2014

SPECIAL LOCAL NOTICE TO MARINERS

U.S. Department of Homeland Security

United States Coast Guard

Commander
Thirteenth Coast Guard District

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To: All Mariners in the 13th Coast Guard District

This Special Notice to Mariners is an annual publication containing important information for the mariners in the Thirteenth Coast Guard District. Thirteenth District waterways include the seacoast from the California/Oregon border to the United States/Canadian border, and all federally navigable waterways in Idaho, Montana, Oregon and Washington.

This Special Local Notice to Mariners includes points of contact, phone numbers and email addresses for various subject matter experts, to assist you in locating further information or answering any questions.

I hope you find this publication helpful and useful as a guide to safe operations in our area. There are tips for trip planning, updates to the Rules of the Road, and information on local hazards. Also included are the excerpts from the various Federal laws and regulations regarding marine pollution reporting, aids to navigation, and Vessel Traffic Service procedures.

As the Thirteenth District Commander, it is a great pleasure working with the maritime community to keep our waterways safe and secure. The men and women of the United States Coast Guard remain dedicated to ensuring the safety, security, and environmental stewardship of our waterways. We work very hard, each and every day, to prevent bad things from happening in the work that we do, day in and day out, focused on boating safety; we remain ready to respond when mariners need our services, especially when carrying out our search and rescue duties.

If you wish to make comments or suggestions to this Special 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,

Richard T. Gromlich
Rear Admiral, U.S. Coast Guard

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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. Short-range distress signals, limited in range of visibility or audibility, are:

1. "SOS" (··· --- ···) signal made by audio or visual means.
2. International Flag Code "NC" (November Charlie flag hoist).
3. Hoisting any square flag with a ball, or anything resembling a ball, above or below it.
4. Flames made visible (as burning oil in a barrel).
5. A meteor, parachute or hand held flare showing a red light.
6. Rockets or shells, throwing red stars, fired one at a time in short intervals.
7. Orange smoke as emitted from a distress flare.
8. A gun or other explosive device fired at about one minute intervals.
9. Continuous sounding of any fog signal device.
10. Slowly and repeatedly raising and lowering arms outstretched to each side.
11. (EPIRB) signals transmitted by emergency position indicating radio beacons.
12. A signal sent by radiotelephone consisting of the spoken word "MAYDAY".
13. Radiotelegraph alarm signal.
14. Radiotelephone alarm signal.
15. A high intensity white light flashing at regular intervals from 50 to 70 times per minute (Inland Waters only).

The preceding distress signals are contained in the NAVIGATION RULES (COMDTINST M16672.2D) Rule 37 and described in Annex IV. Available online at the United States Coast Guard Navigation Center website: http://www.navcen.uscg.gov/index.php?pageName=navRulesContent.

RENDERING OF ASSISTANCE

The master or person in charge of a vessel is obligated by law to provide 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).

RADIOTELEPHONE (VOICE) DISTRESS MESSAGE

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.

1. SPEAK SLOWLY AND CLEARLY
   If you are in DISTRESS (i.e.: when threatened by grave and imminent danger) transmit the International Distress Call on either 2182 kHz or 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). If you need information or assistance from the Coast Guard (other than in a distress) call COAST GUARD on either 2182 kHz or VHF-FM Channel 16 (156.8 MHz) (the DISTRESS and CALLING FREQUENCIES). In this situation, you will normally be shifted to a common working frequency allowing the DISTRESS frequencies to remain open. The Radiotelephone Alarm Signal on 2182, if available, should be transmitted prior to the DISTRESS CALL for approximately one minute. The Radiotelephone Alarm Signal consists of two audio tones, of different pitch, transmitted alternately. Its purpose is to attract the attention of persons on radio watch and shall only be used to announce that a distress call or message is about to follow.

NOTE: Mariners are advised that calls to the USCG on the international radiotelephone distress frequency 2182 kHz or the Digital Selective Calling (DSC) frequency 2187.5 kHz may not be heard, or may be severely degraded. Instead of using 2182 kHz for distress calls, mariners should use high frequency (HF) radiotelephone or DSC in the 4, 6, 8, and 12 MHz distress or calling bands. Additional information concerning USCG HF watchkeeping is posted on the USCG's Navigation Center website: http://www.navcen.uscg.gov/?pageName=cgcommsCall.

2. IF ABOARD A VESSEL IN DISTRESS OR DIFFICULTY – PROVIDE
   If you are the master, crew, or passenger on a vessel in immediate danger, contact assistance by the most rapid means available (radio, cell phone, signal device, etc.). Be prepared to provide:
   a. 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 Columbia River" is better than "due west of the Columbia River."
   b. NUMBER OF POB (Persons on board):
      You will be instructed to get them into personal flotation devices (lifejackets).
   c. VESSEL DESCRIPTION & NAME:
      Provide your vessel's physical description (length, type, cabin, masts, power, color of hull, superstructure and trim) and name.
   d. 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 to the Coast Guard, be prepared for the following:
      a. 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.
      b. 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.
      c. You will be asked to confirm that all persons on board have donned personal flotation devices (life jackets).
      d. You will likely be asked to report the seaworthiness of your vessel (leaking, compartments flooded, source of flooding, etc.).

3. IF OBSERVING ANOTHER VESSEL IN DISTRESS OR SHOWING SIGNS OF HAVING DIFFICULTY - PROVIDE
   a. Your position, and (if possible) the bearing and distance or GPS/LORAN readings if available of the vessel in distress or difficulty.
   b. Nature of distress or difficulty.
   c. Description of the vessel in distress or difficulty.
   d. Your intentions, course, and speed, etc.
   e. Your radio call sign, name of your vessel, listening frequency and schedule.
   f. Cell phone number.

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 IMMEDIATE DANGER.

4. IF YOU HAVE A MEDICAL CASE - PROVIDE

a. Name of vessel and/or call sign.
b. Position.
c. Patient's name and age.
d. Nature of problem (symptoms, locations of pain or injury).
e. Is patient conscious?
f. Is patient ambulatory (able to walk)?
g. Patient's temperature and pulse. Difficulty breathing?
h. Is patient bleeding? Is the bleeding controlled?
i. Duration of pain.
j. Previous similar episode (if yes, treatment and diagnosis).
k. Medicine taken and medicine available.
l. Private physician's name and phone number.

5. RADIOTELEGRAPH DISTRESS SIGNAL

a. Trip the radiotelegraph alarm signal (if available).
b. Set equipment to frequency 500 kHz and transmit the Morse code "SOS", followed by long dash or steady key (5-10 seconds), for direction finding.

Since radiotelegraph communications require familiarity with Morse code, the most that can be accomplished would be to enable other ships or shore stations to take a radio bearing on the vessel in distress. "Simple to follow" instructions for the operation of auto-alarms, radiotelephone and radiotelegraph equipment should be conspicuously placed in the radio rooms of all ships. Procedures outlined here are purposely brief. Complete information on emergency radio procedures is contained in chapter 5 of the Radio Navigational Aids (Pub 117A & B).

6. RADIOTELEPHONE URGENT CALLS

The radiotelephone Urgent Signal consists 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.

7. RADIOTELEPHONE SAFETY CALLS

The radiotelephone Safety Signal consists 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 (156.8 MHz) or 2182 kHz together with a request to shift to a working frequency where the safety message will be given.

8. ROUTINE COMMUNICATIONS WITH THE U.S. COAST GUARD

VHF-FM equipped vessels are encouraged use VHF-FM Channel 22A (157.1 MHz) for non-emergency communications with Coast Guard units. First call the desired Coast Guard unit on Channel 16 then shift to Channel 22A for routine communications.

NOTE: Modern VHF-FM radios now have VHF-FM Channel 22A; however, older models might not.

9. VISUAL DISTRESS SIGNALS (VDS)

On the following page is a pictorial plate showing the different types of VDS to use or respond to in case of emergency. Remember, no person in a boat shall display a VDS under any circumstances except a situation where assistance is needed because of immediate or potential danger to a person onboard.

Visual Distress Signals

Red Star Shells	Fog Horn Continuous Soundings	Flames on A Vessel	Gun Fired at Intervals of One Minute
Orange Background Black Ball & Square	SOS	"Mayday" by Radio	Parachute Red Flare
Dye Marker (any color)	Code Flags November Charlie	Square Flag and Ball	Wave Arms
Radio-Telegraph Alarm	Radio-Telephone Alarm	EPIRB	Smoke

10. <u>EMERGENCY POSITION INDICATING RADIOBEACON (EPIRB)</u>

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 determines the beacon's position that is ultimately relayed 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 www.navcen.uscg.gov/marcomms/gmdss/epirb.htm for more information). Mariners should ensure that EPIRB registration is current at all times. Registration can be accomplished online at www.406registration.com. In case of accidental activation, contact Rescue Coordination Center (RCC) Seattle at (206) 220-7001, confirm that your vessel is not in distress and be ready to provide the beacon identification code (a series of letters and number that starts with ADCD or something similar).

Mariners are advised that as of January 1, 2007 the operation of Class A, B, and S EPIRBs (Emergency Position Indicating Radio Beacons) is PROHIBITED. Refer to 47 CFR Parts 80.1051 through 80.1059. These FCC regulations apply to EPIRBs that transmit a distress signal to satellites on the 121.5 / 243 MHz frequencies. EPIRB owners must check the class or type of their beacons carefully, since both the illegal 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.

11. RESCUE COORDINATION CENTERS (RCC) IN THE NORTHWEST

Location	Telephone No.	Manned By
Seattle, WA	(206) 220-7001	Coast Guard (US)
Victoria, B.C.	(250) 363-2995	Coast Guard (CAN)
Juneau, AK	(907) 463-2000	Coast Guard (US)

12. THIRTEENTH COAST GUARD DISTRICT SEARCH AND RESCUE STATIONS

A. THIRTEENTH COAST GUARD DISTRICT	
1. District Command Center - Seattle	(206) 220-7001
B. SECTOR PUGET SOUND	(206) 217-6001
1. Station Seattle	(206) 217-6750
2. Station Bellingham (northern Puget Sound)	(360) 734-1692
3. Station Port Angeles (Strait of Juan de Fuca)	(360) 417-5990
4. Station Neah Bay (northern WA coast)	(360) 645-2237
5. Station Quillayute River (central WA coast)	(360) 374-6469
C. SECTOR FIELD OFFICE PORT ANGELES	(360) 417-5840
D. SECTOR COLUMBIA RIVER	(503) 861-6211
1. Station Grays Harbor (southern WA coast)	(360) 268-0121
2. Station Cape Disappointment (Columbia River)	(360) 642-2382
3. Station Tillamook (northern OR coast)	(503) 322-3531
4. Station Portland (inland Columbia River)	(503) 240-9365
E. SECTOR NORTH BEND	(541) 756-9210
1. Station Depoe Bay (northern OR coast)	(541) 765-9278
2. Station Yaquina Bay (central OR coast)	(541) 265-5382
3. Station Siuslaw River (central OR coast)	(541) 997-3631
4. Station Umpqua River (central OR coast)	(541) 756-9273
5. Station Coos Bay (central OR coast)	(541) 756-9271
6. Station Chetco River (southern OR coast)	(541) 469-3885
F. MARINE SAFETY UNIT PORTLAND	(503) 240-9310

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 2182 kHz or 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 helo 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 CAN ONLY PROCEED UP TO 100 MILES off-shore for a pickup, and then only if weather conditions permit. Moreover, they 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 the Pacific Northwest are at the following locations:

1. Port Angeles, Washington
2. Astoria, Oregon
3. Newport, Oregon
4. North Bend, Oregon

a. WHEN REQUESTING HELICOPTER ASSISTANCE
   (1) Give accurate position, time, speed, course, weather conditions, sea conditions, wind direction and velocity, type of vessel, and radio frequencies.
   (2) If not already provided, give COMPLETE medical information including whether or not patient is ambulatory (able to walk).
   (3) If you are beyond helicopter range, advise your intentions so that a rendezvous point may be selected.
   (4) 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
   (1) Provide continuous radio guard on 2182 kHz or specified VOICE frequency if possible.
   (2) 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.
   (3) 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.
   (4) 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.
   (5) 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
   (1) If possible, have patient moved to, or as close to, the hoist area as his condition permits - **THIS IS IMPORTANT**.
   (2) 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.
   (3) 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.
   (4) Reduce speed to ease ship's motion but maintain steerageway.
   (5) 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.
   (6) ALLOW BASKET OR STRETCHER TO TOUCH DECK PRIOR TO HANDLING TO AVOID STATIC SHOCK.
   (7) If a trail line is dropped by the helicopter, guide basket or stretcher to the deck; keep line clear at all times. The line will not cause a shock.
   (8) 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 is able. DECK PERSONNEL GIVE THUMBS UP.
   (9) 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.
   (10) 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.
   (11) If trail line is attached to basket or stretcher use to steady (keep feet clear of line).

THIRTEENTH COAST GUARD DISTRICT - NON-EMERGENCY ASSISTANCE POLICY

Boaters who find themselves in need of assistance in non-emergency situations will receive help from the Coast Guard by either 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, or 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 will be dispatched.
3. If commercial towing companies operate in the area, the Coast Guard will 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 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 Auxiliary resource will be dispatched if it can provide a more timely response.
5. If no response to the MARB is received within 10 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 onboard, 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. Questions concerning this notice should be directed to the Thirteenth Coast Guard District, Response Branch at (206) 220-7259.

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. Records show that even the quickest ship sinkings 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 some recommended preventative tablets or medicine. The incapacitation caused by seasickness interferes with your survival chances; the 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 5 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. One should not jump into the water astern of a life raft because the ship might be moving through the water.
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 now. In cold water you may experience violent shivering and great pain. These are natural body reflexes that are not dangerous. Take action as quickly as possible before you lose full use of your hands: button up clothing, turn on signal lights, locate whistle, etc.
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

FIRST AID AND PRIMARY CARE

NOTE: For a vessel owner/operator, a formal first aid course provided by a professional medical personnel is recommended. This chapter is only a guide to aid you in emergency procedures. Not all situations are covered.

THERE IS NO SUBSTITUTE FOR PROFESSIONAL TRAINING AND PRACTICE!

FIRST AID

First aid is the immediate and temporary care given to sick or injured persons. It does not take the place of professional medical treatment, but it can mean the difference between life and death, between quick recovery and long hospitalization, and between temporary disability and permanent injury. For most mariners, help is but a short distance away, and can be contacted quickly via radio, but there are times at sea when you have only to depend on yourself or your crew in an emergency, so it is important to learn how to react positively and effectively, and with a realistic perspective as to what one can and can't do or provide. It is important to do the best you can under the circumstances, but do not blame yourself if your efforts fail. You should realize that you have two jobs to do:

1. Ensure the victim's immediate survival.
2. Become an extension of the medical professionals who should be contacted by radio as soon as you can accurately describe the problem.

This chapter is intended to help you cope with the conditions that represent immediate threats to a victim's survival and seeks to help you gather information necessary to obtain professional advice by radio, and is intended only as an introduction to emergency first aid. It is recommended that you have onboard a more complete text on emergency medicine and obtain professional training.

WHEN IN DOUBT SHOUT - THE RADIO CALL

In the event of a serious accident or illness, as soon as you have dealt with the immediate threats, you should contact the Coast Guard on one of the distress frequencies. The Coast Guard will obtain professional advice and relay instructions, but the advice won't be any good unless you can provide enough accurate information. The better you can describe the problem, the better the Coast Guard can help you treat it. You have to study the victim's body and find out what is wrong,

THE SITUATION

Before rushing into the accident site, study the environment to ensure there is no continuing danger. Don't become a victim yourself. Make sure the danger is no longer present or is adequately eliminated (i.e. loose rigging is secured; electrical power is secured, etc.). Work as quickly as possible but not frantically or in a panic. Try not to waste time looking for readymade (store bought) medical supplies - do the best you can with whatever is at hand and, if possible, have a third person call for help and obtain adequate medical supplies. Remember: Take a few seconds to survey the situation before you begin to provide assistance.

SURVEY THE DAMAGE

Try to determine the nature and extent of the problem. There are two stages of examination. First you must locate and treat immediate threats to the victim's survival. This is the primary survey and should normally be conducted as follows:

1. CLEAR THE AIRWAY.
2. CHECK BREATHING.
3. RESTORE CIRCULATION.
4. CONTROL GROSS BLEEDING.
5. TREAT SHOCK.
6. IMPROVE THE ENVIRONMENT.
7. TREAT/SPLINT – FRACTURES.

Circumstances may necessitate changing the order (i.e. you can't give first aid in an unsafe environment such as fire). You have to remain calm and determine the gravest danger. Keep in mind that blood loss may look much worse than it really is. Once life-threatening dangers have been eliminated, do a second, more thorough survey prior to moving the victim. In general a victim should not be moved until his injuries have been examined carefully to insure there are no fractures or injuries to the back or neck, and that other fractures are properly secured.

CARDIO-PULMONARY RESUSCITATION – CPR

The ABCs of CPR are: AIRWAY, BREATHING, and CIRCULATION.
When coming upon a victim use the following systematic procedure for administering CPR:

1. Gently shake the victim's shoulders and shout to see if he/she is conscious (figure 1).
2. Instruct a specific person nearby to call 911 or call the Coast Guard via VHF radio (see chapter I, page 2).
3. Position the victim on his/her back on a hard, flat surface. A victim with suspected neck injuries who is lying on his/her stomach needs his/her neck stabilized as you roll him/her over.

4. <u>AIRWAY</u>

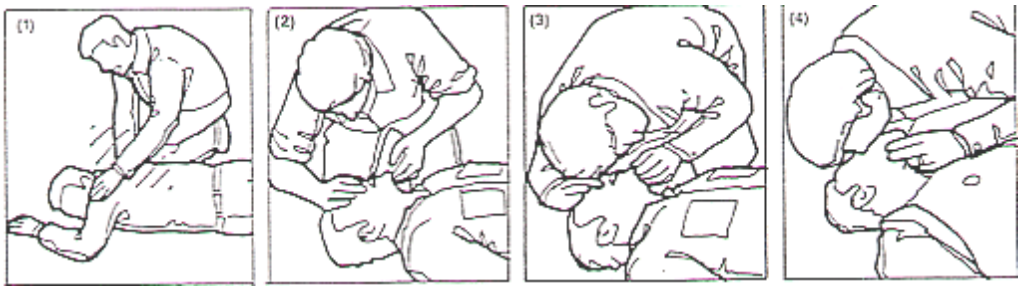
   a. If the victim does not respond, tilt the head and lift the chin to clear the tongue out of the way (figure 2).
   b. Check for normal breathing (chest or stomach is rising and falling).
   c. If head or neck trauma is suspected do not tilt head, instead align fingers along victims jaw line and gently pull forward carefully. Be sure you do not to move the head.

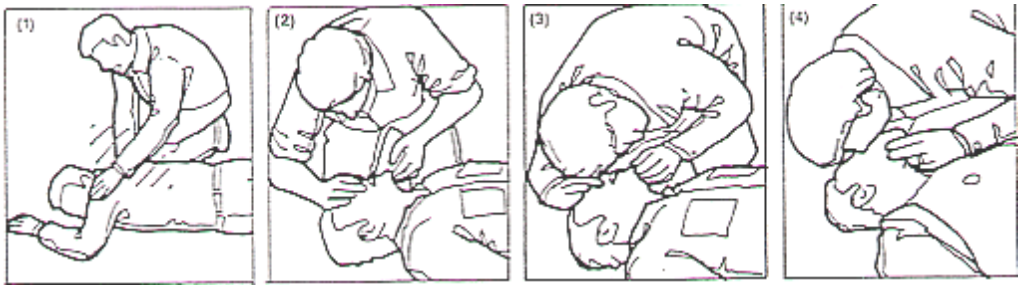
5. <u>BREATHING</u>

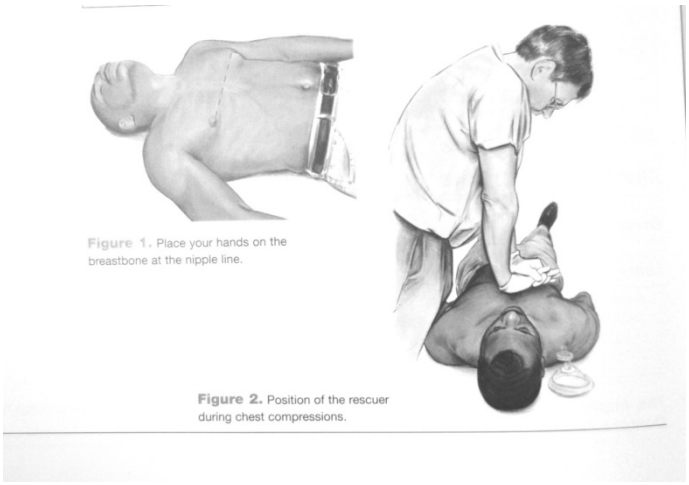
   a. If the victim is not breathing, Request AED and begin CPR compressions.

6. <u>CIRCULATION</u>

   a. Place the heel of one hand between the nipples over the breastbone (figure 1).
   b. Place the other hand on top of the first. Keep your arms straight and keep shoulders over the breastbone (figure 2).
   c. Compress the breastbone straight down 2 inches for adults (figure 9).
   d. Compress 30 times Seal the victim's mouth with yours.
   e. Give two (–breaths 1 second per breath enough air to see the chest rise(figure 4).
   f. 1 second for exhalation between breaths.
   g. Repeat 30 compression and two breaths until more help arrives. Do not stop CPR unless victim moves, AED arrives or EMS arrives
   h. Place AED as soon as possible and follow AED directions.







NOTE: Relay the nature and extent of his injuries over the radio. The professionals can give you better advice if you can take the victim's vital signs, and if you have his/her medical history available. **SEE CHAPTER I, EMERGENCY PROCEDURES FOR MORE INFORMATION**.

BLEEDING

It is imperative to control gross bleeding. Arterial bleeding from a major blood vessel can cause the victim to bleed to death in a very short time. Rapid loss of as little as 1 quart of blood can cause shock. Bleeding from veins or capillaries may scare you even when it is not an urgent priority. It is important to be able to recognize the types of bleeding. Arterial bleeding - blood is bright red and gushes forth in jets or spurts in rhythm with the victim's heartbeat. It is much redder than the blood you commonly see as the result of minor cuts or scrapes. Bleeding from veins - blood is dark red and bleeds in a steady flow. Capillary bleeding - blood is also dark red and oozes from the wound.

Arterial bleeding Bleeding from veins Capillary bleeding

TREATMENT OF BLEEDING

When coming upon a victim with gross bleeding the use of direct pressure is the recommended way to reduce or stop bleeding until a pressure bandage can be applied. To further control and stop gross bleeding:

1. Use the palm of your hand to apply direct pressure over the wound.
2. Use a thick pad of cloth as a dressing between your hand and the wound. It should be sterile, or at least as clean as possible. Never remove the dressing even if it becomes blood-soaked. Instead, add another dressing on top of the first and continue applying direct pressure and elevating the part.

3. Raise injured arms or legs to a level higher than the heart unless movement will cause further damage (in the case of fractures, etc.).
4. A pressure bandage can replace direct hand pressure on most body parts. Center the bandage over the dressing, wrap the ends around the body part and tie the knot directly over the dressing.
5. After bleeding has been controlled with a pressure bandage, check frequently for swelling and other indications of excessive pressure. Be sure the pressure bandage has not become a tourniquet.

NOTE: Warning signs for excessive pressure include swelling next to the bandage site, numbness to touch, sensation of pins and needles, the limb becoming white or purple, and pain beyond the site of the injury. Direct pressure is effective in stopping the bleeding from nearly all wounds. It almost always eliminates the need for a tourniquet. A tourniquet is **NEVER** put on unless the bleeding is so severe that it cannot be stopped by any other means.

INTERNAL BLEEDING

Internal bleeding it difficult to identify, but should be suspected if the victim has suffered a hard fall or heavy blow to the body.

Symptoms of internal bleeding:
1. Vomit that looks like coffee grounds.
2. Coughed-up blood that is bright red or bubbly.
3. Paleness.
4. Rapid, hard-to-feel pulse.
5. Lightheadedness and restlessness.
6. Thirst.
7. Confusion.
8. Dizziness, weakness, fainting.

Immediate treatment of internal bleeding:
1. Check the ABCs. (Airway, Breathing and Circulation)
2. Treat for shock.
3. Seek medical advice.
4. Do not give victim anything to eat or drink.
5. Look for injuries such as broken bones, which may have caused the bleeding.
6. Stay calm and reassure the victim.

NOTE: Shock is always present in victims who have lost a moderate amount of blood. Even if the symptoms of shock are not visible, treat for it as a preventative measure. In all cases of bleeding, keep the victim quiet to assist blood clotting. Do not move the victim unless it is absolutely necessary. If you must move him/her, handle him/her gently, keep the injured part elevated as long as doing so does not cause further injury or pain, and keep him/her as comfortable as possible.

SHOCK

Shock is a serious condition that may cause death. It is caused by reduced blood supply to body parts and tissues. The victim should be checked for shock symptoms whenever there has been an injury or serious illness. Only the ABCs and treatment of gross bleeding should have priority over the emergency care of shock. The signs of shock may not appear until the condition is severe. You should always presume that shock may be present and treat it in a preventative manner. **Remember**: Some degree of shock occurs in almost all injuries.

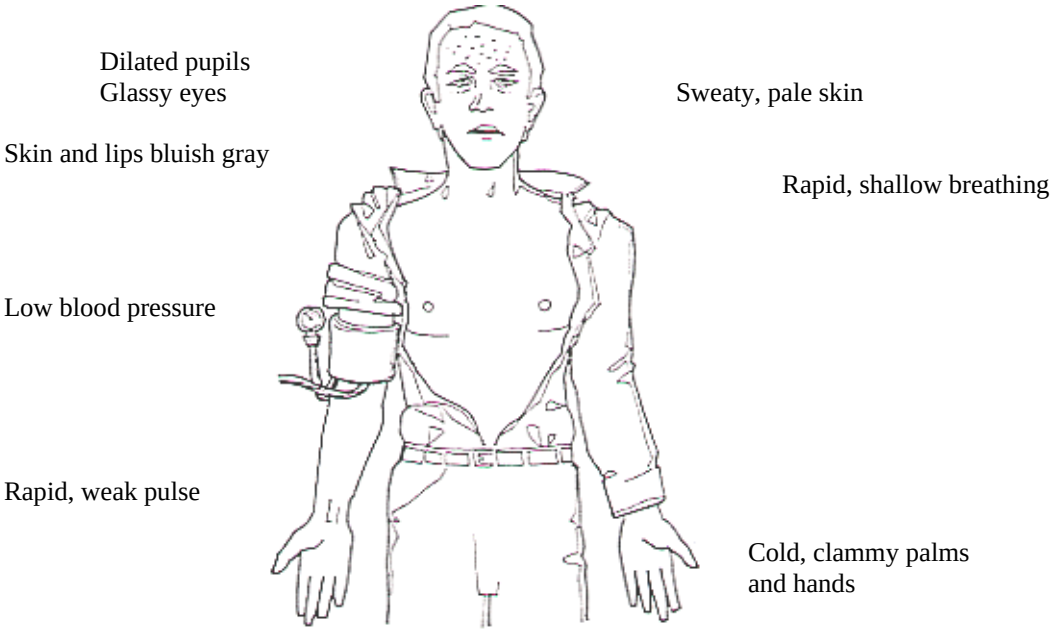
1. SYMPTOMS
   a. Pulse rapid and weak, usually over 100 beats per minute.
   b. Low blood pressure.
   c. Rapid, shallow breathing.
   d. Eyes glassy or lackluster, pupils dilated.
   e. Skin and lips pale and bluish-gray.
   f. Clammy, sweaty skin.
   g. Nausea and vomiting.
   h. Thirst.
   i. The victim may be restless or anxious and excited, becoming confused, finally unresponsive.
   j. The victim may faint if sitting or standing.

2. TREATMENT

   It is much easier to prevent shock than to treat it after it develops. The treatment that can be done by nonprofessionals is limited. Nevertheless, there are vital measures that can be taken to prevent shock or to minimize its effect.

   a. Check the ABCs.
   b. Eliminate the cause (i.e. restore breathing, control bleeding, alleviate pain, etc.)
   c. Keep the victim lying down, with his/her feet raised to maximize circulation to the heart and brain. Exceptions to these rule are:
      (1) Head, neck and back injuries. In these cases, the victim should not be moved until he/she is prepared for transportation.
      (2) Victims who are suffering facial injuries that involve bleeding or fluid loss. Such victims should be positioned on their stomachs with their heads turned to one side to minimize breathing complications.
      (3) In cases of suspected head trauma the feet should NOT be raised due to an increase in cranial pressure!
   d. Keep the victim warm but not hot. Use blankets under and over their body to maintain normal body temperature.
   e. Continue to observe the victim. Check the ABCs and note any worsening of the condition.
   f. Reassure the victim.
   g. Seek medical advice by radio.
   h. In general, do not give the victim anything by mouth until you have a doctor's okay. If you are in a remote area and must treat the victim for an extended period of time, water may be administered to a conscious victim.
   i. Victims in severe shock should be given high priority for evacuation and professional treatment.

Symptoms of Shock



Severe Shock - if the victim is in severe shock, place him on his back with his head slightly lower than his feet (condition permitting).

Vomiting or bleeding around the mouth and semi-conscious - if the victim is in danger of choking on blood, vomit or water, position him on his stomach with his head turned to one side.

Shortness of breath - if the victim has a chest injury or respiratory obstruction, he would probably be most comfortable and breathe easier in a sitting or semi-sitting position.

HEART ATTACK

Myocardial Infarction – caused by either an obstructed artery or lack of oxygen to the heart muscle.

Symptoms- sudden pain in chest radiating to arm, jaw, back, neck or abdomen. Anxiety, Sweating, difficulty breathing, light headiness, loss of skin color, weakness, nausea, vomiting and denial.

Call for help immediately.

Get information on pain quality, intensity, duration and location. Ask about nausea, sweating, hot or cold flashes difficulty breathing,.

TREATMENT

a. Call for help
b. Stay calm and keep the victim calm
c. Monitor Air way, Breathing and Circulation
d. Provide O2 if available.
e. Have AED standing by if available.

STROKE

Cerebral Vascular Accident – has occurred when there is a sudden onset of neurological deficits as a result of bleeding in the brain.

SYMPTOMS – paralysis of half of the face, blindness, seizures, dizziness, loss of motor control, deafness, nausea, vomiting weakness, impaired level of conciseness, may appear displaced, feverish or sweating.

Call for help immediately.

THE SECONDARY SURVEY

Once you have checked the ABCs, examined the victim for gross bleeding, and provided preventative care for shock; it is time to conduct the secondary survey. The secondary survey is a top of the head to bottom of the feet examination. TAKE YOUR TIME. It would be very helpful to have someone on hand to write down your findings and note any changes in the victim's condition. The following is a suggested routine for your secondary survey:

1. Be alert to possible injuries to the neck or spine. Remember: "If in doubt don't move the victim." It is better to be safe than sorry. But continue on with the secondary survey.
2. If the victim is conscious, ask him/her questions, reassure them, and let them know what you are doing.
3. Communication between you and the victim will provide the best information as you examine him/her.
4. Use your fingers to examine his/her neck, head, and face but, be careful not to move the head if you suspect a neck injury.
5. Look at the eyes and for discharge from the nose and/or ears.
6. Slip your hand underneath his/her lower back and examine upwards to the shoulder blades looking for other injured areas (i.e.: blood, broken bones, cramped muscles, etc.).
7. Place your hands along each side of his/her chest and lightly compress it. Also check the sternum for injuries.
8. Use your fingers to press lightly on each of the four abdominal quadrants looking for ridged areas and damage to internal organs.
9. Press the hips together and down at the hip crest and pelvic bone.
10. Slide your hands along the insides of his/her legs up to the groin. Check for blood, urine, or feces. The latter two indicate loss of bladder or bowel control.
11. Feel each leg and foot. Have him/her press your palm with his/her feet. Is the pressure equal?
12. Feel shoulders, arms, and hands. Have him/her squeeze your fingers to test for equal grip.

Remember: This is no time to be afraid or shy in touching your shipmate. You are looking for things that do not feel right (i.e. wounds, fractures, spongy spots, excessive rigidity, areas of pain or that have no feeling). Now is the time to check for the vital signs. Make sure you have noted on paper what you have found so far, as this will aid you in determining if there has been a change in the victim's condition.

VITAL SIGNS

These are the key indicators that will help medical professionals evaluate the victim's condition. They are:
1. Pulse Rate
2. Respiration Rate
3. Temperature
4. Blood Pressure

In the event of any serious illness or injury, the vital signs should be checked frequently (every 5 to 10 minutes) and the information written down with the time of notation. Changes in the vital signs tell the professional who is trying to assess the situation by radio whether or not the victim is getting better. To take the vital signs, you need a watch with a second hand, a thermometer, and a blood pressure cuff (BP cuff) and stethoscope. The latter two require some professional training and practice in order for you to use them properly. They are also recommended as a part of your on-board first aid kit.

RESPIRATION

Rate of respiration is the number of breaths taken per minute. The normal respiration rate is 14 to 20 breaths per minute (count one breath each time the victim breathes in and out). To get an accurate count, it is best to count respirations when he/she is not aware of what you are doing.

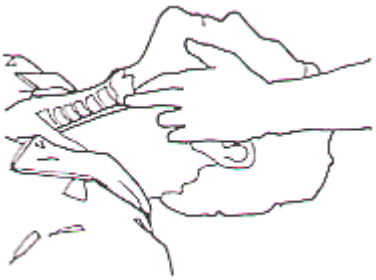
PULSE

The pulse (heart rate) is most easily felt at the carotid artery on either side of the neck, as it is large and located close to the heart and is usually the last to disappear. On a conscious victim the radial pulse (on the wrist) may be more convenient, as you can take the blood pressure on that arm also.

1. To find the radial pulse: Place your middle finger over the victim's artery on the thumb side of his wrist. Next move your finger and press lightly until you find the pulse beat. Count the number of beats in a minute using the second hand of your watch. You can also time the beats for 30 seconds and they multiply the number by 2.
2. To find the carotid pulse: Tip the victims head back gently and locate the Adam's apple. Next slide your index and middle fingers into the groove between the throat and neck muscles on the side closest to you.

NOTE: Do not use your thumb, as it has a pulse of its own and will give you a false count.

To find Carotid Pulse:
(1) Tip head back and locate Adams Apple.



(2) Slide index and middle fingers into groove between throat and neck muscle at side closest to you.

TEMPERATURE

Body temperature measures the balance between heat production and heat loss. There are three types of thermometers available. They are:

1. Oral. You should use an oral thermometer if the victim is conscious and alert. If his/her mouth is dry, parched, or inflamed or if the victim is delirious and irrational do not use an oral thermometer. To take an oral temperature, use a sterile thermometer and shake it down until the mercury is below 96° Fahrenheit. Place it under the victim's tongue and have him/her close his/her lips tightly without biting. Leave it in one minute before removing and reading. Normal mouth temperature is 98.6°F. Readings below 95°F or above 105°F represent critical temperatures.
2. Rectal. To take a rectal temperature, select the proper thermometer and lubricate it with Vaseline or K-Y jelly. Insert the tip about 1.5 inches into the rectum and hold it in place for 3 minutes (do not leave it unattended). Wipe the thermometer free of jelly before reading. Normal rectal temperature is 99.6°F.
3. Hypothermic. A hypothermic thermometer is similar to a rectal thermometer except that is can measure body core temperatures as low as 70°F.

All three types of thermometers should be part of your on-board first aid kit, if possible.

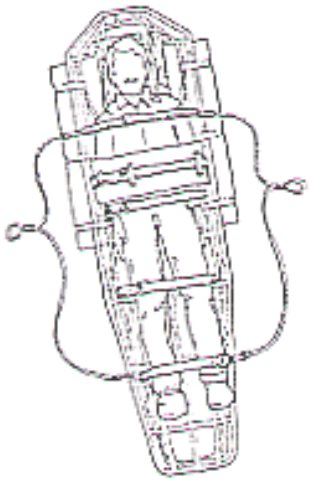
STAGES OF HYPOTHERMIA

Stage	Core Body Temperature
Normal	98.6°F
Shivering	96°F to 90°F
Muscle rigidity begins	90°F
Unconsciousness	85°F
Death	72°F and below

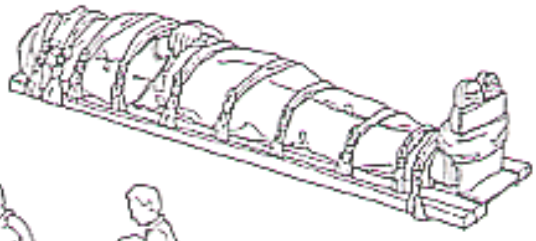
TRANSPORTING VICTIMS

Safe transport of a victim is essential in order to obtain professional medical attention or to move the victim out of harm's way. Choosing the proper method is as important as any other first-aid procedure. The victim's life may depend on the manner in which you move him/her after the injury. Whenever possible, use a litter, stretcher, or backboard to transport seriously injured victims, especially those you suspect of having neck or back injuries. Manual carries should be used only to get victim away from immediate danger or to move him/her a short distance. Take the stretcher to the victim, cover him/her, and make him/her comfortable. Before you can transport a victim make sure you have: (1) Checked the ABCs (2) Controlled gross bleeding (3) Treated for shock (4) Insured the wounds are dressed and fractures are immobilized. The following are pictorials showing the various methods of transporting victims:

Stokes Litter



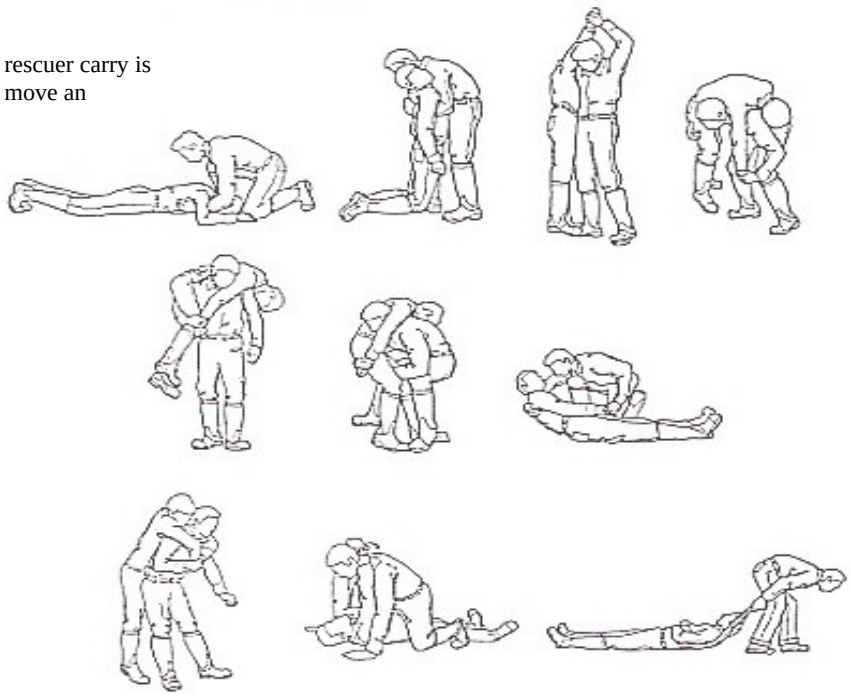
Improvised Litter



Chair Litter

Manual Carries

Fireman's Carry - This one rescuer carry is probably the easiest way to move an unconscious victim.



Pack Strap Carry - If the victim is on a bed or chair, this carry is convenient. The victim's arms are brought across the shoulders taking care that they are well up i.e. that his armpits rest on the shoulders of the rescuer. The victim's arms are then crossed in front and grasped firmly.

Drag Carry - One rescuer method for hauling an unconscious victim for a short distance. The victim's hands are tied and placed behind the rescuer's neck.

Blanket Drag - The victim is placed on a blanket and moved by pulling on one end of the blanket. This method is used when the victim is unconscious and has injuries which forbid handling or lifting by a single bearer.

FIRST AID KIT

All vessels should have a first aid kit on board. It should be adequately stocked and regularly inspected and replenished. You should ensure that everyone on board knows where all emergency gear is kept. A first aid kit should be stored near the survival equipment you would take with you when abandoning ship. The contents should be sealed in a weatherproof container with individually sealed packages, labeled with the trade name, generic name, and expiration date. Contents should be checked before getting underway or at regular intervals. For the most part, items will remain sterile if unopened, but should be replaced every 5 years. The following is a list of supplies, equipment, and medications recommended for a basic first aid kit. The contents and quantity will vary according to the medical history of people on board, the number of individuals on board, the length of time you will be underway, and the available storage space on board.

1. INSTRUMENTS AND EQUIPMENT

- Complete first aid manual
- Rescue shears
- Airway pharyngeal
- Rectal thermometer
- Cervical collar
- Safety pins
- Gauze pads (various sizes)
- Stretch bandages (various)
- Adhesive tape
- Scrub brush
- Forceps
- Blood pressure cuff
- Hypothermic thermometer
- Full arm splint
- Burn sheet
- Gauze roll bandages
- Compresses (various sizes)
- Paper tape
- Eye magnet & nylon loop
- Tweezers
- Stethoscope
- Cyclume light
- Full leg splint
- Space blanket
- Non-adherent pads
- Band-aids (various sizes)
- Butterfly closure & steri-strip package
- Scissors
- Scalpel w/ #11 blade
- Oral thermometer
- Pen light
- Finger splint
- Cotton swabs
- Vaseline gauze
- Triangular bandages

2. OPTIONAL

- Oxygen cylinder, regulator, tubing, and mask
- Urinary catheter

3. MEDICINES

- Aspirin
- Eye cortisone drops
- Triple antibiotic ointment
- Boric acid
- Cold pack
- Acetaminophen
- Ammonia inhalant
- Lubricant (Vaseline)
- Blistex
- Ipecac syrup
- Antacids
- Providone-iodine
- Oil of clove
- Insta-glucose
- Silver sulfadiazine burn cream
- Eye antibiotic drops
- Hibiclens or equivalent
- Mineral oil
- Benzoin
- Hot pack

NOTE: It is recommended that you, as a vessel owner/operator, take a formal first aid course given by a professional medical person. This chapter is only a guide to aid you in emergency procedures but does not cover all situations.

THERE IS NO SUBSTITUTE FOR PROFESSIONAL TRAINING AND PRACTICE!

COASTAL BAR CONDITIONS AND RESTRICTION REPORTING

A system of notification to mariners has been developed to provide tools to assist boaters in making risk based decisions when evaluating their ability to cross the bar. Boaters should seek out several forms of information to make these decisions to safely evaluate weather and sea conditions for their specific size and type of vessel as well as their individual abilities as an operator. Things such as knowing the state of the tide and its effect, knowing the current forecasted weather and sea conditions and, knowing the how all those forces affect the local conditions.

The U.S. Coast Guard and the National Weather service have teamed up to provide the most up to date forecasts information and sea condition observations for coastal bar conditions along the Oregon and Washington coast. Each port provides a local area radio broadcast on 1610AM that gives the current observed bar conditions and any restrictions that may be in place. This information can also be obtained by phone, dialing the port specific number found further in this section. Internet viewing of conditions and restrictions, including bar camera images, can be found at http://www.wrh.noaa.gov/pqr/marine/bars_mover.php or for smart phone or mobile device by scanning the QR code in the photo above or going to http://www.wrh.noaa.gov/pqr/marine/BarObs.php. These observations are updated every four hours or when conditions change.

The Coast Guard and NOAA provide this information to assist mariners in making sound decisions for navigating safely but the safe navigation is the responsibility of the vessel operator. The bar restrictions and conditions information provided will be updated every four hours or when local conditions change. The information provided only reflects conditions at the time the bar was observed and may not reflect current conditions and bar conditions are subject to change without notice. These reports should NOT be used as the sole source of information when making a decision to cross the bar. Mariners are advised to use all means available to safely evaluate bar conditions and risk before crossing the bar.

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 in the Pacific Northwest. A flood tide 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 movement. Tidal Current is the flow of water. In Washington and Oregon saltwater tidal currents can obtain considerable velocities, especially when the ebbing tide is reinforced by river runoff.

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 tide floods. 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 of the Pacific Northwest are contained in this chapter. The charts of the Oregon coastal bars are provided courtesy of the Oregon Marine Board. They have many useful publications that can be downloaded from http://www.osmb.state.or.us/.

REGULATED NAVIGATION AREAS (RNA); BARS ALONG THE COASTS OF OREGON AND WASHINGTON

Each of the following areas is a regulated navigation area in accordance with 33 USC 165.1325: Quillayute River Entrance, Wash, Grays Harbor Entrance, Wash, Willapa Bay, Wash, Columbia River Bar, Wash.-Oregon, Nehalem River Bar, Oregon, Tillamook Bay Bar, Oregon, Netarts Bay Bar, Oregon, Siletz Bay Bar, Oregon, Depoe Bay Bar, Oregon, Yaquina Bay Bar, Oregon, Siuslaw River Bar, Oregon, Umpqua River Bar, Oregon, Coos Bay Bar, Oregon, Coquille River Bar, Oregon, Rogue River Bar, Oregon, Chetco River Bar, Oregon.

Passage across the bars located in regulated navigation areas will be restricted for recreational and uninspected passenger vessels as determined by the Captain of the Port (COTP) or his designated representative. In making this determination, the COTP or his designated representative will determine whether an unsafe condition exists. Additionally, the COTP or his designated representative will use their professional maritime experience and knowledge of local environmental conditions in making their determination. Factors that will be considered include, but are not limited to: size and type of vessel, sea state, winds, wave period, and tidal currents. When a bar is restricted, the operation of recreational and uninspected passenger vessels in the regulated navigation area is prohibited unless specifically authorized by the COTP or his designated representative.

The bars located in the regulated navigation areas will be closed to all vessels whenever environmental conditions exceed the operational limitations of the relevant Coast Guard search and rescue resources as determined by the COTP. When a bar is closed, the operation of any vessel in the regulated navigation area is prohibited unless specifically authorized by the COTP or his designated representative. The Coast Guard will notify the public of bar restrictions and bar closures via a Broadcast Notice to Mariners on VHF–FM Channel 16 and 22A. Additionally, Coast Guard personnel may be on-scene to advise the public of any bar restrictions and/or closures. Regulated Navigation Area Warning Signs are diamond-shaped white warning day markers with orange reflective border and the words "ROUGH BAR" in black letters. Generally, two alternating quick flashing yellow lights are displayed when seas exceed 4 feet in height. Lights are usually extinguished during lesser sea conditions, but this is no guarantee that the bar is safe. Regulated Navigation Area Warning Signs are located at: CHETCO RIVER, ROGUE RIVER (when manned), COQUILLE RIVER (when manned), COOS BAY, UMPQUA RIVER, SIUSLAW RIVER, YAQUINA BAY, DEPOE BAY, TILLAMOOK BAY, GRAYS HARBOR, and QUILLAYUTE RIVER.

The operator of any recreational vessel operating in a regulated navigation area shall ensure that whenever their vessel is being towed or escorted across a bar by the Coast Guard all persons located in any unenclosed areas of their vessel are wearing lifejackets and that lifejackets are readily accessible for/to all persons located in any enclosed areas of their vessel.

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.

RANGE MARKERS (See Chartlets for location)

Front and rear range markers are rectangular-shaped dayboards either red, green, black, or white, with a contrasting colored center strip. (most range markers are KRB, red with a black center stripe). 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.

NOTE: Nehalem River Entrance Range Daybeacons are privately maintained and should only be used if one has local knowledge of the area.

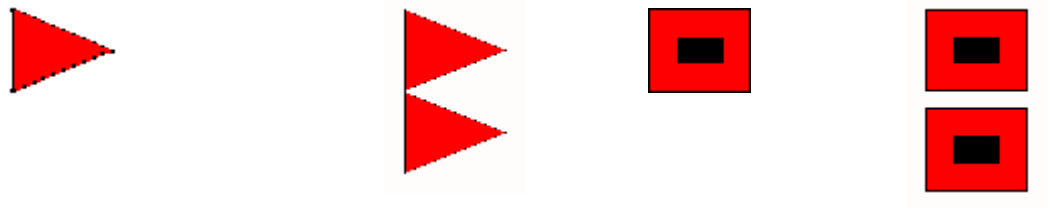
SEASONAL AIDS TO NAVIGATION

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

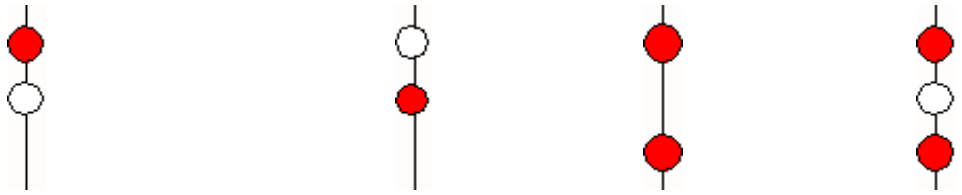
DAYTIME SIGNALS

SMALL CRAFT ADVISORY GALE WARNING STORM WARNING HURRICANE WARNING



NIGHT (LIGHT) SIGNALS

SMALL CRAFT ADVISORY GALE WARNING STORM WARNING HURRICANE WARNING



EXPLANATION OF WARNING DISPLAYS

1. Small Craft Advisory: To alerts mariners to sustained (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 display indicates that 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.

OREGON AND WASHINGTON - COASTAL WARNING DISPLAYS

The U.S. Coast Guard continues to maintain Coastal Warning Displays at the following locations:

Station	**Latitude**	**Longitude**	**Type of Display**
Chetco River Station, OR	42°02.7'N	124°16.1'W	Day & Night
*Rogue River Patrol, OR	42°25.6'N	124°25.3'W	Daytime only
*Coquille River Patrol, OR	43°07.2'N	124°25.0'W	Daytime only
Coos Bay Station, OR	43°20.4'N	124°19.4'W	Daytime only
Coos Head Lookout, OR	43°21.1'N	124°20.1'W	Daytime only
Umpqua River Lookout, OR	43°40.0'N	124°12.2'W	Daytime only
Umpqua River-Winchester Bay, OR	43°40.8'N	124°10.6'W	Daytime only
Siuslaw River Station, OR	44°00.1'N	124°07.3'W	Daytime only
Yaquina Bay Station, OR	44°37.6'N	124°03.3'W	Daytime only
Depoe Bay Station, OR	44°48.6'N	124°03.5'W	Daytime only
Tillamook Bay Station, OR	45°33.2'N	123°54.8'W	Daytime only
Cape Disappointment, WA	46°16.7'N	124°02.8'W	Daytime only
Westport, WA	46°54.3'N	124°07.2'W	Daytime only
Quillayute River, WA	47°54.4'N	124°38.0'W	Day & Night
Neah Bay Station, WA	48°22.3'N	124°35.8'W	Day & Night

* Operational from approximately Memorial Day through Labor Day only

CHETCO RIVER BAR INFORMATION

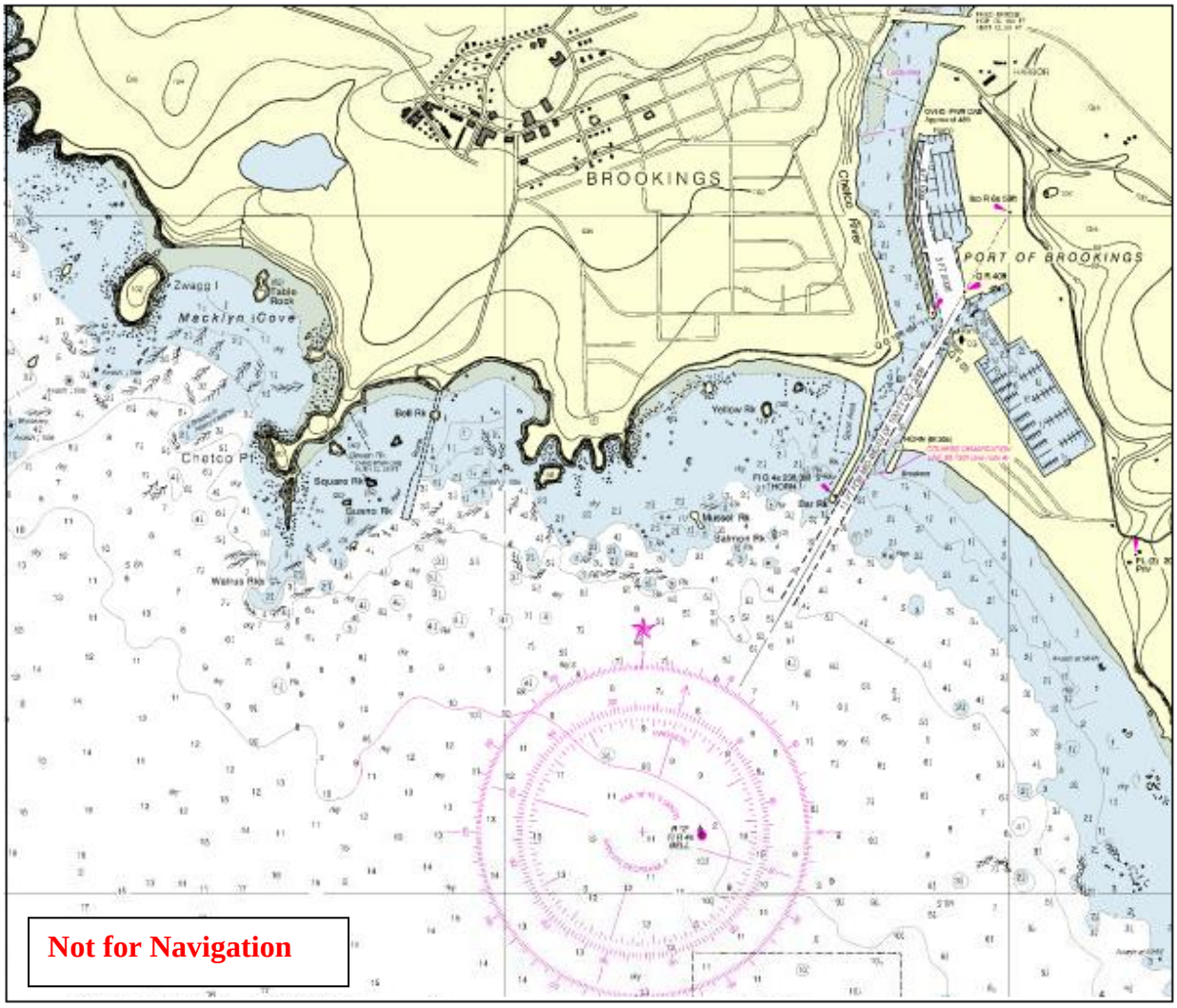
DANGER AREAS

A. WEST JETTY ROCKY AREA: This is dangerous because of many rocks and shoaling. At high tide the rocks are covered by water and the area appears to be navigable, but is extremely dangerous. Avoid this area at all times.

B. EAST AND WEST JETTY SHOAL AREAS: These areas are extremely dangerous at all times because of submerged rocks and breakers. Rocks in these areas may be seen at low tide. Avoid these areas at all times.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: At Chetco River the sign is located on Coast Guard fuel dock at the North NW corner of the Coast Guard station grounds. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: For recorded bar condition and weather reports call Chetco River Coast Guard Station at (541) 469-4571. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. Additional warning signs are located at the entrance to the boatramp that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction. Bar conditions are also broadcast by radio station KURY (910 kHz) every hour during the summer daylight hours.



ROGUE RIVER INFORMATION

DANGER AREAS

A. SHOAL WATER, SOUTH SIDE: Alongside the south side of the Rogue River Channel are shoal water and gravel bars. This shoal water breaks to a height of 6 feet when a swell is running. Many boats fishing inside the river, trolling between the jetties, find themselves set into this dangerous area by northwest winds. If a vessel breaks down in the channel and is not anchored, the northwest wind and ebb tide will set it into this dangerous area in a matter of minutes.

B. OUTER END, NORTH JETTY: Breakers are almost always present here because of shoal water. When the sea is running from the west or southwest, it is particularly dangerous.

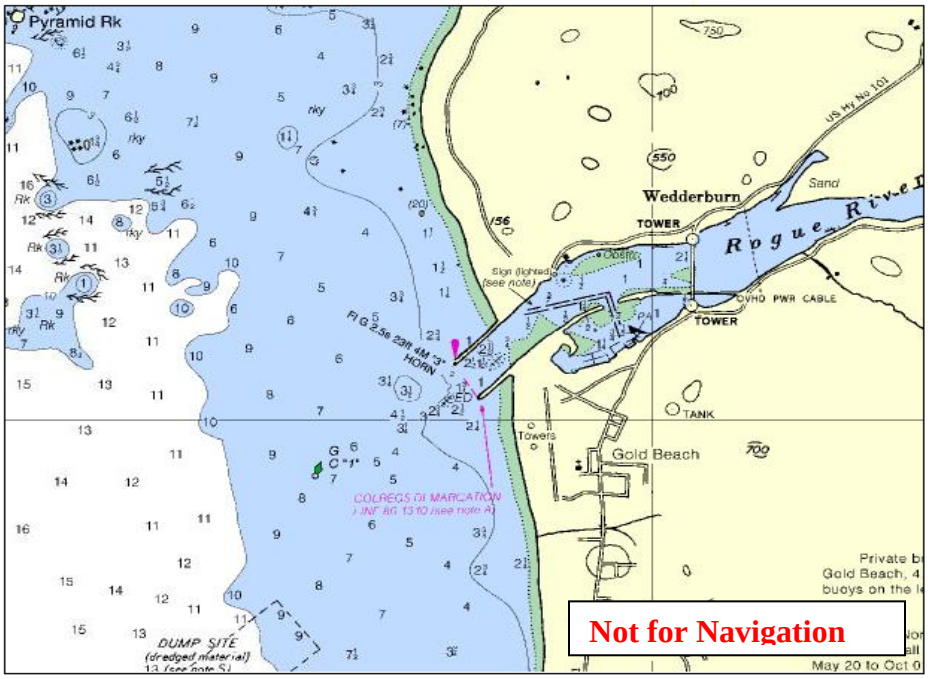
C. OUTER END, SOUTH JETTY: Breakers are almost always present. Even when it appears calm, there may be occasional breakers 1,000 feet outside the south jetty. When the sea is running from the west or southwest, this area is very dangerous.

FISHING INSIDE THE CHANNEL: During recent years, small boats, which do not usually go out into the ocean, fish just inside the bar and troll in an area between the north and south jetties. Frequently there are a great number of boats in this small area and they tend to crowd each other. Because trolling is the most common method of fishing, lines can get accidentally caught in boat propellers. Should this happen, the disabled boat should immediately anchor and/or call for aid. A northwest wind or ebb tide can set a boat into a dangerous area within a matter of minutes.

ROGUE RIVER CHANNEL: The Rogue River channel lies between the jetty tips towards the north jetty. As of February 2003, the entrance channel depths were 6, 12, and 2 feet for the left outside quarter, mid-channel, and right outside quarter respectively. The entrance channel extends from the ocean to the inner end of the north jetty. Boaters are urged to use and stay within this channel. The river entrance is subject to frequent shoaling and depth changes. Consult the Army Corps of Engineers channel reports for the latest depths.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: There is a Regulated Navigation Area Warning Sign when the seasonal Coast Guard Station is manned. It is located on Doyle Point at the Rogue River Station Patrol on the north jetty. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: The Rogue River Coast Guard Station is activated and operational only when the boating activity is significant enough to warrant the patrol, typically Memorial Day through Labor Day. For bar conditions call Chetco River Coast Guard Station at (541) 469-3885, or Rogue River Station at (541) 247-7219 (when seasonally manned). Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions and local weather.



COQUILLE RIVER BAR INFORMATION

DANGER AREAS

A. SOUTH JETTY: It is always dangerous to get too close to the end of a jetty. An unexpected breaker could carry a small boat onto the end of the jetty with great force. The inside of the south jetty is dangerous, and boaters should remain clear. The prevailing northwest wind could set a powerless boat onto the jetty.

B. NORTH JETTY: Stay clear of the end of this jetty, because the sea breaks almost continuously in this area. A shallow area with partially submerged rocks extends from the abandoned lighthouse to the end of the jetty. Large swells that occur in this area could put a boat onto these rocks.

C. SOUTH SIDE OF COQUILLE RIVER ENTRANCE: The area to the south of the entrance can be very dangerous. There are several rocks just below the surface that cannot be seen except during heavy seas. There is a prevailing northwest wind during the summer months, and the sea currents run to the south. These two conditions could combine to send a powerless boat into this area and onto the rocks.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: There is a Regulated Navigation Area Warning Sign when the seasonal Coast Guard Station is manned. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Call the Coos Bay Coast Guard Station at (541) 888-3266, additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. The Coast Guard Station on the Coquille River is activated and operational when the boating activity is significant enough to warrant the patrol, usually Memorial Day through Labor Day, and can be contacted at (541) 347-2038.

COOS BAY BAR INFORMATION

DANGER AREAS

A. SAND SPIT, SOUTH SLOUGH: As you leave the Charleston Boat Basin, the South Slough Sand Spit is on your left. It extends north and parallel to the channel from South Slough Buoy 6 approximately 450 yards towards South Slough Light 4. South Slough Lighted Buoy 2 marks the north end of the sand spit. DO NOT CROSS THIS AREA.

B. SUBMERGED JETTY: When you proceed out from the Charleston Boat Basin in the South Slough channel, and are directly between South Slough Light 4 and South Slough Buoy 5, directly ahead will be South Slough Light 1, which marks the end of the submerged jetty. This jetty is visible only at low water. When departing the Charleston Boat Basin, stay to the left of Light 1 at all times.

C. SAND SPIT, NORTH BEACH: This area is dangerous because of shoal waters and submerged jetties. Occasionally, on a strong ebb, there will be breakers in this area. Avoid this area because of the possibility of going aground or striking submerged jetties and pilings. Note, too, that inbound and outbound tugs with tows, freighters, and so forth, pass close aboard the area and cannot stop for obstructions in the channel – including small vessels.

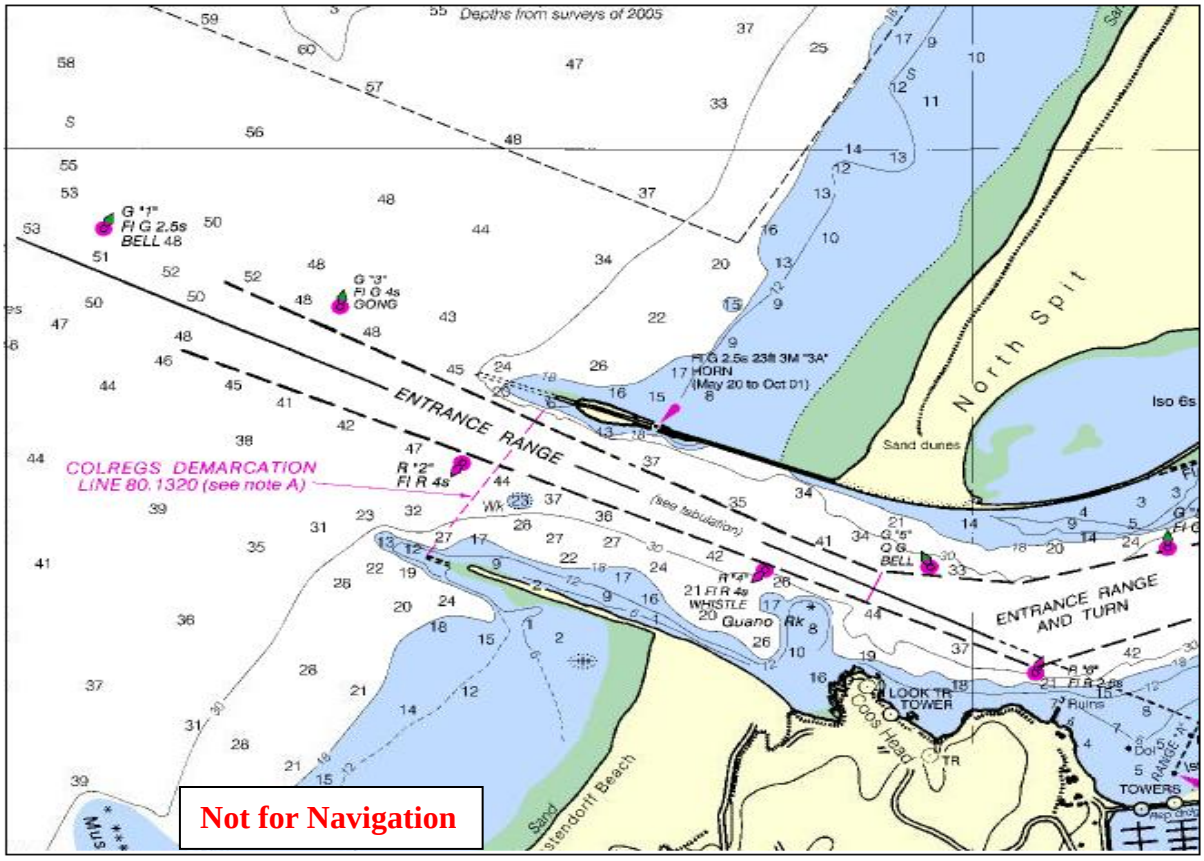
D. SOUTH JETTY, GUANO ROCK AREA: This is a very dangerous area because of shoals extending out from the south jetty to the entrance channel. Breakers are frequently experienced from Guano Rock Lighted Whistle Buoy 4 extending out to just past the end of the South Jetty. Exercise extreme care in this area at all times, especially on ebb tides.

E. NORTH JETTY, SUBMERGED: The North Jetty extends approximately 200 yards to the West. The outward end of the jetty is submerged from the visible end of the jetty out towards Coos Bay North Jetty Lighted Gong Buoy 3. NEVER CROSS THIS AREA. There are breakers in this area most of the time. When departing the bar northbound, be sure to pass Coos Bay North Jetty Lighted Gong Buoy 3 before turning to the north.

F. AREA NORTH OF COOS BAY CHANNEL LIGHTED BUOY 5: This area can be very dangerous when there are any large swells on the bar or during ebb tide. Freak breakers are common in this area. While vessels transit this area on occasion, it is strongly recommended that you never cross here.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: The Coast Guard has established a Regulated Navigation Area Warning Sign 8 feet above the water on the jetty just north of the Charleston Boat Basin. This is a two-part sign, facing toward the Charleston Boat Basin and toward South Slough Light 2. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Weather and bar conditions are updated every three hours or more frequently if there is a significant change in weather at the Coast Guard Station in Coos Bay. This recording can be obtained by calling (541) 888-3102. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. Additional warning signs are located at the entrance to the Charelston and Empire boat ramps that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction. Radio Station KBBR (1330 kHz) broadcasts bar conditions once each hour during the summer months. Current weather advisories are also posted at the Coast Guard Station in Charleston.



UMPQUA RIVER BAR INFORMATION

DANGER AREAS

A. MIDDLE GROUND AND NORTH SPIT: The North Spit is to your right as you proceed down the Umpqua River, starting from the first rock spar jetty and long pier on the east side of the channel. The North Spit area has small breakers when a swell is running, and gets rougher toward the north jetty. The north spit is very dangerous because large breakers may come into this area from the middle ground. The north spit meets the middle ground at the outer end of the training jetty. The middle ground area extends from the north jetty to the north edge of the main channel and is dangerous because a little swell can create large breakers which can capsize a vessel. Boaters should not linger near the mouth of the river during ebb tide, because if their power fails, their boats could be carried out to sea before an anchor would be effective or oars could be put to work.

B. NORTH AND SOUTH JETTY: The areas north of the north jetty and south of the south jetty can be very dangerous. Whenever breakers are observed, boaters should avoid this area.

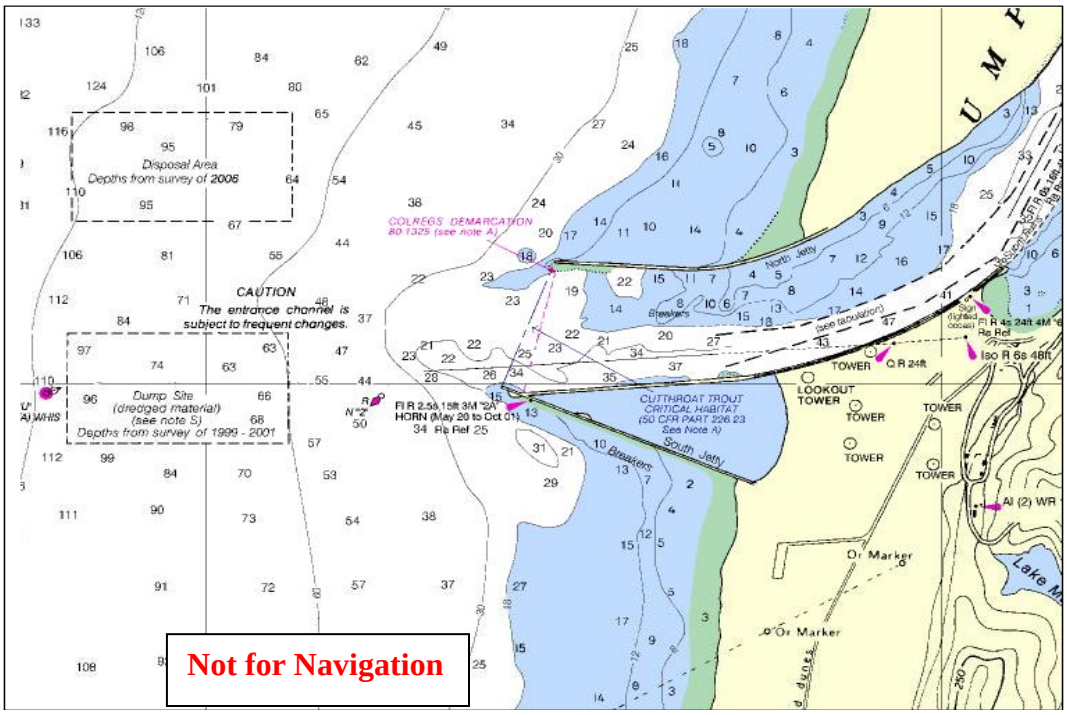
C. TRAINING JETTY: On the ebb tide, the current will pull boats into the jetty. Refraction waves are often encountered in this area, creating extremely choppy conditions.

D. UMPQUA RIVER LIGHT 6A, OLD COAST GUARD DOCKS: Current on either the ebb or flood will often set boats into this area.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: The Coast Guard has established a Regulated Navigation Area Warning Sign out towards light #6 and has two rough bar warning signs located at both boat ramps in Winchester bay. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Bar condition reports for Umpqua River are given hourly (daylight hours only) during summer months by station personnel and recordings are available by calling (541) 271-4244. Bar information can also be obtained by contacting Coast Guard Station Umpqua River via radio, VHF-FM Channel 16/22A. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. Additional warning signs are located at the entrance to the boat ramps that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.

NOTE: Breaking waves can be encountered on the Umpqua River bar at any time.
NOTE: Entrance range may not mark best water.



SIUSLAW RIVER BAR INFORMATION

DANGER AREAS

A. SHOAL WATER, NORTHEAST SIDE OF CHANNEL: Has a depth of 2 to 3 feet at high tide and extends from Siuslaw River Channel Buoy 7 to Siuslaw River Channel Light 9 and on to Siuslaw River Channel Buoy 11.

B. SHOAL WATER, SOUTH SIDE OF CHANNEL: Extends from Siuslaw River Channel Buoy 6 to Siuslaw River Channel Buoy 4 and approximately 50 yards out toward the south jetty tips.

C. OUTER END OF SOUTH JETTY: Breakers are almost always present in this area. When the seas are from the southwest or west, breakers may extend to the entrance buoy, Siuslaw River Approach Lighted Whistle Buoy S.

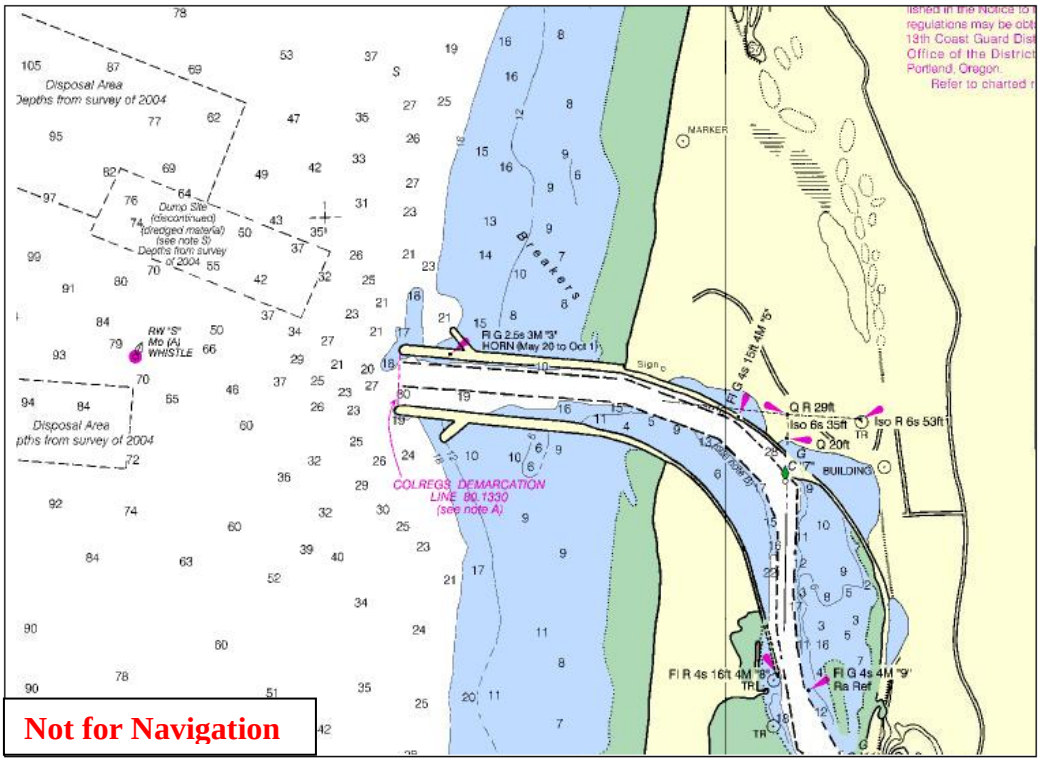
D. OUTER END OF NORTH JETTY: Breakers are almost always present in this area. When the seas are from the west, the breakers may extend to the entrance buoy (Lighted Whistle Buoy "S").

SIUSLAW RIVER BAR: Siuslaw River Bar has a very narrow channel extending out past the jetties. Unlike the larger bars on the Oregon Coast, the Siuslaw River Bar may be rendered impassable for small boats by a moderate swell, particularly at ebb tide. Boaters should use extreme caution when operating near this bar. Due to shoaling and jetty extensions, bar conditions are unpredictable. When the bar is rough, expect continuous breakers just inside the jetty tips out to 250 yards.

NOTE: The entrance range may not mark best water due to the changing conditions of the bar.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: At Siuslaw River the sign is mounted on the Coast Guard lookout tower and faces 150° True. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Recorded bar and weather conditions can be obtained by calling Coast Guard Station Siuslaw River at (541) 997-8303. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the boat ramp in Florence that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.



YAQUINA BAY BAR INFORMATION

DANGER AREAS

A. SOUTH JETTY AND GROINS IN RUINS: The groins, or short jetties, along the south side of the entrance are completely submerged at high tide, but are bare at other stages. In addition, there are submerged rocks along the entire length of the jetty, which are close to the surface at all times. Never cross over the submerged end and do not hug the jetty on either side. Remain in the channel entering and leaving the river, so that if your engine should fail, you will have time to anchor before the current or wind sweeps you onto the rocks.

B. NORTH JETTY: This jetty affords excellent protection from northerly winds. However, the same caution should be exercised in running close to it as with the south jetty. Stay well clear of the end of the north jetty, since there is danger of shoal water breakers at the extreme end. Remain in the channel outbound until you have passed Yaquina Bay Entrance Approach Lighted Whistle Buoy, YB Buoy. This applies to entering the river as well. Mariners should anticipate a north to south beach current during the summer months and a south to north current during the winter months. The beach current may be intensified close to the tips of the jetties. Note: The current can be affected by severe weather and extreme tidal changes.

C. SOUTH REEF: This reef can be considered an extension of Yaquina Reef and is equally dangerous due to the same surf conditions that are encountered on Yaquina Reef. When going south, continue out of the channel to Yaquina Bay Approach Lighted Whistle Buoy Y before turning south.

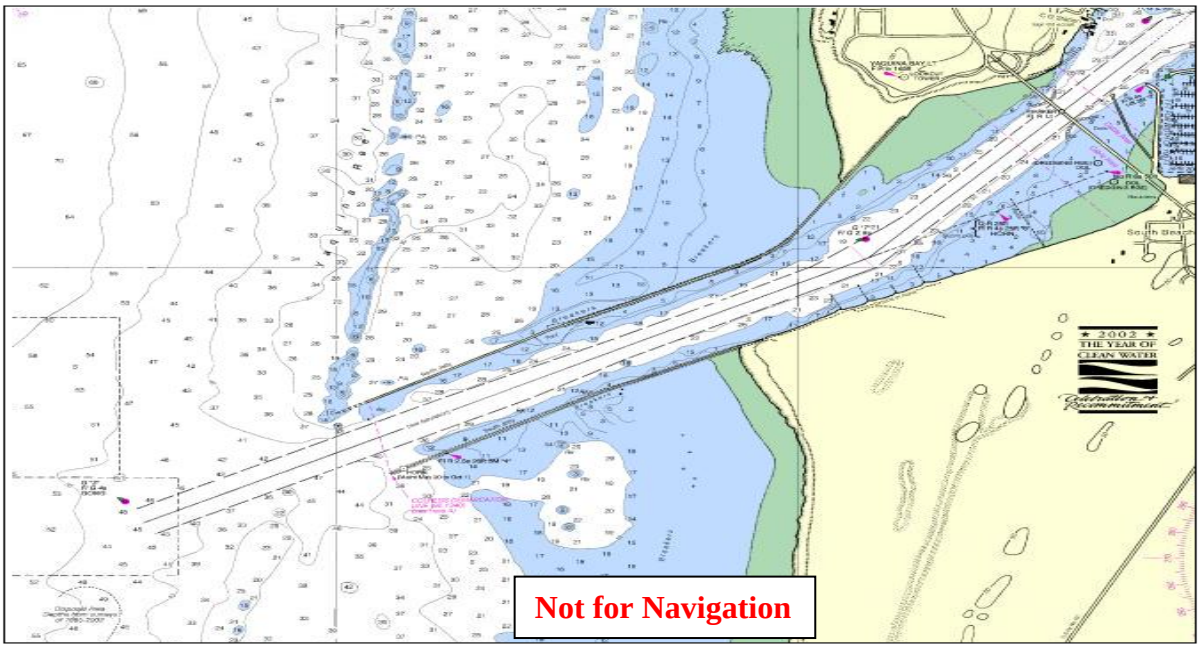
D. YAQUINA REEF: This reef is always extremely dangerous, even when the winds are light and few breakers are seen. A large swell coming from seaward can cause a tremendous breaker on this reef with little or no warning, even when the sea is otherwise calm. Never fish close to the reef and do not turn north until you have passed Yaquina Bay Approach Lighted Whistle Buoy, YB Buoy.

GENERAL: The Army Corps of Engineers has a disposal site for dredge spoils approximately 600 yards north of Yaquina Bay Entrance Lighted Gong Buoy 1 and 1000 yards west of Yaquina Bay Entrance Lighted Gong Buoy 3 (seasonal May 1 to October 1). Mariners are encouraged to proceed to the Yaquina Bay Approach Lighted Whistle Buoy YB before turning north when departing for sea.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: At Yaquina Bay the sign is on the northeast end of the Coast Guard pier and faces 280° True. There are two new signs in Yaquina Bay, the first is located by the Embarcadero Marina on the break wall facing NE at position 44 37’ 43”N 124 02’ 28”W, the second sign is located at the new boat ramp at South Beach Marina facing E at position 44 37’ 25”N 124 03’ 04”W. If the yellow lights on this signs are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Bar condition reports are given twice daily (and at the Coast Guard's request) during the winter and summer by radio station KNPT (1310 kHz), or as bar and/or weather conditions change. Recorded weather and bar condition reports are available by calling (541) 265-5511. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the boatramp at the South Beach Marina that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.

NOTE: The Coast Guard is available to escort or stand by the bar when the bar is rough for both recreational and commercial boaters.



DEPOE BAY BAR INFORMATION

DANGER AREAS

A. NORTH REEF: Once a boat has cleared the entrance, any waters to the north are hazardous until Depoe Bay Entrance Lighted Bell Buoy 2 is reached. The sea breaks from the northwest and southwest at the same time, so this area must be avoided at all times.

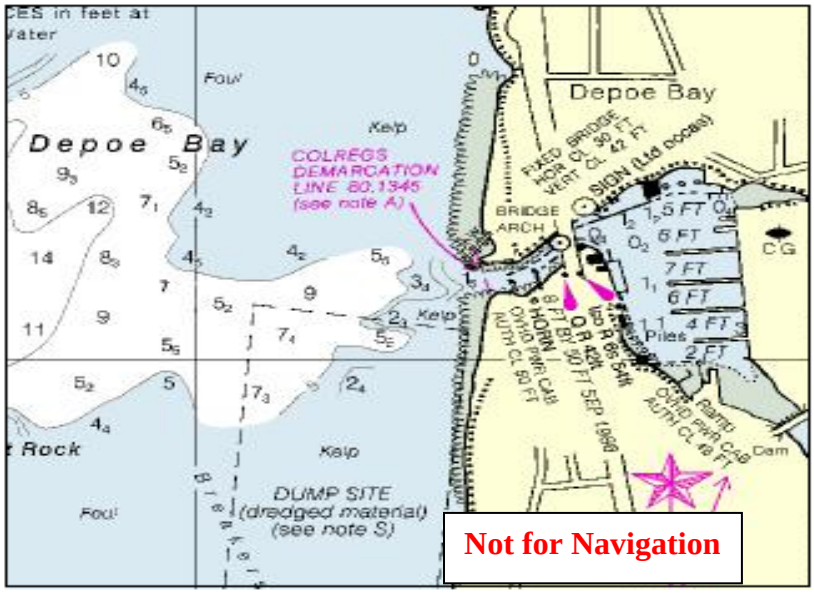
B. SOUTH REEF: Better known as "Flat Rock", this area lies just south of the channel. Breakers are almost always present. Boats coming from the south should never use this area as a short cut to the channel. This area should be avoided at all times.

C. CHANNEL FROM DEPOE BAY ENTRANCE LIGHED BELL BUOY 2 INBOUND (APPROXIMATELY 1000 YARDS): The passage into and out of Depoe Bay is unusually short and difficult. The Coast Guard recommends studying it before attempting to operate a boat in it. Because the north and south reefs are so close to the channel, this area sometimes becomes very hazardous. During adverse conditions, breakers from the north reef will cross the channel and run into the entrance. When this condition exists, it is better to stand by at the entrance buoy until the Coast Guard advises it is safe to enter or is there to escort boats in. An important rule at Depoe Bay: **Never fish between the entrance and Depoe Bay Entrance Lighted Bell Buoy 2.**

DEPOE BAY CHANNEL: Depoe Bay Channel has been widened from 35 feet to 50 feet to make passing less dangerous. The channel has a depth of 7 feet at mean low water. Under normal conditions, small craft can enter and leave the harbor with little difficulty. Even under good conditions, however, the area between the breakwater and the bridge should be navigated with extreme caution. The channel has a “dog leg” under the bridge that obstructs a vessels view of inbound or outbound vessels. The local charter fleet monitors VHF FM Channel 80 and it is standard practice for vessels to make a broadcast on this channel when inbound or outbound. Under adverse conditions, only mariners thoroughly familiar with the channel should attempt to enter this harbor. Depoe Bay has a flood lighted entrance. It should not be entered at night, unless the boat operator is well acquainted with the channel entrance and range lights.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: The Coast Guard has established a Regulated Navigation Area Warning Sign with two flashing yellow lights 25 feet above the water, visible by outbound vessels, on a building on the north side of the entrance channel. There is also a new warning sign with two yellow flashing lights located at the south end of the harbor at the public boat ramp. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Recorded weather and bar conditions reports are available by calling (541) 765-2122 or contact Coast Guard Station Depoe Bay on VHF-FM Channel 16. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the boatramp that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.



TILLAMOOK BAY BAR INFORMATION

DANGER AREAS

A. BAR AREA: The entire area between the beach and the 25-foot curve is BAR AREA. This area is consistently changing and can be extremely hazardous under certain conditions. The water runs out from 4 to 6 knots on the average and is very strong. Boats proceeding out should stop in the channel eastward of the jetty tips and carefully evaluate the bar. Between November and April the area around Tillamook Bay Entrance Bell Buoy 1 can be extremely hazardous and should be avoided.

B. NORTH JETTY: Approximately 100 yards of the north jetty tip is submerged. This area and all areas immediately adjacent to the jetty are extremely dangerous and should be avoided. About the last 150 yards of the outer tip of the North Jetty is curving towards the Tillamook Bay Channel. Do not proceed north or south until you are well clear of the submerged jetties (approximately 200 yards seaward of the jetty tips).

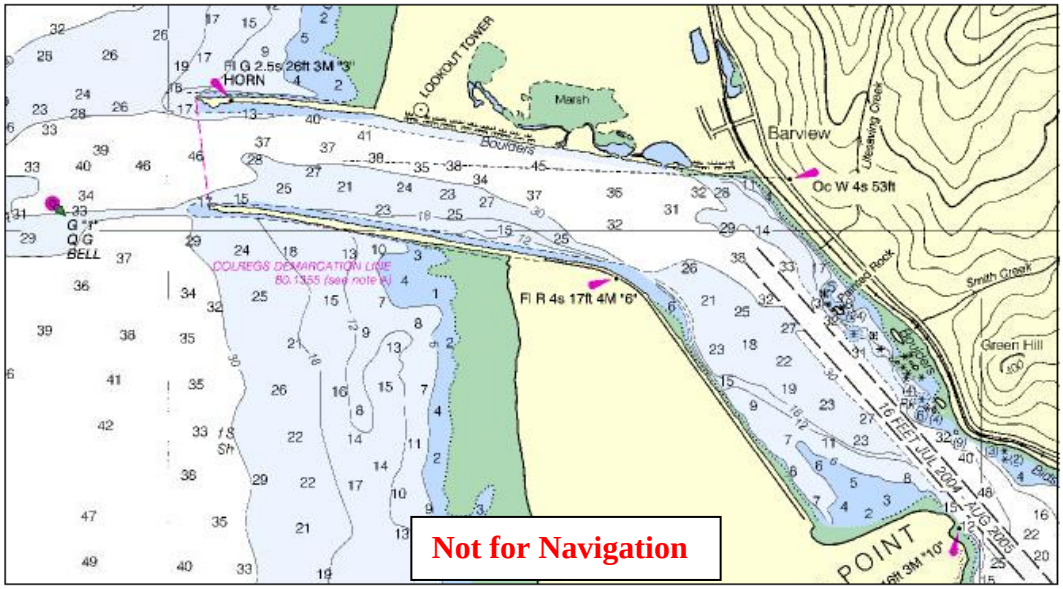
C. MIDDLE GROUNDS: Shoaling makes this area unpredictable and hazardous and should be avoided.

D. SOUTH JETTY: Approximately 100 yards of the south jetty tip is submerged. Extreme caution must be exercised when transiting this area.

TILLAMOOK BAY CHANNEL: Tillamook Bay Channel lies just south of the North Jetty. Boaters are urged to navigate with extreme caution as this channel changes constantly. The Tillamook Bay Entrance Leading Light marks the correct location of the navigable channel only when you are between the jetties. The leading light should not be used to make an approach to the Tillamook Bay Bar since it runs directly over some hazardous areas west of the jetty tips. Most local mariners prefer to transit in and out of Tillamook Bay by following the "south hole" which is the deep water area that runs north and south, just west of the end of the submerged rocks on the south jetty.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: One Regulated Navigation Area Warning Sign is located on the south side of the Coast Guard boathouse. A second sign is mounted on the Coast Guard Tower, which is located on the North Jetty. If the yellow lights on these signs are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar. To see if this restriction affects your vessel, please contact Coast Guard Station Tillamook Bay on VHF-FM Channel 16 or call (503) 322-3531.

BAR CONDITION REPORTS: Bar condition and weather reports for Tillamook Bay can be obtained by contacting Coast Guard Station Tillamook Bay on VHF-FM Channel 16 or call (503) 322- 3234. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the boat ramp that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction. Radio station KTIL (1590 kHz) gives bar conditions once a day, in the morning, during the summer time. With conditions changing frequently on the bar this morning radio report is only pertinent for the period that the report is given.



NEHALEM RIVER INFORMATION

DANGER AREAS

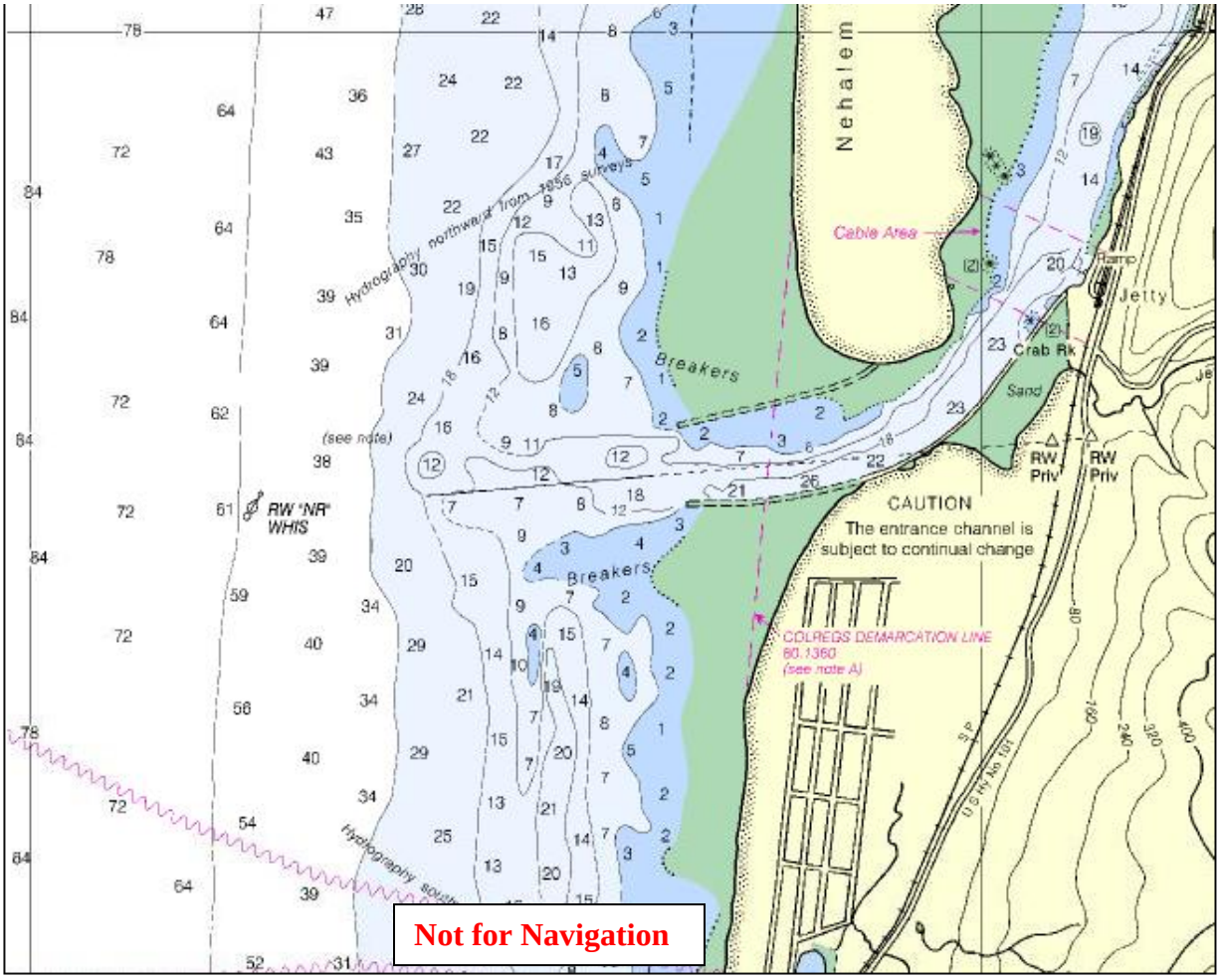
The Nehalem River entrance lies between two rebuilt jetties. The best water is close to the South Jetty. The channel seaward of the jetties is continually shifting and local knowledge is needed to cross it safely. The privately maintained range markers do not necessarily show the exact channel and are often not visible.

A. CRAB ROCK: Located about 150 yards southwest of Jetty Fisheries Resort docks, it is a hazard to small boats when it is covered by water.

B. BAR AREA: The entire area between the beach and the 30 foot curve is BAR AREA and breaks on the ebbing current. The channel across the bar is subject to frequent change. Boats proceeding out should stop just inside the entrance and carefully evaluate the bar. If a decision is made to cross, pick the calmest area and proceed. Once you have begun to cross the bar, do not attempt to turn around if the bar is breaking.

THERE IS NO REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN ESTABLISHED

Note: This is an unmonitored bar. For assistance contact the Coast Guard on VHF-FM Channel 16.



COLUMBIA RIVER BAR INFORMATION

DANGER AREAS

A. CHINOOK SPUR, UPPER, LOWER AND MIDDLE SAND ISLAND SPURS: Built on two rows of staggered pilings. Currents flowing through these pilings attain a velocity of up to 5 knots. A boat which becomes disabled or is maneuvered in such a way as to come in contact with any of these spurs is almost sure to suffer damage or become trapped against them and turn over. Even large boats have been capsized in these areas. Give these spurs a wide berth and never get close to them on the up-current side.

B. CLATSOP SPIT: Is the most unpredictable area on the river entrance. During flood currents and slack water it may be calm with only a gentle swell breaking far in on the spit. Yet 5 or 10 minutes later, when the current has started to ebb, it can become extremely hazardous with breakers extending far out toward the channel. You should remain north of the red buoys (Clatsop Spit Lighted Buoys 4, 6, 8, 10, 12, and 14) in this area, particularly just before or during the ebb. The South Jetty has a section broken away on the outer end. The broken section is under water close to the surface. Boats should use extra caution in the area from the visible tip of the Jetty out to Columbia River South Jetty Bell Buoy 2SJ. Peacock and Clatsop Spits are called the graveyard of the Pacific for good reason.

C. JETTY A: Southeast of Cape Disappointment, it presents a particular danger when the current is ebbing. Water flowing out of the river, is deflected by the jetty and frequently the currents reach 8 knots, often causing waves of 8 feet or more. Boats proceeding into Baker Bay West Channel make very little speed against the swift current and are exposed to the rough water or surf for long periods of time. The shallow sandy area should be avoided by small craft when heavy seas are present because of the surf that breaks on the beach.

D. MIDDLE GROUND: This is a shallow area between the North Jetty and main Ship Channel that is subject to breaking seas when swells as small as 4 feet are present. Conditions here can change in minutes with tidal current changes.

E. PEACOCK SPIT: Breakers are heavy in all types of current. Sport craft leaving the river should never be on the north side of the green buoys (Columbia River Entrance Lighted Buoys 1, 3, and 9 and Peacock Spit Lighted Buoy 7). When rounding Peacock Spit, give the breakers at least a half-mile clearance. Many times unusually large swells coming in from the sea suddenly commence breaking 1/4 to 1/2 mile outside the usual break on the end of the north jetty.

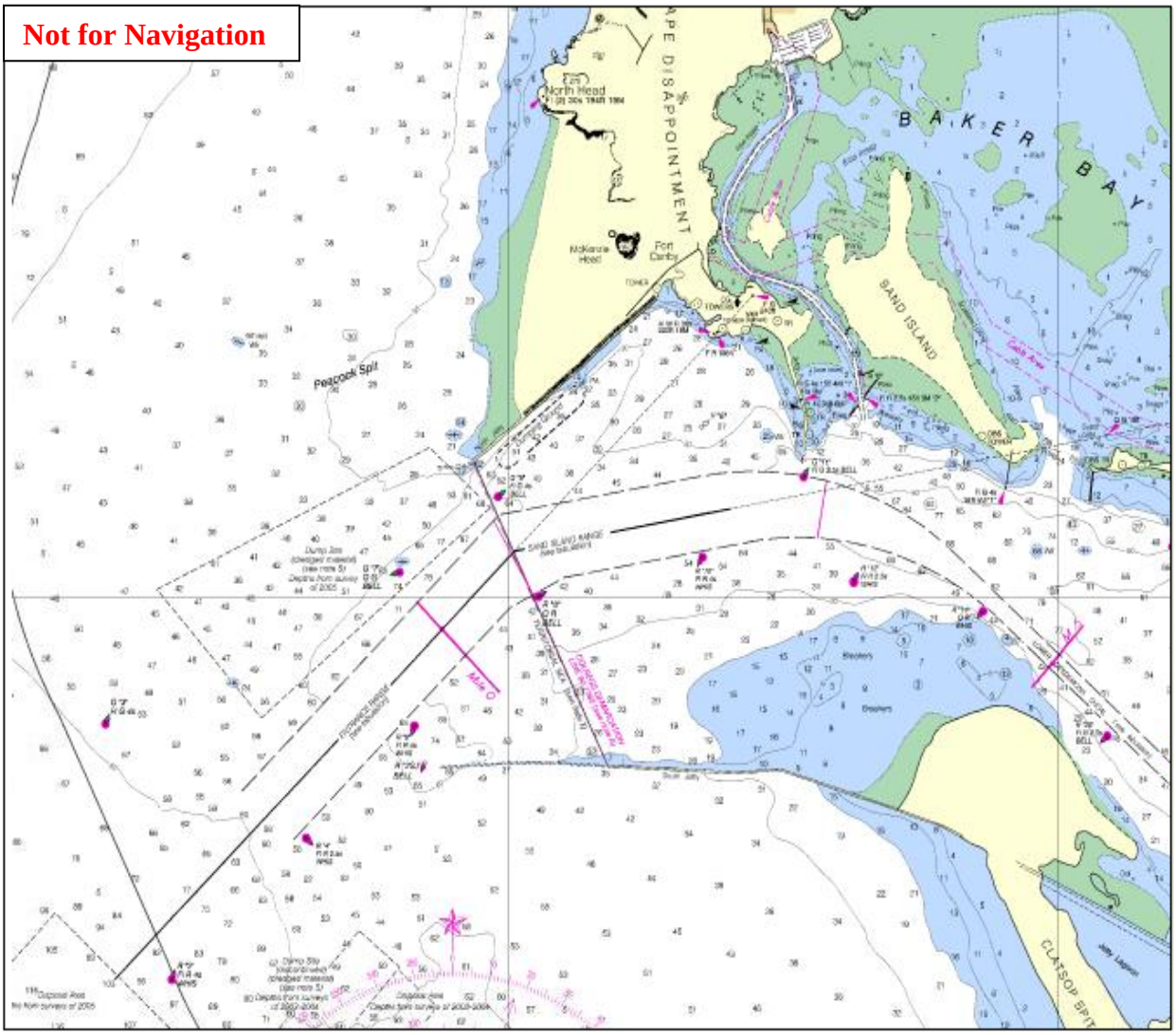
F. SOUTH JETTY (SUBMERGED): There is a submerged jetty that extends approximately 1 nautical mile westward to Columbia River South Jetty Bell Buoy 2SJ. There have been many deep draft vessels that have struck the rock bottom causing flooding or other damage. Sailing vessels have had the extended skeg become fouled in the crevices between the stacked rocks that comprise the submerged jetty.

G. CURRENTS: Change shape and size of swells during the periods off the outgoing (ebb) tide and the incoming (flood) tide. The ebb tide can have a two-fold effect on the incoming swell. The ebb current pushes against the swells and can hold the pattern outside of the bar. This can cause waves to double stack and create shorter distances between the waves. The ebb current can create the effect of a false bottom on swells. The current meeting the wave can cause them to build in size and even break. This type of waves develop very quickly and can cause broaching or capsizing. The flood current will allow the wave patterns that were held by the ebb current to start flowing across the bar. Though the flood current can create favorable conditions for bar crossings, the flood can allow these waves to come in unrestricted and increase in speed and power. These type of conditions regarding the ebb and flood can be seen as the off shore swells approaching land and are ten foot in height.

BAR CONDITION PUBLIC INFORMATION SIGNS: There are five Public Information Signs for the Columbia River, three in Washington; Chinook Boat ramp, Ilwaco Boat ramp and one at Cape Disappointment State Park Boat ramp, and two in Astoria; Hammond Boat ramp and Warrenton Boat ramp. The signs are black and orange with two amber flashing lights when activated. Below the black and orange sign there is a public information sign “Bar Restrictions in Effect Tune AM Radio to 1610” When activated the amber lights flash and the Bar restriction information is broadcast on 1610 kHz AM.

THERE IS NO REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN ESTABLISHED.

BAR CONDITION REPORTS: Radio stations KVAS (1230 kHz) and KAST (1370 kHz) gives bar condition reports 15 minutes before and after the hour. Safety information continuously (in a loop). Additionally, within a three mile radius from the Coast Guard station, and at the Hammond boat basin, a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. Additional warning sign are located at the entrance to the boat ramps at Fort Canby, Ilwaco, Chinook, Warrenton, and Hammond, and when the amber lights are flashing, you are directed to listen to 1610 AM for more information on the restriction. Coast Guard Station Cape Disappointment can be contacted via VHF-FM Channel 16 for bar conditions. The Coast Guard also maintains a recorded bar and weather forecast report at (360) 642-3565. The recording is updated every 3 hours or when weather conditions change



WILLAPA BAY BAR INFORMATION

DANGER AREAS

Most of the waters in the Willapa Bay entrance are "**DANGEROUS AREAS**". This is due to extensive shoal water, effects of ocean wind and swells, and the fact that bars and shoals are constantly changing. The sea can break into dangerous surf at any time in this area. If your boat should swamp, help may not be able to reach you because the sea breaks into shoal water. The channel into Willapa Bay is subject to frequent changes. You should only attempt to cross Willapa Bay Entrance if you are intimately familiar with the entrance. Even the most recent chart of Willapa Bay will most likely not show the current shoals and channels. Shoaling at the entrance to Willapa Bay is constantly shifting. **The nearest Coast Guard Station that can respond to distress calls is over one hour away to the north in Grays Harbor.**

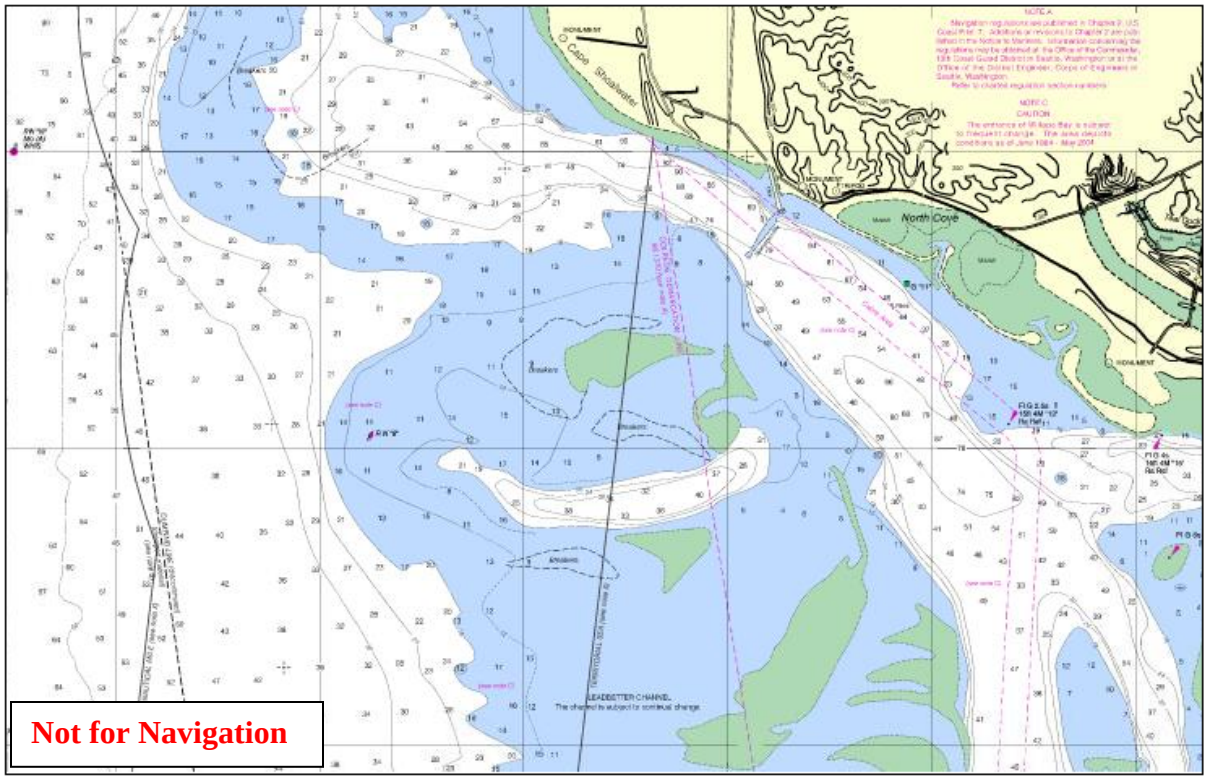
A. SOUTH SPIT: Located on your right as you enter Willapa Bay. During ebb currents it generally breaks with swells 4 to 6 feet high. In addition to the danger of capsizing in this area, there is the added hazard of fouling your propeller on one of the many crab pot floats set by fishermen.

B. NORTH SPIT: Lies to your left as you enter Willapa Bay. This area is dangerous due to shallow water and there is generally an 8 to 10 foot swell running. During ebb currents it is usually breaking. Great caution should be used while fishing near this area as the drift rate is very fast and the turbulence may cause you to capsize.

NOTE: The buoy system that serves the entrance to Willapa Bay is only meant to serve as a general guide. The buoys are yellow in color, not red and green because they are special purpose buoys. Because of the quickly shifting shoals, the buoys may or may not mark the best channel. With the frequent and severe storms that occur, it is normal for one or more of the buoys to break lose. Upriver from the North Cove area, the traditional red and green buoy system comes into effect.

THERE IS NO REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN ESTABLISHED.

BAR CONDITION REPORTS: Radio Station KAPA (1340 kHz) gives bar condition reports Monday through Saturday at 6:30 a.m., 9:00 a.m., 3:00 p.m., and 6:00 p.m., and on Sundays at 8:00 a.m., 12:00 noon and 4:00 p.m.



GRAYS HARBOR BAR INFORMATION

DANGER AREAS

A. OUTER WHITCOMB FLATS: Is to your right as you leave Westport. This is a shoal area, and breakers sometimes exist, causing a dangerous situation.

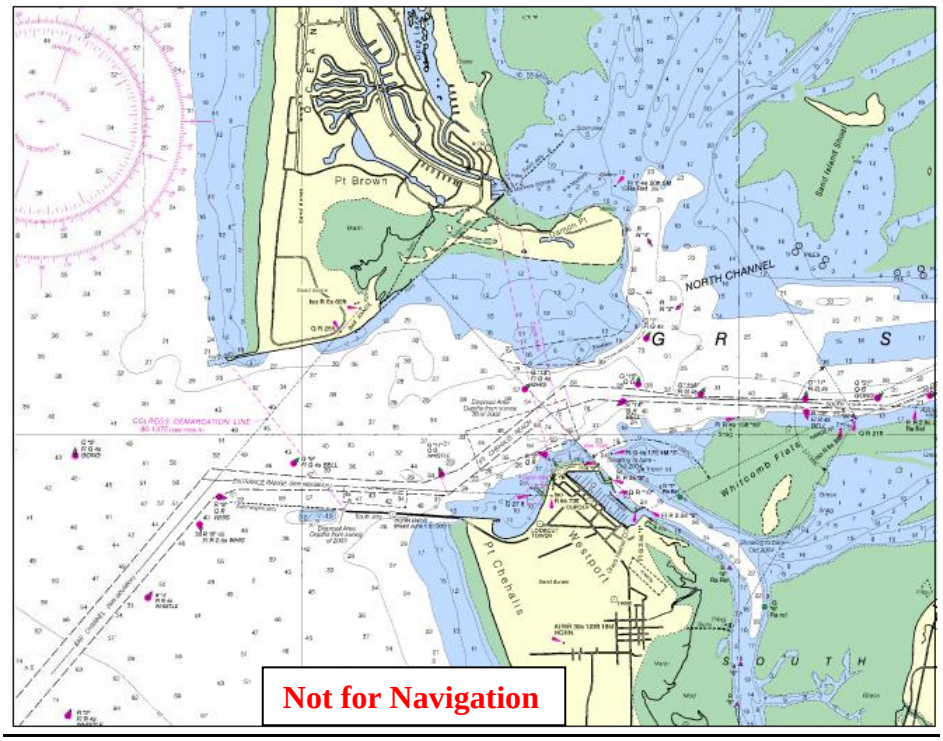
B. THE MIDDLE GROUND: Is the area located from buoy 11 west towards buoy 9 and extending North to the base of the North Jetty. In moderate weather, large ground swells and breakers may be present. All attempts should be made to stay within the federally marked channel located south of the middle grounds when transiting the bar.

C. THE SOUTH JETTY: The South Jetty is submerged from the exposed end to about 4,500 feet seaward. Usually the sunken rocks are not visible and the danger of grounding is always present. In other than very calm weather conditions breakers exist on the Sunken Jetty, creating the possibility of capsizing or grounding. Grays Harbor Entrance Lighted Buoy 8 marks the sunken or seaward end of the jetty. Always avoid the area between Grays Harbor Entrance Lighted Buoy 8 and the raised or exposed end of the South Jetty. This area has caused most of the boating mishaps on the bar in recent years.

D. THE NORTH JETTY: The North Jetty and the area north of it are dangerous because of shallow water and breaking surf.

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: A Regulated Navigation Area Warning Sign is located on the point of land northwest of the Islander Motel and Restaurant. This sign is oriented 070° True. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: For current bar conditions vessels are encouraged to call Coast Guard Station Grays Harbor weather line at (360) 268-0622. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the Westport boat ramp that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.. Bar information is updated periodically throughout the day and as conditions change. The station will also broadcast any bar restrictions on VHF-FM Channel 16 and 22. The station can also be reached at (360) 268-0121 for the most up to date bar report.



QUILLAYUTE RIVER BAR INFORMATION

DANGER AREAS

A. ROCK DIKE AND NORTH SIDE OF JAMES ISLAND: A rock dike, exposed at low water, runs from the northeastern side of James Island northeastward to the beach. It should be given a wide berth because of the danger of being swept upon it by river currents. The area northward of James Island is fouled with many submerged rocks and should be avoided.

B. OUTER END OF THE BREAKWATER: The end of the breakwater is slowly settling and the area around it is shoaling which causes breakers and should be avoided.

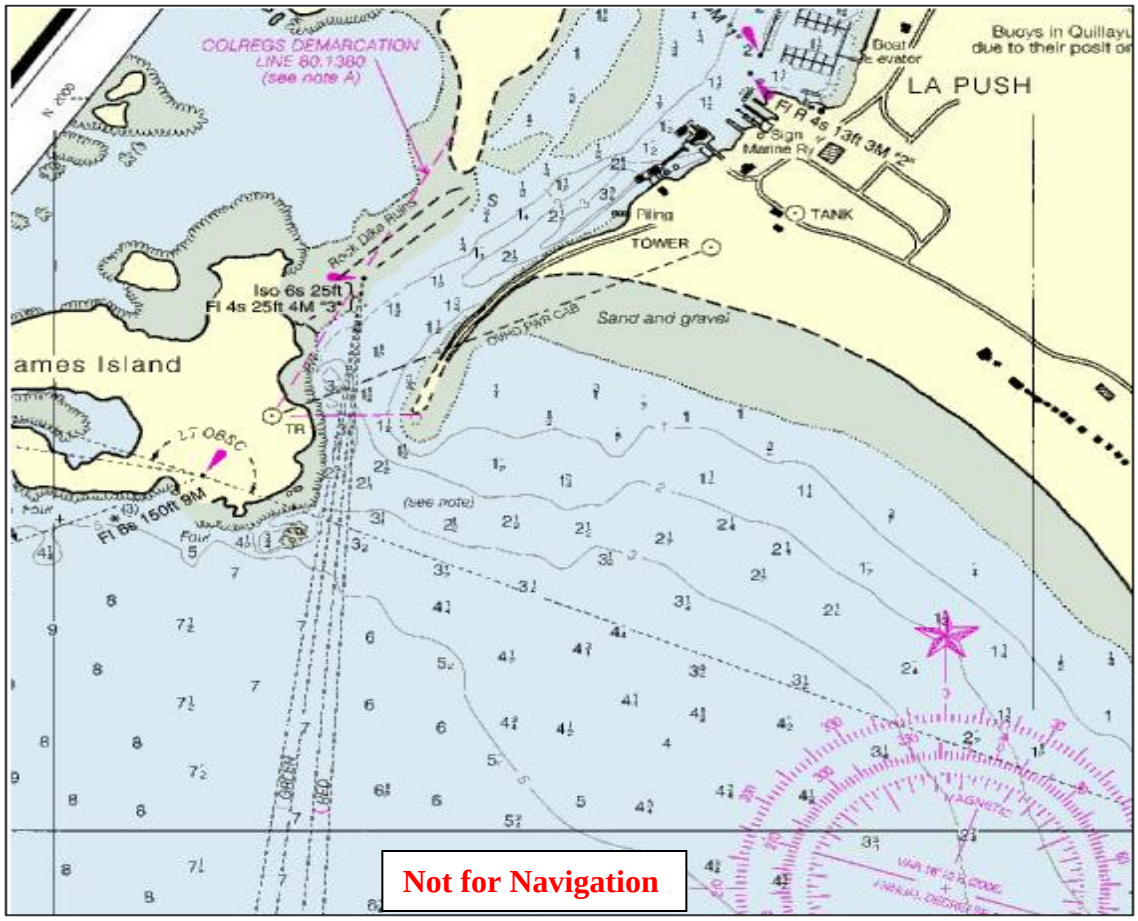
C. WASH ROCK: Wash Rock, 4 feet above water at mean low tide, lies about 55 feet off the southeast corner of James Island. In calm weather it can be passed fairly close, but care must be taken not to hit it. In rough weather there is considerable turbulence around it, which will affect a boat's ability to maneuver.

D. AREA EAST OF BREAKWATER: This area is very shallow and breaks in almost all weather. It should be avoided.

QUILLAYUTE RIVER ENTRANCE: Quillayute River Entrance lies between James Island and a rock breakwater. The depth is about 10 feet but is subject to extreme variations. The usual width at the entrance is about 70 feet. While inside the entrance (north of the breakwater) stay on the jetty side of mid-channel and keep a sharp eye out for fish nets especially between mid August and early June. From May 1 to October 15, seasonal buoys mark the channel from the entrance of the river to the boat basin. Also during the summer months there is very little danger of breakers on the bar except when a storm is passing through. The entrance to the river is hazardous after dark and entering should not be attempted unless one is familiar with the area. The entrance is marked by Quillayute River Direction Light which shows white, red, and green lights. The white light marks the centerline of the channel. If a mariner moves to the port or starboard side of the channel the white light will change to either red or green depending on which side of the channel the boat is tending toward (see the Coast Guard Light List, Volume VI for more details).

REGULATED NAVIGATION AREA WARNING (ROUGH BAR) SIGN: At Quillayute River the Regulated Navigation Area Warning Sign is mounted on the northwest corner of the Coast Guard boathouse facing 016° True. If the yellow lights on this sign are flashing, a restriction has been placed on recreational and uninspected passenger vessels crossing the bar.

BAR CONDITION REPORTS: Bar conditions are also available by calling (360) 374-6993. This information is updated every three hours from sunrise to sunset. Bar information is updated periodically throughout the day and as conditions change. The station will also broadcast any bar restrictions on VHF-FM Channel 16 and 22. Additionally, within a three mile radius from the Coast Guard station a continual broadcast is on radio station 1610 AM containing bar conditions, bar restrictions, and local weather. An additional warning sign is located at the entrance to the LaPush boat ramp that when the amber lights are flashing you are directed to listen to 1610 AM for more information on the restriction.



CHAPTER IV

COMMUNICATIONS

COMMUNICATIONS ON 2182 kHz AND 156.8 MHz

The authorized use of 2182 KHz and VHF-FM Channel 16 (156.8 MHz) is limited to distress, safety, and calling communications. The Coast Guard and the Federal Communications Commission (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. Both 2182 KHz and 156.8 MHz 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 2182 KHz or 156.8 MHz while distress communications are in progress.
3. Switching to an appropriate working frequency is required once communications are established on 2182 KHz and 156.8 MHz.
4. Radio checks are not authorized on either frequency.

For further information write to: Federal Communications Commission
Field Operations Bureau, Seattle Field Office
11410 NE 122nd Way, Suite 312
Kirkland, WA 98034
Or call: (888) 225-5322

COMMUNICATIONS ON 2670 KHz AND 157.1 MHz

The voice frequencies of 2670 KHz single sideband (SSB) and 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 2670 KHz and 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 2182 KHz or 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) and on 2670 KHz single sideband (SSB). 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) and/or 2182 KHz, mariners are instructed to shift to VHF-FM Channel 22A simplex (157.1 MHz) or 2670 KHz respectively. 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. As a minimum, they should continually monitor 2182 KHz for announcements of U.S. Coast Guard marine safety broadcasts on 2670 kHz. The stations broadcast Notice to Mariners information upon receipt and on the following scheduled times and frequencies:

STATION	BROADCAST TIME	FREQUENCY USED
Sector North Bend, OR	1003 PST & 2203 PST	157.10 MHz
Sector Columbia River - Coastal	0933 PST & 2133 PST	157.10 MHz
Sector Columbia River	0945 PST	157.10 MHz
Sector Puget Sound - North	1015 PST & 2215 PST	157.10 MHz
Sector Puget Sound - South	1030 PST & 2230 PST	157.10 MHz

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; and,
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=licensing&id=ship_stations#Obtaining%20a%20License 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.

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
PUBLIC CORRESPONDENCE (MARINE OPERATOR) - Use these channels to call the marine operator at a public coast station. By contacting a public coast station, you can make and receive calls from telephones on shore. Except for distress calls, public coast stations usually charge for this service.	24, 25, 26, 27, 28, 84, 85, 86, 87, 88[1]
VTS PORT OPERATIONS - These channels are used in directing the movement of ships in or near ports, locks or waterways. Messages must be about the operational handling movement and safety of ships. In certain major ports, Channels 11, 12 and are not available for general port operations messages.	5A[2], 6, 12, 14, 73
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, 67
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. The United States will declare Sea Area A1 (see DSC on page 5) when the Rescue 21 system is fully employed.	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

Channel Superscript Translation

1. Only for use in the Great Lakes, St Lawrence Seaway, and Puget Sound and the Strait of Juan de Fuca and its approaches.
2. Available only in the Puget Sound and the Strait of Juan de Fuca.

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 (COMDTINST M16672.2D), available from the U.S. Government Printing Office or from the website http://www.navcen.uscg.gov/?pageName=navRulesContent. 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

City	Station	Frequency	Broadcast Times
Astoria, OR	KEC-91	162.40 MHz	continuous
Brookings, OR	KIH-37	162.55 MHz	continuous
Coos Bay, OR	KIH-32	162.40 MHz	continuous
Neahkahnie, OR	WWF-94	162.425 MHz	continuous
Tillamook, OR	WWF-95	162.475 MHz	continuous
Neah Bay, WA	KIH-36	162.55 MHz	continuous
Newport, OR	KIH-33	162.55 MHz	continuous
Olympia, WA	WXM-62	162.475 MHz	continuous
Port Orford, OR	WNG-596	162.425MHz	continuous
Portland, OR	KIG-98	162.55 MHz	continuous
Roseburg, OR	WXL-98	162.55 MHz	continuous
Salem, OR	WXL-96	162.475 MHz	continuous
Seattle, WA	KHB-60	162.55 MHz	continuous
Puget Sound Marine	WWG-24	162.425 MHz	continuous

The National Weather Service manages the VHF-FM radio stations listed above. 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), including the Strait of Juan de Fuca and the Inland Waters of Western Washington.

2. Offshore waters forecast (60-250 miles offshore) from Cape Flattery to Point Conception.

3. State forecasts and local forecasts.

4. Selected weather observations from Coast Guard, buoys, and other stations in Western Oregon, Western Washington, Northern California, and Southwestern British Columbia.

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 contact the National Weather Service (NOAA), 7600 Sand Point Way NE, BIN C15700, Seattle, WA 98115 or call (206) 526-6095 or on the internet at: http://www.wrh.noaa.gov/.

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.

GLOBAL MARITIME DISTRESS & SAFETY SYSTEM (GMDSS)

Adopted to improve all forms of communications (distress, urgency, safety and routine) between vessels and shore units.

DIGITAL SELECT CALLING (DSC)

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.

Safety of Life at Sea (SOLAS) convention-regulated ships have already begun using this system. DSC alerts will be received at Coast Guard units and provide the capability to communicate with SOLAS and other DSC capable vessels.

GMDSS coverage areas have been designated as follows:
Sea Area A1: VHF-FM range, coastal area out 20 miles offshore. DSC signal sent on VHF-FM Ch 70 (156.525 MHz) with voice transmission on Ch 16 (156.8Mhz). The United States has no declared A1 Sea Areas. Establishment of Sea Area A1 in the U.S. is contingent upon the full employment of Rescue 21.

Sea Area A2**:** MF range, area beyond VHF-FM coverage to approximately 100 miles offshore. A DSC alert is sent on 2187.5 KHz with a voice transmission followed on 2182 KHz. The United States presently has no declared A2 Sea Areas.

RADIO CHECKS

Radio checks via DSC are encouraged and accepted whenever possible. When conducting radio checks via DSC, the alert signal shall not be used. Over-the-air testing shall be conducted on the associated voice frequency. Testing shall not be conducted on DSC guard frequencies.

HOAX CALLS

Federal law prohibits a person from knowingly and 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. 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.

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.

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.

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.

Hoax calls divert resources away from people who are truly in distress, unnecessarily risk the lives of the responders, and waste taxpayer money that could be used for more productive operations. Report Hoax callers to the nearest Coast Guard facility or your local law enforcement agency.

CHAPTER V

BOATING SAFETY

NOTE: This chapter deals with boating safety. Many articles in this chapter have corresponding rules and regulations. Summaries of these rules and regulations are contained in CHAPTER IX of this Special Notice to Mariners. More information about recreational boating safety can be obtained by visiting the Coast Guard Boating Safety web site at http://www.uscgboating.org/. 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.

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 such as boat handling, navigation and piloting, weather, communications, etc. If you don't feel comfortable with your knowledge in some of these areas, or if you want to brush up on your skills, you may wish to take a safe boating course offered by either the Coast Guard Auxiliary or the United States Power Squadrons. These organizations are comprised of volunteers dedicated to boating safety. Both organizations offer a variety of outstanding safe boating courses at minimal cost. 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, http://www.d13cgaux.com/sites/ or http://www.usps.org/

REGISTRATION, NUMBERING AND DOCUMENTATION

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. These numbers must be displayed on your vessel. 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.

Some larger recreational vessels may be documented. 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.

DISPLAY OF NUMBERS

Numbers must be painted or permanently attached to each side of the forward half of the vessel. The 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". See figure 1 below.

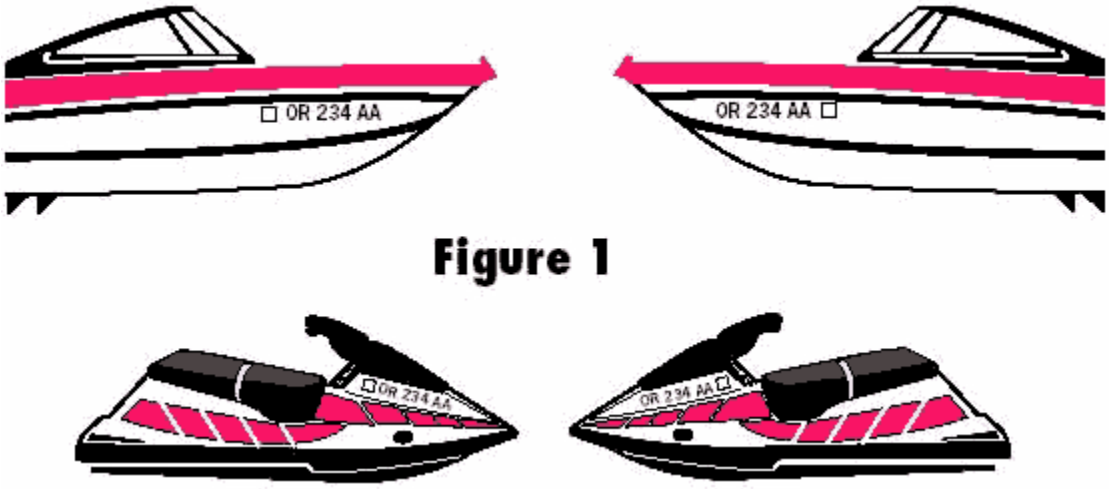


Figure 1

NOTIFICATION OF CHANGES TO A NUMBERED VESSEL

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 Thirteenth District that regulate boating laws and registration.

Idaho
Department of Parks and Recreation
Boating Program
P.O. Box 83720
Boise, ID 83720-0065
(208) 334-4199
http://parksandrecreation.idaho.gov/activities/boating

Montana
Montana Fish, Wildlife, and Parks
Division of Law Enforcement
1420 East 6th Avenue
Helena, MT 59620
(406) 444-2452
http://fwp.mt.gov/recreation/regulations/boating/

Oregon
Oregon State Marine Board
P.O. Box 14145
Salem, OR 97310
(503) 378-8587
http://www.oregon.gov/OSMB/Pages/index.aspx

Washington
WA State Parks & Recreation
Boating Programs
PO Box 2650
Olympia, WA 98504-2650
(360) 902-8555
http://www.parks.wa.gov/boating/

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.

VESSEL DOCUMENTATION WITH THE COAST GUARD

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, but not required, to be documented. A recreational boat may (at the option of the owner) also be documented if it is 5 or more net tons. The Certificate of Documentation is issued by the Coast Guard. 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 clearly 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. http://www.uscg.mil/hq/cg5/nvdc/

OPERATOR'S RESPONSIBILITIES

Your water fun depends on you, your equipment and other people who, like yourself, enjoy spending leisure time on, in or near the water. Let's take a look at your responsibilities:

1. File a float plan with a relative or friend.
2. Make sure the boat is in top operating condition and that there are no tripping hazards. The boat should be free of fire hazards and have clean bilges.
3. Safety equipment, required by law, is on board, maintained in good condition, and you know how to properly use these devices.
4. Have a complete knowledge of the operation and handling characteristics of your boat.
5. Know your position and know where you are going.
6. Maintain a safe speed and proper lookout at all times to avoid collision.
7. Keep an eye out for changing weather conditions, and act accordingly.
8. Know and practice the Rules of the Road (Navigational Rules).
9. Know and obey Federal and state regulations and waterway markers.
10. 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!*

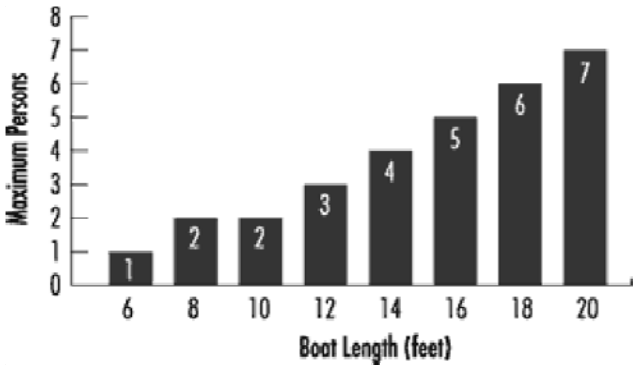
CHOOSING THE RIGHT BOAT

In the U.S. there are more than 2,500 boat manufacturers that produce more than 4,000 different boat models which are powered by a variety of outboard, stern drive, and inboard engines. Because of the great variety, choosing the right boat can be confusing, but the right choice is an important step in enjoying the nation's waterways. In selecting the right boat for your needs, consider the type of activity for which you plan to use it, such as water skiing, fishing, cruising, or weekend outings. You need to consider the type of water on which it will be used, such as lakes, rivers, open ocean, or the Great Lakes. The boat should be large enough to handle the number of people on a normal outing.

LOADING YOUR BOAT

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

1. Distribute the load evenly fore and aft and from side to side.
2. Keep the load low.
3. Keep passengers seated (Do not stand up in a small boat!).
4. Fasten gear to prevent shifting.
5. Do not exceed the "U.S. Coast Guard Maximum Capacities" information label (commonly called the Capacity Plate).
6. 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 mono-hull is a boat, which makes a single "footprint" in the water when loaded to its rated capacity. For example, a catamaran, trimaran, or a pontoon boat is not a mono-hull boat.



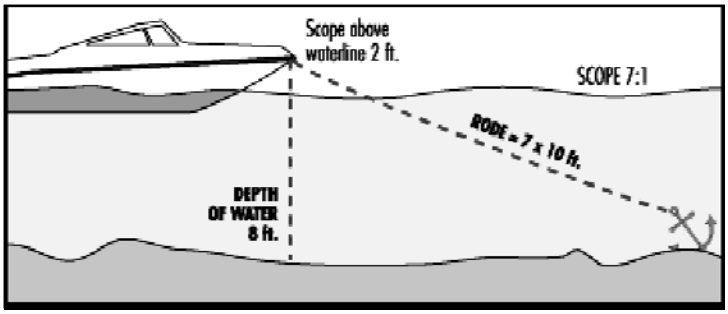
Many hunters and anglers do not think of themselves as boaters, but use small semi-v hull vessels, flat bottom jon-boats or canoes to pursue their sports. These boats tend to be unstable and easily capsize. Capsizings, sinkings, and falls overboard from small boats account for 70% of boating fatalities and these facts mean you must have a greater awareness of the boat's limitations and the skill and knowledge to overcome them.

Standing in a small boat raises the center of gravity, often to the point of capsizing. Standing for any reason or even changing position in a small boat can be dangerous, as is sitting on the gunwales or seat backs or on a pedestal seat while underway. A wave or sudden turn may cause a fall overboard or capsizing because of the raised center of gravity.

ANCHORING

Anchoring is done for two principal reasons: first, to stop for fishing, swimming, lunch, or an overnight stay and secondly, 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:

1. Make sure you have the proper type of anchor (danforth/plow/mushroom).
2. 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.
3. 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.
4. Select an area that offers maximum shelter from wind, current and boat traffic.
5. Determine depth of water and type of bottom (preferably sand or mud).
6. 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 below).



7. Secure the anchor line to the bow cleat at the point you want it to stop.
8. Bring the bow of the vessel into the wind or current.
9. When you get to the spot you want to anchor, place the engine in neutral.
10. 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.
11. When all anchor line has been let out, back down on the anchor with engine in idle reverse to help set the anchor.
12. 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. 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. The boat is also vulnerable to swamping by wave action. The weight of a motor, fuel tank, or other gear in the stern increases the risk.

FUELING

Most fires and explosions happen during or after fueling. To prevent an accident, follow these rules:

1. Portable tanks should be refueled ashore.
2. Close all hatches and other openings before fueling.
3. Extinguish all smoking materials.
4. Turn off engines, all electrical equipment, radios, stoves and other appliances.
5. Remove all passengers.
6. Keep the fill nozzle in contact with the tank and wipe up any spilled fuel.
7. Open all ports, hatches and doors to ventilate.
8. Run the blower for at least four minutes.
9. Check the bilges for fuel vapors before starting the engine.
10. 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!*

Fuel Management

Practice the "One-Third Rule" by using:

1. One-third of the fuel going out
2. One-third to get back and
3. One-third in reserve

WEATHER

You should never leave the dock without first checking the local weather forecast. You can get the weather information from the TV, radio, local newspaper, on-line, 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 keep a "weather eye" out. While you are out in a boat here are a few signs you can look for that indicate an approaching weather change:

1. Weather changes generally come from the west. Scan the sky with your weather eye, especially to the west.
2. Watch for cloud to build up, especially rapid vertically rising clouds.
3. Sudden drop in temperature.
4. Sudden change in wind direction and/or speed.
5. 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

1. Reduce speed, but keep just enough power to maintain headway.
2. Put on your PFDs.
3. Turn on running lights.
4. Head for nearest shore that is safe to approach, if possible.
5. Head bow of boat into the waves at about a 45-degree angle.
6. Keep bilges free of water.
7. Seat passengers on bottom of boat near centerline.
8. 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.
9. Anchor the boat if necessary.

FLOAT PLAN

Play it safe, keep a stack a 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. A word of caution-in case you're delayed, and it's not an emergency, inform those with your float plan, and be sure to notify them when you return so the float plan can be "closed out" and an unnecessary and costly search avoided.

FLOAT PLAN

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)
   PFDs_____ 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:
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

PROPELLER BLADES WARNING

Never forget the danger that boat propellers can inflict to persons in the water. Statistics indicate the most propeller injuries and fatalities involve open motorboats 16 to less than 26 feet in length, and are due to operator inattention, inexperience, and carelessness. Remember to shut off your engines when approaching swimmers. When engines are running, alert swimmers to stay clear of the stern. Propeller guards are not suitable for all types of boats. Therefore, the best and safest course of action to take when people are in water near your boat—Shut off your engines.

CARBON MONOXIDE POISONING

Carbon monoxide (CO) can harm and even kill you inside or outside your boat!

Did you also know:

- CO symptoms are similar to seasickness or alcohol intoxication?
- CO can affect you whether you're underway, moored, or anchored?
- You cannot see, smell, or taste CO?
- CO can make you sick in seconds. In high enough concentrations, even a few breaths can be fatal?

Most important of all, did you know carbon monoxide poisonings are **preventable**? Every boater should be aware of the risks associated with carbon monoxide - what it is; where it may accumulate; and the symptoms of CO poisoning. To protect yourself, your passengers, and those around you, learn all you can about CO.

What is Carbon Monoxide?

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

Why is it so dangerous?

Carbon monoxide (CO) 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 receive the medical attention they need.

Altitude, certain health-related problems, and age will increase the effects of CO. Persons who smoke or are exposed to high concentrations of cigarette smoke, consume alcohol, or have lung disorders or heart problems are particularly susceptible to an increase in the effects from CO. However, anyone can be affected. Another factor to consider is that physical exertion accelerates the rate at which the blood absorbs CO.

Carbon monoxide can accumulate **anywhere in or around your boat**. **How can it accumulate?**

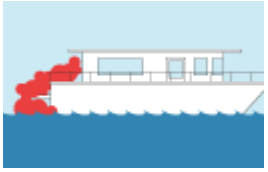
Inadequately ventilated canvas enclosures.

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 and ventilate the area if possible.
- Evacuate the area and move affected person(s) to a fresh air environment.
- Observe the victim(s).
- Administer oxygen, if available.
- Contact medical help. If the victim is not breathing, perform rescue breathing or approved cardiopulmonary resuscitation (CPR), as appropriate, until medical help arrives. Prompt action can mean the difference between life and death.
- Shut off potential sources of CO, if possible. Correct ventilation problems and/or repair exhaust problems as appropriate. Investigate the source of CO and take corrective action, such as evacuating and ventilating the area or shutting off the source of the CO, while at the same time evacuating and ventilating the area.
- SEEK MEDICAL ATTENTION AS SOON AS POSSIBLE!

ALCOHOL AND BOATING

Boating While Intoxicated (BWI) is just as deadly as drinking and driving!

Did you know:

- A boat operator is likely to become impaired more quickly than a driver, drink for drink?
- The penalties for Boating Under the Influence (BUI) can include large fines, revocation of operator privileges and serious jail terms?
- The use of alcohol is involved in about a third of all recreational boating fatalities?

Every boater needs to understand the risks of boating under the influence of alcohol or drugs (BUI). It is illegal to operate a boat while under the influence of alcohol or drugs in every state. The Coast Guard also enforces a federal law that prohibits BUI. This 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.

Tips for Avoiding BUI

Boating, fishing and other water sports are fun in their own right. Alcohol can turn a great day on the water into the tragedy of a lifetime.

Consider these alternatives to using alcohol while afloat:

- Take along a variety of cool drinks, such as sodas, water, iced tea, lemonade or non-alcoholic beer.
- Bring plenty of food and 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's common to become tired more quickly on the water.
- If you want to make alcohol part of your day's entertainment, plan to have a party ashore at the dock, in a picnic area, at a boating club, or in your backyard…. Choose 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.
- Having no alcohol while aboard is the safest way to enjoy the water — intoxicated passengers are also at risk of injury and falls overboard.
- Spread the word on the dangers of BUI. Many recreational boaters forget that a boat is a vehicle - and that safe operation is a legal and personal responsibility.

STAYING 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:

1. Remain calm, do not thrash about or try to remove clothing or footwear. This leads to exhaustion and increases the loss of air that keeps you afloat.
2. Keep your PFD on.
3. Keep your knees bent.
4. Float on your back and paddle slowly to safety.

HYPOTHERMIA AND COLD WATER IMMERSION

Think you're a good swimmer? It may not matter if you suddenly and unexpectedly end up in the frigid waters. Every year, dozens of swimmers and boaters drown in lakes, rivers and coastal waters but it may surprise you that many victims don't die as a result of poor swimming skills or the effects of hypothermia, but from the immediate effects of cold water immersion, or cold water shock. Unlike hypothermia, the effects of cold water immersion can lead to death in just a few minutes and in some cases, instantly.

Sudden entry into the water can cause a combination of physiological responses on the human body. The shock of the cold water can produce an involuntary gasp reflex that can cause victims to inhale water and drown. After just a few minutes, the ability to swim or tread water is impaired as the victim loses muscular coordination from the cold. All of this can occur in water as warm as 69 degrees. This sudden cold-water immersion is a phenomenon that is becoming more recognized as a cause of death as compared to hypothermia. True hypothermia usually does not set in until at least 30 minutes or longer after being in the water. Variables depend on body size and type, insulation of clothing, sea conditions and other factors. Even then, victims can survive for hours before losing consciousness and drowning. The key to survival in this situation is to be prepared. So what can be done to protect you from the effects of cold water shock? Wear a personal floatation device.

Wearing a Coast Guard approved PFD is important because it keeps a person's head above the water giving them the time and ability to control their respiratory rate to avoid the potentially deadly effects of the gasp reflex. A PFD also provides some protection from the cold water and makes the wearer more visible. But PFD's are virtually useless unless they are worn at the time someone becomes immersed in cold water. Amazingly, many people are not prepared for accidental immersion in cold water by already wearing a PFD. They think that, if worst comes to worst, I'll just put it on in the water. That's a difficult enough task in warm water and calm conditions. In cold water, it's nearly impossible.

Experts say that there are other things you can do to increase your chances of survival if you do end up in the water. First, don't panic. Keep your head above the water and concentrate on breathing. If you can find a way to get out of the water, do it quickly. Better yet, take every measure possible to prevent a sudden entry into cold water. Be prepared; Think about what you can do to increase your chances of survival if you somehow ended up in the water. Does you vessel have a means to facilitate self rescue. Do you have a boarding ladder or other device that can assist in your reentering the boat? How can you signal help it you can't self rescue? Do you have whistles on your PFD, a personal EPIRB? Have you trained your passengers on how to respond during a man overboard or capsizing situation? The four stages of sudden coldwater immersion are,

Stage 1 -Cold Water Shock
When someone falls into cold water their first unconscious response is to take a large breath of air, called the "involuntary gasp reflex." If their face is in the water when that gasp occurs, then their chances of survival immediately diminish.

Stage 2 -Swim Failure
After one has been in cold water for 3-30 minutes, there's a continued inability to hold one's breath, loss of coordination in the arms and legs results in cramping and inability to grab onto anything. Swimming becomes increasingly difficult, and painful.

Stage 3 -Hypothermia
It usually takes between 15-30 minutes to reach this stage. The first signs are uncontrolled shivering and the person starts to become disoriented. As the body pulls blood away from the extremities toward the organs, the person usually cannot use their arms and legs for self-rescue. When severe hypothermia sets in, will eventually become unconscious. A person's normal body temperature is around 98.6 degrees F. Most people cannot survive a core body temperature below 85 degrees F.

Stage 4 -Post-Rescue Collapse
The hypothermic boater is not out of the woods after rescue. Blood pressure can drop to a dangerously low level, inhaled water can damage tissues in the lungs (dry drowning), and heart problems may develop as colder blood from the extremities is released back from the core of the body.

If your boat capsizes it will likely float on or just below the surface. Recreational vessels built after 1978 are designed to support you even if full of water or capsized. Try to get as much of your body out of the water as possible. This will significantly reduce the effects of cold water immersion and slow the onset of hypothermia. If you can't get in the boat a PFD will enable you to keep your head out of the water. This is very important because about 50% of body heat loss is from the head.

Wear a PFD

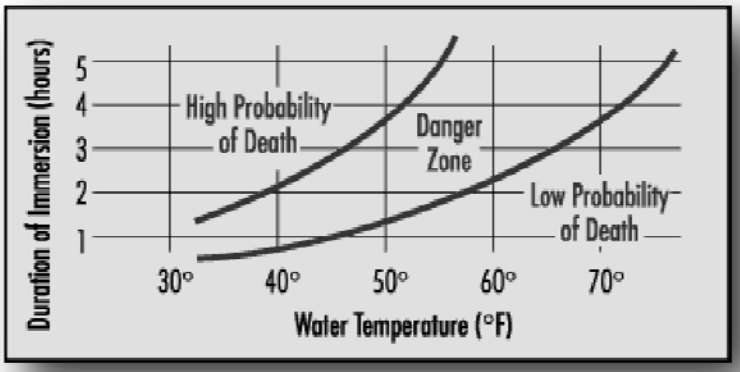
- Button up your clothing
- Cover your head if possible and enter the water slowly
- Keep your head out of the water if at all possible
- Assume the ***H.E.L.P.*** position

H.E.L.P. Position

<u>HEAT ESCAPE LESSENING POSTURE (***H.E.L.P.***)</u>

Assuming 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 and press your thighs together, cross your feet, and raise your knees to your chest. This technique can reduce your heat loss and increase your survival time by approximately 50 percent.

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.



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. The latest printing was May 15, 1994. However, a current electronic edition is available for searches at http://cgmix.uscg.mil/equipment. Individuals may download specific sections from that site. The 1994 version is available for sale as follows:

U. S. Government Printing Office Superintendent of Documents Attn: New Orders P. O. Box 371954 Pittsburgh, PA 15250-7954	Phone: (202) 512-1800 Fax: (202) 512-2233 Refer to ordering number: ISBN 0-16-045408-5

PERSONAL FLOTATION DEVICES (PFDs)

Personal flotation devices are the most important pieces of safety equipment that all boaters must have on board their vessels. All recreational boats must carry one wearable PFD (Type I, II, III or V PFD) for each person aboard. A Type V PFD provides performance of a Type I, II, or III PFD (as marked on its label) and must be used according to the label requirements. Any boat 16 feet and longer (except canoes and kayaks) must also carry one throwable PFD (Type IV PFD).

PFDs must be:
1. Coast Guard approved,
2. In good and serviceable condition, and
3. The appropriate size for the intended user.

Accessibility:
1. Wearable PFDs must be readily accessible.
2. You must be able to put them on in a reasonable amount of time in an emergency (vessel sinking, on fire, etc.).
3. They should not be stowed in plastic bags, in locked or closed compartments or have other gear stowed on top of them.
4. The best PFD is the one you will wear.
5. Though not required, a PFD should be worn at all times when the vessel is underway. A wearable PFD may save your life, but only if you wear it.
6. Throwable devices must be immediately available for use.

Many states *require* the wearing of life jackets for certain age groups (e.g. children), or when engaged in certain types of activities such as water skiing, operating personal watercraft, white water boating activities, or sail boarding. Check with your state boating safety officials. As of January 2003, federal law requires that children under 13 years old aboard recreational vessels to wear Coast Guard approved personal flotation devices while the vessel is underway, unless the children are below decks or in an enclosed cabin. In states that already have an

existing law that requires children to wear PFDs on board recreational boats; the Coast Guard will enforce the provisions of the state law within the waters of that particular state.

PFD Flotation

There are three basic kinds of PFD flotation in the five *types* of PFDs with the following characteristics:

1. Inherently Buoyant (primarily foam):
   a. The *most* reliable.
   b. Adult, Youth, Child, and Infant sizes.
   c. For swimmers and non-swimmers.
   d. Wearable and throwable styles.

Minimum Buoyancy - Inherently Buoyant

Wearable Size	Type	Inherent Buoyancy (Foam)
Adult	I	22 lb
	II & III	15.5 lb
	V	15.5 to 22 lb
Youth	II & III	11 lb
	V	11 to 15.5 lb
Child and Infant	II	7 lb
Throwable		
Cushion	IV	20 lb
Ring Buoy	IV	16.5 to 32 lb

2. Inflatable
   a. The most compact and may be more comfortable to wear.
   b. Some with the best in-water performance (see next page for more details).
   c. Inflatable PFDs require the user to pay careful attention to the condition of the device.
   d. Inflatable PFDs must have a full cylinder and all status indicators on the inflator must be green, or the device is NOT serviceable, and does NOT satisfy the requirement to carry PFDs.
   e. Coast Guard Approved Inflatable PFDs are authorized only on recreational boats by a person at least 16 years of age.
   f. Sizes only for adults 16 years of age and older.
   g. Not recommended for white water or high speed sports.
   h. Wearable styles only.

Minimum Buoyancy - Inflatable Buoyant

Wearable Size	Type	Inflatable Buoyancy
Adult	I & II	34 lb
	III	22.5 lb
	V	22.5 to 34 lb

3.
4. Hybrid (Foam and Inflation)
   a. Reliable.
   b. Adult, Youth, and Child sizes.
   c. For swimmers & non-swimmers.
   d. Wearable styles only.
   e. Some designed for water sports.

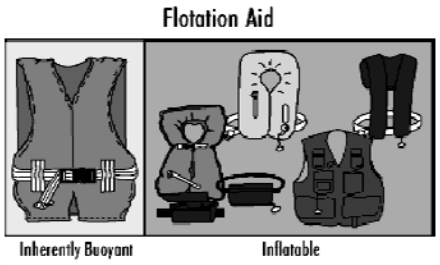
Hybrid Buoyancy

Wearable Size	Type	Inherent Buoyancy	Inflated Total Buoyancy
Adult	II & III	10 lb	22 lb
	V	7.5 lb	22 lb
Youth	II & III	9 lb	15 lb
	V	7.5 lb	15 lb
Child	II	7 lb	12 lb

Types of PFDs

A TYPE I PFD, or OFF-SHORE LIFE JACKET 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 PFD, 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 PFDs 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 PFDs will turn an unconscious person to the face-up position as well as a Type I foam PFD.



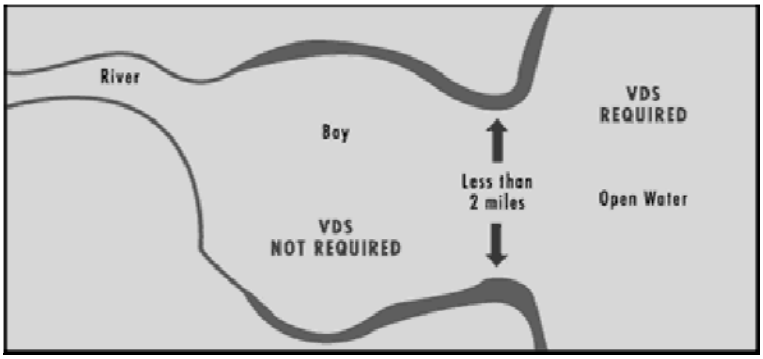
A TYPE III PFD, or FLOTATION AID is good for conscious users in calm, inland water, or where there is a good chance of quick rescue. It is designed so wearers can place themselves in a face-up position in the water. The wearer may have to tilt their head back to avoid turning face down in the water. The Type III Inherently buoyant foam vest has the same minimum buoyancy as a Type II Inherently buoyant PFD. Type III PFDs 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 PFDs. Type III PFDs turn as well as a Type II Inherently buoyant (foam) PFDs.

A TYPE IV PFD, 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. There are no inflatable Type IV devices.

A TYPE V PFD, or SPECIAL USE DEVICE is intended for specific activities and may be carried instead of another PFD only if used according to the approval condition(s) on its label. A Type V PFD provides performance of either a Type I, II, or III PFD (as marked on its label). If the label says the PFD is "approved only when worn" the PFD 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.

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 (see Chapter I for more information). 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 are exempt from daytime signals. However, the vessels listed above 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

1. Pyrotechnic Visual Distress Signals must be Coast Guard Approved, in serviceable condition, and readily accessible.
   a. They are marked with an expiration date. Expired signals may be carried as extra equipment, but can not be counted toward meeting the visual distress signal requirement, since they may be unreliable.
   b. Launchers manufactured before January 1, 1981, intended for use with approved signals, are not required to be Coast Guard Approved.
   c. 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.
   d. Pyrotechnic devices should be stored in a cool, dry location, if possible.
   e. A watertight container painted red or orange and prominently marked "DISTRESS SIGNALS" or "FLARES" is recommended.
2. U. S. Coast Guard Approved Pyrotechnic Visual Distress Signals and associated devices include:
   a. Pyrotechnic red flares, hand-held or aerial.
   b. Pyrotechnic orange smoke, hand-held or floating.
   c. 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:

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

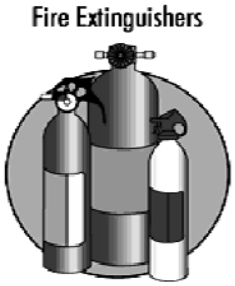
The following are just a few of the variety and combination of devices which can be carried in order to meet the requirements:
1. Three hand-held red flares (day and night).
2. One hand-held red flare (day and night) and two parachute flares (day and night).
3. One hand-held orange smoke signal (day), 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.

FIRE EXTINGUISHERS

Fire on a boat is one of a skipper's greatest fears and one of the major causes of damage to boats. For protection, 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. For instance, an extinguisher marked "Type A, Size II, Type B: C, Size I" is a B-I extinguisher.

Look for the part of the label that says "Marine Type USCG".
- Make sure Type B is indicated

Portable extinguishers will be either size I or II. Size III and larger are too big for use on most recreational boats.

Class	Foam (Gals)	CO_2 (lbs)	Dry Chemical (lbs)	Halon (lbs)
B-I (Type B, Size I)	1.25	4	2	2.5
B-II (Type B, Size II)	2.5	15	10	10

Fire extinguishers are required on boats if any of the following conditions exist:
1. Inboard engines are installed.
2. There are closed compartments and compartments under seats where portable fuel tanks may be stored.
3. There are double bottoms not sealed to the hull or which are not completely filled with flotation materials.
4. There are closed living spaces.
5. There are closed stowage compartments in which combustible or flammable materials are stored.

6. 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:

1. Seals and tamper indicators are not broken or missing.
2. Pressure gauges or indicators read in the operable range. (**NOTE**: CO_2 extinguishers do not have gauges.)
3. There is no obvious physical damage, corrosion, leakage or clogged nozzles.
4. 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. The weight of the units should be checked regularly. It is recommended that portable extinguishers be mounted in a readily accessible position.

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.

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. Recreational 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 intentions and to signal your 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.)

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 your needs. Look at the maximum number of persons that will be on board, including guests, and select accordingly. When choosing retention or recirculating devices, be sure to provide sufficient capacity between pump outs for your cruising needs. Remember, 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.

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) operates 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 beacon-unique identifying code. The system detects the signal, calculates an accurate distress position, checks the unique identifying code against the EPIRB registration database (vessel and point of contact information supplied by the owner) and routes the distress alert with registration information to the responsible Coast Guard (or international) Rescue Coordination Center (RCC). 406 MHz EPIRBs with GPS (internal or attached) 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 an other-than-406MHz EPIRB, be sure you understand its capabilities and limitations.

Mount either 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) is PROHIBITED. Refer to 47 CFR Parts 80.1051 through 80.1059. These FCC regulations apply to EPIRBs that transmit a distress signal to satellites on the 121.5 / 243 MHz frequencies. EPIRB owners must check the class or type of their beacons carefully, since both the illegal 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.

ADDITIONAL RECOMMENDED EQUIPMENT

Besides meeting the legal requirements, prudent boaters should carry additional safety equipment. The following additional items of equipment are suggested 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

REGATTAS AND MARINE EVENTS

Whenever an organized marine event or regatta is anticipated, a Marine Event Permit Application must be submitted, in triplicate, to the appropriate State Office or Coast Guard Sector at least 135 days in advance of the requested event day. https://homeport.uscg.mil/mycg/portal/ep/marine_event/marine_event_form.jsp. This on line form will be automatically forwarded to the Coast Guard Sector having authority in the area your event is being held. You will be notified if your event does not meet federal permitting requirements and it will be up to you to contact the local state authority to comply with local and or state regulations. Many types of events now require that documentation of the environmental impact of the event be completed before a permit can be issued. Contact the nearest Coast Guard Sector if you have any questions. A chart or scale drawing indicating the course that participants will navigate, markers, turning buoys, and any other factors that may affect the passage of any nonparticipating vessels and/or spectators, must accompany the application. Applications will be reviewed and a Marine Event Permit will be issued provided that the required information was included for evaluation and no undue safety hazard would be imposed on any other vessel and/or spectators, or impede the safe passage of non-participants. For further information please call the following State Agencies or the Coast Guard Sector nearest you listed below (or go to http://www.uscg.mil/d13/):

Oregon	**Idaho**	**Montana**
Oregon State Marine Board	Department of Parks & Recreation	Montana Fish & Wildlife & Parks
P.O. Box 14145	Boating Program	Law Enforcement Division
Salem, OR 97310	PO Box 83720	PO Box 200701
(503) 378-8587	Boise, ID 83720	Helena, MT 59620
	(208) 334-4199	(406) 444-2452

U.S. Coast Guard Sectors

Puget Sound	**Columbia River**
Seattle (206) 217-6026	Astoria (503) 861-6211
Port Angeles (360) 417-5840	Portland (503) 240-9301

AQUATIC INVASIVE SPECIES

Aquatic invasive species 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.

It is important to remember that humans have carried plants, animals, and disease with them since they first began to travel. Most of the plants and animals were considered necessary or beneficial. This includes everything from food crops like soybeans and wheat, cattle, horses, pigs, fish and shellfish, to pets and decorative garden plants.

Many other organisms have been spread to various parts of the world unintentionally. They arrive in the ballast water of ships, packing materials, wood used for pallets, soil, or as hitchhikers on other plants and animals.

Once nonnative species become established in a new environment where natural enemies, pests, or disease 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. One of the most well known species is the zebra mussel (*Dreissena polymorpha*). The zebra mussel has caused extensive economic and ecological damage since arriving in the Great Lakes, and is rapidly spreading throughout North America

Aquatic nuisance species reach the Pacific Northwest through various routes or pathways. Some of these are natural, as when species from southern waters travel north with the warmer ocean waters during *el Nino* years. Other routes are man-assisted, such as the release of east coast lobsters into Puget Sound. Successful introductions of species, where the new plants or animals thrive and reproduce, are not always predictable and, depending on many variables, may result from the release of small as well as large numbers of a particular non-native species.

Each of us has the most control over the pathways of ANS which introduce small numbers of animals or plants. 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 ANS 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, as all non-native 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 aquatic nuisance species that can harm waterways. But there are three that are considered among the most threatening. Learn to recognize these organisms. If you find one or suspect there may be a new infestation, report it. Call the **Aquatic Nuisance Species Hotline** at **1-877-STOP-ANS,** (1-877-786-7267).

zebra mussel

Hydrilla

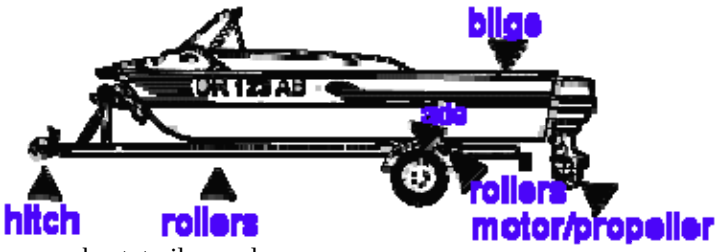
mitten crab

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 Washington, 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. A permit should be requested from the Washington Department of Fish and Wildlife before any non-native animal is brought into the state.
In addition to the small releases described above, ballast water and aquaculture are potential sources of ANS. 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 ANS may be released to our waters at one time through the discharge of ballast water.

A great deal of work is underway to help protect from introductions of ANS. Washington and British Columbia have recently developed a joint strategy for limiting introductions of non-native marine species as part of the efforts of the Puget Sound/Georgia Basin Task Force. Coordination between coastal and inland states concerning ANS is also increasing. What do you do if you find an *Aquatic Nuisance Species?* Call the **Aquatic Nuisance Species Hotline at 1-877-STOP-ANS (1-877-786-726**

To protect our environment and economy from the harmful effects of ANS we need widespread public education on how to deal with ANS and willingness by each of us to do our share to prevent their release and spread. If we want to keep and protect the native species of the Pacific Northwest, we can do no less.

Recreational Boaters

For your safety

Make Way!

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.

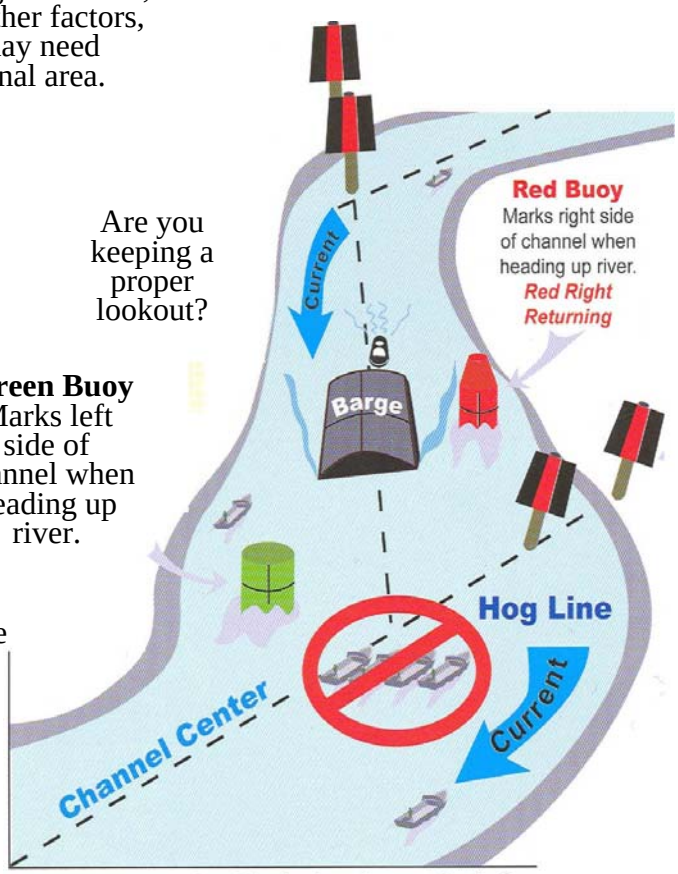
Keep Clear of
Turning Barges and large Deep
Draft vessels

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

Are you keeping a proper lookout?

Green Buoy
Marks left side of channel when heading up river.

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



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?

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

CHAPTER VI

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 Auxiliarists. The cost of materials and textbooks is usually the only cost involved. The courses offered include:

1. BOATING FUN: 1 session course, for kindergarten to third grade.
2. WAYPOINTS: 1 session course, for 4th through 6th graders.
3. BOATING SKILLS AND SEAMANSHIP: 8-session course.
4. SAILING SKILLS & SEAMANSHIP: 8 to 13 session lessons.
5. HOW TO READ A NAUTICAL CHART: 3 hour session.
6. WEEKEND NAVIGATOR: 8 to 13 session course, each session is 2 to 3 hours; covers the basic elements of coastal navigation.
7. SUDDENLY IN COMMAND: 4-hour session.
8. ABOUT BOATING SAFETY (ABS): Computer aided course purchased on the internet. www.cgaux.org.
9. GPS FOR MARINERS: 4-6 hour course, basic introduction to the GPS.
10. PERSONAL WATERCRAFT SAFETY (PWC): 1 to 2 hour session.

Local Flotillas of the Coast Guard Auxiliary schedule numerous Boating Skills and Seamanship, Boating Safely, Let's Go Sailing, and Coastal Navigation classes throughout the year. For information please contact your local Auxiliary Flotilla, the Director of Auxiliary office at (206) 220-7081, or the BoatUS Hotline at (800) 336-BOAT.

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).

Small commercial fishing vessels and vessels carrying six or fewer passengers for hire are also eligible for VSCs. 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 examiner will advise you of the deficiencies so that you can correct them.

A vessel must meet the following Coast Guard Auxiliary standards for award of the VSC decal:

1. **Numbering:** The boat's registration number must be permanently attached to each side of the forward half of the boat. They must be plane, vertical, block characters, not less than three (3) inches high, and in a color contrasting with the background. A space or hyphen must separate the letters from the numbers. Place State tax stickers according to state policy. (e.g. WA 1234 AB or WA-1234-AB)
2. **Registration/Document:** Papers must be on board and agree with the Hull Identification (HIN) or Documentation Number. On documented pleasure vessels the hailing port, including city and state abbreviation, of not less than 4 inches in height must be on some clearly visible exterior part of the hull.
3. **Personal Flotation Devices:** PFDs shall be Coast Guard Approved, in good and serviceable condition, and of suitable size for the wearer. Boats less than 16 feet in length must be equipped with one wearable PFD for each person on board. Boats 16 feet and over must be equipped with one wearable PFD for each person plus one throwable.
4. **Visual Distress Signals (VDS):** All recreational boats used on coastal waters, Great Lakes, or the high seas, are required to carry Coast Guard Approved VDS. Vessel Safety Checks exceed the Federal Regulations by requiring vessels operating on inland waters to have a carry a suitable day and night VDS.
5. **Fire Extinguishers:** Vessel Safety Checks exceed the Federal Regulations by requiring that all vessels carry a minimum of one B-1 fire extinguisher.
6. **Ventilation:** Requirements are the same as the Federal Regulations (see Chapter VIII for more details).
7. **Backfire Flame Arrestor:** Vessel Safety Checks exceed the Federal Regulations by requiring all gasoline inboard and I/O motorboats, regardless of date of construction or engine installation, be equipped with a Coast Guard approved means of backfire flame control.
8. **Sound Producing Devices:** For compliance with "Navigation Rules" and for distress signaling purposes, all boats must carry some type of sound producing device capable of a 4 second blast audible for a half mile.

9. **Navigation Lights:** Vessels less than 16 feet in length are not required to have navigation lights. However, if the boat is equipped with them, they must be properly located and displayed.
10. **Pollution Placards (Oily Waste Discharge):** Vessels over 26 feet must display a placard, at least 5 by 8 inches, in a conspicuous place in the machinery spaces, or at the bilge pump control station.
11. **MARPOL Trash Placard (Garbage Dumping Restrictions):** United States vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions.
12. **Marine Sanitation Devises (MSDs):** Recreational boats with installed toilet facilities must have an operable MSD. Vessels 65 feet and under must have either a type I, II, or III MSD and vessels over 65 feet must have either a type II or III MSD.
13. **Navigation Rules:** A current copy of the Navigation Rules (COMDTINST M16672.2D) must be carried onboard any vessel 39.4 feet and over.
14. **State Requirements:** State equipment requirements that pertain to basic safety and exceed standard VSC requirements will be also be checked by the Auxiliary vessel examiner and must be met before a VSC decal can be awarded.
15. **General Condition:** Also known as "seaworthiness". The boat must be free from fire hazards, in good overall condition with the bilges reasonably clean and the visible hull and structure generally sound. The maximum passenger capacity and horsepower must not be exceeded.
    a. **Galley Equipment:** Appliances and their fuel tanks must be properly secured, and the system must not leak. There must be no flammable material in the vicinity of stoves or heaters. Adequate ventilation must be provided for appliances and their fuel supply. Appliance fuel shut off valves must be readily accessible. Only common appliance fuel may be used on vessels. Gasoline, naphtha, and benzene are not allowed due to their highly volatile nature.
    b. **Electrical:** Wiring must be in good condition and properly installed. No exposed areas or deteriorated insulation is permitted. The electrical system must be protected by fuses or manual resetting circuit breakers. Switches and fuse panels must be protected from rain or spray. Batteries must be secured to prevent movement and the terminals covered to prevent accidental arcing.

In addition to the preceding requirements, the Auxiliary also recommends the following to receive a VSC Decal:

1. **Fuel Systems:** Portable fuel tanks (7 gallon capacity or less) must be constructed of sturdy non-breakable material and in good condition. Tanks shall be free of excessive corrosion and must not leak. Vents must be capable of being closed and the tank must have a vapor-tight, leak-proof cap. All tanks must be properly secured in the boat to prevent excessive movement. Permanent fuel tanks (over 7 gallon capacity) and fuel lines must be free of excessive corrosion and not leak. Fuel tanks must be secured and grounded. The fuel fill pipe must be tightly fitted to the fill plate and located outside the hull, where any spilled fuel will be directed overboard. A vent terminating outboard of the hull and compartments must lead to each permanent fuel tank.
2. **Anchor and Anchor Line**: The boat should be equipped with an adequate anchor and a line of suitable size and length for locality.
3. **Alternate Propulsion**: All boats less than 16 feet in length should carry a second method of propulsion (i.e.: paddle, oar, etc.). If an alternate means of mechanical propulsion is carried, it must use separate fuel and starting source from the main propulsion motor.
4. **De-watering Device**: All boats should carry at least one effective manual de-watering device. This requirement is in addition to any installed electrical bilge pump that the vessel may have on board.

To request a Vessel Safety Check, contact your local Coast Guard Auxiliary Flotilla. Go to the website: http://www.d13cgaux.com/sites/VesselInspections.aspx and identify the location of your vessel.

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 Auxiliarist 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 Auxiliarist 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 Auxiliary is the all-volunteer arm of the United States Coast Guard. USCG Auxiliary members demonstrate their interests in safety on and 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. Auxiliarists further demonstrate their dedication to homeland security by volunteering support to Coast Guard Units and Commands of the Thirteenth Coast Guard District. For further information on the Auxiliary and its programs, contact your local flotilla using the District 13 USCGAUX web site: http://www.d13cgaux.com/sites/AboutAuxiliary/JointheAuxiliary.aspx or contact the Coast Guard by calling (206) 220-7081. Inquires may also be mailed to: Commander (dpa), Thirteenth Coast Guard District, Room 3498, Jackson Federal Bldg., 915 Second Avenue, Seattle, WA 98174-1067.

CHAPTER VII

AIDS TO NAVIGATION

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 ice, running ice or other natural causes, collisions, or other accidents. For the preceding 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.

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 specified in the Light List, Volume VI, Pacific Coast and Pacific Islands (COMDTPUB P16502.6) in column 8 or below the heading. The date seasonal aids are deployed may also be printed on nautical charts produced by the National Ocean Service. The actual dates the aids are deployed may be changed due to adverse weather or other conditions. Mariners should consult the Coast Guard's Local Notices to Mariners and listen to Broadcast Notices to Mariners for the latest information. The Local Notice to Mariners may be obtained from the following web site: http://www.navcen.uscg.gov/?pageName=lnmMain

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 damaged, defaced, or destroyed by vandals. This type of irresponsible activity not only creates a serious 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, Thirteenth Coast Guard District (dpw) at (206) 220-7285. More information and links may be found at the following web address: http://www.uscg.mil/d13/dpw/aton.asp.

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 DISCREPENT 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
CHAPTER 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.

NOTE: The Coast Guard Sectors 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 (206) 220-7001. 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. More information and links may be found at the following web address: http://www.uscg.mil/d13/dpw/aton.asp.

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), Thirteenth Coast Guard District, 915 Second Avenue, Room 3510, Seattle, WA.98174-1067. The Code of Federal Regulations excerpt below provides more details on the specific information that should be provided.

TITLE 33--NAVIGATION AND NAVIGABLE WATERS
CHAPTER 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 use. No person, public body or other instrumentality not under the control of the Commandant, exclusive of the Armed Forces, shall establish and maintain, discontinue, or 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 make application to establish and maintain, discontinue, change, or transfer ownership of a private aid to navigation, a person or an individual shall submit a "Private Aids to Navigation Application" (CG-2554) to the Commander of the nearest Coast Guard District. To learn more and obtain a CG-2554 write Commander (dpw), Thirteenth Coast Guard District, 915 Second Avenue, Room 3510, Seattle, WA 98174-1067, or call (206) 220-7285 or go to the following website: http://www.uscg.mil/d13/dpw/paton.asp.

GLOBAL POSITIONING SYSTEM - SYSTEM SPECIFICATIONS

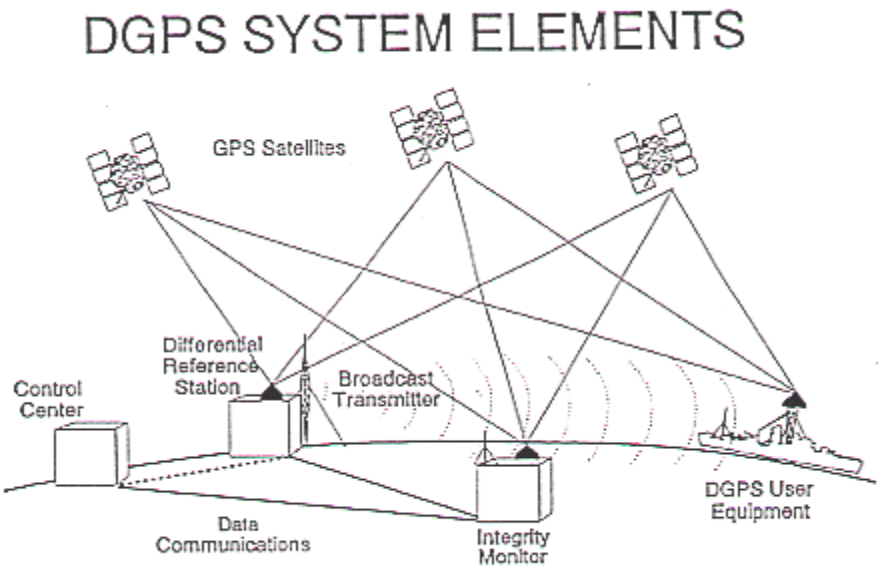
The Global Positioning System (GPS) is a highly precise, satellite based radio navigation system providing three-dimensional positioning, velocity and time information. GPS is an all weather system whose coverage is continuous and worldwide. GPS receivers collect signals from satellites in view. They 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. GPS is provided at two levels of service, the Standard Positioning Service (SPS) for general public use and an encoded Precise Positioning Service (PPS) primarily intended for use by the Department of Defense. SPS signal accuracy can be intentionally degraded to protect U.S. national security interests. This process called Selective Availability (SA), controls the availability of the systems full capabilities. Effective 01 May 2000, selective availability was set to zero, which means all users receive the same level of service. The SPS accuracy specifications, given below, include the effects of SA. SPS is designed to provide predictable accuracies of within:

1. 100 meters (2 drms) horizontal, 156 meters (2 Sigma) vertical
2. 300 meters (99.99% prob.) horizontal
3. 340 nanoseconds time (95% prob.)
4. Coverage is continuous and worldwide, with a position dilution of precision (PDOP) of 6 or less.

DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS)

1. WHAT is DGPS? Differential GPS (DGPS) is the regular Global Positioning System (GPS) with an additional correction (differential) signal added. This correction signal improves the accuracy of the GPS and can be broadcast over any authorized communication channel.
2. HOW does it work? 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, plus differential corrections from a DGPS station in the area.
3. WHY use it? DGPS accuracy and integrity are better than GPS. Accuracy Improvement (2drms): 10 meters or better for DGPS (USCG signals) vs. 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.



THIRTEENTH COAST GUARD DISTRICT DGPS SITES:

The specific DGPS sites for the Thirteenth 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.

WHIDBEY ISLAND, WA
Status Operational: RBn Antenna Location 48-18.8N, 122-41.8W; REFSTA Antenna Location (A) 48 18.762698 N, 122 41.767562 W; REFSTA Antenna Location (B) 48 18.746291 N, 122 41.767589 W; REFSTA RTCM SC-104 ID (A) 276; REFSTA RTCM SC-104 ID (B) 277; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 888 Transmit Frequency (KHz) 302; Transmit Rate (bps) 100; Signal Strength 75uV/m at 128 KM

ROBINSON POINT, WA
Status Operational: RBn Antenna Location 47-23.32N, 122-22.48W; REFSTA Antenna Location (A) 47 23.250130 N, 122 22.484961 W; REFSTA Antenna Location (B) 47 23.231986 N, 122 22.499392 W; REFSTA RTCM SC-104 ID (A) 274; REFSTA RTCM SC-104 ID (B) 275; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 887; Transmit Frequency (KHz) 323; Transmit Rate (bps) 200; Signal Strength 100uV/m at 89 KM

KLAMATH FALLS, OR
Status Operational: RBn Antenna Location 42-17.30N, 121-40.23W; REFSTA Antenna Location (A) 42 17.328641 N, 121 40.159024 W; REFSTA Antenna Location (B) 42 17.328421 N, 121 40.178357 W; REFSTA RTCM SC-104 ID (A) 138; REFSTA RTCM SC-104 ID (B) 139; REFSTA Firmware Version RE00-1C19 Broadcast Site ID 791; Transmit Frequency (KHz) 294; Transmit Rate (bps) 100; Signal Strength 75uv/m at 350 KM

FORT STEVENS, OR
Status Operational: RBn Antenna Location 46-12.29N, 123-57.36W; REFSTA Antenna Location (A) 46-12.29298N, 123-57.36472W; REFSTA Antenna Location (B) 46-12.30949N, 123-57.35977W; REFSTA RTCM SC-104 ID (A) 272; REFSTA RTCM SC-104 ID (B) 273; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 886; Transmit Frequency (KHz) 287; Transmit Rate (bps) 100; Signal Strength 75uV/m at 175 KM

APPLETON, WA
Status Operational: RBn Antenna Location 45-46.92N, 121-19.57W; REFSTA Antenna Location (A) 45-46.95769N, 121-19.65279W; REFSTA Antenna Location (B) 45-46.95741N, 121-19.63428W; REFSTA RTCM SC-104 ID (A) 172; REFSTA RTCM SC-104 ID (B) 173; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 871; Transmit Frequency (KHz) 300; Transmit Rate (bps) 100; Signal Strength 75uV/m at 250 KM

SPOKANE, WA
Status Operational: RBn Antenna Location 47-31.16N, 117-25.40W; REFSTA Antenna Location (A) 47-31.10105N, 117-25.42095W; REFSTA Antenna Location (B) 47-31.10178N, 117-25.40003W; REFSTA RTCM SC-104 ID (A) 68; REFSTA RTCM SC-104 ID (B) 69; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 848; Transmit Frequency (KHz) 316; Transmit Rate (bps) 100; Signal Strength 75uV/m at 300 KM

POLSON, MT
Status Operational: RBn Antenna Location 47-39.77N, 114-6.88W REFSTA Antenna Location (A) 47-39.82589N, 114-6.83464W; REFSTA Antenna Location (B) 47-39.82548N, 114-6.85656W; REFSTA RTCM SC-104 ID (A) 60; REFSTA RTCM SC-104 ID (B) 61; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 849; Transmit Frequency (KHz) 287; Transmit Rate (bps) 100; Signal Strength 75uV/m at 300 KM

BILLINGS, MT
Status Operational: RBn Antenna Location 45-58.33N, 107-59.82W; REFSTA Antenna Location (A) 45-58.27063N, 107-59.78833W; REFSTA Antenna Location (B) 45-58.27085N, 107-59.80834W; REFSTA RTCM SC-104 ID (A) 62; REFSTA RTCM SC-104 ID (B) 63; REFSTA Firmware Version RD00-1C19 Broadcast Site ID 874; Transmit Frequency (KHz) 313; Transmit Rate (bps) 100; Signal Strength 75uV/m at 245 KM

SENECA, OR
Status Operational: RBn Antenna Location 44-09.86N, 119-03.59W; REFSTA Antenna Location (A) 44-09.86N, 119-03.59W; REFSTA Antenna Location (B) 44-09.84803N, 119-03.50584W; REFSTA RTCM SC-104 ID (A) 214; REFSTA RTCM SC-104 ID (B) 215; REFSTA Firmware Version RE00-1C19 Broadcast Site ID 773; Transmit Frequency (KHz) 310; Transmit Rate (bps) 100; Signal Strength 75uV/m at 273 KM

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, radio beacons, 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 users 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)	LRIT Web Page 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.	irvmc@cgstl.uscg.mil 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	(571) 557-5455
NGA WEEKLY NOTICE TO MARINERS	Published weekly	Status/Forecasts/Outages	(571) 557-7103 NGA Weekly Notice to Mariners
NGA MARINE NAVIGATION DEPARTMENT HOMEPAGE	24 hours a day	Marine Safety Information	NGA Products Services
NAVTEX DATA BROADCAST	Six times daily at alternating times	Status/Forecasts/Outages	518 kHz

COAST GUARD LIGHT LISTS

For more information concerning aids to navigation, both Federal and private, a mariner should obtain a copy of the Coast Guard Light List for their area. 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 following is a list of the Light List volumes maintained by the Coast Guard:

1. VOLUME I, ATLANTIC COAST - describes aids to navigation from St. Croix River, Maine to Toms River, New Jersey.
2. VOLUME II, ATLANTIC COAST - describes aids to navigation from Toms River, New Jersey to Little River, South Carolina.
3. VOLUME III, ATLANTIC AND GULF COASTS - describes aids to navigation from Little River, South Carolina to Econfina River, Florida.
4. VOLUME IV, GULF OF MEXICO - describes aids to navigation from Econfina River, Florida to Rio Grande, Texas.
5. VOLUME V, MISSISSIPPI RIVER SYSTEM - describes aids to navigation on the Mississippi River and its navigable tributaries.
6. **VOLUME VI, PACIFIC COAST AND PACIFIC ISLANDS** - describes aids to navigation on the Pacific Coast and outlying Pacific Islands.
7. VOLUME VII, GREAT LAKES - describes aids to navigation on the Great Lakes and the St. Lawrence River above St. Regis River.

NOTE: For the U.S. West Coast and Pacific Islands, a mariner only has to purchase or download LIGHT LIST VOLUME VI as listed above.

CHAPTER VIII

VESSEL TRAFFIC SERVICE

GENERAL INFORMATION

The Puget Sound area and the waters of the Pacific Northwest provide several fine harbors for commercial and public vessels. The area historically has also supported a valuable fishery (both commercial and recreational) and a large, and ever increasing, recreational fleet. Vessel Traffic Service (VTS) Puget Sound plays a major role in ensuring the continued safe use of these waters by its many diverse users. The purpose of VTS Puget Sound is to facilitate the safe and efficient transit of vessel traffic to assist in the prevention of collisions or groundings that could cost lives, property damage, or subject the waters of this beautiful area to environmental harm. Additionally, by facilitating the safe and efficient flow of commerce, VTS Puget Sound serves as an inter-modal partner in supporting the National Transportation System. Many VTS Puget Sound regulations are applicable to all vessels, no matter the size, operating in the Puget Sound VTS Area, while certain regulations are applicable only to vessels of certain length, tonnage, and/or engaged in certain specific activities. It is incumbent upon the operator of any vessel in this area to be familiar with the regulations for the particular type vessel being operated. The Ports and Waterways Safety Act, as amended, prescribes civil and criminal penalties for violation of the regulations. Regulations governing the operations of PSVTS are found in Title 33 Code of Federal Regulations Part 161 and are reprinted in the VTS Users Manual.

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 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);
   b. VTS Measures (direction given by the VTS);
   c. All other practices of safe navigation and prudent seamanship.

NON-PARTICIPANT 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 10 when navigating 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.

USERS MANUAL

In addition to the general information provided in this Special Notice to Mariners, the Coast Guard publishes a User's Manual for VTS Puget Sound, which contains a more in-depth discussion of VTS operating procedures as well as further details on anchorages, certain dangerous cargo and Special Rules during certain fishing seasons in the Puget Sound area. All mariners transiting VTS waters are encouraged to obtain a copy of the User's Manual by calling VTS Puget Sound at USCG Sector Puget Sound, Waterways Management Division at (206) 217-6040, or by accessing the document via the VTS web site at either:
http://www.uscg.mil/d13/psvts
http://psvts.us.

VTS COMPONENTS

Traffic Separation Scheme (TSS)
The Traffic Separation Scheme (TSS) in the VTS Puget Sound 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 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 Puget Sound area, International Collision Regulations apply.

Vessel Movement Reporting System (VMRS)
The VMRS is based upon a VHF-FM communication network monitored continuously by VTS Puget Sound, which uses the call sign SEATTLE TRAFFIC. This network consists of fifteen communications sites, located throughout the VTS area, allowing mariners to contact SEATTLE TRAFFIC while normally only using low power (1 watt) on their VHF-FM radio. SEATTLE TRAFFIC may not have firsthand knowledge of all hazardous conditions that exist in the VTS area, so unreported hazards may confront the mariner at any time. Such hazards should be reported to SEATTLE TRAFFIC so the information can be passed to other mariners. Much of the information processed by SEATTLE TRAFFIC is collected from vessel reports, and mariners are cautioned that advisories based on these reports are only as accurate as the information given to SEATTLE TRAFFIC from vessels in the area.

Surveillance Systems
Thirteen Automatic Identification System (AIS) sites provide VTS with full coverage throughout the entire VTS Area. Twelve radar sites provide the VTS with a picture of the traffic conditions throughout the area. These sites provide coverage of approximately 2,900 square miles, including the Strait of Juan de Fuca, Rosario Strait, and Puget Sound from Point Wilson south to Tacoma. Closed circuit television (CCTV) cameras provide coverage of various critical waterways and anchorage areas. In areas without AIS, radar or CCTV coverage, vessels are tracked by voice reports. In these areas, participating vessels will be told when to provide the VTS position reports, and should provide updated position reports whenever necessary.

Communications
VTS Puget Sound uses a multi-channel communication system with two primary VTS frequencies. VHF-FM Channel 5A (156.25MHz) is the primary frequency for all waters north of a line from Nodule Point to Bush Point on the west side of Whidbey Island and waters north of Possession Point (47° 54' 00"N) on the east side of Whidbey Island. This includes the Strait of Juan de Fuca, Rosario Strait, Saratoga Passage, and all associated waters. VHF-FM Channel 14 (156.70 MHz) is the primary frequency used south of the waters defined above including Elliott Bay and Commencement Bay. VTS Puget Sound will shift participating vessels at the designated frequency change lines to the appropriate frequency. Operators of small recreational and fishing vessels less than 20 meters in length are not required to participate, but are strongly encouraged to monitor the VTS operating frequencies. The VTS frequencies can be a valuable source of vessel movement and weather information.
Below are communications requirements for vessels operating in the VTS area:

1. Each VMRS User and VTS User must have radiotelephone equipment onboard capable of operation from its navigational bridge and maintain a listening watch on Channel 13 (156.650 MHz), and on the designated VTS frequency.
   NOTE: A single VHF-FM radio capable of scanning, or with "dual watch: capability, will not meet the requirements of two radios.
2. A VHF watch on Channel 16 is not required on vessels subject to the Vessel Bridge to Bridge Radio Telephone Act, and participating in the Vessel Traffic Service when maintaining a watch on both the vessel bridge-to-bridge frequency and the designated VTS frequency.
3. A person required to maintain a listening watch must be able to communicate in the English language. If experiencing difficulties, use of Message Markers is encouraged.
4. Any fixed or portable radiotelephone equipment capable of transmitting and receiving on the designated VHF frequency may be used.

REPORTS REQUIRED OF VMRS USERS

1. Sailing Plan (SP). Call SEATTLE TRAFFIC at least 15 minutes, but not more than 45 minutes, before navigating in the VTS area. On initial call, provide your vessel's name and the general location of your vessel to permit VTS operators to select the proper radio transmission site. After the VTS answers your radio call, provide the following information about your voyage as applicable:
   a. Vessels name and type
   b. Position
   c. Destination and Estimated Time of Arrival (ETA)
   d. Anticipated speed of advance
   e. Intended route
   f. Time and point of entry into the Seattle Traffic Area
   g. Dangerous cargo on board or in your tow, if applicable

2. Position Information - Position Report (PR). You must report your vessel's name and position:
   a. When you get underway or enter the VTS area.
   b. When inbound in the Strait of Juan de Fuca at 124° 00' 00" W longitude.
   c. When southbound in Rosario Strait at Tide Point (Puget Sound Harbor Safety Committee Standard of Care applicable to Towing Vessels only).
   d. When directed by Seattle Traffic.

3. Updated Information. You must report:
   a. Any significant deviation from the Sailing Plan Report, or from previously reported information.
   b. Any intention to deviate from a VTS issued measure or the TSS.

4. Destination Information - Final Report (FR). Upon arrival at your destination, or when leaving the VTS area, you must provide:
   a. Name of Vessel
   b. Vessel position
   c. Your intention to check out of the system

5. Automated Reporting.
   a. Unless otherwise directed, vessels equipped with Automatic Identification System (AIS) are required to make continuous, all station, AIS broadcasts.
   b. Should an AIS become non-operational, while or navigating in a VRMS area, vessels must notify SEATTLE TRAFFIC and restore the AIS to operating condition as soon as possible.

6. Reporting Exemptions. Due to the nature of their operation, unless otherwise directed, the following vessels are exempted from providing Position and Final Reports:
   a. Vessels on a published schedule and route.
   b. Vessels operating within an area of a radius of three nautical miles or less.
   c. Vessels escorting another vessel or assisting another vessel in maneuvering procedures.

   Vessels exempt from making a final or position report must:
   a. Provide a sailing plan at least five minutes but not more than 15 minutes before navigating within the VTS area.
   b. If vessel departs from its schedule by more than 15 minutes or changes its limited operating area, make the established VMRS reports, or report as directed.

7. Providing Marine casualty or hazardous condition information reports (VRMS User and VTS User). Call "SEATTLE TRAFFIC" immediately whenever involved in a (an):
   a. Grounding
   b. Allision with a fixed object or collision with a floating object
   c. Striking of a bridge
   d. Any condition related to a vessel's ability to safely navigate or maneuver including the absence or malfunction of a vessel's operating equipment such as propulsion, steering, radar, gyrocompass, radiotelephone, nautical charts, or similar equipment or conditions.
   e. Incident adversely affecting seaworthiness or causing property damage in excess of $25,000, (including fire, explosion, flooding, etc).
   f. Incident adversely affecting the environmental quality of a waterway.
   g. Incident involving hazardous materials.
   h. Loss of life or injury requiring professional medical attention.

NOTE: It is critical that VTS receives timely information on bridge strikes to prevent possible loss of life.

PASSING ARRANGEMENTS/USE OF CHANNEL 13

Passing arrangements not only clarify navigational information for the vessels involved, but also for other vessels in the area. Channel 13 should be used for making passing arrangements and is VTS Puget Sound's secondary frequency. Within the Strait of Juan de Fuca vessels are encouraged to use Channel 5A for passing arrangements. VTS watchstanders constantly monitor these frequencies and expect to hear passing arrangements during close quarters situations. VTS Puget Sound will query vessels if passing arrangements are not heard. Regulations require all VMRS users to make passing arrangements while operating in a VTS Special Area (see below for more information on VTS Special Areas). To reduce frequency congestion, recreational boaters shall avoid using Channel 13 for making calls to locks and bridges unless essential for navigation safety.

FERRY ADVISORIES

VTS Puget Sound will not repeat departure information on Washington State ferries on a normal basis. Participants are required to monitor the VTS channel in order to hear Washington State ferries announce their departure; however, when visibility drops below two miles SEATTLE TRAFFIC will pass Washington State ferry transit information to all affected participants.

VESSEL SIZE RESTRICTIONS

Tank vessels larger than 125,000 deadweight tons (DWT) bound for a port or place in the U. S. may not operate in Washington waters east of a line extending from Discovery Island Light to New Dungeness Light. Vessels of 40,000 DWT or greater may not enter Rosario Strait unless permission to enter is obtained from VTS Puget Sound.

VTS SPECIAL AREA: If transiting the Eastern San Juan Island Archipelago VTS Special Area (includes Rosario Strait, Guemes Channel, Bellingham Channel and the Saddlebag Route):

1. Towing vessels shall not impede the passage of a vessel of 40,000 dead weight tons or more.
2. A vessel of 100 meters or more in length will not be allowed to meet or overtake; or, cross or operate within 2000 yards of a vessel of 40,000 dead weight tons or more (except when crossing astern).
3. A vessel of 40,000 dead weight tons or more will not be allowed to meet or overtake; or, cross or operate within 2000 yards of a vessel of 100 meters or more in length (except when crossing astern).
4. Vessels of 40,000 dead weight tons or more require authorization from SEATTLE TRAFFIC to enter or get underway in the Eastern San Juan Island Archipelago VTS Special Area. A vessel requiring authorization shall provide at least 15 minutes notification prior to entering or getting underway within the VTS Special Area.
5. Vessels experiencing maneuverability or navigational difficulties, or any other situation that may impair their safe transit, must report this to SEATTLE TRAFFIC and may not enter or get underway in the VTS Special Area. The Captain of the Port will either grant a deviation or require additional safety measures before authorizing a vessel with a defect to proceed in the VTS Special Area.
6. Vessels required to fully participate with VTS (VMRS Users) must communicate on channel 13 to make safe passing arrangements before meeting, crossing or overtaking any other VMRS User.

NOTE: Definitions of the Eastern San Juan Island Archipelago VTS Special Area geographic boundaries can be found in 33CFR Part 161.55(c).

REGULATED NAVIGATION AREAS (RNA)

33 CFR Section 165.1301 will apply only when implemented by VTS Puget Sound in a defined area where hazardous levels of vessel traffic congestion are deemed to exist. The VTS will broadcast implementation provisions of the RNA on the designated VTS frequency.

DEVIATIONS TO REGULATIONS

Deviations from VTS regulations and operating procedures will be granted for navigational safety reasons only. Deviations can be granted verbally for one-time transits by VTS Puget Sound or for extended periods by written authorization from: Commander, U.S. Coast Guard Sector, 1519 Alaskan Way South, Seattle, WA 98134-1192.

NOTE: In emergency situations a specific verbal request for deviation is not required; however, you should notify the VTS as soon as possible.

DIRECTIONS

All vessels must comply with orders issued by VTS Puget Sound. The Coast Guard wishes to stress that under normal circumstances VTS Puget Sound 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.

VESSEL SPEED AND WAKE CONTROL

Each vessel operator is responsible for operating their vessel at a safe speed, especially in reduced visibility, and with consideration of the wake created by their vessel. When a tide exceeds a stage of 11.0 feet at Seattle, there is an increased risk of vessel wakes endangering persons and/or property along the shoreline within the VTS area. All vessels operating within the VTS Area should proceed at a speed that will minimize the risk of wake damage while maintaining the ability to maneuver safely. The VTS will begin tidal advisory broadcasts 30 minutes before the tide is predicted to exceed 11.0 feet in Seattle. This advisory will be rebroadcast every 30 minutes until the tidal state has subsided.

ANCHORAGE RESERVATIONS

VTS Puget Sound manages the anchorages in Puget Sound and adjacent areas for the Captain of the Port. For safety reasons, each anchorage has a restricted number of anchorage spaces available; these spaces are normally reserved on a "first come, first served" basis. To allow a more efficient and fair allocation of available space, we ask that:

1. Reservations be made as far in advance of arrivals as possible.
2. Revisions to ETA's and ETD's be made as soon as they become known. Reservations are only valid for the time span requested. A vessel staying past the ETD may be subject to movement orders to make room for an inbound vessel with a reservation. Anchorage reservations will not be accepted in high usage areas, such as Elliott Bay or Port Angeles, if there is a possibility of delay due to uncertain orders. With these considerations, the occasions of a vessel being denied anchorage or being ordered to depart to make room for another vessel should be infrequent.
3. General information including a Quick Reference Sheet on the Puget Sound anchorages can be found in the Puget Sound Harbor Safety Plan Anchoring Standard of Care.

VISITORS

Personnel from the Maritime community, Government, and Military are encouraged to visit the Vessel Traffic Center. Please call one of the numbers below to arrange for a tour. Speakers may be available for group meetings. We also encourage suggestions for improvements to the VTS Users Manual or to VTS operating procedures. Send suggestions, comments or requests for copies of the User's Manual to:

Commander (spw)	Phone:	(206) 217-6050	Vessel Traffic Center
U.S. Coast Guard Sector		(206) 217-6040	Administration
1519 Alaskan Way South	Fax:	(206) 217-6900	
Seattle WA 98134-1192	Email:	psvts@uscg.mil	

CANADA/U.S COOPERATIVE VESSEL TRAFFIC SERVICES (CVTS)

In 1979 by formal agreement, the Canadian and the United States Coast Guard established the Co-operative Vessel Traffic System (CVTS) for the Strait of Juan de Fuca region. The purpose of this agreement is to provide for a co-operative system of vessel traffic management in the applicable waters in order to enhance safe and expeditious movement of vessel traffic while minimizing the risk of pollution of the marine environment. Three Centers manage this area: Tofino Traffic, Seattle Traffic, and Victoria Traffic. These Centers are linked electronically to exchange vessel traffic information providing a seamless service to the mariner.

Tofino Traffic monitors VHF-FM CH 74 and manages the approaches to the Strait of Juan De Fuca, Victoria Traffic monitors VHF-FM CH 11 and manages the main access route to Vancouver from Race Rocks through Haro Strait and Boundary Pass to the Strait of Georgia.

Vessel Traffic Services

Participation with Tofino, Seattle, and Victoria Traffic is mandatory within Canadian and U.S. territorial waters. Though participation seaward of Canadian and U.S. territorial waters is voluntary, vessels are strongly encouraged to participate to receive the full benefit of the Vessel Traffic Services, typically about 50 nautical miles. These benefits include traffic information, warnings of vessel congestion or other hazards conditions, and many other forms of transit services.

When inbound and crossing longitude 127 W, latitude 48 N, or within 50 NM of Vancouver Island, all vessels 20 meters or greater, including tug and tows, will contact "TOFINO TRAFFIC" on VHF Channel 74. Once under Tofino Traffic management, vessels will receive instructions on when to switch to new frequencies for SEATTLE TRAFFIC (Channel 5A) and VICTORIA TRAFFIC (Channel 11) zone boundaries. If bound for a U.S. port, vessels will monitor channel 5A. If bound for a Canadian port, vessels will switch to channel 11 when passing north of Race Rocks.

English Language

All communications with Tofino, Seattle, or Victoria Traffic must be made in clear, unbroken English. At least one person capable of conducting two-way radio communication using the English language must be present on the bridge at all times within the CVTS area. When language problems arise communications may be preceded by the following Message Markers:

1. Question: request for information.
2. Answer: the reply to a previous question.
3. Request: a request for action from others with respect to the ship.
4. Information: observed facts.
5. Intention: notice of immediate planned navigational actions.
6. Warning: information about dangers.
7. Advice: a recommendation to correct a hazardous condition.
8. Instruction: a lawful order.
9. Clearance: an authorization to proceed subject to conditions.

CVTS General Information:

Details and regulations concerning the Canadian/United States Cooperative Vessel Traffic Services are contained in the Canadian Coast Guard publication (Radio Aids to Marine Navigation – DFO5471), the U.S. Code of Federal Regulations, and in many nautical publications. For more information about the CVTS contact either of the following or view the CVTS web site at: http://www.uscg.mil/d13/cvts :

Canada		**United States**	
Superintendent, Canadian Coast Guard – Western; Marine Communications and Traffic Services	Canadian Coast Guard Base 25 Huron Street Victoria, BC Canada V8V 4V9 Telephone: (205) 363-8922 Facsimile(205) 363-8929	Commander (dpw), U. S. Coast Guard Thirteenth Coast GuardDistrict	Jackson Federal Building 915 Second Avenue Seattle, WA 98174-1067 U.S.A. Telephone: (206) 220-7270 Facsimile: (206) 220-7265

CHAPTER IX

MARITIME HOMELAND SECURITY

As part of the Department of Homeland Security, the Coast Guard has pursued a four-pronged strategy since 9/11 to ensure that our nation's waterways remain secure from terrorist activity. We've increased awareness of cargo, people and vessels that are entering, departing or transiting our ports and waterways; we've developed a maritime security system to address international shipping; we've increased our presence in our ports and waterways for deterrence purposes and we've built a greater response capability so that if an incident does occur we have the capabilities to adequately respond to it.

For the local mariner, Coast Guard security activities to protect Puget Sound are most visible during harbor and air patrols and escorts of large passenger vessels and commercial traffic.

The most important thing we've learned so far is that it takes teamwork to effectively protect our ports. We have expanded our partnerships with maritime industry and with state and local agencies, gained full membership in the national intelligence community, and have fully integrated into the Department of Homeland Security.

KEY REGULATIONS

PWSA: The Ports and Waterway Safety Act (PWSA) provides the Secretary of Homeland Security with broad authority to regulate the movement and operation of a vessel subject to the jurisdiction of the United States. Coast Guard Captains of the Port may order vessels to operate as directed, to anchor, as well as require pre-arrival notices. The PWSA also authorizes the Secretary to respond to acts of terrorism against vessels and waterfront facilities and to investigate any incident that causes damage to a waterfront facility or affects the safety of a U.S. port. The Secretary is authorized to refuse or revoke a vessel's clearance when it may be liable to the U.S. for violation of the PWSA.

Notice of Arrival Reporting Requirements for all United States Ports

Under Subpart C of 33 C.F.R. 160, most vessels are required to provide advance notice of arrival to the Coast Guard. U.S.-flagged recreational vessels are exempt from this requirement under 33 C.F.R. § 160.202(b). The required advanced time of the notice depends on voyage duration and can be found at 33 C.F.R. § 160.212. Detailed requirements on the content of the Advanced Notice of Arrival submissions can be found in Subpart C of 33 C.F.R. 160.

Notice of Arrivals can be sent to the National Vessel Movement Center 24 hours per day, 7 days a week by phone: (800) 708 -9823 or (304) 264-2502, fax: (800) 547-8724 or (304) 264-2684, or email: sans@nvmc.uscg.gov. More information and forms are available on the National Vessel Movement Center (NVMC) web site: http://www.nvmc.uscg.gov/.

PUGET SOUND AND THE WATERS ADJACENT TO WASHINGTON

Large Passenger Vessel Security and Safety: As of January 14, 2004, the Coast Guard established final regulations for the security and safety of large passenger vessels in the navigable waters of Puget Sound and adjacent waters of Washington. Notice of Enforcement is published in Federal Register; these regulations provide the requirements for vessel traffic operating in the vicinity of large passenger vessels (defined as any cruise ship over 100 feet in length carrying passengers for hire, and any auto ferries and passenger ferries over 100 feet in length carrying passengers for hire). Examples of large passenger vessels include, but are not limited to cruise ships, Washington State Ferries, M/V COHO, and Alaskan Marine Highway Ferries. In accordance with 33 Code of Federal Regulation (CFR) 165.1317 (http://www.gpoaccess.gov/cfr/index.html), a moving security and safety zone extends for a 500-yard radius around all large passenger vessels and remains in effect whether the vessel is underway, anchored, or moored. Within a large passenger vessel security and safety zone all vessels must operate at the minimum speed necessary to maintain a safe course and must proceed as directed by the on-scene official patrol or large passenger vessel master. No vessel or person is allowed within 100 yards of a large passenger vessel that is underway or at anchor, unless authorized by the on-scene official patrol or large passenger vessel master. No vessel or person is allowed within 25 yards of a large passenger vessel that is moored. To request authorization to operate within 100 yards of a large passenger vessel that is underway or at anchor, contact the on-scene official patrol or large passenger vessel master on VHF-FM channel 16 or 13. When conditions permit, the on-scene official patrol or large passenger vessel master should:(1) Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass

within 100 yards of a large passenger vessel in order to ensure a safe passage in accordance with the Navigation Rules; and (2) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of an anchored large passenger vessel or within 25 yards of a moored large passenger vessel with minimal delay consistent with security. When a large passenger vessel approaches within 100 yards of any vessel that is moored or anchored, the stationary vessel must stay moored or anchored while it remains within the large passenger vessel's security and safety zone unless it is either ordered by, or given permission by the Captain of the Port Puget Sound, his designated representative or the on-scene official patrol to do otherwise. Pursuant to 33 USC§1232 (http://www.gpoaccess.gov/cfr/index.html), any violation of the security zones described therein, is punishable by civil penalties (not to exceed $40,000 per violation), and criminal penalties (up to 6 years imprisonment and a $250,000 fine), liability against the offending vessel and license sanctions.

Tank Ship Security: As of March 31, 2003, the Coast Guard established final regulations for the security of tank ships in the navigable waters of Puget Sound and adjacent waters of Washington. Notice of Enforcement was published in the April 15, 2003, Federal Register [68 FR 17733] (http://www.gpoaccess.gov/fr/index.html). Enforced by the Captain of the Port, these regulations provide the requirements for vessel traffic operating in the vicinity of tank ships (defined as any self-propelled tank ship that is constructed or adapted primarily to carry oil or hazardous material in bulk as cargo or cargo residue in the cargo spaces). The definition of tank ship does not include tank barges. In accordance with 33 CFR §165.1313 (http://www.gpoaccess.gov/cfr/index.html), a moving security zone extends for a 500-yard radius around all tank ships and remains in effect whether the vessel is underway, anchored, or moored. Within a tank ship security zone all vessels must operate at the minimum speed necessary to maintain a safe course and must proceed as directed by the on-scene official patrol or tank ship master. No vessel or person is allowed within 100 yards of a tank ship, unless authorized by the on-scene official patrol or tank ship master. To request authorization to operate within 100 yards of a tank ship that, contact the on-scene official patrol or tank ship master on VHF-FM Channel 16 or 13. When conditions permit, the on-scene official patrol or tank ship master should: (1) Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass within 100 yards of a tank ship in order to ensure a safe passage in accordance with the Navigation Rules; and (2) Permit commercial vessels anchored in a designated anchorage area to remain at anchor when within 100 yards of a passing tank ship; and (3) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of a tank ship with minimal delay consistent with security. Pursuant to 33 USC§1232 (http://www.gpoaccess.gov/uscode/index.html), any violation of the security zones described therein, is punishable by civil penalties (not to exceed $40,000 per violation), and criminal penalties (up to 6 years imprisonment and a $250,000 fine), liability against the offending vessel and license sanctions.

COLUMBIA RIVER AND THE WATERS ADJACENT TO OREGON

Large Passenger Vessel Security and Safety: As of September 12, 2003, the Coast Guard established final regulations for the security and safety of large passenger vessels in the navigable waters of the Salmon & Snake Rivers in east Idaho down the Columbia River to coastal Oregon and Washington. The Captain of the Port will cause Notice of Enforcement to be made and will issue Broadcast Notice to Mariners when the Large Passenger Vessel Security and Safety Zone is in effect. Enforced by the Captain of the Port, these regulations provide the requirements for a vessel that operates in the vicinity of large passenger vessels defined as any vessel greater than 100 feet carrying passengers for hire. Examples include, but are not limited to, cruise ships, auto ferries, passenger ferries, and excursion vessels. In accordance with 33 CFR sub-part 165.1318, a moving security and safety zone extends for a 500-yard radius around all large passenger vessels and remains in effect whether the vessel is underway, anchored, or moored. Within a large passenger vessel security and safety zone all vessels must operate at the minimum speed necessary to maintain a safe course and must proceed as directed by the on-scene official patrol or the master of the large passenger vessel. No vessel or person is allowed within 100 yards of a large passenger vessel, unless authorized by the on-scene official patrol or master of the large passenger vessel. To request authorization to operate within 100 yards of a large passenger vessel contact the on-scene official patrol or large passenger vessel master on VHF-FM Channel 16 or 13. When conditions permit, the on-scene official patrol or large passenger vessel master should: (1) Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass within 100 yards of a large passenger vessel in order to ensure a safe passage in accordance with the Navigation Rules; (2) Permit commercial vessels anchored in a designated anchorage area to remain at anchor within 100 yards of a large passenger vessel; and (3) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of an anchored large passenger vessel. When a large passenger vessel approaches within 100 yards of any vessel that is moored or anchored, the stationary vessel must stay moored or anchored while it remains within the large passenger vessel's security and safety zone unless it is either ordered by, or given permission by the Captain of the Port Portland, his designated representative or the on-scene official patrol to do otherwise. Pursuant to 33 USC§1232 (http://www.gpoaccess.gov/uscode/index.html),

any violation of the security zones described therein, is punishable by civil penalties (not to exceed $40,000 per violation), and criminal penalties (up to 6 years imprisonment and a $250,000 fine), liability against the offending vessel and license sanctions.

MAKING OUR WATERS SAFER

The Maritime Transportation Security Act of 2002 (MTSA), the new security amendments to the International Convention for the Safety of Life at Sea 1974 (SOLAS), and the complementary International Ship and Port Facility Security Code (ISPS) have all been fully implemented and strengthen and add additional protective layers for defense of our Nation's ports. These measures are designed to protect the nation's ports and waterways from a terrorist attack. The landmark MTSA legislation requires area maritime security committees made up of local maritime industry officials, first responders and the USCG. Facility and Vessel maritime security plans are required for facilities and vessels that may be involved in a transportation security incident. Regulations specify requirements for security assessments, development of security plans, implementation of measures to address access control, security monitoring, and physical, passenger, personnel, baggage and cargo security, drills and exercises, designation of security personnel for each vessel or facility, and installation of Automatic Identification System (AIS), equipment that automatically sends detailed ship information to other ships and shore-based agencies. The regulations concentrate on those entities that may be involved in a transportation security incident, including various tank ships, barges, large passenger vessels, cargo vessels, towing vessels, offshore oil and gas platforms, and port facilities that handle certain kinds of dangerous cargo or service the vessels listed above. Affected facilities and vessels have completed the implementation requirements and are monitored by the Coast Guard on a regular basis. For the full text of the regulation, see the web site: http://www.uscg.mil/hq/g-m/mp/rules.html.

CHAPTER X

LAW ENFORCEMENT

NAVIGATION RULES

The Navigation Rules establish actions to be taken by vessels to avoid collision. The vessel operator is responsible for knowing and following applicable navigation rules. Annex V (Inland) of the Navigation Rules requires operators of each self-propelled vessel 12 meters (39.4 feet) or more in length to carry on board and maintain for ready reference a copy of the Inland Navigation Rules. Commercially produced navigation rules publications or copies of Title 33 Code of Federal Regulations, Parts 80 through 90, are acceptable. The vessel operator is responsible for knowing and following the applicable navigational rules. Copies may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 or call (202) 512-1800.

International Rules apply outside established lines of demarcation and Inland Rules apply inside the lines. Demarcation lines are printed on most navigational charts and are published in the Navigation Rules.

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 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 usually are 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, detect, and suppress violations on vessels subject to the jurisdiction of the United States. All Coast Guard officers and petty officers that are graduates of the Maritime Law Enforcement Academy, 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. The boarding team will be armed.

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 always be in a marked Coast Guard or Navy vessel flying the Coast Guard Ensign. Once aboard the vessel, 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. Cooperation will make the entire process move smoothly and quickly.

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 Thirteenth Coast Guard District, Chief, Response Division (r), 915 Second Ave, Seattle, WA 98174-1067 or call (206) 220-7295.

OPERATING A VESSEL WHILE INTOXICATED

New 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.

LAW ENFORCEMENT FOR RECREATIONAL BOATS

Coast Guard vessels are identified by a distinctive stripe, the words 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. 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.
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 returning to mooring. The specific unsafe conditions for which termination may be imposed are:

1. Insufficient number of personal flotation devices (PFDs).
2. Insufficient firefighting devices.
3. Overloaded conditions.
4. Improper navigational light display.
5. Fuel leakage.
6. Fuel in bilges.
7. Improper ventilation.
8. Improper flame arrester (backfire flame control).
9. Manifestly unsafe voyage.
10. Operating a vessel while intoxicated.
11. Operating in Regulated Navigation Areas during predetermined adverse conditions (13th District only).

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.

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.

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 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.

1. 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 Pollution 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.

2. 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 the Commandant (CG-3PVC), U.S. Coast Guard, Washington, DC 20593-0001. 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 into U.S. waters 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.

3. OIL POLLUTION REGULATIONS

   A vessel, except a vessel of less than 26 feet in length, must have 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 IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON OR DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE SUBJECT TO A PENALTY OF $5,000.

a. FACILITIES (33 CFR §154): 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 these regulations. Operators of these facilities must submit letters of intent and operations manuals. Equipment requirements and transfer procedures are set forth in 33 CFR §154.

b. VESSELS (33 CFR §155): This section deals with vessel design, operations, and equipment requirements. No person may drain oil sumps, filters, strainers, or purifiers into a vessel's bilge. Personnel qualifications and oil transfers procedures are also specified. Another part of this section requires all U.S. vessels of 26 ft or greater to display a placard.

c. TRANSFER OPERATIONS (33 CFR §156): This part deals with oil transfer operations, setting forth requirements for oil transfer, inspection procedures, equipment tests, and supervisory responsibilities.

d. TANK VESSELS (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 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.

4. 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. 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. Individual mariners and small groups requesting placards may contact the Center for Marine Conservation, 312 Sutter Street, Suite 606, San Francisco, CA 94108, or call (415) 956-7441.

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:

"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.

5. 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.

6. DEFINITIONS OF ADDITIONAL TYPES OF WASTE

a. 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.

b. 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.

c. DUNNAGE - cargo associated waste.

d. 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.

NAVIGATION LIGHTS AND DAYSHAPES ON FISHING VESSELS

Vessels engaged in gillnetting are frequently observed not displaying day-shapes and proper navigation lights. This constitutes a violation of U.S. Navigation Regulations and can lead to vessel accidents. In addition to the suffering of injuries or loss of life and property that may be a result of this problem, vessels not showing day-shapes or proper navigation lights increase their liability for payment of damages which result from collisions with other vessels and decrease their chances of recovering damages to nets and other equipment.

On December 24, 1981 the International Rules for Preventing Collisions at Sea, 1972 (72 COREGS) replaced the old Inland Rules as the applicable "Rules of the Road" on Lake Washington, Puget Sound, Georgia Strait, Strait of Juan de Fuca and all adjacent waters. In the 72 COLREGS, Rule 26 requires the following navigation lights and day-shapes for "vessels engaged in fishing, other than trawling":

1. Two all-around lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with apexes together in a vertical line one above the other; a vessel of less than 20 meters in length may instead of this shape exhibit a basket.
2. When there is outlying gear extending more than 150 meters horizontally from the vessel, an all-around white light or cone apex upwards in the direction of the gear.
3. When making way through the water, in addition to the lights prescribed above, sidelights and a stern light.

The lighting and day-shape requirements described above apply only to vessels engaged in fishing other than trawling. The 72 COLREGS define a vessel engaged in fishing as "any vessel fishing with nets, line trawls or other fishing apparatus which restricts maneuverability". This term does not include fishing vessels, which do not have gear over the side. It does not include fishing vessels which do have gear over the side but whose maneuverability is not restricted by that fishing gear. In these latter two situations, the fishing vessels should display the lights prescribed for a power driven vessel underway. In addition, problems have been noted with the coloration of certain navigation lights. The red lenses used in lights on certain vessels have turned amber through age. These lenses should be checked. If they have turned amber, they should be replaced with a red lens to be in compliance with the 72 COLREGS.

In the Puget Sound area, refer questions on navigation light requirements to Coast Guard Sector Seattle, 1519 Alaskan Way South, Seattle, WA 98134, or call (206) 217-6200. In the Columbia River area and the Washington and Oregon coast area, refer these questions to Coast Guard Sector Portland, 6767 North Basin, Portland, OR 97217, or call (503) 240-9301.

FISHING VESSEL MODIFICATIONS

Historically, fishing vessels have been found modified or altered. Some of these fishing vessels have had additions in space, others have used unauthorized compartments for storage, and others had sealed up tonnage openings. These alterations placed the vessels in violation of several Federal requirements. Any time a vessel is modified by altering the internal compartments or by adding area to the superstructure, the overall tonnage of the vessel changes. In these cases, (1) the vessel's Certificate of Documentation becomes invalid and must be surrendered (46 CFR §67.25-7), (2) the vessel needs to be re-admeasured to determine its new tonnage, and (3) the new tonnage requires application for a new Certificate of Documentation. Violation of these Federal Regulations may result in the assessment of civil penalties against the vessel's owners/operators as well as administrative action against masters or other licensed personnel (e.g. suspension or revocation of Coast Guard-issued licenses). Penalties for vessel documentation regulations can be up to $500 per day and the vessel can be liable to seizure by the U.S. Government. Penalties for admeasurement regulations can be up to $20,000 per day. The American Bureau of Shipping handles vessel admeasurement on behalf of the USCG.

CREW CITIZENSHIP REQUIREMENTS FOR FISHING INDUSTRY VESSELS

Federal Regulations require that on U.S. fishing, fish processing, and fish tender vessels engaged in fisheries in the navigable waters of the U.S. OR THE EXCLUSIVE ECONOMIC ZONE (EEZ), AT LEAST 75 PERCENT OF THE UNLICENSED SEAMEN 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 seamen may be other aliens who are allowed to be employed under Immigration and Naturalization Service (INS) rules. Any unlicensed person aboard a vessel who provides any service toward the mission of the vessel is considered an unlicensed seaman. This includes any foreign national who is aboard as a technician or advisor.

EPIRB REQUIREMENTS FOR UNINSPECTED FISHERY VESSELS

After May 17, 1990, the owner of an uninspected vessel that is a fishing vessel, fish processing vessel, or a fish tender vessel shall ensure that the vessel does not operate outside three (3) nautical miles from the coast unless it has a properly registered FCC Type, accepted Category 1, float-free, automatically activated, 406 MHz Emergency Position Indicating Radio Beacon (EPIRB) on board. For more information on EPIRBs see Chapter V.

REPORTS OF FOREIGN FISHING VESSELS VIOLATING LAWS OF THE U.S.

All foreign vessels are prohibited from fishing inside 12 miles of the U.S. coastline except those foreign fishing vessels permitted for and engaged in support activities involving Joint Venture fishing. Foreign fishing vessels are also prohibited from fishing or engaging in fishing support activities within the 3 to 200 mile fishery conservation zone unless they have a permit for such activities. "Activities in support" include repair of a fishing vessel and transfer of personnel, supplies, fuel, water, fishing gear or machinery or fish processing equipment. It is also a violation of U.S. law for a foreign vessel to take and retain any continental shelf fishery resources from the U.S. continental shelf (generally speaking the edge of the shelf is 109 fathoms). "Continental shelf fishery resources" include coral, crab, abalone, conch, clam, quahog, sponge, and lobster. It is requested that apparent violations of U.S. law and routine sightings of foreign fishing vessels be reported to the Coast Guard. Immediate reports are particularly desired, but later reports also have value. Reports should include the activity observed, the location, and as much identifying information (name, number, home port, flag, color, size, shape, etc.) about the foreign vessel as possible.

TERMINATION OF UNINSPECTED FISHING VESSEL VOYAGES

A Coast Guard Boarding Officer may direct the individual in charge of an uninspected fishing vessel, fish processing vessel or fish tender vessel to immediately take reasonable steps necessary for the safety of persons on board the vessel if the officer observes the vessel being operated in an unsafe manner which creates an especially hazardous condition. With OPCON's (Operational Control)permission, this may include ordering the individual in charge to return the vessel to a mooring and to remain there until the situation creating the hazard is corrected or ended. A violation 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 1 year imprisonment. Termination is suspended when the conditions, which created the especially hazardous condition, have been corrected. It remains the operator's responsibility to ensure the vessel is in compliance with all applicable federal regulations before getting underway again.

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. 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.

13TH COAST GUARD DISTRICT CAPTAIN OF THE PORT AND MARINE INSPECTION OFFICE ZONES

The Thirteenth Coast Guard District is divided into two Captain of the Port and two 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 3.65-10 for the Captain of the Port, Puget Sound and Marine Inspection Office Puget Sound Zones and in 33 Code of Federal Regulations part 3.65-15 for the Captain of the Port, Columbia River and Marine Inspection Office Columbia River Zones. For more information concerning the Captains of the Port or the Marine Inspection Offices call or write:

Captain of the Port, Columbia River
2185 SE 12th Place
Warrenton, OR 97146
(503) 861-6213

Captain of the Port, Puget Sound
1519 Alaskan Way South
Seattle, WA 98134
(206) 217-6232

CHAPTER XI

CAUTIONARY SITUATIONS

FIRING DANGER AREAS

Firing and bombing practice exercises take place in numerous areas established for those purposes along the coast and in some areas of the Strait of Juan de Fuca and Puget Sound. 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 National Oceanic and Atmospheric Administration, (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.

U.S. NAVY OPERATING AREAS

The U.S. Navy advises the following Navy Operating Areas are in use on a continuing basis by Navy ships and aircraft. Area designations, charts showing them, type of exercises authorized, and times of use, are indicated as follows:

1. R-6701 (Navy 7). Charts 18400, 18440, 18464, 18423, and 18471. Ship tactical exercises, inert ordnance, small arms fire, aerial training rockets, miniature bombs, practice mines; sunrise to sunset for aircraft, continuously for surface exercises.
2. R-6707 (Navy 5). Chart 18500. Aerial rockets, bombs, strafing (live ordnance); sunrise to sunset.
3. R-6713 (Navy 3). Charts 18400, 18421, 18465, 18440, 18441, 18423, and 18471. Ship tactical exercises, inert ordnance, small arms fire, air to surface gunnery, night illumination, practice bombs, mines, torpedoes, and rockets.
4. W-237 (Navy 6 and Navy 8). Charts 18003, 18007, 18500, 18480, 18485, and 18400. Surface tactical exercises and gunnery, antiaircraft and missile firing, undersea warfare and combined exercises, air to air gunnery, rockets, and missiles; aerial bombing, air to surface firing; live ordnance authorized; continuous.

Because of the frequency and variety of exercises conducted in the above areas and the difficulty in scheduling them far in advance due to the uncertainties of weather, it is not possible to issue individual Notice to Mariners each time an exercise is scheduled. Mariners are therefore warned of the possible danger when in the above areas. For regulations governing Restricted Areas, consult U.S. Coast Pilot 7, Pacific Coast.

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 12 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 as described in Chapter IV.

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 burn for about twenty-five seconds. The color of the smoke or flare/star has the following meanings:

1. 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.
2. YELLOW: Indicates that submarine is about to come to periscope depth from below periscope depth. Vessels should not stop propellers. This is important to ensure that the submarine knows where you are located.
3. 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:

1. Release of dye marker.
2. Release of air bubble.
3. Ejection of oil.
4. Pounding of the hull.

If any of these attempts to attract attention are noted, immediately advise Navy Region NW at (360) 315-5127 and/or contact the U.S. Coast Guard on Channel 16 VHF-FM.

SIGNALS FOR COAST GUARD VESSELS WHILE HANDLING OR SERVICING AIDS TO NAVIGATION

1. 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.
2. 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.

GEOPHYSICAL SURVEYING VESSELS

In the last few years operations conducted by geophysical survey vessels have increased off the Oregon and Washington seacoasts. 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.

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 not to exceed $40,000 for each violation. 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. Permanent Regulated Navigation Areas and Limited Access Areas in the Thirteenth Coast Guard District are published at 33 CFR 165.165.1301– 165.1321. Limited Access Areas established on a temporary basis are published in the Federal Register (available at www. Federalregister.gov) as well as weekly Local Notices to Mariners. Temporary regulations are denoted with section numbers that begin with a "T", e.g. 33 CFR 165.T13-016.

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.

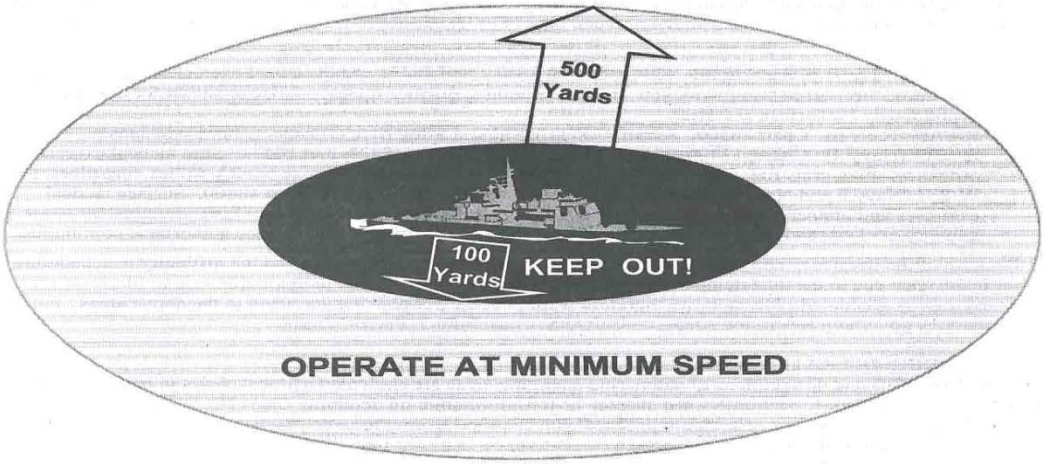
PROTECTION OF NAVAL VESSELS

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; and 49 CFR §1.45. 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 Oregon and Washington, transits of Puget Sound and the Strait of Juan de Fuca 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 165.2010 Subpart G.

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

U.S. NAVY SUBMARINE SECURITY ZONE

In addition to the Naval Vessel Protection Zone, all U.S. Navy submarines operating in the Sector Puget Sound Captain of the Port Zone, as defined in 33 CFR 3.65-10 ,have a 1,000 yard security zone around them. No person or vessel may enter or remain in the 1,000 yard security zone unless authorized by the Coast Guard Patrol Commander. The Coast Guard security escort will attempt, when necessary and practicable, to contact persons or vessels inside or in the vicinity of the security zone via VHF Channel 16 or other means reasonably available. Additional information on this regulation can be found in 33 CFR 165 Subpart D.

HOOD CANAL REGULATED NAVIGATION AREA

All waters of the Hood Canal in Washington is designated a Regulated Navigation Area whenever any U.S. Navy submarine is operating in the Hood Canal and being escorted by the Coast Guard. All persons and vessels located within the Regulated Navigation Area shall follow all lawful orders and directions given to them by Coast Guard security escort personnel. The Coast Guard security escort will attempt, when necessary and practicable, to notify any persons or vessels via VHF Channel 16 or other means reasonable available. Additional information can be obtained in 33 CFR 165, Subpart B.

SEAPLANE OPERATIONS

Mariners are cautioned that seaplane operations are conducted throughout the Puget Sound area but are a particular hazard on Lake Union, Lake Washington, and the San Juan Islands. Mariners are urged to maintain a sharp lookout for seaplanes taking off and landing in the areas traditionally used by them, since they require significant surface area and have difficulty in maneuvering. Once on the water (displacement mode) they are required to conduct themselves in accordance with the Navigation Rules - Inland and International, like any other vessel.

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:

1. 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:
   Stream the object as far aft as possible.

   a. Notify the nearest Coast Guard or Navy activity and stand by for instructions or help. The Coast Guard can be notified on VHF radio or at (206) 220-7001. The Navy can be notified at (360) 396-1631.
   b. Position the crew at the forward end of the vessel keeping the deckhouse between them and the object astern.
   c. Maintain steerageway as necessary to stay in the area until help or instructions arrive.

2. OBJECTS BROUGHT ON BOARD: If a suspected explosive object is not detected until the trawl of net contents have been discharged on board the vessel, take the following actions:

   a. Avoid any bump or shock to the object.
   b. Secure it in place.
   c. Keep it covered up and wetted down.
   d. Radio the nearest Coast Guard or Navy activity and stand by for instructions.

3. 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.

4. 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 sighting unidentified or suspicious objects are requested to furnish the following information to the nearest Coast Guard or Navy radio station or activity:

   a. Position of object, and how closely it was approached.
   b. Size, shape, condition of painting, and the presence of marine growth.
   c. Whether or not horns or rings are attached.
   d. Whether or not definite identification is possible.

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.

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. Where 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.

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.

MARINE CONSTRUCTION SITES

Information concerning marine construction projects involving dredging, breakwaters, piers, pipelines, oil drilling platforms, etc., is disseminated via Local and Broadcast Notices to Mariners when the Coast Guard is advised. 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).

HIGH-INTENSITY DECK WORKING LIGHTS

The Coast Guard and the Canadian Coast Guard have received numerous complaints from mariners that vessels are operating at night with their high-intensity deck working lights energized. The complaints generally involve large fishing vessels and scows transiting Puget Sound and adjacent waters, and the Canadian/Alaskan inside passage. The glare from these lights seriously impairs the night vision, if not the entire vision, of mariners. In addition, their use can impair the visibility or distinctive character of required navigation lights, and may interfere with the keeping of a proper lookout. These lights should not be energized at night when other transiting vessels are or may be in the vicinity. In addition to posing a significant safety problem, the use of these lights at night near other vessels is a violation of Rule 20(b) of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS). Violators risk potential legal action. In the event of a collision or other casualty, violators face possible financial liability (if bright working lights are found to have caused or contributed to the mishap).

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 the 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, such 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.

RADIO CHECKS

Regrettably, boaters and anglers are increasingly testing their radios or maliciously transmitting the "mayday" distress signal over VHF-FM radio 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 who is not visible, 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, 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.

NATIONAL BALLAST WATER MANAGEMENT (BWM) PROGRAM

The unintentional introduction of non-indigenous species (NIS) 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. If the voyage is less than 24 hours, the operator must report before departing the port or place of departure. If the voyage exceeds 24 hours, the operator must report at least 24 hours before arrival at the port or place of destination.

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 §151.2041 and §151.2045 are:

- Crude oil tankers engaged in coastwise trade,
- DOD/Coast Guard/Armed Service Vessels,
- Vessel that operate exclusively within a single COTP zone do not have to submit BWM reports and do not have to maintain BWM records on board for two years.
- 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 §151.2041 and §151.2043.

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 §151.2041 and §151.2045 in addition to the requirements of 15 CFR§ 754.2(j)(3).

Penalties for failing to comply with the Mandatory BWM Requirements:
Max: $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 §151.2045). 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/submit.html
- email to NBIC@BALLASTREPORT.ORG,
- fax to 301-261-4319 or
- mail to the USCG c/o SERC (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 found online at: https://homeport.uscg.mil/mycg/portal/ep/channelView.do?channelId=-18361&pageTypeId=13489.

or contact:

Commandant, (CG 5224)
2100 2nd Street, SW
Washington, DC 20593-0001
(202) 372-1402

COASTAL TOWLANE 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.

Washington Sea Grant took the lead in this voluntary industry program in 1997, working with west coast commercial crab fishers and towboat operators to continue this critical effort. The 2010-11 edition of the Tow lane Charts are a result of discussions and final agreements between the two groups. Updated electronic charts can be reviewed and download at; http://www.wsg.washington.edu/mas/econcomdev/lanes.html. For more information or copies of the Tow lane charts contact Steve Harbell, Marine Field Agent, Washington Sea Grant, at (360) 875-9331.

CHAPTER XII

BRIDGE INFORMATION

BRIDGE PROGRAM INFORMATION

Background
In 1967, the Bridge Program was transferred from the Army Corp of Engineers to the U.S. Coast Guard within the Department of Transportation. On 01 March 2003, the U.S. Coast Guard became an agency of the U.S. Department of Homeland Security. The Coast Guard is responsible for approval of the location and plans of bridges and causeways constructed across navigable waters of U.S. In addition, the Coast Guard is responsible for approval of the location and plans of international bridges and the alteration of bridges found to be unreasonable obstructions to navigation. Authority for these actions is found in in the following laws: 33 U.S.C 401, 491, 494, 511-524, 525 and 535a, 535b, 535c, 535e, 535f, 535g, and 535h *(Note: these are all separate sections, not subsections of 535).* Section 535 and following is popularly known as the International Bridge Act of 1972. The Implementing regulations are found in Title 33, Code of Federal Regulations Parts 114 through 118.

Goals

1. To provide reasonably free, safe, and unobstructed passage for waterborne traffic while considering the needs of land transportation.
2. Ensure that drawbridge operating regulations provide for the reasonable needs of navigation and land transportation.
3. Identify unreasonably obstructive bridges and order their removal or alteration.
4. Ensure the timely engineering of bridge design and construction for bridge removal or alteration projects to remove unreasonable obstructions to navigation with due consideration for land traffic needs and the environment.
5. Regulate bridge lighting for the safety of navigation and land traffic for every bridge which crosses waterways with significant nighttime navigation.
6. Optimize resources to best meet growing workload and customer needs.

The Bridge Section of the Aids to Navigation and Waterways Management Branch administers the program for bridges over the navigable waters of the Thirteenth Coast Guard District. To report bridge discrepancies or request information about bridges contact the Bridge Section at (206) 220-7282.

DRAWBRIDGE OPERATION

Drawbridges are required to open on signal for the passage of vessels unless otherwise regulated by the Coast Guard. 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 Coast Guard may also authorize a deviation from normal operating procedures to accommodate repair work or a public event. Temporary deviations from normal operation are announced via Broadcast Notices to Mariners and/or the weekly Local Notice to Mariners. Drawbridge operation regulations, including proper signaling procedure, can be found in the current editions of 33 Code of Federal Regulations Part 117 (for all of the U.S.) and U.S. Coast Pilot 7 (for bridges in California, Oregon, Washington, and Hawaii only). 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. The Coast Pilot is available from retail outlets for charts and other nautical publications. These regulations may also be found on the internet at http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR

VHF-FM CHANNEL 13

Channel 13 (156.650 MHz) is designated for use by vessels for communicating with drawbridges and locks. This channel is also the ship-to-ship channel for matters that concern vessel safety. Recreational boaters 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 serve the needs of land transportation and provide for the reasonable needs of navigation. The Coast Guard ensures marine Safety, Security, and Stewardship and contributes to the freedom of navigation through its authority to approve the location and plans of all new bridges, modifications of existing bridges, and causeways in or over navigable waterways of the United States. The Bridge Program determines whether a proposed bridge or modification will provide for the reasonable needs of safe and reasonably unobstructed navigation on the waterway, while also providing for land based modes of transportation that will use the bridge. Persons contemplating the construction of new bridges or the modification of existing bridges should contact the bridge section to find out if a permit is necessary for the planned work. Certain works and waterways are exempt from permitting requirements. For the purposes of Coast Guard jurisdiction, "bridges" include roadway, railway, and pedestrian bridges as well as pipelines, conveyers, and cable-held conveyances.

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

BRIDGE LIGHTING

The Coast Guard prescribes and permits lighting on bridges. The lighting on bridges may vary with the needs of the waterway 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 span that some vessels could pass through. Drawbridges often do not show any green lights except in the fully opened position. No bridges in the Thirteenth Coast Guard District are marked in the lateral system. The lights on bridges perform as navigational aids, but have no Light List number and are not regulated under the same part of the federal code as private aids to navigation. While the Coast Guard Auxiliary conducts an annual inspection of bridge lights, any mariner is encouraged to report lighting discrepancies to the nearest Coast Guard Sector.

CHAPTER XIII

CHARTS AND PUBLICATIONS

CHARTS

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 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.

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. For other channels, the latest controlling depths available at the time of publication are given.

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 NOS 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: http://www.nauticalcharts.noaa.gov/staff/chartspubs.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.

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, 1315 East West Highway, 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 and the Coast Guard's Local Notices to Mariners. 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. Significant changes may have taken place since the date of the last survey or report.

NATIONAL OCEAN SERVICE (NOS)

The NOS provides charts and related publications for the safe navigation of marine and air commerce, and provides basic data for engineering and scientific purposes and other commercial and industrial needs. NOS facilities are located in the country, and can be found at these two links: http://www.legislative.noaa.gov/NIYS/, http://www.csc.noaa.gov/.

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 partners OceanGrafix and East View Geospatial , 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, it is printed via 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. For more information on POD charts and how to obtain them, visit the website http://www.nauticalcharts.noaa.gov/pod/POD.htm.

NOAA has announced the end of traditional paper nautical charts beginning April 13, 2014. NOAA will continue to provide other forms of nautical charts, including Print-on-Demand paper charts as well as electronic and digital formats to the public. Government agencies may continue to order paper charts through the supply system. For more information on traditional paper nautical charts, visit NOAA's website at: http://www.nauticalcharts.noaa.gov/staff/news/2013/papercharts.html.

NAUTICAL CHART NEW EDITION DATE INFORMATION

National Ocean Service (NOS) 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 (www.nga.mil), 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 NOS 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.

NOS CHART AND PUBLICATION ORDERS

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 NOS website: http://www.nauticalcharts.noaa.gov/staff/charts.htm.
The National Ocean Service (NOAA) has a worldwide network of authorized nautical chart sales agents.

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. National Imagery and Mapping Agency (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/#Nautical

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.

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.

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:

1. Detailed position/time information.
2. Mariners own evaluation of positional accuracy - type of navigational system used and frequency of fixes.
3. Ship's course and speed with times of changes noted.
4. Echogram scales in use, graduated scales provided, and time of scale changes.
5. Draft of vessel and if zero reference is corrected for draft.
6. Regular annotations of date/time marks on echograms to enable correlation with position.
7. 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.

PUBLICATIONS

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:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. Section VIII: CORRECTIONS TO LIGHT LIST, VOLUME VI; PACIFIC COAST AND PACIFIC ISLANDS contains all of the corrections to the Thirteenth Coast Guard District's Aids to Navigation that are included in the Light List
9. ADDITIONAL ENCLOSURES contains items such as a listing of dredging operations, marine events, tabulations, chartlets, public notices, and other pre-printed material.

AVAILABILITY OF THE LOCAL NOTICE TO MARINERS

The Thirteenth 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.

NGA U.S. NOTICE TO MARINERS

Subscriptions are limited to bona fide mariners who, when submitting requests, must include a sound justification for the worldwide coverage provided by this publication. The U.S. Notice to Mariners 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.

NGA 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.

NOS 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 can be found, along with previous online versions of the Coast Pilot, is on the following NOS website: http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm .

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

NOS TIDE AND TIDAL CURRENT TABLES

Tide Tables and Tidal Current Tables are prepared by NOS and published by a NOS 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/

OTHER GOVERNMENT PUBLICATIONS FOR THE MARITIME COMMUNITY

The following lists some of the more popular Government publications available for the maritime consumer. Many are free; however, it is recommended that you verify the current price with the source before ordering. The following publications are available from the U.S. Government Bookstore at: http://bookstore.gpo.gov/, or call (866) 512-1800:

1. 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=navRulesContent.
2. 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.

3. NAUTICAL ALMANAC: Contains astronomical data used by navigators in celestial navigation.

CANADIAN CHARTS AND NAUTICAL PUBLICATIONS

Canadian nautical charts and publications are available from authorized dealers only. To locate a dealer or for more information you may visit their website at: http://www.charts.gc.ca/charts-cartes/index-eng.asp .

Nautical charts are a necessity for safe navigation and a requirement for commercial navigation under the Canada Shipping Act. Furthermore, the necessity of having up-to-date charts showing the latest information cannot be stressed too strongly, therefore purchasers should correct their own charts from the Weekly Notices to Mariners and obtain New Editions as soon as they are advertised. The Hydrographic Service corrects all charts up to the date of sale, with the exception of those published primarily for small-craft use. Although charts contain a wealth of information, certain details of importance to navigation cannot be included. Such details are given in Sailing Directions which describe the coast, conspicuous landmarks and provide other information such as availability of fuel, berthing facilities, etc. Other related publications provide information concerning tides, water levels, aids to navigation, nautical regulations, etc.

The Canadian Hydrographic Service carries out surveys in Canada's coastal and inland waters for the production of new charts and to improve existing charts and publications. Mariners can assist by notifying the Director, Hydrography, Pacific Region, Canadian Hydrographic Service, Department of Fisheries and Oceans, Sidney, British Columbia, Canada, V8L 4B2, when uncharted dangers to navigation are discovered, or any discrepancies are noticed in any publications.

These publications are of particular importance to mariners and may be obtained from the Hydrographic Chart Distribution Office and authorized dealers. Below is a partial list.

1. SAILING DIRECTIONS
   a. British Columbia Coast (South Portion) Vol. 1.
   b. Inner Passage - Queen Charlotte Sound to Chatham Sound (PAC-205E).
   c. Hecate Strait, Dixon Entrance, Portland Inlet and Adjacent Waters and Queen Charlotte Islands (PAC-206E).
2. CANADIAN TIDE & CURRENT TABLES. Tide Tables provide predicted times and heights of the high and low waters associated with the vertical movement of the tide. The Current Tables provide predicted times for slack water and the times and velocities of maximum current, all of which are associated with the horizontal movement of the tide. Short term current predictions are available online, and the tide tables are available for downloading from the website http://www.charts.gc.ca/publications/ctct-tmcc-eng.asp.
3. LIST OF LIGHTS, BUOYS, AND FOG SIGNALS - Published annually for the Pacific Coast and the rivers and lakes of British Columbia Inland waters. They are also available at website: www.notmar.com/eng/services/list/pacific_coast_e.php.
4. RADIO PUBLICATIONS. Radio Aids to Marine Navigation (Pacific and Western Arctic) - published annually Radiotelephone Operators Handbook - land/sea/air. It is also available at website:

   http://www.charts.gc.ca/publications/ramn-arnm-eng.asp.
5. NOTICES TO MARINERS. Canadian "Notices to Mariners," published monthly; contain important navigational information including amendments to Canadian Charts, Sailing Directions, Lists of Lights and Lists of Radio Aids. These "Notices" may be obtained free as a download from the web site http://www.notmar.gc.ca/go.php?doc=eng/services/notmar/index or can be subscribed to as a monthly email. In addition to the weekly publication one should obtain a copy of the “Annual Notices to Mariners” which contains a wealth of information concerning navigation safety in Canada. This annual publication is very much on the same lines as the U.S. Coast Guard's Special Notice to Mariners and is invaluable for those transiting Canadian waters. It can be downloaded at the same website as the Monthly Notices to Mariners.

NOTICE TO MARINERS
MARINE INFORMATION, REPORT AND SUGGESTION SHEET

Readers are encouraged to notify the 13th Coast Guard District of any discrepancies found in this book. Please fill this form out, and mail it to:

Commander (dpw)
13th Coast Guard District
915 2nd Avenue, Suite 3510
Seattle, WA 98174-1067

or email to: D13-PF-LNM@uscg.mil

Special Notice to Mariners:

Page Number(s):_____

Item(s) to be corrected:

Suggestions: