements between operators and to communicate with VTS. Messages must be about the operational handling movement and safety of ships. For more specific information on communicating with VTS in these specific ports see Chapter X and Chapter XI of this Special Local Notice to Mariners.	12, 13, 14
NAVIGATIONAL - (Also known as the bridge-to-bridge channel.) This channel is available to all ships. Messages must be about ship navigation, for example, passing or meeting other ships. You must keep your messages short. Your power output must not be more than one watt. This is also the main working channel at most locks and drawbridges.	13
MARITIME CONTROL - This channel may be used to talk to ships and coast stations operated by state or local governments. Messages must pertain to regulation and control, boating activities, or assistance to ships.	17
DIGITAL SELECTIVE CALLING - Use this channel for distress and safety calling and for general purpose calling using only digital selective calling techniques.	70
WEATHER - On these channels you may receive weather broadcasts of the National Oceanic and Atmospheric Administration. These channels are only for receiving. You cannot transmit on them.	Wx-1 162.55 Wx-2 162.4 Wx-3 162.475

GLOBAL MARITIME DISTRESS & SAFETY SYSTEM (GMDSS)

This system was adopted to improve all forms of communications (distress, urgency, safety and routine) between vessels and shore units.

GMDSS coverage areas have been designated as follows: Sea Area A1: VHF-FM range, coastal area to about 20 miles offshore. DSC signal sent on VHF-FM Ch 70 (156.525 MHz) with voice transmission on Ch 16 (156.8 MHz). In the U.S. the Coast Guard uses Rescue 21 in A1. Sea Area A2: An area, excluding Sea Area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC (2187.5 kHz) alerting and radiotelephony services are available. For planning purposes, this area typically extends to up to 180 nautical miles (330 km) offshore during daylight hours. Sea Area A3: An area, excluding sea areas Al and A2, within the coverage of an INMARSAT geostationary satellite in which continuous alerting is available. Sea Area A4: The area outside that covered by areas A1, A2 and A3 is called Sea Area A4 Area. Ships travelling these polar regions must carry a DSC-equipped HF radiotelephone/telex.

Components of GMDSS

a. Digital Selective Calling (DSC): This system allows mariners 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 is a primary component of GMDSS in MF, HF, and VHF maritime frequency bands. Each ship or shore station equipped with a DSC terminal has a unique Maritime Mobile Station Identity (MMSI). This is a nine-digit number that specifically identifies a ship, coast station or group of stations. The DSC system alerts an operator when a distress call is received. It will provide the operator with a pre-formatted message that can include the distressed vessel's 9 digit MMSI, location, nature of distress, desired mode of communication and preferred working frequency. To minimize possible

interference, live testing on DSC distress and safety frequencies with coast stations should be limited to once a week as recommended by the International Maritime Organization.

b. Rescue 21 Distress System Coverage: The USCG is implementing GMDSS in Sea Area A1. On 20 January 2015, the Coast Guard declared Sea Area A1 in certain areas off the coast of the United States based upon the performance of the Coast Guard's Rescue 21 System in accordance with applicable provisions of the International Convention for the Safety of Life at Sea, 1974 (SOLAS). The Coast Guard operates a network of VHF transceivers and antenna high-sites which are remotely controlled by Sector communications centers to provide coverage extending out to at least 20 nautical miles from shore, and often much further. Coverage is reasonably continuous through most of the Atlantic, Gulf and Pacific Coasts, the Great Lakes and many rivers. Many urban areas of the U.S. are also covered. Operation outside these areas may require carriage of such long range communications equipment as HF radiotelephone or satellite communications terminals in addition to VHF radiotelephone equipment. Each Rescue 21 site consists of receivers guarding VHF-FM Channels 16 and 70, the maritime radiotelephone and DSC distress, safety and calling channels respectively, and transceivers capable of operating on other channels.

c. NAVTEX: NAVTEX is a standard international method of broadcasting notices to mariners and marine weather forecasts using small, low cost receivers designed to be installed in the pilothouse of a vessel. NAVTEX receivers screen incoming messages, inhibiting those, which had been previously received or are of a category not of interest to the user, and print the rest on adding machine size paper. NAVTEX not only provides marine information previously available only to those knowledgeable in Morse code, but also allows any mariner who cannot man a radio full time to receive safety information at any hour. All NAVTEX transmissions are made on 518 kHz. Mariners who do not have NAVTEX receivers but have SITOR radio equipment can also receive these broadcasts by operating it in the FEC mode and tuning to 518 kHz. Information broadcast over NAVTEX include offshore weather forecasts, offshore marine advisory warnings, search and rescue information and navigational information that applies to waters from the line of demarcation (separating Inland Rules from COLREG Rule waters) to 200 miles offshore. Navigational information that affects the safety of navigation of deep draft (15 feet or more) vessels within the U.S. Inland Rules waters will also be included. Gulf Stream location is also included from Miami and Portsmouth. Coastal and high seas weather forecasts are not being broadcast over NAVTEX. The Safety of Life at Sea Convention, as amended in 1988, requires vessels regulated by that convention to carry NAVTEX receivers.

HOAX CALLS

Federal law prohibits a person from willfully communicating a false distress message with the intent of causing the Coast Guard to attempt to save lives and property when it is known that no assistance is needed. Firing off flares in a non-distress situation is the same as pulling a fire alarm or making a false call to 911. The Coast Guard treats all emergency calls as real until the rescue is completed, or it can be confirmed that there is no distress.

1. Hoaxes are malicious acts that are punishable as a felony. New technology, including direction-finding equipment, voice recorders, and voice analysis equipment, have helped the Coast Guard and the Department of Justice aggressively prosecute and convict hoax callers.

2. Hoaxes put the lives of rescuers and other boaters at risk. Coast Guard personnel know, train for and accept the risks associated with rescue operations and will launch within minutes of receiving a call. Hoax callers needlessly expose rescuers to these risks and endanger their lives. When Coast Guard units are pursuing Hoax calls, rescue units are not available to respond to calls for help from other boaters who may be in real danger.

3. Hoaxes cost the taxpayer’s money. Millions of dollars are spent not only by the Coast Guard but also by local harbor and marine patrols who respond to Hoax calls. It costs approximately $200 per hour to operate a standard utility boat, while a helicopter or cutter may cost from $1,500 to $3,000 per hour. If convicted, the person responsible for committing a Hoax can be sentenced to jail time in excess of one year, and made to repay the government’s costs to respond to the hoax. These costs can quickly total in the hundreds of thousands of dollars.

4. Report Hoax callers to the nearest Coast Guard facility or your local law enforcement agency.

CHAPTER V

VESSEL TRAFFIC SERVICE

Los Angeles – Long Beach

GENERAL INFORMATION

The goal of the Los Angeles/Long Beach VTS is to provide seamless navigational information to improve vessel transit safety. The Coast Guard/ Marine Exchange, Los Angeles Pilots and Long Beach Pilots (each specializing in their own area) have worked together to create a unique system. VTS is a cooperative effort of the State of California, U.S. Coast Guard, Marine Exchange of Southern California, and Ports of Los Angeles and Long Beach that falls under the authority of California Government Code Section 8670.21, Harbors and Navigation Code Section 445-449.5, and the port tariffs of Los Angeles and Long Beach. VTS is listed in the Federal Regulations under Title 33CFR Part 161 Vessel Traffic Management.

We encourage all interested parties to visit the USCG/Marine Exchange Vessel Traffic Center, the Los Angeles Pilot Station and the Long Beach Pilot Station.

Administration Office Phone Number: (310) 519-3126
24 Hour Operations Center Phone Number: (310) 832-6411
Fax: (310) 832-7238
Website: www.mxsocal.org

USER GROUPS

1. VESSEL MOVEMENT REPORTING SYSTEM (VMRS) USERS (Active Participation): The vessels listed below must, in addition to monitoring the designated VTS VHF-FM frequency, make reports to the VTS and comply with general VTS operating rules:
   a. A power driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;
   b. A commercial vessel engaged in towing of 8 meters (approximately 26 feet) or more in length, while navigating;
   c. A vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

2. VTS USERS (Passive Participation): The vessels listed below must monitor the designated VHF-FM VTS frequency for the area in which they are operating, must respond if hailed, and comply with general VTS operating rules:
   a. A power driven vessel of 20 meters (approximately 66 feet) or more in length;
   b. A vessel of 100 gross tons or more carrying 1 or more passengers for hire;
   c. A dredge or floating plant.

3. NON-REQUIRED VESSELS: If a vessel does not fall into either of the above categories, it is not required by law to participate with the VTS. However, such vessels are still subject to:
   a. All Regulations for Prevention of Collisions at Sea (Rules of the Road, COLREGS), in particular Rule 10 (Traffic Separation Schemes); and 9 (Narrow Channels).
   b. VTS Measures (direction given by the VTS);
   c. All other practices of safe navigation and prudent seamanship.

USERS MANUAL

In addition to the general information provided in this Special Local Notice to Mariners, the Marine Exchange of Southern California publishes a User's Manual for VTS Los Angeles – Long Beach, which contains a more in-depth discussion of VTS operating procedures as well as further details on anchorages, certain dangerous cargo and Special Rules. All mariners transiting VTS waters are encouraged to obtain a copy of the User's Manual by calling VTS Los Angeles – Long Beach at (310) 832-6411 or viewing the user manual online at www.mxsocal.org.

VESSEL TRAFFIC SERVICE SECTORS

VTS Los Angeles – Long Beach is a vessel traffic monitoring and reporting system within the Los Angeles/Long Beach Harbor and approaches and extending to 25 nautical miles seaward of PT Fermin. This system is comprised of three VTS Sectors. Within each Sector is a Vessel Traffic Center (VTC) with watchstanders that monitor and report traffic information within their sector and coordinate traffic movements across sector boundaries.

SECTOR	Sector Description	VTC Location	VHF-FM Channel	VTC Voice Call
The **San Pedro Sector**	25 nautical miles from PT Fermin to the Federal Breakwater	USCG/MX VTS	14	*"San Pedro Traffic"*
The **Los Angeles Sector**	The area inside the federal breakwater encompassing the port of Los Angeles	Los Angeles Harbor Pilot Station	73	*"LA Pilot Station"*
The **Long Beach Sector**	The area inside the federal breakwater encompassing the port of Long Beach	Jacobsen Pilot Station	12	*"Long Beach Pilot Station"*

VESSEL MOVEMENT AND REPORTING PROCEDURES

These reporting requirements are to provide necessary information to the VTC watchstander(s) so they can utilize and pass timely, relevant and accurate information to VTS users.

Active Participants are required to:

- Monitor VTS frequencies, respond promptly when hailed
- Check into the system,
- Advise when underway,
- Contact the applicable VTC when passing a Position Reporting Point or VTS Sector boundary. Additional reporting may be necessary as determined by the appropriate VTC,
- Check out of the system upon reaching their destination.

Passive participants are required to:

- Monitor VTS frequencies, respond promptly when hailed.

Non-Participants are **highly encouraged** to monitor VTS frequencies and communicate with participating vessels and/or VTCs as necessary.

SAN PEDRO SECTOR

Checking into the VTS "San Pedro Sector"

When to Report	Who to Contact	What to Report
Upon entering the VTS San Pedro Sector from Sea (at 25 nm VTS Boundary)	Call: ***San Pedro Traffic*** on VHF-FM channel 14	a. Vessel name/call sign, b. Position (lat and long), c. Course and speed, d. Vessel destination, e. Whether the vessel is taking a pilot or being piloted by master/commanding officer, f. ETA to destination.

Reporting Movements within the VTS "San Pedro Sector"

Upon entering or departing the Precautionary Area	Call: ***San Pedro Traffic*** on VHF-FM channel 14	a. Vessel name/call sign, *b.* If **entering**: report that the master/ commanding officer is on the bridge and that the vessel is being steered by hand, *c.* Main propulsion machinery has been successfully tested ahead and astern, as required by 33CFR 164.25 (5) referenced in U.S.C.P. 7, Chapter 2 (2956), *d.* If **departing**: report *"departing Precautionary Area",*
Fifteen (15) minutes prior to commencing a movement within the San Pedro Sector (Preparing to get underway from anchorages outside the federal breakwater, El Segundo or Avalon anchorages)	Call**:** ***San Pedro Traffic*** on VHF-FM channel 14	a. Vessel name/call sign, b. Vessel destination port or direction of departure. If the vessel will cross the Traffic Separation Scheme, such vessel shall exercise utmost caution and comply with COLREGS Rule 10.
Upon getting underway outside the Federal Breakwater	Call**:** ***San Pedro Traffic*** on VHF-FM channel 14	a. Vessel name/call sign, b. "*Underway at this time,* c. Any changes/updates to 15 minute check-in call, d. If **Inbound and embarking pilot**, ETA to Sea Buoy.

Checking out of the VTS "San Pedro Sector"

Upon departing the San Pedro Sector bound for sea (at 25 nm VTS boundary)	Call: ***San Pedro Traffic*** on VHF-FM channel 14	a. Vessel name/call sign, b. Vessel location, c. *"Checking out of VTS".*

Additional Reporting

Additional Reporting may be necessary or required as determined by the appropriate VTC	Call the VTC sector requesting the report	a. Response back to the appropriate VTC sector with requested information, e.g. (San Pedro Traffic "*Vessel's Name & abeam the Sierra Papa (SP) buoy*).

LOS ANGELES – LONG BEACH SECTOR

Reporting Movements within the "Los Angeles – Long Beach Sectors" reporting Points

When to Report	Who to Contact	What to Report
Preparing to get underway (from berth, anchorage or offshore mooring.) ***Note***: The report shall be made prior to casting off all lines.	Call the appropriate **VTC** on their designated VHF-FM channel.	a. Vessel name/call sign, b. *"Preparing to get underway in approximately ____minutes",* c. Any changes/updates to vessel status after initial call has been made.
(5 min) prior to crossing a Inner-Harbor Sector boundary • **Los Angeles – Long Beach City Boundary line** • **The Heim bridge** (Cerritos Channel) ***Note***: For all vessels departing either the port of LA or LB entering San Pedro Sector the **15** minute prior notification remains in effect	Call the appropriate **VTC** on their designated VHF-FM channel.	a. Vessel name/call sign, b. The boundary which you are crossing, c. Destination/ETA.
Upon completion of transit (upon mooring or anchoring)	Call the appropriate **VTC** on their designated VHF-FM channel.	a. Vessel name/call sign, b. Vessel location, c. Vessel status (moored, anchored), *d. "Checking out of VTS".*

COMMUNICATIONS

All active and passive VTS participants in the VTS area shall continuously monitor or cause to be monitored the VHF-FM channel for the sector in which they are transiting and respond promptly when hailed.

1. In accordance with Federal Communication Commission regulations, no person may use the VTS frequencies designated in this section to transmit any information other than information necessary for the safety of vessel traffic.

2. All transmissions on the VTS frequencies should be initiated on low power (1 watt). High power may only be used if low power communications are unsuccessful.

3. In the San Pedro Sector, all vessels should make passing arrangements with other vessels on VHF Channel 14 to allow monitoring by VTS.

4. In the LA and LB Sectors, all vessels should make passing arrangements with other vessels on VHF Channel 13.

REGULATED NAVIGATION AREA (RNA) AND PRECAUTIONARY AREA

33 CFR 165.1152 San Pedro Bay, California--Regulated navigation area and Precautionary Area.

1. **Location**. The following are the geographic coordinates for the San Pedro regulated navigation area and precautionary area: From Point Fermin Light (33-42.3'N, 118-17.6'W) thence along the shoreline to the San Pedro Breakwater, thence along the San Pedro Breakwater and the Middle Breakwater (following the COLREGS

Demarcation Lines) to Long Beach Channel Entrance Light "2" (33-43.4'N, 118-10.8'W), thence southeast to (33-37.7'N, 118-06.6'W); thence southwesterly to (33-35.5'N, 118-08.8'W); thence west to (33-35.5'N, 118-17.6'W); thence north to point of origin----.[Datum: NAD 1983]

2. **Pilot areas.** There are two pilot areas within the regulated navigation. They are defined as follows:
   a. The Los Angeles Pilot Area is enclosed by a line beginning at Los Angeles Light (33-42.5'N, 118-15.0'W); thence easterly to Los Angeles Main Channel Entrance Light "6" (33-42.7'N, 118-14.1'W); thence southeasterly to (33-41.3'N, 118-13.5'W); thence southwesterly to (33-40.8'N, 118-14.8'W); thence north to the point of origin [Datum: NAD 1983].
   b. The Long Beach Pilot Area is enclosed by a line beginning at Long Beach Light (33-43.4'N, 118-11.2'W); thence easterly to Long Beach Channel Entrance Light "2" (33-43.4'N, 118-10.8'W); thence southeasterly to (33-41.5' N, 118-10.2' W); thence south to (33-40.5' N, 118-10.2' W); thence west to (33-40.5'N, 118-11.8'W), thence north to (33-41.5' N, 118-11.8' W), north northeasterly to the point of origin [Datum: NAD 1983].
   c. The Los Angeles Deep Water Traffic Lane: This area is bounded by a line beginning at (33-42' 28.0"N, 118-14' 56.9"W), thence easterly to (33-42' 33.4"N, 118-14' 45.0"W), thence southeasterly to (33-39' 29.0"N, 118-13' 19.4"W), thence westerly to (33-39' 25.1"N, 118-13' 33.0"W), thence northerly to the point of origin.
   d. The Long Beach Deep Water Traffic Lane: This area is bounded by a line beginning at (33-43' 25.5"N, 118-11' 09.0"W), thence east to (33-43' 23.3"N, 118-10' 54.1"W), thence south to (33-41' 30.8"N, 118-10' 42.6"W), thence west to (33-41'30.0"N, 118-10' 57.0"W), thence north to the point of origin.
   e. The Los Angeles Deep Water Pilot Boarding Area: This area is defined by a circular area of 1.0nm diameter centered on position at 33-39' 00.0" N, 118-13' 11.6" W.

3. The following regulations apply to all vessels while operating within the regulated navigation area:
   a. **Los Angeles Pilot Area**:
      i. No vessel may enter the Los Angeles Pilot Area unless it is entering or departing the Los Angeles Harbor Entrance (Angel's Gate).
      ii. Vessels entering the Los Angeles Pilot Area shall pass directly through without stopping or loitering except as necessary to embark or disembark a pilot.
   b. **Los Angeles Deep Water Pilot Area**:
      i. When a vessel of 50 foot draft or greater is embarking or disembarking a pilot in the Los Angeles Deep Water Pilot Area no other vessel shall enter the Deep Water Pilot Area.
   c. **Long Beach Pilot Area**:
      i. No vessel may enter the Long Beach Pilot Area unless it is entering or departing Long Beach Harbor Entrance (Queen's Gate).
      ii. Every vessel entering the Long Beach Pilot Area shall pass directly through without stopping or loitering except as necessary to embark or disembark a pilot.
      iii. Every vessel shall leave Long Beach Approach Lighted Whistle Buoy ``LB'' to port when entering and departing Long Beach Channel and departing vessels shall pass across the southern boundary of the Long Beach Pilot Area.
   d. **Los Angeles and Long Beach Deep Channels**:
      i. When a vessel of 50 foot draft or greater is using the Los Angeles or Long Beach Deep Water Channel no other vessel shall enter the Deep Water Traffic Lane if it will result in a meeting, crossing or overtaking situation.

4. The following regulations contained in paragraphs (4)(a) through (4)(d) apply to power driven vessels of 1600 or more gross tons, a towing vessels of 8 meters (approximately 26 feet) or over in length engaged in towing, vessels of 100 gross tons and upward carrying one or more passengers for hire:
   a. Such vessel's speed shall not exceed 12 knots;
   b. A vessel navigating within the RNA, shall have its engine(s) ready for immediate maneuver and shall operate its engine(s) in a control mode that will allow for an immediate response to any engine order, ahead or astern, including stopping its engine(s) for an extended period of time;
   c. A vessel navigating within the RNA shall maintain a minimum separation from other vessels of at least 0.25 nm;
   d. No such vessel may enter the waters between Commercial Anchorage G and the Middle Breakwater as defined by an area enclosed by a line beginning at Los Angeles Main Channel Entrance Light 6 (33-42' 42.0"N, 118-14' 42.0"W); thence eastward along the middle breakwater to Long Beach Light (33-43' 24.0"N,

118-11' 12.0”W); thence south to (33-43' 05.3”N, 118-11' 15.3”W); thence westerly to (33-43' 05.3”N, 118-12' 15.7”W); thence southwesterly parallel to the breakwater to (33-42' 29.9”N, 118-14' 16.0”W); thence to the point of origin, unless such vessel is:

i. In an emergency,
ii. Proceeding to anchor in or departing Commercial Anchorage G,
iii. Standing by with confirmed pilot boarding arrangements; or,
iv. Engaged in towing vessels to or from Commercial Anchorage G, or to or from the waters between Commercial Anchorage G and the Middle Breakwater.

When operating within the Precautionary Area:

1. Prior to entering the Precautionary Area, Active Users shall check in with the VTC and report that the master/commanding officer is on the bridge and the vessel is being steered by hand. Power driven vessels of 1600 or more gross tons shall report that their main propulsion machinery has been successfully tested ahead and astern (33 CFR 164.25,(a),(5) referenced in U.S.C.P. 7, Chapter 2 (2956),

2. Power driven vessels of 1600 or more gross tons, a towing vessels of 8 meters (approximately 26 feet) or over in length engaged in towing, vessels of 100 gross tons and upward carrying one or more passengers for hire shall not exceed 12 knots,

3. Vessels underway should maintain a minimum vessel separation of ¼ nautical mile (460 meters),

4. Vessels crossing the Precautionary Area or maneuvering in an unusual manner, whether in the Precautionary Area or near the TSS, i.e. compass/RDF calibrations or drills/exercises, shall notify VTS of their intentions,

5. All vessels shall be aware of the Regulated Navigation Areas in San Pedro Bay. This area encompasses both Pilot Boarding Areas as well as Anchorage “G.” Refer to 33CFR 165.1152 and United States Coast Pilot #7 for additional information on the San Pedro Bay Regulated Navigation Area.

TRAFFIC SEPARATION SCHEME

Description of the traffic separation scheme
The traffic separation scheme “In the Approaches to Los Angeles – Long Beach” consists of two parts:

Part I
LA-LB Northern approach
(a) A separation zone is bounded by a line connecting the following geographical positions:

(1) 33°37.70’ N, 118°17.60’ W
(2) 33°36.50’ N, 118°17.60’ W
(3) 33°36.50’ N, 118°20.48’ W
(4) 33°48.87’ N, 118°46.63’ W
(5) 33°49.89’ N, 118°46.32’ W
(6) 33°37.70’ N, 118°20.57’ W

(b) A traffic lane for northbound coastwise traffic is established between the separation zone and a line connecting the following geographical positions:

(7) 33°38.70’ N, 118°17.60’ W
(8) 33°38.70’ N, 118°20.24’ W
(9) 33°50.91’ N, 118°45.94’ W

(c) A traffic lane for southbound coastwise traffic is established between the separation zone and a line connecting the following geographical positions:

(10) 33°35.50’ N, 118°17.60’ W
(11) 33°35.50’ N, 118°20.81’ W
(12) 33°47.88’ N, 118°46.93’ W

Part II
LA-LB Southern approach

(a) A separation zone is established bounded by a line connecting the following geographic position:

(13) 33°35.50’ N, 118°10.30’ W
(14) 33°35.50’ N, 118°12.75’ W
(15) 33°19.00’ N, 118°05.60’ W
(16) 33°19.70’ N, 118°03.50’ W

(b) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions:

(17) 33°35.50’ N, 118°09.00’ W
(18) 33°20.00’ N, 118°02.30’ W

(c) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions:

(19) 33°35.50’ N, 118°14.00’ W
(20) 33°18.70’ N, 118°06.75’ W

The traffic separation scheme in the Santa Barbara Channel consists of two parts:

Part I
Between Point Vicente and Point Conception
(a) A separation zone is bounded by a line connecting the following geographical positions:

(1) 34°20.84’ N, 120°30.28’ W
(2) 34°03.87’ N, 119°15.63’ W
(3) 33°44.93’ N, 118°35.75’ W
(4) 33°44.06’ N, 118°36.34’ W
(5) 34°02.94’ N, 119°16.09’ W
(6) 34°19.88’ N, 120°30.59’ W

(b) A traffic lane for north-westbound traffic is established between the separation zone and a line connecting the following geographical positions:

(7) 34°21.80’ N. 120°29.96’ W
(8) 34°04.80’ N, 119°15.16’ W
(9) 33°45.80’ N, 118°35.15’ W

(c) A traffic lane for south-eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

(10) 33°43.18’ N, 118°36.94’ W
(11) 34°02.01’ N, 119°18.26’ W
(12) 34°18.92’ N, 120°30.91’ W

Part II
Between Point Conception and Point Arguello
(a) A separation zone is bounded by a line connecting the following geographical positions:

(1) 34°20.84’ N, 120°30.28’ W
(6) 34°19.88’ N, 120°30.59’ W
(13) 34°24.76’ N, 120°52.10’ W
(14) 34°25.72’ N, 120°51.78’ W

(b) A traffic lane for westbound traffic is established between the separation zone and a line connecting the following geographical positions:

(7) 34°21.80’ N. 120°29.96’ W
(15) 34°26.68’ N, 120°51.46’ W

(c) A traffic lane for eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

(12) 34°18.92’ N, 120°30.91’ W
(16) 34°22.80’ N, 120°52.42’ W

<u>LOS ANGELES / LONG BEACH HARBOR SAFETY COMMITTEE VOLUNTARY WESTERN TRAFFIC LANES</u>

There has been a recent trend in traffic patterns where some vessel operators are choosing to depart the Traffic Separation Scheme (TSS) established in the Santa Barbara Channel and transiting through an area to the south of San Miguel, Santa Rosa and Santa Cruz Islands (referenced herein as "south of the Channel Islands"). As such, the Los Angeles / Long Beach Harbor Safety Committee has published voluntary western traffic lanes for vessels approaching and departing the Ports of Los Angeles and Long Beach. The new voluntary western traffic lanes are not approved by the IMO, nor are they approved by any U.S. federal authority, including the U.S. Coast Guard. The geographical coordinates for the voluntary western traffic lanes are published by the LA/LB HSC secretary within the Los Angeles/Long Beach VTS User Manual, available at www.mxsocal.org.

Mariners transiting through the western and northern approaches to and from the Ports of Los Angeles and Long Beach (LA/LB) are advised of the established TSS through the Santa Barbara Channel as shown on NOAA and Admiralty charts is the only International Maritime Organization (IMO) approved routing measure in this area. An IMO approved TSS reduces the risk of collision by providing for the separation of arriving and departing traffic and minimizing potentially hazardous crossing situations. Mariners, who have traditionally used this approved TSS, are encouraged to continue to do so.

Recreational and Fishing Vessels

The area to the south of the Channel Islands is also used by both commercial fishing vessels and recreational vessels, whose operators may not be aware of the new voluntary western traffic lanes or that ship traffic has recently increased in this area. Since the new voluntary western traffic lanes are not an IMO approved traffic separation scheme, the International Regulations for Avoiding Collisions at Sea (COLREGS) Rule 10 does not apply.

PACIFIC MISSILE TEST RANGE, POINT MUGU

Departing the IMO approved TSS and transiting south of the Channel Islands may result in delays and diversions, as this transit will take vessels through the Pacific Missile Test Range, Point Mugu California. **The U.S. Navy advises that hazardous operations may take place within the test range.** The test range extends for 180 miles in a South West direction from Point Mugu and is up to 210 miles wide. The specific hazardous areas within the range are broadcast by the Navy daily Monday through Friday at 0900 and 1200 on 2638 kHz and 2738 kHz. When notified by the Navy, the Coast Guard also broadcasts this information on VHF-FM Channel 16.

When transiting south of the Channel Islands (inbound or outbound to the Ports of Los Angeles and Long Beach), all mariners should communicate with Navy PLEAD CONTROL in a timely manner so that early decisions can be made regarding safe routing. Every effort should be made to comply fully with any instructions received from the Navy. For information regarding the status of current hazardous operations, please contact "PLEAD CONTROL" on VHF-FM Channel 11or 16 or at (805) 989-8841/8843 from 0600-1800 and at (805) 816-0792 after 1800. If you are unable to contact "PLEAD CONTROL", contact "SAN PEDRO TRAFFIC" on VHF-FM Channel 14 or (310) 832-6411 for the most recent information regarding hazardous military operations.

DIRECTIONS

All vessels must comply with orders issued by VTS Los Angeles/Long Beach. The Coast Guard wishes to stress that under normal circumstances VTS will not exercise direct control over vessel movements. However, under rare circumstances when the situation dictates, the VTS can and will direct vessel movement. The responsibility of the person directing the safe navigation of his/her vessel is in no way lessened by this VTS authority. The primary function of a VTS is to enhance good order and predictability on a waterway.

CHAPTER VI

VESSEL TRAFFIC SERVICE
San Francisco

GENERAL INFORMATION

The primary mission of Vessel Traffic Service (VTS) San Francisco is to coordinate the safe, secure and efficient transit of vessels in San Francisco Bay. Originally established in 1973, Congress mandated participation in the VTS on 13 October 1994. In May 1995, the Coast Guard established Regulated Navigation Areas (RNAs) in areas where maneuvering room is limited.

To carry out this mission and the secondary mission of assisting Coast Guard units and other public agencies, VTS San Francisco uses Automatic Identification System (AIS), radar, closed-circuit television (CCTV), and VHF-FM radiotelephone to gather and disseminate vessel traffic information. The VTS personnel who staff the Vessel Traffic Center (VTC) 24 hours a day, seven days a week receive reports from mariners and correlate those reports with the AIS, radar and CCTV information to get an accurate picture of vessel movements. Thus, the accuracy of information that VTS provides depends largely on mariners' participation - VTS traffic summaries and reports of floating obstructions, can be no more accurate than the reports given to VTS and the ability of VTS equipment to verify those reports.

All mariners are encouraged to read the VTS user manual prior to participating in the San Francisco VTS. In accordance with the National VTS regulations mariners must keep a copy of this manual readily available when operating in the VTS area. VTS asks for mariners' cooperation and welcomes suggestions on how to improve this manual or the San Francisco VTS. To obtain a copy of the VTS San Francisco users' manual, call the USCG Waterways Management Branch, Sector San Francisco, (415) 399-7401, or find it online at: http://www.pacificarea.uscg.mil/OurOrganization/District11/DistrictUnits/VTSSanFrancisco/VTSSFUserManual.aspx

USER GROUPS

1. VESSEL MOVEMENT REPORTING SYSTEM (VMRS) USERS (Full Participation): The vessels listed below must, in addition to monitoring the designated VTS VHF-FM frequency, make reports to the VTS and comply with general VTS operating rules:
   a. A power driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;
   b. A commercial vessel engaged in towing of 8 meters (approximately 26 feet) or more in length, while navigating;
   c. A vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

2. VTS USERS (Passive Participation): The vessels listed below must monitor the designated VHF-FM VTS frequency for the area in which they are operating, must respond if hailed, and comply with general VTS operating rules:
   a. A power driven vessel of 20 meters (approximately 66 feet) or more in length;
   b. A vessel of 100 gross tons or greater carrying passengers for hire;
   c. A dredge or floating plant.

3. NON-REQUIRED VESSELS: If a vessel does not fall into either of the above categories, it is not required by law to participate with the VTS. However, such vessels are still subject to:
   a. All Regulations for Prevention of Collisions at Sea (Rules of the Road, COLREGS), in particular Rule 10 (Traffic Separation Schemes);
   b. VTS Measures (direction given by the VTS);
   c. All other practices of safe navigation and prudent seamanship.

ADHERENCE TO NAVIGATION RULES AND REGULATIONS

Operators of all vessels should be aware that even when not required to participate in the VTS they are required to follow the Rules to the Road. In particular, they are required to abide by Rule 9 of the International and Inland Navigational Rules of the Road requires that all vessels less than 20 meters (65 feet), vessels engaged in fishing and all sailboats shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.

The term “shall not impede” means a small vessel must keep well clear of and not hinder or interfere with the transit of larger vessels. A vessel shall not cross a narrow channel or fairway if doing so impedes the passage of a vessel that can safely navigate only within that channel or fairway.

USCG Sector San Francisco Marine Safety Information Bulletin 14-07 designates the following locations within the San Francisco Bay region as narrow channels or fairways. This list is not all-inclusive, but identifies areas where deep draft commercial and public vessels routinely operate.

1. All traffic lanes, separation zones and precautionary areas within the San Francisco Bay Region's Regulated Navigation Area defined in 33 CFR § 165.1 181 including:
    a) Golden Gate Traffic Lanes and Golden Gate Precautionary Area
    b) Central Bay Traffic Lanes
    c) Central Bay Precautionary Area
    d) North Ship Channel RNA
    e) San Pablo Strait Channel RNA
    f) Pinole Shoal Channel RNA
    g) Benicia-Martinez Railroad Bridge RNA
    h) Southampton Shoal Channel/Richmond Harbor RNA
    i) Oakland Harbor RNA
2. Point Potrero Reach/Turn
3. Richmond Harbor Channel
4. Santa Fe Channel
5. Oakland Inner Harbor from Inner Harbor Channel Light “5” (LLNR 4670) to and including Brooklyn Basin South Channel
6. Oakland Outer Harbor
7. Alameda Naval Air Station Channel
8. South San Francisco Bay Channels between the Central Bay Precautionary Area and Redwood Creek Entrance Light “2" (LLNR 5180)
9. Redwood Creek between Redwood Creek Entrance Light "2” (LLNR 5180) and Redwood Creek Daybeacon "21" (LLNR 5265)
10. Carquinez Strait between the Pinole Shoal Channel RNA and the Benicia-Martinez Highway Bridge
11. Mare Island Strait between Mare Island Light "2” (LLNR 6095) and the Mare Island Causeway) Bridge
12. Suisun Bay Channels between the Benicia-Martinez Highway Bridge and Suisun Bay Light "34” (LLNR 6655)
13. New York Slough between Suisun Bay Lighted Buoy "30"' (LLNR 6585) and San Joaquin River Light "'2” (LLNR 6670)
14. Sacramento River and Sacramento Deep Water Ship Channel from Suisun Bay Light “34” (LLNR 6655) to the Port of Sacramento
15. San Joaquin River from San Joaquin River Light "2” (LLNR 6670) to the Port of Stockton

Additionally, mariners are required to abide by Rule 10 International when navigating west of the COLREGS Demarcation Line in or near the Traffic Separation Scheme (TSS). Small vessels that choose to operate within the TSS shall abide by the regulations with due regard to traffic flow and priority.
The following areas are designated Traffic Separation Schemes per 33 CFR §167.400-406.

1. Off San Francisco: Precautionary Area
2. Off San Francisco: Northern Approach
3. Off San Francisco: Southern Approach
4. Off Sun Francisco: Western Approach
5. Off San Francisco: Main Ship Channel
6. Off San Francisco: Area to be avoided

USER'S MANUAL

In addition to the general information provided in this Special Notice to Mariners, the Coast Guard publishes a User's Manual for VTS San Francisco, which contains a more in-depth discussion of VTS operating procedures as well as further details on anchorages, RNAs, certain dangerous cargo and Special Rules during certain fishing seasons in the San Francisco Bay area. All mariners transiting VTS waters are encouraged to obtain a copy of the User's Manual by calling either Sector San Francisco or downloading it online (see above).

Vessel Movement Reporting System (VMRS) and Reports Required of VMRS Users
Vessel Movement Reporting System (VMRS) means a mandatory reporting system used to monitor and track vessel movements. This is accomplished by a vessel providing information under established procedures as set forth in this part in the areas defined in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas).

Vessel Movement Reporting System (VMRS) User means a vessel, or an owner, operator, charterer, Master or person directing the movement of a vessel that is required to participate in a VMRS

A Vessel Movement Reporting System (VMRS) is a system used to monitor and track vessel movements VTS or VMRS area. This is accomplished by requiring that vessels provide information under established procedures as set forth in this part, or as directed by the Center. To avoid imposing an undue reporting burden or unduly congesting radiotelephone frequencies, reports shall be limited to information which is essential to achieve the objectives of the VMRS. These reports are consolidated into three reports (sailing plan, position and final).

The VTS Area is separated into two sectors with a separate dedicated operating frequency for each sector. These two sectors are labeled Inshore Sector and Offshore Sector. Use Channel 14 when transiting in the Inshore Sector; use Channel 12 when transiting in the Offshore Sector. Participation procedures for each of these sectors are outlined in the Inshore Sector Reporting Procedures and the Offshore Sector Reporting Procedures section of this Users Manual (The Inshore Sector begins at the boundary of the Offshore Precautionary Area, going eastward).

Offshore Sector Procedures
The VTS San Francisco Offshore Sector area is defined as the *navigable waters* of the Pacific Ocean within a 38 nautical mile radius of Mount Tamalpais (37°55.8'N, 122°34.6'W), excluding the San Francisco Offshore Precautionary Area (an area enclosed by a circle of 6 nautical mile radius, centered on the "SF" lighted buoy in approximate position (37°45.0'N, 122°41.5'W). The shoreward boundary of the Offshore Sector is a line bearing 180° from Duxbury Point (37°54.0'N, 122°42.0'W) to the limit of the San Francisco Offshore Precautionary Area, then following the limit through lighted buoy "N" (37°48.2'N, 122°47.9'W), lighted buoy "W" (37°41.5'N, 122°47.7'W) and lighted buoy "S" (37°39.2'N, 122°39.7'W) to a position 270° from Mussel Rock (37°40.0'N, 122°30.0'W) .

The VTS San Francisco Offshore Sector is depicted on charts 18640 and 18680 as a counter-clockwise arc starting at the shoreline near Bodega head, crossing Cordell Bank, continuing counter clockwise approximately 30 nautical miles west of the San Francisco Sea Buoy, then curving to the shoreline near Pescadero Point.

When approaching from sea, check in with VTS 15 minutes from the outer boundary on Channel 12 and report your Sailing Plan.

Sailing Plan
Give the following information in your Sailing Plan.

- Vessel name and type
- Position latitude and longitude (if unable to provide coordinates then provide your bearing and range from the SFSB)
- Course and speed
- ETA (estimated time of arrival) at next reporting point
- ETA to the San Francisco Sea Buoy (SFSB) if inbound, or the outermost reporting point on your route if outbound or transiting across the Offshore Sector

Sailing Plan and Amplification Reports
When your vessel is at the next reporting point, Call VTS. Give the following information:

- Vessel name
- Position of the Offshore reporting point being passed
- Course and speed
- ETA at the SFSB if inbound
- ETA to the outermost reporting point on intended route if outbound

Other Reports
Vessels conducting research, engaged in naval exercises or conducting other special operations within the Offshore Sector, must report their Sailing Plan to the VTS including the nature of the operation.

Vessels must report any emergency on board their vessel or any other vessels to the VTS immediately.

Fishing vessels and recreational vessels, although generally not required to participate in the VTS, are encouraged to monitor the VTS radio channels, as needed, to gather traffic movement information.

Transiting Across the Offshore Sector
Vessels transiting across the Offshore Sector that will not enter the San Francisco Offshore Precautionary Area (Inshore Sector) must report their sailing Plan on VHF Channel 12 fifteen minutes before crossing the VTS boundary.

Offshore Vessel Traffic Advisories
VTS broadcasts the positions, courses, speeds and estimated times of arrivals at reporting points of all VTS users who have reported to VTS in the Offshore Sector. VTS makes these advisories at minute 15 and minute 45 each hour. VTS strongly recommends that vessels in the area of the Offshore sector listen to these broadcasts.

Offshore Reporting Points
Vessels must make reports in accordance with the IMO Standard Ship Reporting System (SSRS), on the appropriate Sector Primary VHF Channel, when getting underway, entering or departing a sector, when secured at the destination and when passing the following waypoints:

*Table 1 – Offshore Sector: Inbound Waypoints (*WP*)*

WP	Geographic description	Latitude	Longitude
1N	Northern TSS. Passing N Buoy. Entering Offshore Precautionary Area.	37°47.183'N	122°48.533'W
2N	Northern TSS. Passing Pt. Reyes.	37°57.283'N	123°10.733'W
3N	VTS Northern Limit. Entering VTS Area.	38°07.483'N	123°21.583'W
1W	Western TSS. W Buoy. Entering Offshore Precautionary Area.	37°40.733'N	122°46.783'W
2W	Western TSS.	37°32.367'N	123°02.783'W
3W	VTS Western Limit. Entering VTS Area.	37°29.437'N	123°10.703'W
1S	Southern TSS. Passing S Buoy. Entering Offshore Precautionary Area.	37°39.183'N	122°39.787'W
2S	Southern TSS. Passing Piller Point.	37°30.000'N	122°39.900'W
3S	VTS Southern Limit. Entering VTS Area.	37°18.400'N	122°39.767'W

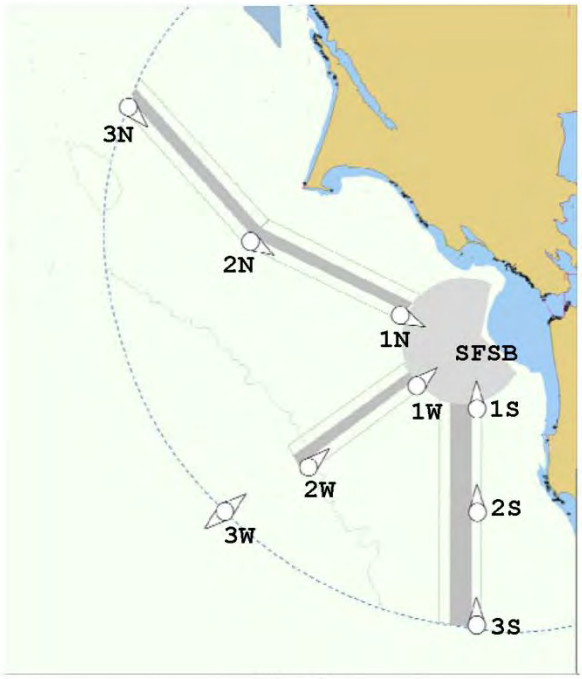
*Table 2 – Offshore Sector: Outbound Waypoints (*WP*)*

WP	Geographic description	Latitude	Longitude
4N	VTS Northern Limit. Exiting VTS Area.	38°09.617'N	123°20.550'W
5N	Northern TSS. Passing Point Reyes.	37°58.833'N	123°09.083'W
6N	Northern TSS. Passing N Buoy.	37°48.900'N	122°47.217'W

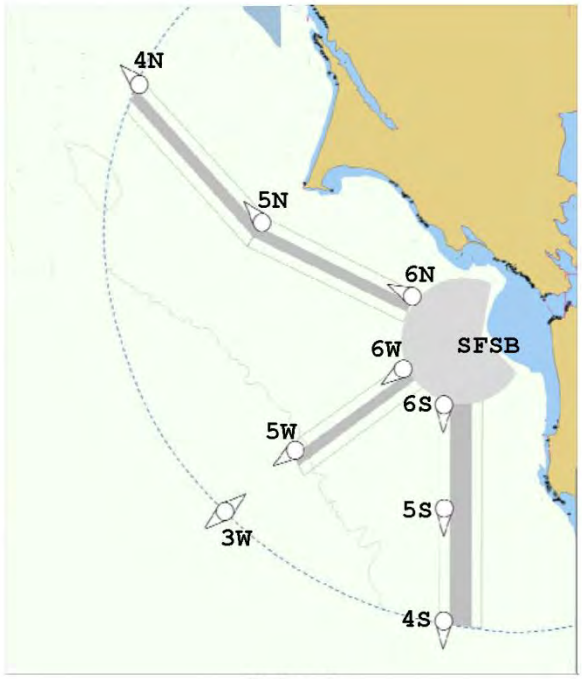
4W	VTS Western Limit. Exiting VTS Area.	37°29.437'N	123°10.703'W
5W	Exiting Western TSS. Crossing continental shelf.	37°33.950'N	123°04.133'W
6W	Western TSS.	37°42.350'N	122°48.267'W
4S	VTS Southern Limit. Exiting VTS Area.	37°18.800'N	122°43.633'W
5S	Southern TSS. Passing Piller Point.	37°30.000'N	122°43.633'W
6S	Southern TSS.	37°39.267'N	122°43.633'W

Diagrams These diagrams depict the waypoints described above.

Note: **SFSB** is San Francisco Sea Buoy and Offshore Pilot Boarding Area.



Inbound



Outbound

INBOUND

1st Waypoint – VTS Boundary Line

WP…	**Report to VTS…**					
3N	**Vessel Name**	**Position**	**True Course**	**True Speed**	**ETA 2nd WP**	**ETA SFSB**
3W	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS
3S	*ALPHA*	*CHARLIE*	*ECHO*	*FOXTROT*	*NOVEMBER*	*BRAVO*

2nd Waypoint – Midpoint Along Route

WP…	**Report to VTS…**					
2N	**Vessel Name**	**True Course**	**True Speed**	**ETA SFSB**		
2W	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS		
2S	*ALPHA*	*ECHO*	*FOXTROT*	*BRAVO*		

3rd Waypoint – November, Whiskey, or Sierra Buoy

WP…	**Report to VTS…**					
1N	**Vessel Name**	**ETA SFSB**	**Route to SFSB**			
1W	IMO SSRS	IMO SSRS	IMO SSRS			
1S	*ALPHA*	*BRAVO*	*LIMA*			

OUTBOUND

1st Waypoint – November, Whiskey or Sierra Buoy

WP…	**Report to VTS…**					
6N	**Vessel Name**	**Position**	**True Course**	**True Speed**	**ETA 2nd WP**	**ETA 3rd WP**
6W	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS
6S	*ALPHA*	*CHARLIE*	*ECHO*	*FOXTROT*	*NOVEMBER*	*KILO*

2nd Waypoint – Midpoint Along Route

WP…	**Report to VTS…**					
5N	**Vessel Name**	**True Course**	**True Speed**	**ETA 3rd WP**		
5W	IMO SSRS	IMO SSRS	IMO SSRS	IMO SSRS		
5S	*ALPHA*	*ECHO*	*FOXTROT*	*KILO*		

3rd Waypoint – VTS Boundary Line

WP…	**Report to VTS…**					
1N	**Vessel Name**					
	IMO SSRS					
	ALPHA					

Inshore Sector

The Inshore Sector consists of the waters of the San Francisco Offshore Precautionary Area eastward to San Francisco Bay and its tributaries extending inland to the ports of Stockton, Sacramento, and Redwood City.

Sailing Plan
A vessel shall provide a sailing plan to the VTS on Channel 14 at least 15 minutes prior to getting underway from a berth or anchorage in the Inshore Sector. The Sailing Plan should contain the following information:

For power-driven vessels 40 Meters (approx 131 ft) or more in length or when operating instructions require participation:

- Pilot
- Vessel name
- Position
- Destination
- Draft
- Route (see section on route intentions below)
- Tug frequency

For a towing vessel 8 meters (approx 26 ft) or more in length if towing astern/alongside or pushing ahead:

- Vessel name
- Position
- Destination
- Towing/pushing/alongside
- Barge over/under 1600 gross tons
- Draft

For a vessel certificated to carry 50 or more passengers for hire, engaged in trade report:

- Vessel name
- Position
- Destination
- Route

The passenger vessel may also request or decline a traffic report. If a request or decline of the report is not stated the VTS controller will provide a traffic report.
**Note: For passenger vessels on a scheduled or published route as defined in 33CFR 161.23, the sailing plan time requirement is at least 5 minutes before entering the VTS area.*

Position Reports
A latitude/ longitude, bearing and range from a specific point, or description of vessel's position in relation to a known geographic point shall be made:

- Once a vessel is actually underway or upon entry into a VTS area;
- When passing a reporting point (see below list of reporting points);
- After pilot change, departure of pilot, or other change in person directing the movement of the vessel.
- Ferry and tour boats are required to call at least every 30 minutes.

Final Report
Report to VTS upon docking, anchoring, mooring or departing the VTS Area as applicable.

Inshore Sector Reporting Points
The recent implementation of AIS has eliminated the need for voice position reports at designated points for all vessels with a properly installed and operating AIS unit. For those vessels without installed AIS, VMRS Users are directed to contact VTS at the following listed reporting points.

- Pilot Area/Point of Entry into VTS Area
- San Mateo Bridge
- Redwood Creek Entrance Light 2
- Dumbarton Bridge
- Richmond-San Rafael Bridge
- 'E' Buoy San Pablo Strait Channel
- Petaluma Channel Day beacon 19
- Mare Island Strait Light 1
- Mare Island Causeway bridge (when inbound/outbound Mare Island Strait)

- Carquinez Bridge
- Military Oceans Terminals Concord (MOTCO)
- New York Point
- Antioch Bridge
- Prisoners Point
- Rio Vista Bridge
- Sacramento Deep Water Channel Light 51 & Light 65

COMMUNICATIONS

VTS maintains a continuous radiotelephone watch on VHF-FM Channels 12 (156.60 MHz), 13 (156.65 MHz), 14 (156.70 MHz) and 16 (156.80 MHz). The call sign is "SAN FRANCISCO TRAFFIC." Once communications are established, the abbreviated call sign "TRAFFIC" may be used. If communications on Channel 12, 13 or 14 are lost, call TRAFFIC on Channel 16 and be prepared to shift to another frequency. All reports should be in English and use the 24-hour clock system.

In addition to monitoring the VTS dedicated frequency for the sector in which the vessel is operating, vessels that are required to participate in the Vessel Traffic Service must maintain a listening watch on Channel 13. A listening watch on channel 16 is not required on vessels subject to the Vessel Bridge-to-Bridge Radiotelephone Act who are also participating in a Vessel Traffic Service system when the watch is maintained on both the vessel bridge-to-bridge frequency and a designated VTS frequency (47 CFR 80.148 (b)).

As soon as is practicable, a VTS User shall notify the VTS of any of the following:
1. A marine casualty as defined in 46 CFR 4.05-1;
2. Involvement in the ramming of a fixed or floating object;
3. A pollution incident as defined in Sec. 151.15 of this chapter;
4. A defect or discrepancy in an aid to navigation;
5. A hazardous condition as defined in Sec. 160.203 of this chapter;
6. Improper operation of vessel equipment required by Part 164 of this chapter;
7. A situation involving hazardous materials for which a report is required by 49 CFR 176.48; and
8. A hazardous vessel operating condition as defined in Sec. 161.2.

REGULATED NAVIGATION AREAS (RNAs)

The geographic constraints of San Francisco Bay make implementation of a Traffic Separation Scheme (TSS) impractical and unnecessarily restrictive on recreational and harbor tour boats. Instead, traffic flow within the Bay is guided by a series of RNAs. These RNAs increase navigational safety by reducing vessel congestion and establishing a predictable traffic flow in constricted channels. The RNAs apply to Large Vessels (defined as: any power-driven vessels of 1600 gt or more, or tugs with a tow of 1600 gt or more). While additional rules apply in each specific RNA, **in every RNA Large Vessels shall**:
1. Not exceed a speed of 15 knots through the water; and
2. Have engine(s) ready for immediate maneuver and operate engines in a control mode and on fuel that allows for an immediate response to any engine order.

San Francisco Bay RNA

LARGE VESSELS shall use the indicated direction of travel within a given lane. Eastbound travel is permitted in the eastbound lane, westbound travel is permitted in the westbound lane, and east or westbound travel is permitted in the Deep Water Traffic Lane (DWTL).

LARGE VESSELS shall use the DWTL if eastbound with a draft of 45 feet or greater or westbound with a draft of 28 feet or greater.

A LARGE VESSEL shall not meet, cross, or overtake another LARGE VESSEL within the DWTL when either vessel is a tank vessel in ballast, carrying certain dangerous cargoes, or bulk petroleum products (33 CFR 160.203).

Southampton Shoal/Richmond Harbor RNA
A LARGE VESSEL shall not meet, cross, or overtake another LARGE VESSEL within this RNA.

Oakland Harbor RNA
A LARGE VESSEL shall not meet, cross, or overtake another LARGE VESSEL within this RNA.

All vessels operating within these RNAs are reminded of their responsibility to comply with Rule 9 of the Inland Navigation Rules.

Pinole Shoal Channel RNA
The Pinole Shoal Channel RNA is reserved for navigation of LARGE VESSELS (this includes tugs w/tows of 1600 GT or greater) Vessels less then 1600GT are not permitted within this RNA. A LARGE VESSEL shall not enter Pinole Shoal Channel RNA, if such entry would result in meeting, crossing or overtaking another LARGE VESSEL, when either vessel is a tank vessel in ballast, carrying certain dangerous cargoes or bulk petroleum products.

Benicia-Martinez Railroad Bridge RNA
(This RNA applies during periods of reduced visibility)

Eastbound LARGE VESSELS shall not transit through this RNA when visibility is less than 1,000 yards.

Westbound LARGE VESSELS shall check visibility conditions within the RNA immediately prior to passing New York Point, and not proceed past Mallard Island until visibility improves to greater than 1,000 yards within the RNA. If the visibility drops below 1,000 yards during the transit, the vessel may proceed but must obtain permission to deviate from this RNA. Visibility is considered to be 1,000 yards or greater when both the Port of Benicia Pier and the Shell Martinez Pier can be seen from the Union Pacific Railroad Bridge.

TRAFFIC SEPARATION SCHEME

The TSS in the VTS San Francisco area has been adopted by the International Maritime Organization (IMO). Therefore, the TSS is subject to the provisions of Rule 10 of the 1972 Collision Regulations. The traffic lanes and separation zone that comprise the TSS's are depicted on nautical charts. The TSS is a network of one-way traffic lanes, with separation zones in between the opposing traffic lanes and precautionary areas where vessels normally enter or exit the traffic lanes. Mariners are reminded that vessels in the TSS are required to proceed in the direction of the lane they are in and keep the Separation Zone and Traffic Separation Scheme Buoys to port even if they are not required to participate with VTS. Throughout the VTS San Francisco and Los Angeles – Long Beach area, International Collision Regulations apply.

The traffic separation scheme Off San Francisco consists of 3 parts:

Part I
Northern approach

(a) A separation zone is bounded by a line connecting the following geographical positions:

- 37°48.52'N, 122°47.63' W
- 37°58.45'N, 123°09.49' W
- 38°09.09'N, 123°20.82' W
- 38°08.03'N, 123°21.34'W.
- 37°57.67'N, 123°10.31'W
- 37°47.66'N, 122°48.29'W

(b) A traffic lane for north-westbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 37°49.29'N, 122°46.79'W
- 37°59.22'N, 123°08.66'W
- 38°10.14'N, 123°20.29'W

(c) A traffic lane for south-eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 38°06.92'N, 123°21.82'W
- 37°46.72'N, 122°48.76'W
- 37°56.89'N, 123°11.14'W

Part II
Southern approach

(a) A separation zone is bounded by a line connecting the following geographical positions:

- 37°39.07'N, 122°40.40'W
- 37°18.71'N, 122°43.00'W
- 37°18.45'N, 122°40.40'W
- 37°39.12'N, 122°43.00'W

(b) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 37°39.30'N, 122°39.14'W
- 37°18.36'N, 122°39.14'W

(c) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 37°18.89'N, 122°44.26'W
- 37°39.41'N, 122° 44.26'W

Part III
Western approach

(a) A separation zone is bounded by a line connecting the following geographical positions:

- 37°41.90'N, 122°47.99'W
- 37°32.85'N, 123°03.18'W
- 37°33.54'N, 123°03.79'W
- 37°41.09'N, 122°47.25'W

(b) A traffic lane for south-westbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 37°42.81'N, 122°48.55'W
- 37°34.37'N, 123°04.49'W

(c) A traffic lane for north-eastbound traffic is established between the separation zone and a line connecting the following geographical positions:

- 37°31.87'N, 123°02.40'W
- 37°40.38'N, 122°46.33'W

DIRECTIONS

All vessels must comply with orders issued by VTS San Francisco. The Coast Guard wishes to stress that under normal circumstances VTS will not exercise direct control over vessel movements. However, under rare circumstances when the situation dictates, the VTS can and will direct vessel movement. The responsibility of the person directing the safe navigation of his/her vessel is in no way lessened by this VTS authority. The primary function of a VTS is to enhance good order and predictability on a waterway.

Any decision to deviate from the TSS or RNA must be made by the master or person in charge of the vessel. Vessels shall notify the VTS prior to deviating from TSS or RNA. VTS will only concur with a proposed deviation when a safety related reason is provided, and it affords a level of safety greater than that provided by adherence to the established traffic scheme. When a deviation does occur, VTS may make a safety broadcast on Channels 14 and 16 to warn the boating public.

Vessels unable to follow the traffic lanes or procedures due to an emergency should maneuver as required to minimize the emergency and notify the VTS as soon as possible.

Charted recreational areas within the VTS shall be avoided by commercial vessels.

ANCHORAGE BERTHING SCHEME

The Harbor Safety Committee of the San Francisco Bay Region adopted a proposal to establish anchorage berthing schemes in general anchorages 7, 8, and 8A and 9. These berthing schemes will provide more efficient use and greater predictability of the available space in these anchorages. All existing regulations governing the use of these anchorages remain in effect. Vessels using these anchorages should strive to let go their anchor in the center of the drop bucket. For more details or comments contact Sean Kelley, Sector San Francisco VTS Director at 415-399-7402.

CHAPTER VII

AIDS TO NAVIGATION

INFORMATION ON AIDS TO NAVIGATION

Mariners can gain access to information concerning aids to navigation, both federal and private, in the areas where they will be transiting by obtaining a copy of the Coast Guard Light List. The Light Lists are available to download at the following website:http://www.navcen.uscg.gov/index.php?pageName=lightListCorrections. The Light Lists posted on this website must be corrected with changes printed in the Local Notice to Mariners. The Coast Guard maintains seven Light List Volumes. For aids to navigation information on the U.S. West Coast and Pacific Islands a mariner only has to purchase or download Light List Volume VI.

CAUTION TO BE USED IN RELIANCE UPON AIDS TO NAVIGATION

The aids to navigation depicted on charts comprise a system of fixed and floating aids that have varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid. With respect to buoys, the buoy symbol is used to indicate the approximate position of the buoy body and sinker, which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecision in position fixing methods, prevailing atmospheric and sea conditions, the slope and the material making up the seabed, the fact that the buoys are moored to sinkers by varying lengths of chain, and the fact that buoy body and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits which occur more than a year apart. Due to the forces of nature, the position of the buoy body can be expected to shift inside and outside the charting symbol. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of natural causes, ice, collisions or other accidents. For the foregoing reasons, a prudent mariner must not rely solely upon the position or operation of floating aids to navigation, but must also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy may be marking.

OFFSHORE AIDS TO NAVIGATION - CAUTION

Courses should regularly be set to pass offshore aids to navigation with sufficient clearance to avoid the possibility of collision or grounding. Errors of observation, current and wind effects, other vessels in the vicinity and defects in steering gear may be and have been the cause of actual collisions or damage to these important aids to navigation. Experience shows that buoys cannot be safely used as leading marks to be passed close aboard and should always be left well off the course whenever sea room permits. It should be borne in mind that most large buoys are anchored by a very long scope of chain and, as a result, the radius of their watch circle is considerable. The charted position is the approximate location. Furthermore, under certain conditions of wind and current, they are subject to sudden and unexpected sheers, which are certain to hazard a vessel attempting to pass close aboard.

VANDALISM OF AIDS TO NAVIGATION

Frequently Coast Guard operated aids to navigation are defaced, damaged, or destroyed by vandals. This type of irresponsible activity not only creates a potentially hazardous condition for the mariner, but also increases the cost to the taxpayer. The primary targets for vandals are usually buoys and lights on structures located on the ends of jetties and breakwaters. Federal laws provide that those apprehended defacing or destroying a Federal aid to navigation shall be guilty of a misdemeanor and are subject to a fine of up to $2,500, or not less than $500, imprisonment or both plus repair cost. Those providing information leading to a conviction may be paid one half of such a fine. All citizens are requested to report sightings of any vandalism to the nearest Coast Guard unit; local law enforcement authority; or by calling Commander, Eleventh Coast Guard District (dpw) at (510) 437-2980.

INTERFERENCE WITH AIDS TO NAVIGATION

In accordance with Title 33, Code of Federal Regulations, Subpart 70.01; "No person, excluding the Armed Forces, shall obstruct or interfere with any aid to navigation established and maintained by the Coast Guard or any private aid to navigation established and maintained in accordance with Title 33, Code of Federal Regulations, Parts 64, 66 or 67. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and be subject to a fine not exceeding the sum of $500 for each offense and each day during such violation shall continue shall be considered a new offense."

REQUIRED REPORTING OF DISCREPANT OR DAMAGED AIDS TO NAVIGATION

Vessel operators are required to notify the Coast Guard of any marine casualty or accident, including damage or destruction of aids to navigation, by the Marine Investigation Regulations, Title 46 Code of Federal Regulations, Section 4.05-20, with penalty for noncompliance. Frequently, aids to navigation are collided with; causing damage and displacement or complete loss, without the knowledge of the Coast Guard. The result is diminished protection for marine traffic and is attributable in large part to the failure of vessel operators to furnish notice of these collisions to the nearest local Coast Guard unit as required by law and regulation. All vessel operators who witness another vessel or individual damage or destroy an aid to navigation, or if an aid is not watching properly in accordance with the Coast Guard Light List, should report the incident to the nearest Coast Guard unit. The Code of Federal Regulations excerpt below provides more details on reporting discrepancies.

TITLE 33 – NAVIGATION AND NAVIGABLE WATERS
CAPTER I – COAST GUARD, DEPARTMENT OF TRANSPORTATION
PART 62—UNITED STATES AIDS TO NAVIGATION SYSTEM—Table of Contents
Subpart D – Public Participation in the Aids to Navigation System

Sec.62.65 Procedure for reporting defects and discrepancies.

(a) Mariners should notify the nearest Coast Guard facility immediately of any observed aids to navigation defects or discrepancies.

(b) The Coast Guard cannot monitor the many thousands of aids in the U.S. Aids to Navigation System simultaneously and continuously. As a result, it is not possible to maintain every aid operating properly and on its charted position at all times. Marine safety will be enhanced if persons finding aids missing, sunk, capsized, damaged, off station, or showing characteristics other than those advertised in the Light List, or other publication, promptly inform the Coast Guard. When making the report to the Coast Guard the mariner should consult the Light List to ensure the correct geographical information is used due to the similarity of names and geographical areas.

(c) Procedures for reporting defects and discrepancies:

(1) *Radio messages* should be prefixed “Coast Guard” and transmitted directly to a Government shore radio station listed in Chapter three of Radio Navigation Aids Publication, 117, for relay to the relevant District Commander.

(2) Telephone, e-mail, or facsimile messages may also be used to advise the nearest Coast Guard unit of defects or discrepancies in aids to navigation.

(3) Via our Web portal at *http://www.navcen.uscg.gov.*

NOTE: The Coast Guard Sector phone numbers listed in Chapter I of this Special Notice to Mariners are 24 hour numbers that can be called to report any discrepancy in aids to navigation. The District Office 24 hour number is (510) 437-3701. Discrepancies may also be reported through the U.S. Coast Guard Navigation Center (NAVCEN) at the following web address: http://www.navcen.uscg.gov/?pageName=atonOutageReport.

PROPOSED CHANGES IN AIDS TO NAVIGATION

Periodically the Coast Guard evaluates its system of aids to navigation to determine whether the conditions for which the aids were established have changed. Some of the conditions that are considered include environmental changes (i.e. shoaling), type and amount of vessel traffic and increases in aid and equipment technology. When changes occur, the feasibility of improving, relocating or discontinuing aids is considered. Comments on proposed changes should be addressed to: Commander (dpw), Eleventh Coast Guard District, Coast Guard Island, Bldg 50-2,

Alameda, CA 94501. The Code of Federal Regulations excerpt below provides more details on the specific information that should be provided.

TITLE 33 – NAVIGATION AND NAVIGABLE WATERS
CAPTER I – COAST GUARD, DEPARTMENT OF TRANSPORTATION
PART 62—UNITED STATES AIDS TO NAVIGATION SYSTEM—Table of Contents
Subpart D – Public Participation in the Aids to Navigation System

Sec.62.63 Recommendations.

(a) The public may recommend changes to existing aids to navigation, request new aids or the discontinuation of existing aids, and report aids no longer necessary for maritime safety. These recommendations should be sent to the appropriate District Commander.

(b) Recommendations, requests and reports should be documented with as much information as possible to justify the proposed action. Desirable information includes:

(1) Nature of the vessels which transit the area(s) in the question, including type, displacement, draft, and number of passengers and crew.

(2) Where practicable, the kinds of navigating devices used aboard such vessels (e.g, magnetic or gyro compasses, radio direction finders, radar, loran, and searchlights).

(3) A chartlet or sketch describing the actual or proposed location of the aid(s), and a description of the action requested or recommended.

PRIVATE AIDS TO NAVIGATION

Private aids to navigation include all marine aids to navigation operated in the navigable waters of the United States other than those operated by the Federal Government or those operated in State waters for private aids to navigation. Within California, the USCG maintains jurisdiction over approval of private aids to navigations, and no areas are designated as “state waters for private aids to navigation”. No person, public body or other instrumentality not under the control of the Commandant, exclusive of the Armed Forces, shall establish and maintain, discontinue, change or transfer ownership of any aid to maritime navigation, without first obtaining permission to do so from the Commandant. For more information consult title 33 Code of Federal Regulations, Part 66. In order to establish and maintain, discontinue, change or transfer ownership of a private aid to navigation, submit a "Private Aids to Navigation Application" (CG-2554) to Commander (dpw) Coast Guard District Eleven. To learn more and obtain a CG-2554 write Commander (dpw), Eleventh Coast Guard District, Coast Guard Island Bldg 50-2, Alameda, CA 94501 or call (510) 437-2984.

ELECTRONIC AIDS TO NAVIGATION

The Coast Guard has begun deploying and transmitting electronic aids to navigation (eATON) via Automatic Identification System (AIS) technology to augment existing aids and features in California. In the near future other authorized agencies and organizations (i.e., U.S. Army Corps of Engineers, Marine Exchange of Alaska) may begin transmitting AIS ATON broadcasts and marine safety information via AIS for testing and evaluation. The exact content, location and times of these broadcasts will be announced in future Local Notice to Mariners.

The AIS transmission provides the position and purpose of an aid, such as a port or starboard lateral buoy, even before it is close enough to be visible from the ship or to provide a radar return. This can help mariners confirm their ship's position or to prepare to make a turn that is based on passing a particular aid. AIS ATON stations broadcast their presence, position and status at least every three minutes or as needed. These broadcasts can originate from an AIS station located on an existing physical aid to navigation (Real AIS ATON) or from another location (i.e., AIS Base Station). An AIS Base Station signal broadcasted to coincide with an existing physical aid to navigation is known as a Synthetic AIS ATON. An electronically charted, but non-existent as a physical aid to navigation, is identified as a Virtual AIS ATON. This can be used to depict an existing aid to navigation that is off station or not watching properly or to convey an aid to navigation that has yet to be charted.

Electronic aids to navigation will be charted on NOAA charts as either special marks, safe water marks or as supplemental information to their associated physical buoy or light. The AIS ATON broadcasts will also be heard by all existing AIS devices, but will require an external process or system to be seen.

1. The Three Variants of AIS ATON on ECDIS, Paper Charts, & Radar

Real AIS ATON	***Synthetic AIS ATON***
NOAA charts will depict the AIS signal with a magenta radio circle centered on the position circle of the aid.	NOAA charts will depict the AIS signal with a magenta radio circle centered on the position circle of the aid.
	

Purpose of Virtual Aid	Definition	ECDIS Portrayal	Paper Chart Portrayal
North Cardinal	A virtual object that indicates navigable water lies northwards		
East Cardinal	A virtual object that indicates navigable water lies eastwards		
South Cardinal	A virtual object that indicates navigable water lies southwards		
West Cardinal	A virtual object that indicates navigable water lies westwards		
Port lateral (IALA A)	A virtual object marking the port side of a channel		
Starboard Lateral (IALA A)	A virtual object marking the starboard side of a channel		
Port lateral (IALA B)	A virtual object marking the port side of a channel		
Starboard Lateral (IALA B)	A virtual object marking the starboard side of a channel		

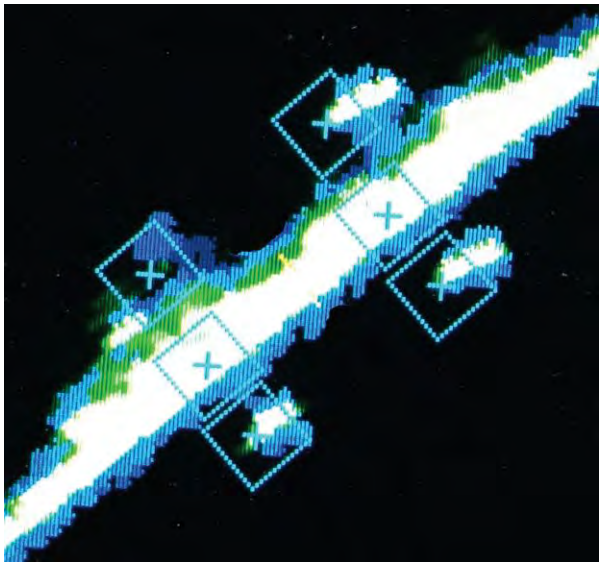
Virtual AIS ATON

Depending on the purpose of the virtual aid, NOAA charts and ECDIS displays of ENCs will use the depictions shown below. Non-ECDIS chart displays may present ENC data differently

Isolated Danger	A virtual object marking an isolated danger		
Safe Water	A virtual object marking safe water		
Special Purpose	A virtual object used to mark an area or feature referred to in nautical documents		
Emergency Wreck Marking	A virtual object marking a wreck		

AIS Enabled Radar Display

Manufactures and software developers are encouraged to update their systems to portray these new ATONs. Mariners capable of receiving and displaying them are encouraged to provide feedback regarding their usefulness and report any anomalies to the USCG NAVCEN website at www.navcen.uscg.gov via the Contact Us Tab / Subject: AIS / Category: AIS Testing. As with any ATON, mariners should not depend solely on eATON to navigate safely. Additionally, mariners should exercise caution in the vicinity of an AIS ATON, particularly those not associated with a physical ATON (i.e. offshore TSS reporting points), because its portrayal could superimpose itself upon other electronic nautical feature or radar return. For additional information on AIS, the various types of AIS ATON and future portrayal standards visit www.navcen.uscg.gov.



GLOBAL POSITIONING SYSTEM - SYSTEM SPECIFICATIONS

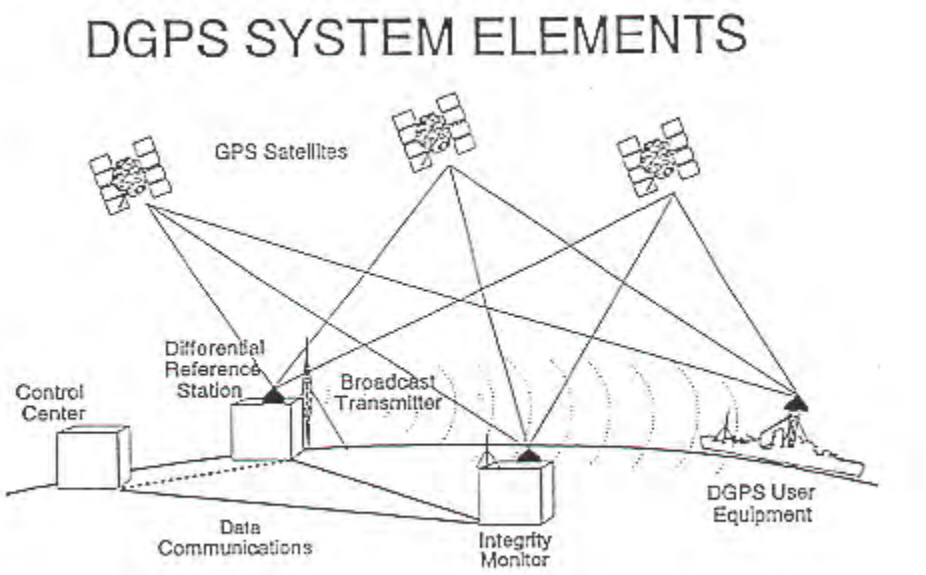
The Global Positioning System (GPS) is a highly precise, satellite based radio navigation system providing three-dimensional positioning, velocity and time information. GPS is an all weather system whose coverage is continuous and worldwide. GPS receivers collect signals from satellites in view. They display the user's position, velocity and time, as needed for their marine, terrestrial or aeronautical applications. GPS is used to support land, sea and airborne navigation, surveying, geophysical exploration, mapping and geodesy, vehicle location systems and a wide variety of additional applications. For additional information see the following web site: http://www.navcen.uscg.gov/?pageName=GPSmain

DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS)

1. Differential GPS (DGPS) is the regular Global Positioning System (GPS) with an additional correction (differential) signal added, improving the accuracy of GPS.

2. How it works. The GPS determined position of a reference station is computed and compared to its surveyed geodetic position. The differential information is transmitted to user receivers by radio or other means. DGPS receivers collect navigational signals from all satellites in view; they then apply the differential corrections from a DGPS station in the area to improve position accuracy.

3. WHY use it? DGPS accuracy and integrity are better than GPS. Accuracy Improvement (2drms): 10 meters or better for DGPS (USCG signals) verse 100 meters or better for GPS (Standard Positioning Service). Integrity Improvement: Provides an independent check of each GPS satellite's signal, and reports whether it's good or bad. The U.S. Coast Guard Navigation Center (NAVCEN) operates the Coast Guard Maritime Differential GPS Service. For detailed information and sites status, see the following web site: http://www.navcen.uscg.gov/index.php?pageName=dgpsSelectStatus



ELEVENTH COAST GUARD DISTRICT DGPS SITES:

The specific DGPS sites for the Eleventh Coast Guard District are listed below. For a detailed map showing the coverage areas, go to the following web address: http://www.navcen.uscg.gov/index.php?pageName=dgpsSiteInfo&bySite.

STATION:	LATITUDE/LONGITUDE:	FREQ:	RATE:	RANGE:
Point Lorna	32°39'54"N, 117°14'36"W	302 kHz	100 baud	180NM
Pigeon Point	37°11'12"N, 122°23'26"W	287 kHz	100 baud	180NM
Cape Mendocino	40°26'24"N, 124°24'24"W	292 kHz	100 baud	180NM
Lincoln	38°50'47"N, 121°29'58"W	314 kHz	200 baud	180NM

COAST GUARD NAVIGATION CENTER - SERVICES

The Coast Guard Navigation Center (NAVCEN) provides civil users with information about GPS system and satellite status, almanac data and precise ephemeris data. The NAVCEN also provides information about Differential GPS and Local Notice to Mariners. Information can be obtained from their website, by phone, email or radio broadcast. Detailed contact information for specific services is shown in the table below. NAVCEN personnel are prepared to respond to individual user inquiries, comments or concerns regarding civil access to and the use of the GPS system. The NAVCEN information service is used worldwide by civil users to support land, sea and airborne navigation, mapping and geodesy, vehicle location systems, and more. The Bulletin Board System and Voice Status Recording are available 24 hours a day. Watchstanders answer questions by telephone and mail 24 hours a day. For additional information, contact: Commanding Officer, Navigation Center, 7323 Telegraph Road, Alexandria, VA 22310-3998 or go to: http://www.navcen.uscg.gov.

SERVICE	AVAILABILITY	INFO TYPE	CONTACT NUMBER, CHANNEL, ADDRESS, or FREQUENCY
NAVIGATION INFORMATION SERVICE (NIS) WATCHSTANDER	24 hours a day	User Inquires: Will forward phone and email messages to the appropriate Office.	PHONE (703) 313-5900 FAX (703) 313-5920 http://www.navcen.uscg.gov/index.php?pageName=contactUs
NAVIGATION CENTER INTERNET SITE	24 hours a day	Status/Forecast/History/ Outages/ NGS Data/ Omega/FRP	http://www.navcen.uscg.gov
LONG RANGE IDENTIFICATION AND TRACKING (LRIT)	24 hours a day	LRIT collects and disseminates position information received from vessels that are subject to the International Convention for the Safety of Life at Sea (SOLAS)	http://www.navcen.uscg.gov/?pageName=lritMain PHONE (866) 944-5748 FAX (703) 313-5920
INLAND RIVER VESSEL MOVEMENT CENTER (IRVMC)	24 hours a day	IRVMC collects information regarding barges loaded with certain dangerous cargo along the Western Rivers System of the U.S.	http://www.navcen.uscg.gov PHONE 866-442-6089 FAX 866-442-6107
NAVIGATION RULES QUESTIONS	24 hours a day	General Navigation Rules questions and information	http://www.navcen.uscg.gov/index.php?pageName=navRulesContent PHONE (703) 313-5900 (NIS)
NIS VOICE TAPE RECORDING	24 hours a day	Status/Forecasts/History	(703) 313-5907 - GPS
WWV	Minutes 14 & 15	Status/Forecasts	2.5, 5, 10, 15, and 20 MHz
WWVH	Minutes 43 & 44	Status/Forecasts	2.5, 5, 10, and 15 MHz
USCG MIB	When broadcasted	Status/Forecasts	VHF Radio marine band
NGA BROADCAST WARNINGS	When broadcast received	Status/Forecasts	(301) 227-3147
NGA WEEKLY NOTICE TO MARINERS	Published & mailed weekly	Status/Forecasts/Outages	(301) 227-3126 http://msi.nga.mil/NGAPortal/MSI.portal
NGA MARINE NAVIGATION DEPARTMENT HOMEPAGE	24 hours a day	Marine Safety Information	http://msi.nga.mil/NGAPortal/MSI.portal?_nfpb=true&_pageLabel=msi_portal_page_63
NAVTEX DATA BROADCAST	Six times daily at alternating times	Status/Forecasts/Outages	518 kHz

CHAPTER VIII

BRIDGE INFORMATION

BRIDGE INFORMATION

The purpose of the Coast Guard's Bridge Administration Program (BAP) is to ensure the safe and unencumbered passage of marine traffic on the nation's waterways by promoting security, mobility and safety on our critical national transportation systems. This objective is accomplished by approving/permitting the location and navigational clearances of all proposed new or replacement bridges and causeways, proposed modification of existing bridges; identifying unreasonably obstructive bridges and ordering their alteration; regulating drawbridge operations; prescribing bridge lighting and markings; assisting in restoration of waterways following natural and manmade disasters; providing timely and accurate marine information through Notices to Mariners; providing oversight of bridge construction and maintenance; coordinating with internal and external waterway stakeholders; and partnering with intermodal transportation stakeholders. The Eleventh Coast Guard District, Bridge Administration Office located in Alameda, California performs the bridge regulatory function for all bridges in/over/on navigable waters of the Eleventh Coast Guard District, by direction of the District Commander. To report bridge discrepancies or request information about bridges contact the Bridge Administrator at (510) 437-3516 during normal working hours, Monday through Friday, except Federal holidays; or cellular phone (510) 219-4366, nights, weekends and holidays.

DRAWBRIDGE OPERATION

Drawbridges are required to open on signal for the passage of vessels unless otherwise regulated by the District Commander. Applicable drawbridge operating regulations including signaling may be found in Title 33 Code of Federal Regulations, Part 117, Sub Parts A & B. Some drawbridges are regulated so that they need not open during periods of heavy vehicular usage to prevent land traffic congestion. Bridges also may operate with advance notice requirements where constant attendance by a bridge operator is not warranted due to infrequent vessel passages on a particular waterway. The District Commander may also authorize a deviation from normal operating procedures to accommodate repair work or a public event. Scheduled and emergency deviations from normal operation are announced via Broadcast Notices to Mariners and/or the weekly Local Notice to Mariners. The Code of Federal Regulations is available for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or any U.S. Government Bookstore or free via the internet by visiting the Coast Guard Bridge Administration Program website at: http://www.uscg.mil/hq/cg5/cg551/

VHF-FM CHANNEL 16

VHF-FM marine radio Channel 16 is designated for use by vessels for initiating communication with drawbridges. Each drawbridge equipped with a marine radio will operate on a separate assigned working frequency. Channel 16 is also the ship-to-ship channel for matters that concern vessel safety and is not to be used for extended routine working communications. Mariners should use proper radio procedure as prescribed by the Federal Communications Commission.

BRIDGE PERMITS

Bridges across navigable waters of the United States are permitted only so long as they are used for the purpose of land transportation and shall provide for the needs of navigation. The Coast Guard ensures marine safety, security, and stewardship and contributes to the freedom of navigation through its authority to approve/permit the proposed location and plans of all new bridges, modifications of existing bridges and causeways in/over/on navigable waterways of the United States. The Bridge Administration Program determines whether a proposed bridge or modification will provide for the reasonable needs of safe, unobstructed navigation on the waterway, while also providing for land based modes of transportation. Persons contemplating the construction of new bridges or the modification of existing bridges must contact the Eleventh Coast Guard District Bridge Administrator for official Coast Guard determinations on bridge permit requirements. For the purposes of Coast Guard jurisdiction, "bridges" include highway, railway, bicycle/pedestrian/equestrian bridges as well as ziplines, pipelines, conveyers and cable-held conveyances.

NOTE: Overhead and submarine electrical power transmission or communication cables are within the jurisdiction of the U.S. Army Corps of Engineers.

BRIDGE LIGHTING

The Coast Guard prescribes and regulates bridge lighting and marking under the provisions of Title 33 Code of Federal Regulations, Part 118. Bridge lighting requirements may vary with the needs of navigation and the peculiarities of the bridge profile. On fixed bridges red lights mark the piers or pilings and two green lights, usable as range lights, mark the center of channel. These green lights often mark only the main and alternate channel, if one is designated, but do not mark every usable span. Drawbridges show green navigation span lights only when they are in the fully opened-to-navigation position. Bridges and their lighting and marking are not Aids to Navigation. They are lighted and marked as permitted obstructions to navigation and are not part of the lateral system of Aids to Navigation. All mariners are encouraged to report lighting, marking and other bridge related discrepancies to the Eleventh Coast Guard District Bridge Administrator using contact information provided above and in the Eleventh Coast Guard District, Weekly Local Notice to Mariners.

CHAPTER IX

CHARTS AND PUBLICATIONS

CHARTS

1. NAUTICAL CHARTS

Nautical charts are published primarily for the use of the mariner, but serve the public interest in many other ways. They are compiled principally from NOAA National Ocean Service (NOS) basic field surveys, supplemented by data from other government organizations. Nautical charts show the nature and shape of the coast, depths of water, general configuration and character of the bottom, prominent landmarks, port facilities, cultural details, aids to navigation, marine hazards and other pertinent information for safe navigation. Changes brought about by people and nature requires that nautical charts be constantly maintained and updated to aid safe navigation. Conventional and small-craft nautical charts vary in scale and format. For coastal navigation, boaters should use the largest scale chart available.

2. DEPTHS ON CHARTS

Depths are in feet, fathoms or meters (below chart datum unless otherwise stated). The controlling depth of a channel is the least depth within the limits of the channel; it restricts the safe use of the channel to drafts less than that depth. The centerline controlling depth of a channel applies only to the channel centerline; lesser depths may exist in the remainder of the channel. The mid-channel controlling depth of a channel is the controlling depth of only the middle half of the channel. Federal Project Depth is the designed dredging depth of a channel constructed by the U.S. Army Corps of Engineers. The project depth may or may not be the goal of maintenance dredging after completion of the channel and, for this reason project depth must not be confused with controlling depth. Depths alongside wharves usually have been reported by owners and/or operators of the waterfront facilities, and have not been verified by government surveys. Since these depths may be subject to change, local authorities should be consulted for the latest controlling depths. In general, the Coast Pilots give the project depths for deep-draft ship channels maintained by the Corps of Engineers. The latest controlling depths are usually shown on the charts and published in the U.S. Coast Guard's Local Notice to Mariners (LNM) and National Geospatial-Intelligence Agency (NGA) U.S. Notice to Mariners (NTM). For other channels, the latest controlling depths available at the time of publication are given.

3. REPORTING DEPTH INFORMATION

The many ships presently equipped with reliable depth recorders constitute a potential wealth of sounding data desired by charting agencies for the purpose of confirming charted depths or charting heretofore unknown depths. While oceanographic survey vessels remain the primary source of bathymetric data, depth recordings submitted by Navy, Coast Guard and merchant vessels make an important contribution to the vital task of charting the oceans.

Mariners are encouraged to obtain and report soundings whenever bridge routine and equipment capabilities allow. Chart 5103 and Publication 606 depict bathymetric requirements and provide some guidance for observing and reporting sonic soundings. However, soundings must be correlated to positions and accompanied by supportive data such as:

a. Detailed position/time information,
b. Mariners own evaluation of positional accuracy - type of navigational system used and frequency of fixes,
c. Ship's course and speed with times of changes noted,
d. Echogram scales in use, graduated scales provided, and time of scale changes,
e. Draft of vessel and if zero reference is corrected for draft,
f. Regular annotations of date/time marks on echograms to enable correlation with position, and
g. Other related information considered appropriate

An uncharted depth of 15 fathoms or less should be considered an urgent danger to navigation and should be reported via radio without delay. Follow up with substantiating evidence, including the echogram, track chart and/or position log and all relevant navigational data and forward to NIMA at the earliest opportunity. Charts submitted to amplify a sounding report will be replaced, on request, with a new chart, except that foreign charts will be replaced with the equivalent U.S. chart, if available. Data reports and charts should be sent to Maritime Domain, ST D44, National Geospatial-Intelligence Agency, 4600 Sangamore Road, Bethesda, MD 20816-5003, either via mail or any U.S. Consulate.

4. NAUTICAL CHART SYMBOLS AND ABBREVIATIONS – INFORMATION

Symbols and abbreviations approved for use on all regular nautical charts published by the National Geospatial Intelligence Agency (NGA) and NOAA are contained in the latest edition of Chart No. 1, United States of America Nautical Chart Symbols and Abbreviations. The 12th Edition, April 2013, is the latest edition of this publication which is available for download at https://nauticalcharts.noaa.gov/publications/us-chart-1.html and maybe available in limited numbers from Government Printing Offices or authorized sales agents. The introduction to this publication includes a number of paragraphs on metric and fathom charts, chart modernization, soundings, drying heights, shorelines, landmarks, buoys, International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA-AISM) buoyage, heights, conversion scales, traffic separation schemes, names, correction dates and special foreign symbols. Buoys and beacons of the IALA-AISM Buoyage System Regions A and B are illustrated in the back of Chart No. 1, including light characteristics in full color. Section V lists abbreviations of principal foreign terms commonly used on charts. More information on unabbreviated foreign terms is provided in NGA Sailing Directions. Identification of these terms is helpful to the chart user for many national languages are used beyond their country of origin; for example, Spanish in many Latin American countries and Portuguese in Brazil. Despite the improved presentation of foreign charting symbols in this section of Chart No. 1, certain reproductions of foreign charts published by NGA may show symbols and abbreviations, and other distinctive features that differ from those illustrated. The mariner is warned that the buoyage systems, shapes, and colors used by other countries have a different significance than the U.S. system.

5. REPORTING CHART DEFICIENCIES

Mariners are requested to report all significant discrepancies in, and desirable additions to, NOS nautical charts; including depth information in privately maintained channels and basins; obstructions, wrecks and other dangers; new landmarks or nonexistence/relocations of charted ones; uncharted private aids to navigation; and deletions or additions of small-craft facilities. All such reports should be sent to: Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282, or submit online at: http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx. The date of a chart is of vital importance to the navigator. When charted information becomes obsolete, further use of the chart for navigation may be dangerous. Announcement of new editions of nautical charts are published in NGA's Weekly Notices to Mariners (NTM) and the Coast Guard's Local Notices to Mariners (LNM). The value of a nautical chart depends upon the accuracy of the surveys on which it is based. The chart reflects what was found by field surveys and what has been reported to NOS Headquarters. The chart represents general conditions at the time of surveys or reports, and does not necessarily portray present conditions.

NOTE: SIGNIFICANT CHANGES MAY HAVE TAKEN PLACE SINCE THE DATE OF THE LAST SURVEY OR REPORT.

6. NOAA PRINT-ON-DEMAND (POD) CHARTS

NOAA's Print-on-Demand (POD) nautical charts provide up-to-date navigation information to mariners. These paper charts are updated on a weekly basis and include all of the latest critical chart corrections. Although NOAA produces POD charts, NOAA does not sell POD charts directly to the public. Instead, POD charts are made available through NOAA's commercial partner OceanGrafix, who has retail agents located throughout the U.S. and overseas. POD Charts are kept up to date with critical corrections from Notices to Mariners and other corrections (such as wrecks, rocks and obstructions) not yet published. New editions are usually available 2-8 weeks sooner than traditional NOAA paper charts. When a chart is ordered, OceanGrafix prints the electronic chart file that is up to date as of the instant the retail agent ordered it. Orders are processed each hour and shipped via FedEx Standard Overnight delivery. In the lower left corner of each POD chart, there is an "Additional Corrections Through" box that identifies the last Notices to Mariners were applied. New editions are available as POD charts 2-8 weeks in advance of the traditional NOAA chart. For more information on POD charts and how to obtain them, visit the website https://nauticalcharts.noaa.gov/publications/ChartCatalog/MapSelect.html.

7. NAUTICAL CHART NEW EDITION DATE INFORMATION

New chart editions cancel former editions. They include corrections published in Weekly NTMs and LNMs through the Notice editions printed on each chart and important corrections from other sources. Mariners are warned against

the use of obsolete charts as new editions contain information essential to safe navigation. All authorized sales agents are listed on the NOAA Office of Coast Survey website: https://www.nauticalcharts.noaa.gov/publications/print-agents.html. NOAA has a worldwide network of authorized nautical chart sales agents. Some nautical agents also sell NGA public sale nautical charts covering the entire world.

NOAA nautical charts have traditionally shown a date in the lower left corner of the chart. In the past, that was the date through which corrections had been made to the new edition of the chart from the Notice to Mariners, published weekly by NGA and the LNMs issued weekly by each Coast Guard district.

The weekly U.S. Notice to Mariners (NTM), published by NGA, is available on the Internet (http://msi.nga.mil/NGAPortal/MSI.portal?_nfpb=true&_pageLabel=msi_portal_page_61), weeks before the issue date of that publication. This has resulted in a significant difference in the publication dates of the latest NTM data and the latest LNM data available when a new edition of a chart is prepared for printing. Due to this difference, NOS has established a policy in which the edition date of a chart will consist of only the month and year of that chart's printing. Separate dates will be shown on the chart indicating the date of the NGA weekly NTM and the date of the latest Coast Guard LNMs corrections that has been applied to the chart. To keep the new edition fully corrected mariners will need to check NGA's NTM and the Coast Guard LNM back to the dates printed on the chart.

Chart users are reminded that NOAA print-on-demand charts are custom printed when ordered by authorized chart agents and include all of the latest NTMs and LNMs corrections issued since the last new edition was published. Print-on-demand charts also indicate separate dates for the latest NTMs and LNMs affecting that updated product.

8. NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY (NGA)

NGA provides hydrographic, navigational, topographic and geodetic data, charts, maps and related products and services to the Armed Forces, other Federal agencies, the U.S. Merchant Marine and mariners for areas outside the United States. Publications include Sailing Directions (pilots), List of Lights, Table of Distances, Radio Navigational Aids, International Code of Signals, American Practical Navigator (Bowditch) and weekly NTMs. ~~NIMA charts and publications are listed in the Hydrographic Regional Catalog, Volumes I through X.~~ Both NOAA/NOS and NGA produced products are available from NOAA/NOS Aeronautical and Chart Sales Agents. For more information, consult their website at: http://egsc.usgs.gov/nimamaps/

NGA is continuing a program to gradually convert the depths and heights on nautical charts and in publications to the metric system. Although many facsimile reproductions of foreign charts have shown depths and heights in meters for several years, NGA originated charts began to show depths and heights in meters instead of fathoms and/or feet in January 1970. Depths are shown in meters (usually in meters and decimeters to 21 meters) and boldly stated in the chart title and in purple colored type in the outer chart borders. A conversion table from meters and decimeters to fathoms and feet is also carried on each chart.

9. GEOGRAPHIC NAME USAGE FOR NGA PRODUCTS

Whenever possible, names used on NGA publications are in the form approved by the U.S. Board of Geographic Names. Generally, local official spellings are used for those features entirely within a single sovereignty, while names of countries and those features which are common to two or more countries or which lie beyond single sovereignty, carry Board-approved conventional spellings (i.e.: names in common American usage). When alternate names would be of value to the user, they may be shown for informational purposes within parentheses. Important individual name changes are made to all revised charts as the opportunity permits. Geographic names, or their spelling, do not necessarily reflect recognition of the political status of an area by the U.S. Government.

PUBLICATIONS

1. COAST GUARD LOCAL NOTICES TO MARINERS (LNMs)

Mariners should rely on LNMs as their primary source of information, with the Broadcast Notices to Mariners (BNM) providing information of such importance that it must be announced immediately. Once the information is published in the LNM usually it will not be included in a BNM. The LNM is published weekly. Although individual articles refer to specific charts and/or publications, it is the responsibility of users to decide which of their charts and publications require correction. The following is a list and brief description of each section:

a. Section I: SPECIAL NOTICE contains information of a special nature that affects the marine environment. New information is published in this section when first received and after four weeks it is moved to the General Notice section if still pertinent. Articles such as DGPS off-air periods lock closures, and changes in regulations pertaining to pilotage and other marine related regulations will be contained in this section.
b. Section II: DISCREPANCIES - DISCREPANCIES CORRECTED contains a tabulation of all discrepancies in aids to navigation and those which have been corrected from the last published list.
c. Section III: TEMPORARY CHANGES - TEMPORARY CHANGES CORRECTED contains information similar to Section II but which is of a temporary nature such as relocating aids for dredging operations or a temporary buoy replacing a destroyed structure or missing buoy.
d. Section IV: CHART CORRECTIONS lists all corrections to Federal and privately maintained aids to navigation, as well as NOS chart corrections. This section is the heart of the Local Notice to Mariners. Each chart will be listed separately, in ascending order. Thus, a single correction might appear several times; once for each chart covering the affected area. An explanation of the format of the Chart Correction Section will be in each issue of the LNM.
e. Section V: ADVANCE NOTICE OF CHANGES IN AIDS TO NAVIGATION contains advance notice of approved projects which are scheduled for a certain date of accomplishment.
f. Section VI: PROPOSED CHANGES IN AIDS TO NAVIGATION contains notices of projects conceived and in the planning stage, but which have not been approved or scheduled for accomplishment.
g. Section VII: GENERAL contains information on new publications, channel conditions, obstructions, dangers, salvage operations, bridges, regattas and other items of general concern to the maritime community. Information on bridge discrepancies and lockage notices is in the front of this section, with other information placed geographically in order.
h. Section VIII: CORRECTIONS TO LIGHT LIST, VOLUME VI; PACIFIC COAST AND PACIFIC ISLANDS contain all of the corrections to the Eleventh Coast Guard District's Aids to Navigation that are included in the Light List.
i. ADDITIONAL ENCLOSURES contains items such as a listing of dredging operations, marine events, tabulations, chartlets, public notices and other pre-printed material.

The Coast Guard District LNM is a free publication. It is available via the internet at: http://www.navcen.uscg.gov/?pageName=lnmMain. The LNM and BNMs are the primary means the Coast Guard has for passing important information concerning navigation safety.

2. U.S. NOTICE TO MARINERS

The U.S. Notice to Mariners is published by NGA and will contain only those chart corrections of interest to ocean going vessels. The NTM is issued free of charge, however, subscribers outside the continental United States must pay for shipping costs. The NTM and other marine information are also available at the following website: http://msi.nga.mil/NGAPortal/MSI.portal. Subscriptions are limited to bona fide mariners who, when submitting requests, must include a sound justification for the worldwide coverage provided by this publication.

3. SUMMARY OF CORRECTIONS

Weekly NTMs chart and publication corrections are compiled in the Summary of Corrections published by NGA. Those corrections effective since July 5, 1975 are included in Volume 4 of the Summary of Corrections. All corrections subsequent to that date, which remains effective, appear in each issue. The Summary of Corrections, Volume 5, contains corrections for World and Ocean Basin Charts, U.S. Coast Pilots, Sailing Directions, Fleet Guides and other miscellaneous publications. Each volume is published semiannually and may be purchased individually or on an annual subscription basis. The Summary of Corrections is not posted to their web site as PDF files due to their enormous file sizes, often exceeding 200MB per Volume when including the graphic corrections. However, all of the information contained within the five *Summary of Corrections* Volumes is available by database query from the Notice to Mariners section.

4. COAST PILOTS

The NOS Coast Pilot is a series of nine nautical books that cover a wide variety of information important to navigators of U.S. coastal and intercoastal waters, and the waters of the Great Lakes. Most of this book information cannot be shown graphically on the standard nautical charts and is not readily available elsewhere. The subjects in the Coast Pilot include, but are not limited to: Channel descriptions, anchorages, bridge and cable clearances,

currents, tide and water levels, prominent features, pilotage, towage, weather, ice conditions, wharf descriptions, dangers, routes, traffic separation schemes, small craft facilities and Federal regulations applicable to navigation. Changes to the Coast Pilot that affect the safety of navigation and are reported to NOS in the interim period between editions are published in the Local and Weekly Notices to Mariners. An online version of the Coast Pilot is on the following NOS website: https://nauticalcharts.noaa.gov/publications/coast-pilot/index.html.

NOTE: Coast Pilot 7, Pacific Coast: California, Oregon, Washington and Hawaii should be utilized by anyone transiting the Pacific Coast or Pacific Islands.

5. TIDE AND TIDAL CURRENT TABLES

Tide Tables and Tidal Current Tables are prepared by NOAA NOS and published by a NOAA approved contractor in advance of the year for which they are prepared. Tide Tables include predicted times and heights of high and low water for every day in the year for a number of reference stations, and differences for obtaining similar predictions for other places. Tide Tables also include other useful information such as a method of obtaining heights of tide at any time, local mean time of sunrise and sunset for various latitudes, reduction of local mean time to standard time and time of moonrise and moonset for various ports.

Tidal Current Tables include daily predictions of the times of slack water and the times and velocities of flood and ebb currents for a number of waterways; together with differences for obtaining predictions for other places. They also include information on methods for obtaining the velocity of current at any time, duration of slack, coastal currents, wind currents, combination of currents and current diagrams.

The Tides and Tidal Current Tables are also available, free of charge, at the following website: http://tidesandcurrents.noaa.gov/

6. OTHER GOVERNMENT PUBLICATIONS FOR THE MARITIME COMMUNITY

The following lists some of the more popular Government publications available for the maritime consumer. The publications are grouped according to the source from which they may be ordered and prices are subject to change. However, many are free. It is recommended that you verify the current price with the source before ordering.

For more information on the following publications call: (800) 368-5647 or visit the U.S. Coast Guard Boating Safety Resource Center website: http://www.uscgboating.org/

a. BOATING SAFETY CIRCULARS: A periodic newsletter that covers safety topics of interest to boat manufacturers, dealers, boat owners and boating educators and writers.
b. FEDERAL REQUIREMENTS FOR RECREATIONAL BOATS: A booklet for the boat operator that explains Coast Guard boating regulations and equipment requirements.
c. THIS IS THE SEAL OF SAFETY - GET A FREE VSC: A pamphlet describing the Coast Guard Auxiliary Vessel Safety Check - a free safety check of your boat's safety equipment.
d. MODIFICATIONS: A pamphlet that explains the coloring scheme for channel buoys and navigation markings.
e. VISUAL DISTRESS SIGNALS: A pamphlet describing the different types of distress signals for recreational boats and the water on which they are required.
f. JOIN THE COAST GUARD AUXILIARY: A pamphlet outlining the activities of the U.S. Coast Guard Auxiliary and the basic eligibility requirements for membership.
g. SHIPSHAPE IS FIRE SAFE: A pamphlet that describes precautions a boater can take to avoid fires and explosions on recreational boats.
h. BOATING SAFETY HOTLINE: A brochure that describes the services available to recreational boaters on the Coast Guard's Boating Safety Hotline (800) 368-5647.

The following are textbooks used in Coast Guard Auxiliary public education courses. Boaters are encouraged to get the textbooks by taking the courses (same as the title). Class prices vary from $15.00 to $70.00. You can find out when the courses will be given in your area by calling toll-free (800) 336-2628 or visiting the website: http://www.cgaux.org/boatinged/ . The text books may be ordered from: Coast Guard Auxiliary National Board, Inc., 9949 Watson Industrial Park, St. Louis, MO 63126.

a. BOATING SKILLS & SEAMANSHIP: Text covers boating laws and regulations, boat handling, navigation rules and much more.

b. SAILING AND SEAMANSHIP: Same basic text as above, except that it is geared more for sailboats.
c. ADVANCED COASTAL PILOTING: A basic navigation text for the small boat owner. It explains how to read charts, plot courses, predict tides, use electronic navigation aids, etc.

The following is a correspondence course that may be obtained from: U.S. Government Bookstore, World Savings Building, 720 N. Main Street, Pueblo, CO 81003 or by calling (719) 544-3142.

a. THE SKIPPER'S COURSE: A correspondence course in recreational boating safety.

The following publications are available by writing the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20401, (202) 512-0132:

a. NAVIGATION RULES, INTERNATIONAL AND INLAND (COMDTINST M16672.2D): Contains requirements for navigation lights, shapes, sound signals and maneuvering rules that must be followed by U.S. vessels navigating the high seas and U.S. inland waters. This book is required by law to be carried on vessels (both commercial and recreational) 12 meters (39.4') or more in length. It is also available as a download from the U.S. Coast Guard Navigation Center at the following site: http://www.navcen.uscg.gov/index.php?pageName=navRuleChanges
b. LIGHT LISTS: A comprehensive listing of the official names, locations and characteristics of all aids to navigation maintained by the Coast Guard (in seven volumes). It is available as a download from the U.S. Coast Guard Navigation Center at the following site: http://www.navcen.uscg.gov/index.php?pageName=lightLists
c. NAUTICAL ALMANAC: Contains astronomical data used by navigators in celestial navigation.

CHAPTER X

LAW ENFORCEMENT

COAST GUARD LAW ENFORCEMENT

One of the Coast Guard's primary missions is maritime law enforcement on the high seas and waters subject to federal statute. These statutes cover the broad range of Coast Guard authorities, including, but not limited to, drug smuggling, illegal immigration, safety, water pollution and fisheries. To enforce these laws, the Coast Guard is empowered to board and inspect any and all vessels within U.S. waters. These boardings are usually conducted while vessels are underway, which has proven to be the most effective method to insure compliance with federal regulations.

BOARDINGS BY THE COAST GUARD

Boardings are not necessarily based on suspicion that a violation has occurred or exists on board. Their purpose is to prevent and suppress violations. All Coast Guard officers and petty officers are federal law enforcement officers and may board any U.S. vessel anywhere and at anytime; so do not be alarmed if boarded at night or unexpectedly.

WHAT TO EXPECT DURING A BOARDING

There are standard procedures the Coast Guard follows before boarding. Remember, Coast Guard personnel will always properly identify themselves, will always be in uniform, coveralls or survival suit displaying Coast Guard insignia, and will normally be in a marked Coast Guard or Navy vessel flying the Coast Guard Ensign. Furthermore, the boarding team will be armed. Coast Guard boarding teams may also partner with other government agencies, conducting boarding from those agencies small boats. The examination is usually limited to determining the vessel's status and checking for compliance with federal laws and regulations. If during an inspection, a reasonable suspicion develops that the vessel has been engaged in criminal activity, the boarding officer may investigate further. If the vessel is subject to a customs inspection, the boarding officer may conduct a thorough search of the entire vessel. This customs inspection is not a substitute for vessels subject to a Customs and Border Protection Office of Field Operations (OFO) pier side inspection. Vessels requiring OFO inspection will still need to comply with legal procedures for vessel arrivals and admittance. Cooperation will make the entire process move smoothly and quickly.

OPERATING A VESSEL WHILE INTOXICATED

Federal regulations went into effect in 1988 that provide for civil and/or criminal penalty for operating a vessel while intoxicated. These regulations pertain to both recreational and commercial vessels; however, the provisions are slightly different for the two categories.

1. Recreational vessels: As applied to recreational vessels "operator" is defined as the individual who has an essential role in the operation of a vessel underway, including but not limited to navigation of the vessel or control of the vessel's propulsion system. An individual is considered intoxicated when:
   a. The individual has an alcohol concentration of .08% by weight or more in their blood.
   b. The effect of the intoxicant consumed by the individual on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation.
   c. If the operator is intoxicated, the voyage may be terminated for unsafe condition and the operator is subject to civil penalties up to $1,000 or criminal penalties up to $5,000 and/or one year in prison.

2. Commercial vessels: The principle difference in the enforcement of these regulations for operators of commercial vessels are:
   a. An individual is considered intoxicated if the blood alcohol concentration is .04% by weight or more in the blood.
   b. All crewmembers, including a watchstander that is not a regular member of the crew, are considered to be operating a vessel. This does not apply to commercial fishing vessels.
   c. If the operator is intoxicated, the voyage may be terminated for unsafe condition and the operator is subject to civil penalties up to $1,000 or criminal penalties up to $5,000 and/or one year in prison.

POSSESSION OF CONTROLLED SUBSTANCES

The Coast Guard enforces federal law on possession of controlled substances, including marijuana, even in states which have legalized these controlled substances. If found in possession of an unauthorized federally controlled substance, the substance will be seized and civil or criminal enforcement options will be pursued.

LAW ENFORCEMENT FOR RECREATIONAL BOATS

Coast Guard vessels are identified by a distinctive stripe, the words U.S. COAST GUARD on the side of the vessel, the Coast Guard ensign and uniformed personnel. Coast Guard law enforcement personnel may also be found aboard other vessels displaying the Coast Guard ensign and will be wearing sidearms or other firearms in the performance of their duties. A vessel underway, upon being hailed by a Coast Guard vessel, is required to stop immediately and lay-to or maneuver in such a way as to permit the boarding officer and team to come aboard. 18 U.S.C. 2237 applies criminal penalties to a master, operator, or person in charge of a vessel subject to the jurisdiction of the United States, who knowingly and intentionally fails to obey an order to heave to. Furthermore, this statute makes it unlawful for any person aboard a vessel subject to the jurisdiction of the United States intentionally to forcibly resist or interfere with a boarding or to provide materially false information during the course of the boarding. A civil penalty up to $500 may be imposed by the Coast Guard for failure to:

1. comply with numbering requirements;

2. comply with equipment requirements;

3. report a boating accident; or

4. comply with other Federal regulations.

A civil penalty of up to $1,000; imprisonment of not more than 1 year; or both; can result for the criminal offense of NEGLIGENT OR GROSSLY NEGLIGENT OPERATION of a vessel. The following are some examples of actions that may constitute negligent or grossly negligent operation under certain circumstances:

1. operating in swimming areas;

2. operating while under the influence of alcohol or drugs;

3. excessive speed in the vicinity of other vessels or a designated channel;

4. hazardous water skiing practices;

5. operating in a clearly dangerous area;

6. bow, seatback, gunwale or transom riding.

A civil penalty of up to $5,000 can result for failure to comply with the Inland Rules of the Road (Inland Navigation Rules Act of 1980).

TERMINATION OF USE

A Coast Guard boarding officer who observes a recreational boat operating in an UNSAFE CONDITION, specifically defined by law or regulation and determines that an ESPECIALLY HAZARDOUS CONDITION exists, may direct the operator to take immediate steps to correct the condition, including terminating the voyage. The specific unsafe conditions for which termination may be imposed are:

1. Insufficient or inadequate lifesaving equipment, i.e., PFDs, immersion suits, or survival craft, onboard. Only lifesaving equipment that is in serviceable condition and is properly serviced and stored should be counted towards a vessel's required equipment;
2. Inadequate firefighting equipment;
3. Instability resulting from overloading, improper loading or lack of freeboard;
4. Failure to display proper navigation lights between sunset and sunrise or during periods of reduced visibility;
5. Fuel leakage from either the fuel system or engine;
6. Excessive accumulation of fuel in the bilges;
7. Inadequate ventilation for fuel and engine compartments;
8. Inadequate backfire flame control; and
9. Operating under the influence of alcohol or dangerous drugs.

An operator who refuses to comply with the order to terminate unsafe use of the boat may be cited for failure to comply with the directions of a Coast Guard boarding officer, as well as for the specific statutory or regulatory violation or provisions which were the basis for the termination order.

COMPLAINTS CONCERNING BOARDINGS OR BOARDING OFFICERS

When conducting boardings or other law enforcement activities, the Coast Guard strives to maintain a proper balance between the apparent intrusion into the normal activities of law-abiding individuals and their mission of Federal law enforcement. Occasionally, the Coast Guard will receive complaints that a boarding was conducted improperly. These complaints usually involve a very small percentage of the total number of boardings conducted each year. Nevertheless, any complaint concerning boardings or boarding officers will be investigated. Complaints should normally be directed to the Violation Case Coordination Center (VCCC) at:

LANT-542
431 Crawford Street
Portsmouth, VA 23704
(757) 398-6217

AMERICA'S WATERWAY WATCH

You can help the Coast Guard keep our waters and ports safe. Boaters should maintain situational awareness and be on the lookout for suspicious individuals and vessels. To find out more information, including who to contact, visit http://americaswaterwaywatch.uscg.mil/Downloads.html

CHAPTER XI

BOATING SAFETY

Most of the material in this section is taken from, "Federal Requirements and Safety Tips for Recreational Boats," which is produced by the United States Coast Guard Office of Boating Safety. More information about recreational boating safety can be obtained by visiting the Coast Guard Boating Safety web site at http://www.uscgboating.org/.

AWARENESS ITEMS:

1. SURVIVING IN THE WATER

Wear a lifejacket!!! Lifejackets give you a fighting chance of survival and are required to be onboard all vessels.

Avoid Cold Water Shock and Cold Incapacitation: Cold water is anything less than 70 degrees Fahrenheit. Sudden immersion in cold water can induce the gasp reflex, hyperventilation or even cardiac arrest. Because of this, many people drown in the first minute in the water. If you can catch your breath and keep yourself afloat you have about 10-15 minutes before your muscles will become so cold they stop working. If you must enter the water, here are few things to follow:

- Wear a lifejacket;
- Cover your head if possible and enter the water slowly, feet first;
- Keep your head out of the water if at all possible;
- Do not try to swim to the shore. It's always farther away than it looks; and
- Assume the H.E.L.P. position (Heat Escape Lessening Position).

Use the Heat Escape Lessening Posture (H.E.L.P.): This technique can reduce your heat loss and increase your survival time by approximately 50 percent. The H.E.L.P position is only possible when wearing a flotation device. To assume the H.E.L.P. position:

- Hold the inner side of your arms tightly against the sides of your chest;
- Press your thighs together;
- Cross your feet; and
- Raise your knees to your chest.

Stay Afloat: It is common belief that someone dressed in heavy clothing or waders will sink immediately if they fall overboard. This is not true. Air trapped in clothing provides considerable flotation, and bending the knees will trap air in waders, providing additional flotation. To stay afloat follow these rules:

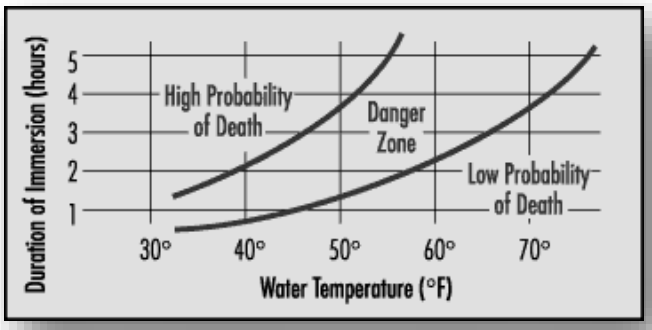
- Remain calm, do not thrash about or try to remove clothing or footwear. This leads to exhaustion, heat loss and loss of the air in your clothing that could keep you afloat;
- Keep your lifejacket on;
- Keep your knees bent; and
- Float on your back and paddle slowly to safety.

Hypothermia: Hypothermia is the abnormal lowering of internal body temperature. Immersion in water speeds the loss of body heat and can lead to hypothermia. If you are not wearing a lifejacket in water less than 70 degrees you will probably succumb to cold water immersion and drown long before hypothermia could set in.

To reduce the effects of hypothermia get in or on the boat and try to get as much of your body out of the water as possible. Outboard powered vessels less than 20 feet long and built after 1978 are designed to support you even if full of water or capsized. If you can't get in the boat a lifejacket will enable you to keep your head out of the water.

It may be possible to revive a drowning victim who has been underwater 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. Start CPR immediately and get the victim to a hospital as quickly as possible. DO NOT TRY TO WARM A HYPOTHERMIC PERSON BY RUBBING THEM OR MAKING THEM MOVE AROUND. THIS COULD KILL THEM. Rather, keep the victim still and cover them in dry insulation like a sleeping bag, blankets or other clothing. Carry them very carefully and slowly to a place where they can get medical attention.

In the chart below, the Danger Zone indicates where safety precautions and appropriate behavior (adopting H.E.L.P) can increase your chances of survival when immersed in cold water.



2. AVOID ALCOHOL CONSUMPTION AND DRUG USE WHILE BOATING

Did you know?

- A boat operator is likely to become impaired more quickly than a car driver, due to the effects of sun, wind, vibration, noise and heat!
- The use of alcohol is involved in about a third of all recreational boating fatalities.
- It is illegal to operate a boat while under the influence (BUI) of alcohol or drugs in every state and the Coast Guard enforces a federal law that prohibits BUI. The federal law pertains to ALL boats (from canoes and rowboats to the largest ships) — and includes foreign vessels that operate in U.S. waters, as well as U.S. vessels on the high seas.
- The penalties for BUI can include large fines, revocation of operator privileges and serious jail terms!

Tips for Avoiding BUI

Alcohol can turn a great day on the water into the tragedy of a lifetime. Consider these alternatives to using alcohol while afloat:

- If you plan to drink or use recreational drugs then have a sober person be the "designated operator;"
- Bring a variety of cool drinks (sodas, water, iced tea, or non-alcoholic beer) and plenty of food & snacks;
- Wear clothes that will help keep you and your passengers cool;
- Plan to limit your trip to a reasonable time to avoid fatigue. Remember that it is common to become tired more quickly on the water;
- If you want to make alcohol or drugs part of your day's entertainment, plan to have a party ashore at a location where you'll have time between the fun and getting back into your car or boat;
- If you dock somewhere for lunch or dinner and drink alcohol with your meal, wait a reasonable time (estimated at a minimum of an hour per drink) before operating your boat; and
- Having no alcohol or drugs while aboard is the safest way to enjoy the water — intoxicated passengers are also at risk of injury, falling overboard or distracting the operator.

In all simple possession cases involving a personal use quantity of an unauthorized controlled substance, USCG law enforcement officers will enforce federal law, even in states that have legalized a controlled substance. For example, where a state has legalized recreational or medicinal use of marijuana, possession of marijuana remains a violation of federal law. USCG law enforcement personnel will seize any controlled substance discovered and may pursue civil penalties and/or criminal prosecution.

3. AVOIDING CARBON MONOXIDE POISONING

What is Carbon Monoxide? Carbon monoxide (CO) is a colorless, odorless and tasteless gas. It is produced when a carbon-based fuels burn, such as gasoline, propane, charcoal or oil. Sources on your boat may include engines, gas generators, cooking ranges and space heaters and water heaters.

Why is it so dangerous?

You cannot see, smell, or taste CO; however, it enters your bloodstream through the lungs, blocking the oxygen your body needs. Prolonged exposure to low concentrations or very quick exposure to high concentrations can kill you!

Early symptoms of CO poisoning include irritated eyes, headache, nausea, weakness and dizziness. They are often confused with seasickness or intoxication, so those affected may not seek the medical attention they need.

Altitude, physical exertion, certain health-related problems and age will increase the effects of CO. Persons who are exposed to high concentrations of cigarette smoke, consume alcohol or have lung/ heart problems are particularly susceptible to an increase in the effects from CO. However, anyone can be affected.

How can it accumulate?
Carbon monoxide can accumulate **anywhere in or around your boat**. CO can affect you whether you're underway, moored or anchored?

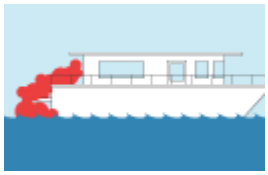
Inadequately ventilated canvas enclosures.

Exhaust gas trapped in enclosed places.

Blocked exhaust outlets.

Another vessel's exhaust.
CO from the boat docked next to you can be just as deadly.

"Station wagon effect" or back drafting.



At slow speeds, while idling, or stopped. Be aware that CO can remain in or around your boat at dangerous levels even if your engine or the other boat's engine is no longer running!

Emergency Treatment for CO Poisoning
CO poisoning or toxicity is a life-threatening emergency that requires immediate action. The following is a list of things that should be done if CO poisoning is suspected. Proceed with caution. The victim may be in an area of high CO concentration, which means you or others could in danger from exposure to CO.

- Evaluate the situation. If possible shut off potential sources of CO, correct ventilation problems/repair exhaust problems and ventilate the area.
- Move affected person(s) to a fresh air environment where you can better observe them.
- SEEK MEDICAL ATTENTION!

- Administer oxygen, if available. If the victim is not breathing, perform rescue breathing or approved cardiopulmonary resuscitation (CPR) until medical help arrives.

OPERATOR'S RESPONSIBILITIES

As the operator and/or owner of a vessel you are responsible not only for the prudent and safe operation of your boat, but also for the lives and safety of your passengers and others around you. Become familiar with federal, state and local rules and regulations regarding safe boat operation and try to learn all aspects of good seamanship. If you don't feel comfortable with your knowledge in seamanship, or if you want to brush up on your skills, you may wish to take a safe boating course offered by the Coast Guard Auxiliary, the United States Power Squadrons or a number of online vendors. Information on some of the courses offered by the Coast Guard Auxiliary is included in Chapter VI of this publication. For more information on classes available in your area, check the Boat/US Course line at (800) 336-BOAT (2628) or on the Coast Guard Boating Safety website: www.uscgboating.org

Things to remember to keep yourself and others safe:

- All required safety equipment is on board, maintained in good condition and you know how to use these devices;
- Make sure the boat is in top operating condition. The boat should be free of fire hazards and have clean bilges;
- Keep an eye out for changing weather conditions and act accordingly;
- File a float plan with a relative or friend telling them when and where you will be;
- Know your location and know where you are going;
- Have a complete knowledge of the operation and handling characteristics of your boat;
- Maintain a safe speed and proper lookout at all times to avoid collision;
- Know and practice the Rules of the Road (Navigational Rules);
- Know and obey federal and state regulations and waterway markers; and
- Maintain a clear, unobstructed view forward at all times. "Scan" the water back and forth; avoid "tunnel" vision. Most boating collisions are caused by inattention. *You are the key to water safety!*

5. FLOAT PLAN

Play it safe, keep a stack of float plan forms on hand. Leave a copy with a friend, relative or local marina before heading out on the water. In case of an emergency, pertinent information will be right at their fingertips to enable them to contact the local marine police or Coast Guard with necessary details. Remember to notify the people you gave a float plan to that you have returned. That way the float plan can be "closed out" and nobody will go searching for you.

FLOAT PLAN EXAMPLE

1. Name and phone number of operator and person reporting:
   Operator:_____ Reporting person:_____
2. Boat description:
   Type:_____ Color:_____ Trim:_____
   Registration Number:_____ Name:_____ Make:_____
   Length:_____ Other pertinent information:_____
3. Persons aboard:

Name:	Age:	Address and Telephone No.
a. _____	_____	_____
b. _____	_____	_____
c. _____	_____	_____
d. _____	_____	_____
e. _____	_____	_____
f. _____	_____	_____

4. Do any of the persons aboard have a medical problem? YES / NO
   If so, what _____
5. Propulsion:
   Type:_____ HP:_____ Number:_____ Fuel Capacity:_____ Fuel Type:_____

6. Survival Equipment: (check as appropriate)
   Lifejackets_____ Flares_____ Mirror_____ Smoke signals_____ Flashlight_____ Food_____
   Water_____Paddles_____ Anchor_____ Raft or dinghy_____ EPIRB_____
   Other_____
7. Radio: yes/no
   Type:_____
Frequencies:_____
8. Cellular Phone: yes/no Cell Phone Number _____
9. Trip Plan:
Depart From: _____
Departure Date: _____ Departure Time: _____
Destination:
_____
Arrival Date: _____Arrival Time:_____
If vessels has not arrived /returned by: Date: _____ Time: _____
Call the Coast Guard or local authority at the following number(s):
_____

10. Remarks:
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

EQUIPMENT REQUIREMENTS

"Coast Guard Approved Equipment" has been approved by the Commandant of the U.S. Coast Guard and has been determined to be in compliance with U.S. Coast Guard specifications and regulations relating to materials, construction and performance. The "Equipment List" is published by the Coast Guard and contains a long listing of items approved, certified or accepted under Marine Inspection and Navigation Laws. A current electronic edition is available for searches at http://cgmix.uscg.mil/equipment.

1. LIFEJACKETS (PERSONAL FLOTATION DEVICES)

All recreational boats must carry **a Coast Guard approved wearable lifejacket** (formerly Type I, II, III or V); **in good and serviceable condition; of proper size for each person aboard; and approved for the kind of activity you are doing** (read the label on the jacket.). Any boat 16 feet or longer (except canoes and kayaks) must also carry **one throwable PFD** (formerly Type IV). A Type V is a special use lifejacket that provides performance as either a Type I, II or III (as marked on its label) and must be used according to the label requirements.

Accessibility:

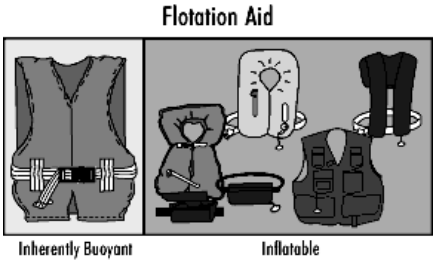
- Wearable lifejackets must be ***readily*** *accessible*. That means you must be able to get them in a reasonable amount of time in an emergency.
- They should not be stowed in plastic bags, in closed compartments or have other gear stowed on top of them.
- **The best lifejacket is the one you will wear.**
- Wear your lifejacket at all times when on the boat It will only save your life if you wear it..
- Throwable devices must *be* ***immediately*** *available* for use (i.e. ***not*** stored in a compartment).

Mandatory Lifejacket Wear
Federal law requires that children under 13 years old must wear Coast Guard approved lifejackets while the vessel is underway, unless the children are below decks or in an enclosed cabin. Most states also require you to wear a lifejacket when operating a personal watercraft (i.e. Jet Ski), while being towed, and in other circumstances. Check your state laws to make sure you know what they are.

Types of Lifejackets

A TYPE I, or OFF-SHORE LIFEJACKET provides the most buoyancy. It is effective for all waters, especially open, rough or remote waters where rescue may be delayed. It is designed to turn **most** unconscious wearers in the water to a face-up position.

A TYPE II, or NEAR-SHORE BUOYANCY VEST is intended For calm, inland water or where there is a good chance of quick rescue. Type II, inherently buoyant lifejackets will turn ***some*** unconscious wearers to a face-up position in the water, but the turning is not as pronounced as a Type I. Type II inflatable lifejackets will turn an unconscious person to the face-up position as well as a Type I foam lifejacket.



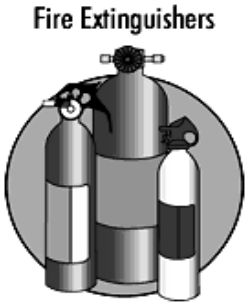
A TYPE III, or FLOTATION AID is good for conscious users in calm, inland water, or where there is a good chance of quick rescue. It is designed so wearers can place themselves in a face-up position in the water. The wearer may have to tilt their head back to avoid turning face down in the water. The Type III inherently buoyant foam vest has the same minimum buoyancy as a Type II inherently buoyant lifejacket. Type III lifejackets come in many styles, colors, and sizes and are generally the most comfortable type for continuous wear. Float coats, fishing vests and vests designed with features suitable for various sports activities are examples of Type III lifejackets.

A TYPE IV, or THROWABLE DEVICE is intended for calm, inland water with heavy boat traffic, where help is always present. It is designed to be thrown to a person in the water and grasped and held by the user until rescued - It is *not* designed to be worn. Type IV devices include buoyant cushions, ring buoys and horseshoe buoys.

A TYPE V, or SPECIAL USE DEVICE is intended for specific activities and may be carried instead of another lifejacket only if used according to the approval condition(s) on its label. A Type V lifejacket provides performance as either a Type I, II or III (as marked on its label). If the label says that it is "approved only when worn" then the lifejacket must be worn, except for persons in enclosed spaces and used in accordance with the approval label, to meet carriage requirements. Some Type V devices provide significant hypothermia protection. Varieties include deck suits, work vests and board sailing vests.

NOTE: For more information on lifejackets see: http://www.uscgboating.org/recreational-boaters/life-jacket-wear-wearing-your-life-jacket.php

2. FIRE EXTINGUISHERS



Fire on a boat is one of a skipper's greatest fears. All boats *should* carry readily accessible approved fire extinguishers. Coast Guard approved fire extinguishers are ***required*** on boats where a fire hazard could be expected from the motors or the fuel system. Extinguishers are classified by a letter and number symbol. The letter indicates the type of fire the unit is designed to extinguish (Type B, for example, are designed to extinguish flammable liquids such as gasoline, oil and grease fires). The number indicates the relative size of the extinguisher (the higher the number, the larger the extinguisher).

Coast Guard approved extinguishers required for boats are hand portable, either B-I or B-II classification and have a specific marine type mounting bracket. The special bracket is required to securely hold the extinguisher in a moving boat. It is recommended the extinguishers be mounted in a readily accessible position, away from the areas where a fire could likely start such as the galley or the engine compartment.

Extinguisher markings can be confusing because extinguishers can be approved for several different types of hazards. Look for the part of the label that says "Marine Type USCG." Make sure Type B is indicated.

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

a. Inboard engines are installed;
b. There are closed compartments and compartments under seats where portable fuel tanks may be stored;
c. There are double bottoms not sealed to the hull or which are not completely filled with flotation materials;
d. There are closed living spaces;
e. There are closed stowage compartments in which combustible or flammable materials are stored; and
f. There are permanently installed fuel tanks. (Fuel tanks secured so they cannot be moved in case of fire or other emergencies are considered permanently installed. There are no gallon capacity limits to determine if a fuel tank is portable. If the weight of a fuel tank is such that persons on board cannot move it, the Coast Guard considers it permanently installed).

Fire Extinguisher Maintenance

Inspect extinguishers monthly to make sure that:

a. Seals and tamper indicators are not broken or missing;
b. Pressure gauges or indicators read in the operable range; (**NOTE**: CO_2 extinguishers do not have gauges.)
c. There is no obvious physical damage, corrosion, leakage or clogged nozzles; and
d. Weigh extinguishers annually to assure that the minimum weight is as stated on the extinguisher label.

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

Required Number of Fire Extinguishers

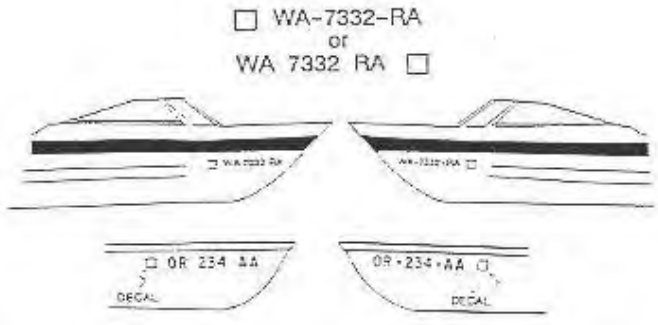
The number of fire extinguishers required on a recreational boat is based on the overall length of the boat. The following chart lists the number of extinguishers that are required. In the case where a Coast Guard approved pre-engineered fire extinguishing system is installed for the protection of the engine compartment, the required number of units may be reduced in accordance with the chart.

Minimum number of hand portable fire extinguishers required:		
Vessel Length	**No Fixed System**	**With Approved Fixed Systems**
Less than 26'	1 B-1	0
26' to less than 40'	2 B-1 or 1 B-II	1 B-I
40' to 65'	3 B-I or 1 B-II and 1 B-I	2 B-1 or 1 B-II

Approved extinguishers must be inspected and tagged by a recognized fire extinguisher servicing company within one (1) year of the examination, to be credited as one of the required fire extinguishers. The pressure gauge alone is not an accurate indicator that halon extinguishers are full.

3. REGISTRATION, NUMBERING AND DOCUMENTATION

Vessel Documentation with the State
All undocumented vessels equipped with propulsion machinery operating on navigable waters of the U.S., must be registered in the state of principal use. A certificate of number will be issued upon registering the vessel with the state. These numbers must be displayed on your vessel. Numbers must be painted or permanently attached to each side of the forward half of the vessel. The state validation stickers must be affixed within six inches of the registration number. With the exception of the vessel fee decal, 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 other than "I" or a number other than "1".

The owner/operator of a vessel **MUST** carry a valid certificate of number whenever the vessel is in use. When moved to a new state of principal use, the certificate is valid for 60 days. Check with your state boating authority for numbering requirements. Some states require all vessels to be numbered, regardless of propulsion.

The owner of a vessel must notify the agency which issued the certificate of number within 15 days if:
1. The vessel is transferred, destroyed, abandoned, lost, stolen or recovered.
2. The certificate of number is lost, destroyed or the owner's address changes.

If the certificate of number becomes invalid for any reason, it must be surrendered in the manner prescribed to the issuing authority within 15 days.

The following are the state offices within the Eleventh Coast Guard District that regulate boating laws and registration.

Arizona
Game and Fish Department
5000 West Carefree Highway
Phoenix, AZ 85086-5000
(623) 236-7380

California
Department of Parks & Recreation
Division of Boating & Waterways
One Capitol Mall, Suite 410
Sacramento, CA 95815
(916) 263-4330

Nevada
Department of Wildlife
1100 Valley Road
Reno, NV 89512
(775) 688-1548

Utah
Department of Natural Resources
Division of Parks & Recreation
1594 W. North Temple Suite 116
P.O. Box 146001
Salt Lake City, UT 84114-6001
(801) 440-5106

Vessel Documentation with the Coast Guard
The Coast Guard issues a Certificate of Documentation. With a few exceptions, all commercial vessels of 5 or more net tons, which are used on the navigable waters of the U.S., must be documented. A commercial vessel of 5 or more net tons engaged in foreign trade is eligible to be documented, but not required. Some larger recreational vessels (at the option of the owner) may be documented with the Coast Guard if it is 5 or more net tons. There are advantages and disadvantages to documenting your vessel. The main benefit of documentation versus numbering is

that a documented vessel may be the subject of a Preferred Ship Mortgage under the Ship Mortgage Act of 1920. In practical terms, this means that lending institutions regard a documented vessel as a more secure form of collateral. For larger and more expensive boats, it may be easier to obtain bank financing if the boat is documented rather than numbered. Another benefit is that the certificate of documentation may make customs entry and clearance easier in foreign ports. The document is treated as a form of national registration that identifies the nationality of the vessel. The main disadvantage of documenting rather than numbering is the higher cost. The numbering fee varies from state to state. In addition, documented vessels are not exempt from state or local taxes or other boating fees. For complete information on documenting a vessel contact the U. S. Coast Guard Vessel Documentation Office at (800) 799-8362 or https://www.uscg.mil/hq/cg5/nvdc/

The certificate of documentation **MUST** be on board a documented vessel at all times. A document serves as a certificate of nationality and an authorization for a specific trade. A documented vessel is not exempt from applicable state or federal taxes, nor is its operator exempt from compliance with federal or state equipment carriage requirements.

A documented vessel must have the name of the vessel and hailing port plainly marked on the exterior part of the hull in clearly legible letters not less than 4 inches in height. In addition, the documented vessel must have the "Official Number" permanently affixed in block type, Arabic numerals, not less than 3 inches in height on some clearly visible structural part of the boat.

4. SOUND PRODUCING DEVICES

The navigation rules require sound signals to be made under certain circumstances. Meeting, crossing and overtaking situations described in the Navigation Rules section are examples of when sound signals are required. Vessels are also required to sound signals during periods of reduced visibility.

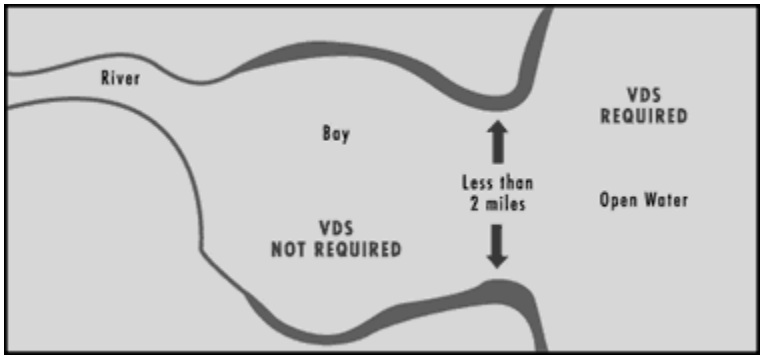
Vessels 39.4 feet/12 meters or more in length are required to carry on board a whistle or horn and a bell. Any vessel less than 39.4 feet/12 meters in length may carry a whistle or horn or some other means to make an efficient sound signal to signal your intentions and to signal your position in periods of reduced visibility.

Therefore, any vessel less than 39.4 feet/12 meters in length is required to make an efficient sound signal to signal intention and to signal the vessel's position in periods of reduced visibility.

Vessel Operators are required to carry some type of horn or whistle capable of a 4 second blast audible for 1/2 mile for all boats (athletic whistles are not acceptable on boats over 39.4 feet/12 meters).

5. VISUAL DISTRESS SIGNALS (VDS)

All recreational boats, when used on coastal waters, the Great Lakes, territorial seas and those waters connected directly to the Great Lakes and the territorial seas, up to a point where a body of water is less than two miles wide, must be equipped with Coast Guard approved Visual Distress Signals (VDS). While there are other devices that can be used as international distress signals in an emergency, the following visual distress signals apply to recreational boaters per 33 CFR 175.101:



Recreational boats under 16 feet in length, open sailboats not equipped with propulsion machinery and less than 26 feet in length and manually propelled boats (kayaks, canoes, etc.) are exempt from daytime signals. However, those vessels must carry night signals if operating at night.

All other recreational boats must carry both night and day signaling devices. If you choose to use pyrotechnic devices, a minimum of three day and three night signals are required. If you choose to use non-pyrotechnic devices as your visual distress signals, only one day signal and one night signal is required.

Pyrotechnic Devices

a. Pyrotechnic visual distress signals must be Coast Guard approved, in serviceable condition and readily accessible.
   i. They are marked with an expiration date. Expired signals may be carried as extra equipment, but cannot be counted toward meeting the visual distress signal requirement since they may be unreliable.
   ii. Launchers manufactured before January 1, 1981, intended for use with approved signals, are not required to be Coast Guard approved.
   iii. If pyrotechnic devices are used, a minimum of three are required. That is, three signals for day use and three signals for night. Some pyrotechnic signals meet both day and night use requirements.
   iv. Pyrotechnic devices should be stored in a cool, dry location, if possible.
   v. A watertight container painted red or orange and prominently marked "DISTRESS SIGNALS" or "FLARES" is recommended.
b. U. S. Coast Guard approved pyrotechnic visual distress signals and associated devices include:
   i. Pyrotechnic red flares, hand-held or aerial;
   ii. Pyrotechnic orange smoke, hand-held or floating; and
   iii. Launchers for aerial red meteors or parachute flares.

NOTE: Each of these devices has a different operating (burning) time. Check the label to see how long each pyrotechnic device will actually be illuminated. This will allow you to select a warning device better suited to the conditions where your boat will operate.

Non-Pyrotechnic Devices

Non-Pyrotechnic Visual Distress Signals must be in serviceable condition, readily accessible and certified by the manufacturer as complying with Coast Guard requirements. They include:

a. Orange distress flag:
   i. Day signal only;
   ii. Must be at least 3 x 3 feet with a black square and ball on an orange background;
   iii. Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 160.072;
   iv. Most distinctive when attached and waved on a paddle, boathook or flown from a mast;
   v. May also be incorporated as part of devices designed to attract attention in an emergency, such as balloons, kites or floating streamers.
b. Electric distress light:
   i. Accepted for night use only;
   ii. Automatically flashes the international SOS distress signal (... --- ...);
   iii. Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 161.013.

Regulations prohibit display of visual distress signals on the water under any circumstances except when assistance is required to prevent immediate or potential danger to persons on board a vessel.

All distress signals have distinct advantages and disadvantages. No single device is ideal under all conditions or suitable for all purposes. Pyrotechnics are universally recognized as excellent distress signals. However, there is potential for injury and property damage if not properly handled. These devices produce a very hot flame and the residue can cause burns and ignite flammable materials.

Pistol launched and hand-held parachute flares and meteors have many characteristics of a firearm and must be handled with caution. **In some states they are considered a firearm and prohibited from use.**
The following are just a few of the variety and combination of devices which can be carried in order to meet the requirements:

a. Three hand-held red flares (day and night);
b. One hand-held red flare (day and night) and two parachute flares (day and night); and

c. One hand-held orange smoke signal (day), two floating orange smoke signals (day) and one electric distress light (night).

All boaters should be able to signal for help. Boaters must have current dated USCG approved day and night signals for all boats operating on coastal and open bodies of water.

6. BACKFIRE FLAME ARRESTORS (BFA)

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

7. MARINE SANITATION DEVICES (MSD)

All recreational boats with installed toilet facilities must have an operable marine sanitation device (MSD) on board. Vessels 65 feet and under must use either a Type I, II or III MSD. Vessels over 65 feet must install a Type II or III MSD. All installed MSDs must be Coast Guard certified. Coast Guard certified devices are so labeled, except for some holding tanks, which are certified by definition under the regulations.

When operating a vessel on a body of water where the discharge of treated or untreated sewage is prohibited 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 non-releasable wire tie to hold overboard discharge valves in the closed position, closing overboard discharge values and removing the handle, locking the door, with padlock or key lock, to the space enclosing the toilets (for Type I and Type II only).

Two types of MSDs treat the sewage, those being Type I and Type II chemical flow-through devices. Type III MSDs are holding tanks which are designed to prevent the overboard discharge of treated or untreated sewage.

The Coast Guard does not have specific capacity standards for all vessels. When you are selecting equipment, be sure to choose a system with adequate capacity for the maximum number of persons that will be on board. When choosing retention or recirculating devices, be sure to provide sufficient capacity between pump outs for your cruising needs. A little planning before you invest in a MSD can result in years of trouble-free, safe operation and you can take pride in your contribution to protecting the quality of the nation's waters for future generations.

8. EMERGENCY POSITION INDICATING RADIOBEACON (EPIRB)

For vessels that operate offshore an EPIRB is a very useful piece of survival gear that has saved many lives in the Pacific in recent years. An EPIRB emits a radio signal at 406 MHz. that can be used by aircraft and vessels to locate mariners in distress.

Satellite EPIRBs, 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) operate satellites, ground stations and an alert distribution system serving the U.S. and a wide segment of the international community.

When activated, the satellite EPIRB transmits a distress signal with a 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 Coast Guard (or international) Rescue Coordination Center (RCC). 406 MHz EPIRBs with GPS also provide an immediate GPS position in the information passed to the RCC.

Geo-stationary 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 an hour on average and almost always less than two hours.

Satellite EPIRBs also include a homing beacon and strobe to help rescue forces and quickly locate the distress scene.

Satellite beacons have significant coverage, alerting timeliness, position accuracy and signaling advantages. Before purchasing or using a beacon ***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. **Registration is mandatory** (see Chapter IX), because it improves SAR response, and reduces false alarms. For more information on how to register your EPIRB, call 1 (301) 457-5678 or go to the following website: http://www.sarsat.noaa.gov/beacon.html.

Mariners are advised that as of January 1, 2007 the operation of Class A, B and S EPIRBs (Emergency Position Indicating Radio Beacons) are PROHIBITED. Refer to 47 CFR Parts 80.1051 through 80.1059. These FCC regulations apply to EPIRBs that transmit on the 121.5 / 243 MHz frequencies. EPIRB owners must check the class or type of their beacons carefully, since both the obsolete 121.5 MHz EPIRBs and the authorized 406 MHz EPIRBs contain a 121.5 MHz homing signal which is used for direction finding purposes. Also, 121.5 MHz Man Overboard Devices are not affected by these FCC regulations and are still legal for use.

9. ADDITIONAL RECOMMENDED EQUIPMENT

The following additional equipment is recommended depending on the size, location and use of your boat. Some of these items may be required aboard certain vessels.

VHF Radio	First Aid Kit	Bailer	Cell Phone
GPS	Fenders	Binoculars	Food & Water
Charts & Compass	Flashlight	Sun Screen & Sunglasses	Spare Parts
Visual Distress Signals	Tool Kit	Boat Hook	Paddles
Anchor and line	Flashlight	Ring Buoy	AM/FM Radio
Spare Anchor	Mirror	Extra Fuel	Extra Line

WEATHER

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

At certain times of the year weather can change rapidly and you should continually assess the weather. Here are a few signs you can look for that indicate an approaching weather change:

- Weather changes generally come from the west. Scan the sky especially to the west;
- Cloud build-up. Watch for clouds to build up, especially rapid vertically rising clouds;
- Sudden drop in temperature;
- Sudden change in wind direction and/or speed; or
- Change in barometric pressure. If you have a barometer on your boat, check it every 2 to 3 hours. A rising barometer indicates fair weather and rise in wind velocity; a falling barometer indicates stormy or rainy weather.

What to Do in Severe Weather

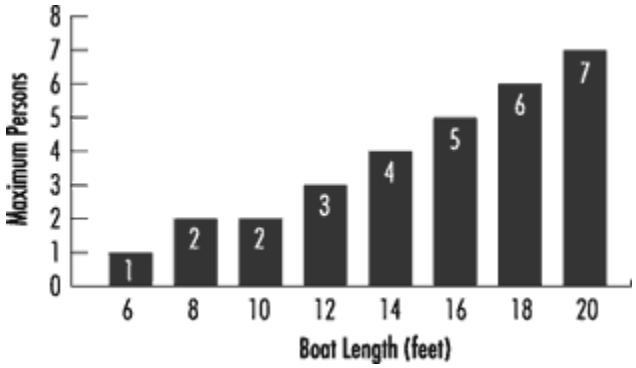
a. Reduce speed, but keep just enough power to maintain headway;
b. Put on your lifejackets;
c. Turn on running lights;
d. Head for nearest shore that is safe to approach;
e. Head the bow of boat into the waves at about a 45-degree angle;
f. Keep bilges free of water (use your bilge pump);
g. Seat passengers on bottom of boat near centerline;
h. If your engine fails, trail a sea anchor on a line from the bow to keep the boat headed into the waves. A bucket will work as a sea anchor in an emergency; and/or
i. Anchor the boat if necessary.

SAFE VESSEL OPERATION

1. LOADING YOUR BOAT

Never overload your boat with passengers and cargo beyond its safe carrying capacity. Too many people and/or too much gear will make the boat unstable. Always balance the load so that the boat maintains proper trim. Here are some things to remember when loading your boat:

a. Distribute the load evenly fore and aft and from side to side;
b. Keep the load low;
c. Keep passengers seated (Do not stand up in a small boat!);
d. Fasten gear to prevent shifting;
e. Do not exceed the number of passengers and gear listed on the "U.S. Coast Guard Maximum Capacities" information label (commonly called the capacity plate); and
f. If there is no capacity plate, use the following chart as a guide to determine the maximum number of persons you can safely carry in calm weather. The chart is applicable only to mono-hull boats less than 20ft in length (a catamaran, trimaran, or a pontoon boat is not a mono-hull boat).

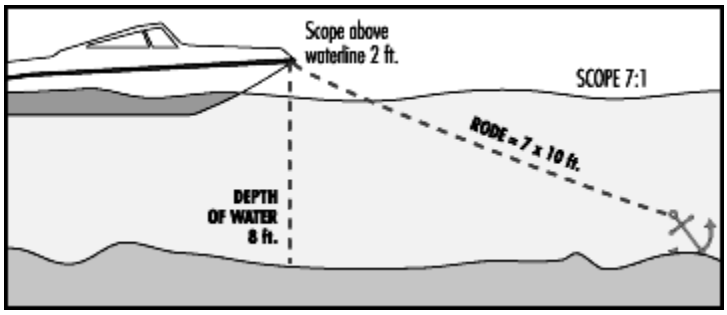


Many hunters and anglers do not think of themselves as boaters, but use small semi-v hull vessels, flat bottom jon-boats or canoes to pursue their sports. These boats tend to be unstable and easily capsize. Capsizing, sinking and falling overboard from small boats account for 70% of boating fatalities. Know your boat's limitations and your own limitations.

2. ANCHORING

Anchoring is done for two principal reasons: 1.) to stop for fishing, swimming, lunch or an overnight stay, and 2.) to keep you from running aground in bad weather or as a result of engine failure. Anchoring can be a simple task if you follow these guidelines:

a. Make sure you have the proper type of anchor (danforth/plow/mushroom);
b. A three to six foot length of galvanized chain should be attached to the anchor. The chain will stand up to the abrasion of sand, rock or mud on the bottom much better than a fiber line;
c. A suitable length of nylon anchor line should be attached to the end of the chain (this combination is called the "Rode"). The nylon will stretch under heavy strain cushioning the impact of the waves or wind on the boat and the anchor;
d. Select an area that offers maximum shelter from wind, current and boat traffic;
e. Determine depth of water and type of bottom (preferably sand or mud);
f. Calculate the amount of anchor line you will need. General rule: 5 to 7 times as much anchor line as the depth of water plus the distance from the water to where the anchor will attach to the bow. For example, if the water depth is 8 feet and it is 2 feet from the top of water to your bow cleat, you would multiply 10 feet by 5 to 7 to get the amount of anchor line to put out (see diagram on following page);



g. Secure the anchor line to the bow cleat at the point you want it to stop;
h. Bring the bow of the vessel into the wind or current;
i. When you get to the spot you want to anchor, place the engine in neutral;
j. When the boat comes to a stop, slowly lower the anchor. Do not throw the anchor over as it tends to entangle the anchor line;
k. When all anchor line has been let out, back down on the anchor with engine in idle reverse to help set the anchor; and
l. When anchor is firmly set, use reference points (landmarks) in relation to the boat to make sure you are not drifting. Check these points frequently.

Do not anchor by the stern! Anchoring a small boat by the stern has caused many to quickly capsize and sink due to waves coming over the transom. The transom is usually squared off and has less freeboard than the bow. In a current, the force of the water can pull the stern under.

3. FUELING

To prevent an accident, follow these rules as most fires and explosions happen after fueling:

a. Portable tanks should be refueled ashore;
b. Close all hatches and other openings before fueling;
c. Extinguish all smoking materials;
d. Turn off engines, all electrical equipment, radios, stoves and other appliances;
e. Remove all passengers;
f. Keep the fill nozzle in contact with the tank and wipe up any spilled fuel;
g. Open all ports, hatches and doors to ventilate;
h. Run the blower for at least four minutes;
i. Check the bilges for fuel vapors before starting the engine; and
j. Do the "sniff test". Sniff around to make sure there is no odor of gasoline anywhere in the boat. Do not start the engine until all traces of fuel vapors are eliminated!

To ensure you do not run out of fuel, practice the "One-Third Rule" by using:

a. One-third of the fuel going out;
b. One-third to get back; and
c. One-third in reserve.

4. PROPELLER BLADES WARNING

Boat propellers are extremely dangerous and can kill. Statistics indicate that most propeller injuries and fatalities are due to operator inattention, inexperience and carelessness. Remember to shut off your engines when approaching swimmers and when engines are running, tell swimmers to stay clear of the stern.

AQUATIC INVASIVE SPECIES (AIS)

AIS both plant and animal pose a serious threat to the biological diversity of coastal waters the world over. With improvements in travel technology, the rate of introductions of nonnative species has increased dramatically.

Once nonnative species become established in a new environment where natural enemies that kept them in check in their native environment are missing, they may spread rapidly and cause unanticipated negative biological and economic impacts. There are numerous examples of the impacts of aquatic invasive species in both marine and freshwater environments. Two of the most well known species are the zebra mussel (*Dreissena polymorpha*) and quagga mussel (*Dreissena bugensis).* These mussels have caused extensive economic and ecological damage since arriving in the Great Lakes and are rapidly spreading throughout North America

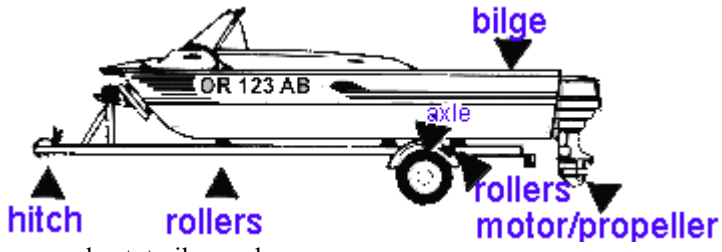
Each of us has control over the pathways of AIS. Examples of these pathways include: the release of aquarium or terrarium pets (including plants), the release or escape of organisms being used in research or education, the release or improper disposal of live seafood and it's packing materials, the spread of aquatic plants or animals from one water body to another on a boat or boat trailer and the release of unused bait into the water. Even these small numbers of non-native species released into a hospitable environment may thrive and spread. The dense beds of Eurasian milfoil plants in many lakes in the region provide an example of the potential for explosive spread of AIS which were introduced in very small numbers. You may have wondered how best to deal with a pet fish, turtle or aquarium plant which you no longer could or wanted to keep. Although releasing the plant or animal to the wild may seem to be the most humane thing you could do, it often is not. Species released to new environments may face harsh environmental conditions, may be exposed to diseases or parasites for which they have no natural defenses and may face intense predation. On the other hand, these species may bring new diseases and parasites into the area where they are released. Furthermore, released species may thrive and drastically change the natural ecology of the area where they are released - preying upon or out-competing native species.

Identification
There are dozens of AIS that can harm waterways. If you find one or suspect there may be a new infestation, report it. Call the **Aquatic Invasive Species Hotline** at **1-877-STOP-ANS,** (1-877-786-7267).

Prevention
Finished boating and ready to head out? Here's what you can do to prevent spreading aquatic nuisance species.

Inspect your boat and trailer, especially at these points. Remove any plants and animals you see before leaving the waterbody.

Drain your motor, wet well, and bilge on land before leaving the waterbody.



Empty your bait bucket on land before leaving the waterbody. Never release live bait into a waterbody, or release aquatic animals from one waterbody into another.

Rinse your boat, trailer, and equipment. It is best to use high-pressure, hot water. A garden hose will work if no other option is available.

Air dry your boat and equipment for as long as possible. Five days is optimal.

As a general practice, following this checklist after each time you use your boat will prevent the spread of most aquatic nuisance species. Check out our identification page to learn what some aquatic nuisance species look like.

Seafood users: Don't release live seafood or haphazardly discard its packing material. These packing materials, which may include non-native seaweed, may harbor numerous small non-native animals.
Fishers: If you use bait that is not native to the state you're in, put the bait and its packaging into the trash when you are done fishing instead of releasing it into the water.
Educators and researchers: Take precautions to keep non-indigenous species contained or quarantined and dispose of them properly.
In addition to the small releases described above, ballast water and aquaculture are potential sources of AIS. Ballast waters are large volumes of water pumped into and out of ships to maintain their stability as their cargo or sea conditions change. Vast numbers of AIS may be released to our waters at one time through the discharge of ballast water.

What do you do if you find an *Aquatic Invasive Species?* Call the **Aquatic Invasive Species Hotline at 1-877-STOP-ANS (1-877-786-7267)**

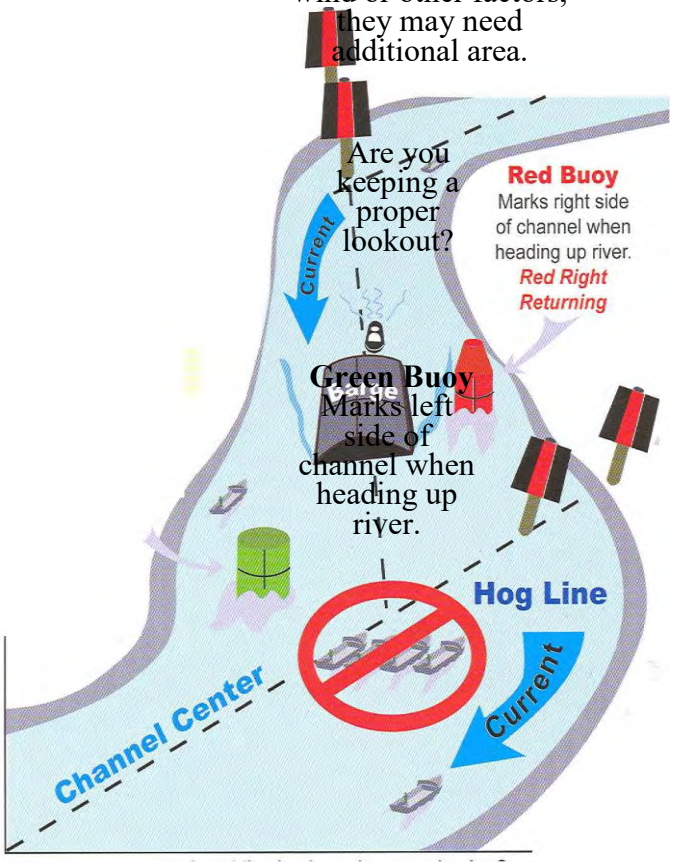
Recreational Boaters

For Your Safety...

Large vessels must navigate within the channel. By law, small vessels must give ships and barges room to safely pass. Maximum fine: $5,000. Keep a good lookout at all times. If you have to move, take your anchor with you. They can foul propellers.
Tow operators may have difficulty seeing over some barges. Keep well clear.

Keep Clear of Turning Barges

Depending on current, wind or other factors, they may need additional area.



Are you in the channel?

Range Markers
Barges & ships align these to locate the center of the channel.

Are you prepared to move clear of large vessels?

Remember...
Vessels restricted to the channel have the right-of-way. It's the law.

Make Way Safety
It's YOUR LIFE

For additional information, refer to the Navigational Rules, COMDTINST M16672.2D, RULE 9.

CHAPTER XII

COMMERCIAL FISHING VESSELS

MANDATORY DOCKSIDE SAFETY EXAMINATIONS FOR COMMERCIAL FISHING VESSELS

As of October 15, 2015, any commercial fishing vessel operating beyond 3NM from shore is required to successfully complete a dockside safety examination at least once every 5 years. Successful completion of a dockside exam will result in a CFVS decal displayed on the vessel. Decals are valid for 2 years. Commercial fishing vessel owners and operators requiring a dockside exam should contact their local USCG Sector CFVS Examiner to make a dockside exam appointment.

EPIRB REQUIREMENTS FOR COMMERCIAL FISHING VESSELS

Commercial fishing vessels 36-feet or greater operating beyond 3NM from shore are required to carry a properly registered, float-free, automatically-activated, Category I 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). Commercial fishing vessels **less** than 36-feet may substitute a CAT 1 EPIRB for a manually-activated Category II 406 MHz EPIRB.

DIGITAL SELECTIVE CALLING FOR COMMERCIAL FISHING VESSELS

Commercial fishermen are HIGHLY encouraged to ensure their Digital Selective Calling (DSC) radio is connected to the vessel's Global Positioning System (GPS). Having this connection greatly improves the Coast Guard's ability to quickly and accurately find and assist a vessel in distress.

CREW CITIZENSHIP REQUIREMENTS FOR FISHING INDUSTRY VESSELS

Federal Regulations require U.S. fishing vessels engaged in fishing on the navigable waters of the U.S. or in the Exclusive Economic Zone (EEZ) have at least 75 percent of the unlicensed crew be either citizens of the U.S. or aliens lawfully admitted to the U.S. for permanent residence. The remaining 25 percent of the unlicensed crew may be aliens allowed to be employed under Immigration and Naturalization Service (INS) rules with a work VISA. Any unlicensed person aboard a vessel who provides any service toward the mission of the vessel is considered an unlicensed crew. This includes any foreign national who is aboard as a technician or advisor.

NAVIGATION LIGHTS AND DAYSHAPES ON FISHING VESSELS

Vessels engaged in fishing have been observed not displaying the proper **day-shapes** and **navigation lights**. This constitutes a violation of U.S. Navigation Regulations and can lead to vessel accidents, injuries, or loss of life. Vessels not showing day-shapes or proper navigation lights increase their liability for payment of damages resulting from collisions with other vessels, and decrease their chances of recovering damages to nets and other equipment.

The International Rules for Preventing Collisions at Sea, 1972 (72 COLREGS), also known as the "Rules of the Road", Rule 26, requires day-shapes and navigation lights for "vessels engaged in fishing, as follows:

1. Vessels Trawling: Two all-around masthead lights in a vertical line, the upper being green and the lower white.

2. Vessels Fishing: Two all-around masthead lights in a vertical line, the upper being red and the lower white.

3. Dayshapes for all vessels engaged in fishing consists of two cones with apexes together in a vertical line.

4. Trollers are not considered restricted in maneuverability and are not required to display the above-noted lights.

5. All fishing vessels when making way through the water are required to display the appropriate sidelights and stern light.

COMMERCIAL FISHING VESSEL SAFETY VOYAGE TERMINATION

The U.S. Coast Guard may direct the individual in charge of a commercial fishing vessel to take immediate steps for the safety of persons on board the vessel if, when boarded at sea, the boarding officer observes the vessel operating in a manner which creates an especially hazardous condition (EHC) for the master and/or crew. If immediate steps to correct the EHC cannot be made at sea, the vessel's voyage may be terminated and the operator ordered to return the vessel to port. Once moored, the vessel is required to remain in port until the EHC is corrected and the vessel is found to be in compliance with all applicable federal safety laws. Per 46 U.S.C. § 4507, a violation of this kind may subject the vessel owner/operator to a civil penalty of up to $5,000. A willful violation could result in a criminal fine of up to $5,000 and imprisonment for not more than one year.

REVOCATION OR SUSPENSION OF LICENSES OR CERTIFICATIONS

A license, certificate of registry, or merchant mariner's document issued by the Coast Guard may be suspended or revoked if, when acting under the authority of the license, certificate or document; the holder is found to be guilty of violations of Federal laws or regulations governing navigation or inspection of vessels or has committed an act of incompetence, misconduct or negligence. Additionally, a license or merchant mariner's document issued by the Coast Guard shall be suspended or revoked if, as a holder of the license or document; is found to have been convicted of violating a dangerous drug law of the United States or of a State. When a holder of a license or merchant mariner's document issued by the Coast Guard is shown that the holder has been a user of, or addicted to, a dangerous drug, such license or merchant mariner's document shall be revoked unless the holder can provide satisfactory proof that the holder is cured. In those cases for which a civil penalty or a criminal penalty is imposed, action against a license, certificate or document will not usually be pursued; however, there are provisions for taking both actions if deemed appropriate.

11TH COAST GUARD DISTRICT CAPTAIN OF THE PORT AND MARINE INSPECTION OFFICE ZONES

The Eleventh Coast Guard District is divided into three Captain of the Port and three Marine Inspection Office zones for the purpose of assigning geographic areas of responsibility. The exact coordinates delineating the geographical boundaries of the zones are contained in 33 Code of Federal Regulations part 3.55-1 for the Captain's of the Port. For more information concerning the Captains of the Port or the Marine Inspection Offices call or write:

Captain of the Port, San Francisco
1 Yerba Buena Island
San Francisco, CA 94130
415-399-3547

Captain of the Port, San Diego
2710 N. Harbor Drive
San Diego, CA 92101
619-278-7000

Captain of the Port, Los Angeles
1001 S. Seaside Ave, BLDG 20
San Pedro, CA 90731
310-521-3600

CHAPTER XIII

U. S. COAST GUARD AUXILIARY

BOATING EDUCATION

The Coast Guard Auxiliary offers courses in boating safety and seamanship to the public. The courses are taught by experienced Coast Guard Auxiliary Members. The cost of materials and textbooks is usually the only cost involved. The courses offered are available at: http://cgaux.org/boatinged/ and include:

1. ABOUT BOATING SAFETY: 1 Session course, 8 hrs, intended for all boaters.
2. SAILING SKILLS AND SEAMANSHIP: Multiple sessions course; intended for sailors.
3. WEEKEND NAVIGATOR: Multiple sessions course; intended for all boaters.
4. BOATING SKILLS AND SEAMANSHIP: Multiple sessions course; power boaters.
5. NAVIGATING WITH GPS: 1 Session course; intended for all boaters.
6. SUDDENLY IN COMMAND: 1 Session course; intended for all boaters, families that boat.
7. PADDLESPORTS AMERICA: 1 Session course, all boaters/paddlers.
8. PERSONAL WATERCRAFT COURSE: 1 Session course, all boaters.
9. WAYPOINTS: 1Session course intended for 4th-6th grade.
10. BOATING FUN: 1 Session course intended for K-3rd grade.
11. SSS – INLAND BOATING: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.
12. SSS – BOATING SAFETY: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.
13. SSS – POWER YOUR BOAT: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.
14. SSS – LINES & KNOTS: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.
15. SSS – WEATHER AND BOATING: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.
16. SSS – YOUR BOAT'S RADIO: Part of the Seamanship Seminar Series, 2 hrs, intended for all boaters.

Local Flotillas of the Coast Guard Auxiliary schedule numerous boating education courses throughout the year. For information please go to National Public Education Calendar Database and enter your ZIP code at: http://cgaux.org/boatinged/class_finder/index.php. Additional information is available via the BoatUS Hotline at (800)-336-BOAT or http://www.usps.org All mariners are strongly encouraged to utilize these resources.

VESSEL SAFETY CHECKS (VSC)

To determine if your recreational motorboat or sailboat meets Federal and State requirements, as well as recommended safety standards, contact a member of the Coast Guard Auxiliary for a free Vessel Safety Check (VSC). A decal is awarded to boats that pass the examination. If your boat does not have the proper equipment, NO

REPORT IS MADE TO ANY LAW ENFORCEMENT AUTHORITY. The Auxiliary Vessel Examiner will advise you of the deficiencies so that you can correct them.

The mission of the VSC program is to minimize loss of life, personal injury, property damage and environmental impact associated with the use of recreational boats, through preventive means.

To request a Vessel Safety Check, contact your local Coast Guard Auxiliary Flotilla or access the National Vessel Safety Check Website at: http://wow.uscgaux.info/content.php?unit=V-DEPT&category=i-want-a-vsc

The National Vessel Safety Check Website also provides links to what equipment is required to be onboard and serviceable prior to the VSC.

RECREATIONAL BOATING SAFETY VISITATION PROGRAM

The Coast Guard and Coast Guard Auxiliary have an ongoing voluntary visitation program with marine dealers called the Recreational Boating Safety Visitation Program (formerly the Marine Dealer Visitation Program). Its purpose is to promote recreational boating safety through the assistance of marine dealers and other partners. A qualified Auxiliary Member establishes rapport with a partner through quarterly visits to provide boating safety information. Partners receive updates on regulations, information on vessel safety checks and boating safety public education course schedules. The Auxiliary Member also provides the participating partner a literature rack with a variety of free boating-related brochures and pamphlets for customers. Advantages are as follows:

1. A participating partner is placed on the Coast Guard mailing list for the BOATING SAFETY CIRCULAR and all CONSUMER FACT SHEETS.

2. This special boating safety knowledge gives the partner a more professional image with consumers.

3. The partner's public service image is enhanced by being able to advise customers on such subjects as required equipment and how to save money on boat insurance by taking a boating safety course.

4. The partner can easily answer questions or provide information to the consumer.

5. The partner has an attractive display of Boating Safety literature to offer customers.

6. The partner has an opportunity to attract customers by providing the space for Auxiliary boating safety classes on the premises.

7. The partner can stimulate sales of safety equipment by promoting Auxiliary VSCs.

8. The partner has the satisfaction of cooperating in a promotion aimed at saving lives. The partner establishes a "Public Service/Boating Safety" image.

COAST GUARD AUXILIARY MEMBERSHIP INFORMATION

The Coast Guard Auxiliary is the all-volunteer arm of the United States Coast Guard. Auxiliary members demonstrate their interests in safety on or near America's waterways by teaching safe boating courses, conducting free vessel safety checks, performing a wide array of marine safety-related services and providing operational patrols underway for the Coast Guard. Coast Guard Auxiliary Members further demonstrate their dedication to homeland security by volunteering support to Active Duty Coast Guard Units and Commands throughout the Eleventh District. For further information on the Auxiliary and its programs, contact your local flotilla or by clicking on the "Join Us Now" button on the http://www.cgaux.org website. If you desire to make a difference, we would like to have you join us.

NOTICE TO MARINERS
MARINE INFORMATION, REPORT AND SUGGESTION SHEET

Readers are encouraged to notify the 11th Coast Guard District of any discrepancies found in this book. Please fill this form out and mail it to:

Commander (dpw)
Eleventh District, Bldg. 50-2
Alameda, CA 94501-5100

or email to: D11LNM@uscg.mil

Special Local Notice to Mariners:

Page Number(s):_____

Item(s) to be corrected:

Suggestions: