CALLON COULD CONTRACTOR COULD COLOR COULCO COULCO COULCO COULCING COULCO BOATING

(FORMERLY EXTENSION MANUAL 3)





Oregon

STATE

MARINE

BOARD

December 1995

Dear Coastal Boater,

Oregon's coast is a beautiful but sometimes hazardous place to boat. Boating in Coastal Water is designed to help you navigate safely and enjoy the coastline.

Conditions along the Oregon coast challenge even the most experienced boaters. Shoals, bar entrances, river and tidal currents, ocean swells and winds often create dangerous conditions for vessels of all sizes. Pleasant seas and fair weather can charge quickly on the open ocean and across the bar.

Safe boating along the coast requires proper preparation, good boat handling skills and knowledge of bar entrances. This publication contains photographs at tharts of each bar entrance as well as local hazard information. It also provides general information on boat operations. We recommend that at part of your preparation, you check in with the U.S. Coast Guard for advice and updates about surrent local conditions.

Consider *Boating in Coasta Waters* as a starting point in preparing to navigate the coast safely. If you are new to boating on the ocean, we recommend taking a trip with an experienced skipper. And, if you are a novice boater, we use you to take a boating course offered by the U.S. Coast Guard Auxiliary or the U.S. Power Squadrons. Or, you can contact the Marine Board for information about the correspondence course *Oregon Boating Basics*.

Safe and happy boating on Oregon't coast!

Ocean State Malin Board Kom Keel, Chimerson Don Christenson Nancy Hungerford Tom O Connor Rick Wren



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OREGO

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OREGON SEA GRANT STATE UNIVERSITY

Sobert Malouf, Director tension Sea Grant Program ard R. Kolbe, Interim Program Leader

	Leave a float plan with a friend or relative. If you m know before you go. Should disaster strike, a few m difference. Here's a sample plan:	nake changes in it, let that person ninutes could mean a lifetime of
	Name of boat operator	
	Home phone number Busine	ess phone summer
	Boat type Color of hull	t^{\vee}
	Name Make Lengt	Other
	Engine: Type Horsepower N	formal fuel (gallons)
	Number of persons aboard (including operator)	
	Name Age defess/Phon	e Number
		×0.
	Survival Equipment: Lifejackets (number)	
	Flashlight food paddles	
	Rate Contractions	
	Pepart from	on (time, date)
	Going to or Expect to return by	(time, date) and in no
$\sim \gamma$	Vor later that	
C ^X	Other Information	
	Autolic menumber Trailer license nur	mber
$\langle \cdot \rangle$ $\langle \cdot \rangle$	If no neturned by	call the Coast Guard or local

.

These forms are available from the State Marine Board.

Storm Signals

Certain locations along the Oregon Coast, such as Coast Guard Stations, marinas, public piers, and other points, display storm signals. These warning signals indicate a prediction of potentially dangerous wind or, in the case of small craft warnings, winds and seas dangerous to smaller vessels. Boaters should be familiar with these signals and heed their warnings. Remember, these warning signals are for forecasting wind, as it may be calm at the time signals are hoisted. On the other hand, the boater must realize the wind might be blowing or the seas rough enough to make boating dangerous even with no warnings up and blue skies overhead.

Safe boaters make it an unbreakable rule to stay ashore voluntarily when storm signals are up or high winds or rough seas are present. The Coast Guard is empowered to prevent small craft from leaving protected waters when sea conditions are dangerous or storm signals are displayed. This service can and does tow in boaters who refuse to heed their warnings.

Storm Warnings

These warnings cover a wide range of wind speeds and/or sea conditions. Also, "small craft" includes boats of many designs and sizes. Mariners should regard the storm warnings as signals that wind and/or sea conditions may be dangerous or as a forecast of potentially dangerous conditions. More detailed information may be obtained by telephone or by intening to local radio stations, Coast Guate radio, or the Weather Service VIEC/M broadcasts. The Weather Service broadcasts on frequencies of 162.400 and 162.550 MHz with transmitters at Astoria, Newport, Coos Bay, and Brookings.

Storm Warning Display Stations

Washington Stations Cape Disappointment (CG)

Oregon Stations

Tillamook Bay Harbormaster Depoe Bay STA (CG) Yaquina Bay STA (CG) Siuslaw River STA (CG) Umpqua River STA

(Winchester Bay) (CG) Umpqua River Lookout Coos Bay STA (CG) Chetco River STA (CG) (D, day displays; CG, Coast Guard; STA, J

Rough Bar Advisory 6g

The Ceast Guard has established a stanuard hough bar ad isony sign. Its posttion barges from pure to port and is included in the card escriptions that fol-

The sign is $6' \times 6'$ white diamondshaped daymark with bight orange border barrying the points "ROUGH BARC in black letters. The alternate flashing more lights will be turned on when



observed seas on the bar exceed 4 feet in height and are considered dangerous.

If the lights are not flashing, this is no guarantee that sea conditions are favorable.

Marine Emergency and Distress Radio Procedures

Speak slowly and stearly

D

D

D

D

D

D

Call:

 If you are in diviress (that is, when threatened by grave and imminent danger), transmit the International Distress Carl on channel 16: "MAYDAY, NAYDAY, MAYDAY, This is (your vessels VHF call number are man) repeated three times]."* If you need information or assistance from the Coast Guare (other than in a distress, call the Coast Guard on channel 16 (the distress addealling frequencies). In this situation, you will normally be shifted to a common working frequency (channel 22A), allowing the distress end can onen

distress mequency to remain open.
If you're aboard a vessel in trouble, state:
1. Way you are (your vessel's VHF call number and name).

- There you are (your vessel's position In latitude/longitude, Loran coordinates, depth of water, or true bearing and distance in nautical miles from a widely known geographical point; local names known only in the immediate vicinity are confusing).
- 3. If you require Coast Guard assistance, and whether or not you are in immediate danger.
- What is wrong (nature of distress or difficulty, if you are not in distress).
- 5. Number of persons aboard and the condition of anyone injured.
- 6. Kind of assistance required.
- Present seaworthiness of your vessel.
 Description of your vessel length, type, cabin, masts, power, color of hull, superstructure and trim.
- 9. Your listening frequency and schedule.
- 10. Weather conditions.

If you are observing another vessel in difficulty, give:

- 1. Your position and (if possible) the bearing and distance of the vessel in difficulty.
- 2. Nature of distress or difficulty.

* If you have the Radiotelephone Alarm Signal available, transmit it before the Distress Call, for approximately 1 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 watch, and it shall only be used to announce that a distress call or message is about to follow.

- 3. Description of the vessel in distress or difficulty (see item 8, above).
- 4. Your intentions, course, and speed, etc.
- 5. Your radio call sign, name of your vessel, listening frequencies and schedule.

Note: The international signal for an aircraft that wants to direct a surface craft to a distress is:

Circling the surface craft, opening and closing the throttle or changing propeller pitch (noticeable by change in sound) while crossing ahead of the surface craft, and proceeding in the direction of the distress. If you receive such a signal, you should follow the aircraft. If you cannot do so, try to inform the aircraft by any available means.

If your assistance is no longer needed, the aircraft will cross your wake, opening and closing the throttle or changing the propeller pitch. If you are radio-equipped, you should attempt to communicate with the aircraft on 2182 kHz or 156.8 mKz when the aircraft makes the above signals or makes any obvious attempt to attract your attention. In the event you cannot communicate by radio, be alert for a message block dropped from the aircraft.

U.S. Coast Guard Search and Rescue Stations

In Oregon Astoria Chetco River Coos Bay Depoe Bay Siuslaw River Tillamook Umpqua River Yaquina Bay In Washington Cape Disappointment

CB channel 9 distress frequence is not a reliable method for reporting marin emergencies. VHF-1 Michannel 16 is more reliable, as is use of a cell phone.

Signa ig assistance t mariners of the official, signals as Guard. The following signals as indicating a essel in dist of the orimary functions of the and addirequiring assistand (These tion to the car. sual disage of required y tress signalling devices to waters. See page 11.) A boat in ess can signal for assistance by:

- 1. Firing a gun or other explosive device into the air at about 1 minute intervals.
- 2. Continuous sounding of any fog-signal apparatus.
- 3. Shooting flares or rockets skyward.

- 4. Sending a message by radio-telephone.
- 5. Waving both arms from alongside the body to over the head in an up-and-down motion.
- 6. Waving side to side over the head any orange-red flag or any garment of any size that can be attached to a fishing pole or long rod.
- 7. Tying a 72-inch fluorescent, orange-red cloth inscribed with an 18-inch black circle and an 18-inch black square, 18 inches apart on the major axis of the flag. This type of signal is to be tied to a hatch or cabin top for ready spotting by aircraft.
- 8. SOS by spotlight.

All Coast Guard Stations are constantly on the alert for vessels that might be in distress. If a vessel is seen displaying or showing any unusual signal or acting in an unusual manner, the Coast Guard will always check to determine if help is needed.

When a boat operator arrives at that bor where a Coast Guard Station is located and, after surveying the bar, actions it is too rough to make an attempt to cross into port, it is suggested that the operator contact the Coast Guard station by using VHF channel 16. DAYTIME SIGNAL One REDucennant displayed by day and a RED light over a WHITE light at night to indicate wind as high as 33 knots (38 m.p.h.) and/or set conditions considered dangerous to small out

ons are forecast for the are

50

Small Craft

DAYTIME SIGNAL

NIGHT SIGNAL

Coastal rigation by age. This sy ple m employ angement of colors, shapes buoy should be pa he side bassed when in a given direction. The red right seturning" has long aying of soufaring men to remind that red vs should be on the star-(right) side when traveling from the open sea bays (upstream). Likewise, are on the port (left) side.

Concersely, when proceeding toward the ce (downstream), red buoys are to part left side) and green buoys are to starloard (right side). These buoys — their numbers, colors, and characteristics — are plotted on all nautical charts. (See the inside front cover.)

Buoys should not be considered as immovable objects. They are occasionally missing, adrift, or off the charted position due to heavy storms, unusual tides, or collisions. Also, many buoys are shown on charts but are in position only in the summer. The Coast Guard removes them in the fall because winter storms would move them out of position or carry them away. Off Newport, for example, buoys #2 and #3 are gone in winter. Two RED pennants displayed by day and a WHITE light above a RED light at night to indicate winds within the range 34 to 47 knots (39 to 54 m.p.h.) are forecast for the area.



DAYTIME SIGNAL

NIGHT SIGNAL

A single square RED flag with a BLACK center displayed during daytime and two RED lights at night to indicate that winds 48 knots (55 m.p.h.) and above are forecast for the area. If the winds are associated with a tropical cyclone (hurricane), the "Storm Warning" display indicates winds 48 to 63 knots (55 to 73 m.p.h.) are forecast.

Whistles, bells, and gongs, which are N Bend: attached to some buoys, are activated by the action of the sea, so when the sea is calm, they may sound irregularly.

Buoys are anchored by a scope of chain that allows the buoy to move with the wind and current for a considerable distance. Keep well clear when passing and never moor to them; it is a punishable Federal offense.

To help boat operators navigate within channels, range markers have been erected in many rivers and bays. These consist of widely separated, brightly painted pairs of targets, or markers. Range markers are international orange with a black stripe and rectangular. They are mounted on skeleton towers or on pilings, and may be in the water or onshore. Consult the appropriate navigation chart for locations of range markers. Steering a course that keeps the two range markers in line while operating within a channel marked by buoys will keep the boat within the channel.

For additional aids to navigation, a useful reference is Coast Guard publication Light List, Volume VI, Pacific Coast and Pacific Islands.

Charts for Coastal Waters

Charts of the Pacific Coast are available from the U.S. Department of Commerce's National Ocean Service. Nautical Chart Catalog 2, United States Pacific Coast Including Hawaii, Guam and Samoa Islands, lists all charts produced for West Coast by the National Ocean Se ice. Copies of the catalog are available free from: Distribution Branch, 6501 Lafayette Ave., Riverdale, MD 20737-1199.

Charts and related ations o National Ocean Servi chased in Oreg the National Char



Oregon Pacific Co 1760 Sheridan

> **B** & F Marine Electronics 134 SW Bay Blvd On the Bay-Waterfront Englund Marine Supply Co 424 SW Bay Blvd

Schiewe Marine Supply 103 SE Bay Blvd

Portland

Winchester

Bay:

Newport:

Captain's Nautical Supplies 138 NW 10th Ebb & Flow Kayak Center Inc 0604 SW Nebraska St

Fisherman's Marine Supply 901 N Columbia Blvd

Rodgers Marine Electronics

3445 NE Marine Dr West Marine Products

12055 N Center Ave

Sharmrock Charters Beach Blvd

U.S. Coast Guard Station

Location Tillamook Bay -Garibaldi 3531 Depoe Bay - Depoe H Yaquina Bay port Siuslaw River nce Umpqua Rive Wincheser Ba Coos Cl

nationwide association of boaters. the United States Coast Guard Auxiliary is a nonmilitary organization administered Soart Guard, and its main purpose promotion of safe boating. Auxiliary ers include yachtsmen, commercial nermen, and others experienced in handing small vessels and knowledgeable in mall boat safety.

During boating season auxiliary patrols supplement and assist the regular Coast Guard. Auxiliary vessels are readily identified by a blue and white flag or a large placard bearing the words "U.S. Coast Guard Auxiliary.

These vessels are in constant communication with the regular Coast Guard patrol boats and lookout towers. By hailing these vessels, boat operators may obtain information regarding bar conditions, tides, weather, etc. The regular Coast Guard often relies on auxiliary vessels to assist in the dissemination of weather reports, bar and sea conditions, and other vital reports. When hailed by a

Coast Guard Auxiliary boat, a boater should heave to and heed the information. In the event of trouble, Coast Guard Auxiliary vessels will stand by to give assistance.

Crossing The Bar

The principal objective of recreational boating is pleasure. Boats provide safe, pleasurable regration when operated within their imitations. Stability is a vital factor for boats cruising in coastal waters, and stability can be aided by proper loadimproperly loaded or overloaded ine ft los s its stability, and is very sisce notible to capsizing. Overloading inc pisk of seas breaking abourd. It is extremely important that beat, operating

extremely important that total operating along the coast have a security freeboard. Most boating accidents and fatalities on the coastal bars result from capsizing. A boat is much more upt to capsize when crossing the bar from the ocean. The seas are on the stern and the operator does not have as shuth control of the steerage. have as When looking at the bar from seaward, one cost not see the front of the seas or breakers, consequently, the bar may be mich rougher than it appears.

When there is the least uncertainty bout bar conditions, boaters should take every precaution to avoid trouble. Radio the Coast Guard or raise another boat operator who can tell what the bar condition is. If necessary, circle the sea buoy, but make every effort to avoid difficulty.

If one is unexpectedly caught on a rough bar when running in, it is imperative to keep the boat square before the seas. Keep the boat on the back of a swell. Ride the swell and keep clear of the following wave. Preservation of the boat's stability is most important at this time, and a sudden shift of the passengers' weight in a small boat could prove dangerous. In fact, in a small boat the stability will be vastly improved if the passengers lie down in the bottom of the boat as near the center line as possible. Make sure that everyone aboard is wearing a personal flotation device (PFD) before crossing.

Most boating accidents on the coastal bars are caused by the boat operators allowing seas to catch their boats from the side, a situation called "broaching," which can result in capsizing. To prevent broaching, the operator must keep the boat square before the seas. The illustration above shows a boat broaching.

A large number of logs and deadheads are adrift in the navigable waters of Oregon at all times, particularly after storms, spring freshets, and unusually high tides. Boaters should always be on the lookout for such logs and deadheads.



Tides

Along the coast of the Pacific Northwest there are roughly two tides each day. Tides are the vertical rise and fall of the water, and a tidal current is the horizontal flow.

The movement toward shore or upstream is the flood current, and movement away from shore or downstream is the ebb current. The period between these two is called slack water. Tidal currents may gain tremendous velocity, particularly when the ebb current is reinforced by a river runoff during a high-low series.

Considered one of the greatest risks a boater could encounter is the craft's being caught in a shallow river entrance to the Pacific Ocean, known as a bar, at the time a swift ebb current meets incoming weterly waves. Such conditions essenting the two opposing forces meeting to sole up water and waves break with themendous force. Even on days when the sea is relatively calm, a fast-moving ebb has the potential to create a bur situation that could be too rough far small craft.

Boaters must always be constious of the stage of he ide. Excent or some few days whethere is unusual salm or unless observation shows that the bar is down cross from harbor to cean on the stat or the flood tide, when the sea is calmes.

the flood fide, that advise all boat operators, if they are still inside the bar when heavy sea conditions teast, to remain there. If a boater is trapped outside a rough bar on an ebb tide, it is wise to lay-to and wait until the flood current or inflowing current is the dominant factor. If trapped outside a rough bar with a southwester developing 40-knot or better winds, it becomes a matter of judgment and experience, deciding whether to stay at sea with a sea anchor or risk crossing the bar If possible, run to another port having more favorable bar conditions.

In a number of the river entrances there are shallows called sards spoals, spin, or floats, on which ways build to the point that they become extremely dangerod to small boats. These reas should area, s be avoided.

for uardnal flotatio PFD) danger. M thout a PFD, tim in king or capsizurviving old waters off he Oregon coast atly reduced. If the boat capsizes, persons together in one group, to nd to improve chances or rescu far easier and quicker to scue a group than to find dividuals. Also, in a group, son can help others stay afloat

A second, all-important lifesaving rule is stay with the boat as long as it remains afloat. Most pleasure craft have built-in flotation that will keep them from sinking. Chances of being found and rescued are increased immensely by clinging to the easy-to-spot boat.

There is no substitute so effective as flares for signalling for aid at sea. If the boat is equipped with flares, use them to attract attention. If there is any warning that danger is imminent, before any emergency happens, get all passengers into PFD's and out of the cabin so that they will float free should the boat capsize. When a boat capsizes, anyone inside is thrown into total darkness. Anyone trapped inside the cabin of a capsized boat should remove his or her PFD and try to swim out the cabin door. Cutting a hole through the hull can sink a capsized boat. Unless the hull has built-in flotation, cutting a hole for escape will release any air trapped inside — and the boat will sink. Although this is a critical time, it is absolutely vital to keep calm. Above all, keep from panicking.

Termination of Use on Coastal Bars

Ecderal law designates certain "Regulates Boating Areas" in the following Ore on bars and channel entrances

Solumbia River Nehalem River Tillamook Bay Netarts Bay Siletz Bay Depoe Bay Xaguina Bay

Siuslaw River Umpgur hiver Cors Bay Bar Caquille River Osue River Chetco River

Check who bcal Coast Guard Stations for the pecific termination of use areas. The coalation states: "The use of indi-

Steepalation states: "The use of indivibral eccreational boats can be terminater on the above-named bars or contances when rough seas create a hazrdous condition." The regulation will be enforced by specially trained Coast Guard boarding officers.

Fog

Fog is often encountered in coastal waters and is usually thick enough to hide all landmarks and other aids to navigation. When cruising or fishing along the coast or harbor entrance, make frequent observations of location, so at the first signs of fog, it will be possible to proceed to a sea buoy or, if practical, return to harbor.

A good, properly aligned compass is one of the essential items for a vessel's operation along the coast. A vessel attempting to run in the fog without steering by a compass course would wander aimlessly. When departing and returning to the harbor, the compass course and the time required to run between buoys should be recorded for reference. One must remember that the area surrounding the compass should be clear of iron or other ferrous metal objects at all times, as they will cause compass errors.

In addition to the tidal currents, there are currents that run along the beaches north and south. These are sometimes



referred to as the "southerly set" or "northerly set." Careful operations are necessary to assure that these currents do not carry the boat off course or further from the harbor entrance than would normally be expected.

Boat operation during fog requires the boater to proceed at a slow speed and to keep a sharp lookout; stop occasionally and listen for other vessels, buoys, and the surf. If an operator is lost or is unsure of his or her whereabouts, it would be wise to anchor and wait for the fog to lift or help to arrive.

An inexpensive radar reflector or a metal object placed above the cabin on a light standard, or fixed as high as possible, will assist the Coast Guard in radar search — and help keep a boat from being run down!

As a reminder, International-Inland Navigational Rules require power boats operating under adverse conditions of reduced visibility to sound their whistles or horns: one prolonged blast of 4 to 6 seconds' duration at intervals of not more than 2 minutes. A ship at anchor must ring its bell rapidly for 5 seconds every minute. (Check the International-Inland Rules.)

Dangers Near Large Vessels

Large commercial ships frequently enter and leave the Columbia River, Yaquina Bay, and Coos Bay; and oceangoing tugs and barges make use of a number of the smaller ports. The size of these ships prevents their quick and easy maneuverability. Because of their deep draft, **they must stay** within the dredged ship channel.

Accordingly, within narrow channels the Navigation Rules give deep-drafts have the right of way in all circumstances. When underway, such huge ships chands stop readily, because of their toonase. Their momentum through the wite will carry them forward for a great distance desorte engines being stopped or reversed. Common sense, courtest, and the flow (the Rules of the Boad) require that moleoaters let these bases have a wide berth. A good rule of themb is to stay a least of ship length (500-600 feet) away from the ship's blow and at lease 100 feet from the ship side as it passes.

Boaters must realize there is a bind spot in the pilet's ine of view from the bridge to the nip's bow. If a stip is bearing down on a smaller craftethe prudent boat operator will alter course promptly in order that the pilet will know his or her intentions. Remember: once the large vessel is on the bar or within the bay or river, it will have to remain in the confines of the channel or run aground.

Boaters should remember that if they are drifting off a harbor entrance and a

large freighter or tanker is coming toward them, they should get underway immediately and clear the channel. In many shipsmall boat collisions, it was found that the smaller craft's engine was slow to start, resulting in a disaster that could have been avoided.

From May through October, U.S. Army Corps of Engineers and contractor dredges are present in coastal harbor channels. Some dredges are held by anchor lines marked by buoys. Avoid both the lines and the dredge itself. Other dredges constantly maneuver. Do not pass in front of or cut in close to them. They cannot stop or turn easily.

Required Safety Equipment

Both Federal and Oregon law require that you have certain safety equipment aboard your boat at all times. For Oregon requirements, see the **Oregon Botters Handbook**, latest edition, available hom the Oregon State Marine Board.

Federal regulations are contained in Federal Requirements for Revisional Boats, available from your local Coast Guard Station.

Boats operating on constal waters runt be equipped with visual distress signal. The rules governing visual distress signals vary according to the size of your best and its type of propulsion. For runther information ask for a copy of Visual Distress Signals for Decreational Beaters at your local Coast Guard Station.

Recommended Safev

In addition to equipment required by law, the pudent boater will carry the following entra gear:

. Anchor with suitable line for anchoring.

- Survival sits for all crew members.
- . Retrochective tape on life jackets, very ring buoys, rafts and survival saits.

Emergency Position Indication Radio Beacon (EPIRB).

- 5. VHF radio.
 - 6. Flashlight with extra batteries.
 - 7. First aid kit.
 - 8. Local navigation charts by the National Ocean Survey.
 - 9. Emergency rations and drinking water.
 - 10. Reliable and accurate compass.
 - 11. Spare engine parts and tools.
 - 12. Bucket for bailing.

Any new line $\frac{1}{2}$ -inch in diameter will hold most small boats except in severe storms — provided there is a short length of chain ahead of the anchor. The length of the anchor line should be from 5 to 7 times the depth of the water in which the boat will be anchored. Ten to 12 feet of chain should be shackled to the anchor and fastened with a swivel to the anchor line. The long length of rope and the weight of the length of chain permit the anchor to lie flat on the bottom and the flukes to dig into the bottom to hold the boat. In severe storms, do not rely on any anchor and line to hold.

Another good pactice of careful boaters is to equip deir traft with a sturdy solid towing bitt located near the bow. Fastenings fur the towing bitt should go through a mutal plate attached to the inside of the hall to prevent the bitt from pulling out, on the event the craft is taken under tow during an emergency. Smill box rings, standard on many modern trailer boats, are not strong group for toving at sea. They frequently in the under stress, with disastrous results.



Each bar, any or river entrance on the Oregon coast presents its own set of challenges. The following pages present information on these waters that every boater should know before operating here. The orcerptions are illustrated with aerial tows of the channel entrances and annovated charts. Danger areas are represented on the charts by shading. In addition to buoys, aids to navigation in many of these channels include pairs of range markers. Steering a course to keep pairs of range markers in line will keep the boat within the channel.

Suggestions for Further Reading

- Chapman, Charles F., *Piloting, Seamanship and Small Boat Handling*, latest edition (New York: Hearst Books, Motor Boating and Sailing Division).
- Crawford, William P., Mariner's Notebook: A Guide to Boating Fundamentals, latest edition (San Francisco: Miller Freeman Publications, Book Division).
- Oregon Boating Facilities Guide, latest edition (Salem, OR: Oregon State Marine Board).
- Nautical Chart Catalog 2: United States Pacific Coast Including Hawaii, Guam and Samoa Islands, latest edition (Riverdale, MD: U.S Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey). Free from NOS and NOS agents; see page 8.

- Oregon Boating Basics, correspondence course, latest edition (Salem, OR: Oregon State Marine Board).
- Oregon Boaters Handbook, latest edition (Salem, OR: Oregon State Marine Board).
- U.S Coast Pilot 7: California, Oregon, Washington, and Hawaii, latest edition (Washington D.C.: U.S Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey). For sale by NOS and NOS agents: see page 8.





Columbia River

B. Clatsop Spit is an unpredictible area of the rive entrance. During flood currents and slacks it may be relatively calm, withouly a getile well breaking far in on the spit. Let or 10 minutes later, when the current has started to ebb, it can be one extremely treacherous, with breakers extending far out toward the channel. Boaters should remain north of the red buoys in this area, particularly just before or during the ebb.

Danger Areas

re buil

A. Chinook Spur, Upper,

two rows of staggered

flowing through

velocity of

becomes

such

Middle Sand Island

sable

Breakers extend out past buoy #8. On a flood tide, you can be carried into Clatsop Spit. Be prepared to anchor.

section broken d. The broken secclose to the surface. atively close and your the flood or ebb current will engina vou across the submerged jetty. take should use extra caution in the m the visible tip of the jetty to buby #2SJ, which marks the western end of the submerged portion of the south jetty. On the flood, a dangerous rip can occur over the sunken jetty. Do not cross the submerged jetty.

edulcatalo

- C. Jetty A, which is southeast of Cape Disappointment, presents a particular danger when the current is ebbing. Water flowing out of the river is deflected by the jetty, and frequently the current reaches 8 knots. This often causes waves up to 8 feet high. Boats proceeding into Baker Bay west channel make very little speed against the swift current and are exposed to the rough water (or surf on rough days) for long periods of time. The shallow, sandy area should be avoided by small craft when heavy seas are running because of the surf that breaks on the beach. Look for the entrance marked by day marks 1 and 2 with green and red lights respectively.
- D. Peacock Spit. Waves in Peacock Spit break from three different directions. If you lose power on the bar during an ebb current, your vessel will be carried into Peacock Spit and is in danger of capsizing. Breakers may be heavy in any type of current. Sports craft leaving the river should never be on the north side of the green buoys. When rounding Peacock Spit, even on a calm summer day, one should give the breakers at least a halfmile clearance. Many times on these same summer days "sneakers," 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.
- E. Middle Ground. This is a shallower area between the north jetty and the main ship channel that is subject to breaking seas when swells as small as 4 feet are present. Breakers are much wider and have more velocity than in other areas. Conditions can change in minutes with tide current changes.

Bar Condition Reports

KAST (1370) kHz): 5 minutes and 30 minutes after the hour, seven days a week.

Weather Conditions KPD485 (1610 kHz).





Nehalem River

left when inbound.

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

Entrance

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 range markers, therefore, do not necessarily show the exact channel and are also obstructed by trees.

Bar Condition Reports

KTIL (1590 kHz): twice daily and when conditions change. During the summer, the Coast Guard will broadcast bar conditions on VHF channels 16 and 22 only when a Coast Guard boat is patrolling the area.



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PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, JULY 1984

Tillamook Bay

A. Bay area. The entre area betweet the brach and the 20 foot curve is barrarea and breaks on the ebbing first. The water runs on from 4 to 6 knows on the averge and s very strong. Boats proceeding out should stop in the channel east of the seaward end of the breakwater and carefully evaluate the bar. If a decision is made to cross, proceed out — but do not attempt to turn around if the bar is breaking.

B. North jetty. About 100 yards of the outer end of the north jetty is submerged. This area and the portion of the channel just south of it are extremely dangerous. Buoy "1A" is

stationed approximately 150 yards west of the tip of the north jetty to warn mariners to stay clear of the submerged section until it can be repaired. Buoy "1A" is seasonal from May to Oct. Avoid the sunken jetty and use caution in the channel south of it.

C. Middle grounds. Has 6 to 8 foot rolling swell on ebb and flood tides that will break. Shoaling makes this area unpredictable.

Channel

Tillamook Bay channel lies just south of the north jetty. Navigate with extreme caution. This channel changes constantly because of continual natural silting and scouring. Obtain up-to-date information on channel conditions from the Coast Guard or other authoritative local sources. Do not rely on the range markers without first inquiring whether they mark the present channel location.

Rough Bar Advisory Sign

Positioned on Coast Guard boathouse.

Bar Condition Reports

KTIL (1590 kHz): twice daily and when conditions change. Call Coast Guard (322-3531) for weather and bar conditions. Coast Guard will broadcast bar conditions on VHF channels 16 and 22.





few boats cross the bar, and they cross only when the most favorable conditions exist. the ebb tide when near the bar, as the strong current can pull a small boat out over the bar and into the surf.







SALMON RIVER Dangerous—not suitable for bar crossings.



DATE

Hornessension. Hornes mer months.







Do not attempt to cross the bar at any time. The entrance is unimproved and not intended for navigation.

The majority of the boat traffic is concentrated on the river or in the bay channels at Siletz Bay. Since there are no

jetties at the bay's entrance, and because of the shallow channel, there is usually surf. On the strong ebb tide, the current reaches 5 to 7 knots at the entrance, which is force enough to pull an underpowered boat or a vessel having engine failure out over the bar into the surf.



PHOTO COURTESY U.S. AR

Dange

- A. North l the er time all time
- ef. Better B. South R as Flat Rock, this area lies in uth of the channel. Breaker almost always Boats coming from present in this are the south should never use this area as a shortcut to the channel. This area should be avoided by boats at all times.
- C. Channel from red bell buoy in. The passage into and out of Depoe Bay is

epoe Bay

FENGINEERE SUMMER 1986 UCUSHAI CONST G Hefore a lly short and difficult. The Guard recommends studying it ore 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 the red bell buoy.

Entrance

The entrance should not be attempted at night or in rough weather without local knowledge. Boats over 50 feet should not

enter the bay without checking with the harbormaster and the Coast Guard.

All vessels are required to sound one prolonged blast (4-6 seconds) when departing or entering Depoe Bay. Local protocol gives the right-of-way to any inbound vessel.

Rough Bar Warning Light

Positioned 25 feet above water, on building on north side of entrance channel, displaying two flashing yellow lights. When light is flashing, check with Depoe Bay Coast Guard on VHF channel 16 for crossing restrictions.

Bar Conditions Report

Recorded weather and bar condition reports: (541) 765-2122



PHOTO COURTESY U.S. ARMY CORPS CEENGINEER S SUMMER 1986. Yaqu Ormer Areas

Yaquina Bay

- A. South lefty. There are submerged reckralong the length of the jetty; a not hug the jetty on ether side Boyers should remain in the channel mering and leaving the river so that if their engine should rail, they will have time to ancho before the current or wind sweeps them onto the rocks.
- **B.** North jetty. This is at otherds excellent protection from northerly winds. However, the same caution should be exercised in running close to it as with the south jetty. Be especially cautious of submerged rocks near the old tip of the north jetty. On an ebb tide stay well clear, up to the end of the north jetty,
- as there is danger of being swept into the breakers at the extreme end. Remain in the channel outbound until buoy #3 has been passed, at the south end of Yaquina Reef. This applies to entering the river as well as leaving.
- C. South reef. This reef can be considered an extension of Yaquina Reef and is equally dangerous because of the same surf conditions that one encounters on Yaquina Reef. When going south, continue out the channel to the lighted bell buoy #1 before turning south.
- **D. Yaquina Reef.** This reef is 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 between the end of the north jetty and buoy #3.

Rough Bar Advisory Sign

Positioned on shore, east end of Coast Guard pier.

Bar Condition Reports

KNPT (1340 kHz): summer, three times daily and at Coast Guard request; winter, twice daily and at Coast Guard request. Recorded weather and bar conditions reports: (541) 265-5541. When the Coast Guard restricts the bar, the restriction applies to the area from the bridge west to the whistler buoy.



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PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, 19

Danger Areas

- A. Shoal water, no theast side of channel, has a depth of 2¹/₂ to 3 feet of water at high tide, which extends from C"7" to G¹/₂.
- B. Short vater, south site of channel, extends from Buoy #4 to Buoy #4 and approximately 50 yards out toward the south jetty tipe.
- C. Outer end of south jetty preakers are almost always present in this area. When the seas are transfersouthwest or west, breaker may extend to the entrance buoy.
- 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 all the way to the entrance buoy.

Siusla River

Siuslay River channel lies along the northern han of the river entrance. Water depter ranges from 6 to 20 feet. When swells are running from the northwest, botters should stay in the channel. When the swells run from the west or southwest, stay closer to the south jetty until clear of rough water.

When conditions are questionable, contact the Coast Guard station for advice on VHF channels 16 or 22A, or CB channel 9. Once inside the bar, head for the channel. Ranges mark the preferred depth channel, but depending on conditions they do not mark the best route to follow.

Bar

The Siuslaw River bar has a very narrow channel extending out past the jetties. Unlike 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 50-100 yards off the jetty tips.

Bridge

Clearance beneath the Siuslaw River bridge is low. Use caution when crossing under the bridge on the flood tide to avoid damaging superstructure such as antennas and troll poles.

Rough Bar Advisory Sign

Positioned on the Coast Guard tower, facing 150° True.

Weather and Bar Condition Reports

Call Coast Guard Station, (541) 997-8303, for recorded weather and bar conditions.





FENGINEERS, T PHOTO COURTESY U.S.

Dang

A. Middle (ound and North North proces brea the gets rc north very dangerous because l kers may come into this area fr m the Middle Ground. The Non Spit meets the Middle Ground the outer end of the training jetty. The Middle Ground area extends from the north jetty about 1000 yards seaward. This area is dangerous because a little swell can create large breakers which may capsize a vessel. mpqua River

s should not linger near the uth of the river during ebb tide, for f 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 extreme choppy conditions.
- D. Buoy 6A, old Coast Guard docks. Current on ebb or flood will often set boats into this area.

Range Markers

The range marker consists of a red rectangular shape with a black vertical stripe mounted on a skeleton tower. By steering a course that keeps the two range markers in line, boaters will remain within the channel. In hazardous conditions, boaters should stay close to the training jetty rather than on the range line until well clear of the surf zone.

Rough Bar Advisory Sign Positioned on shore.

Bar Condition Reports

KDUN (1470 kHz): summer, daily on the daylight hours. Recorded weather and bar condition reports are available by calling (541) 271-4244.

Note: Breaking waves can be encountered on the Umpqua River bar at any time.





PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, SUMMER 1986.

Danger Areas

- A. Sand Spit, South Slough. As you the Charleston Boat Basin, the Slough Sand Spit is on your extends north, parallel to the c from South Slough by imately 450 yards toward light #2. Presently marks the north Do not cross
- . Proceeding out B. Submerged j ston boat Basin the Chai el, when Slough 7 III e only at lo water. rting
- the C ay to the left
- pit, North This area is C. Sand ac dangerous becau oal waters and submerged ie ccasionally, on a will be breakers in strong ebb, this area. Avoid this area because of the possibility of going aground or striking submerged jetties and pilings. Note,

und and oi ound tugs ws, freighters pass close this area and annot stop for channel — includsuctions small ves

- South jerry Guano Rock Area. This is angerous area because of at extend out from the south to the entrance channel. Breaks frequently experienced from Juano Rock Lighted Whistle Buoy #4 extending out to a little past the end of the south jetty. Exercise care in this area at all times, especially on ebb tides.
- E. North jetty, submerged. The north jetty was extended approximately 200 yards to the west. The outward end of the jetty is submerged from the visible end of the jetty out toward 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 buoy #3 before turning to the north.

F. Area north of 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. Many boats do transit this area on occasion, but there is a strong recommendation that you never cross it.

Rough Bar Advisory Sign

Positioned 8 feet above the water on jetty just north of the Charleston Boat Basin. This is a two-part sign, facing (1) toward the Charleston Boat Basin and (2) toward South Slough light #2.

Bar Condition Reports

The Charleston Coast Guard Station records weather and bar conditions; you can obtain this information by phoning 888-3102 or 888-3267. KBBR (1340 kHz) broadcasts reports once each hour during summer months. The Charleston Coast Guard Station also posts current weather advisories. Weather and wind warning flags are displayed at the Charleston Port office during daylight hours.



IMY CORPS OF INGINEERS SUMMER 1986. Coquille River PHOTO COURTESY U.S. ARM

reat at onto d of the ietty is a forc the rs should dan ng northwest remain clear. The wind could set a ss boat onto the jetty.

B. North jetty. Sta clear of the end of this jetty, as 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. The large swells that occur in this sea 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; also, the sea currents run to the south. These two conditions may cause a powerless boat in this area to drift onto these rocks.

Range Markers

Front and rear range markers are identical: a rectangular red daymark with a white stripe on a skeleton tower. By steering a course that keeps the two range markers in line, you will remain within the channel. See the latest CG-162, Light List.

Rough Bar Advisory Sign

Positioned on wharf on south jetty, just north of the Coast Guard Station, summer only.

Bar Condition Reports

Call the Coos Bay Coast Guard Station (888-3266).







PHOTO COURTESY U.S. ARMY CORPS OF

A. Sho south the Rog shing ins the ng selves set em northwest down in the wind channel and is n ored, the northwest wind a de will set it into this dangerou a in a matter of a few minutes.

B. Outer end, north jetty. Breakers are almost always present in this area because of shoal water. When the sea is

ning from the west or southwest, it particularly dangerous.

Outer end, south jetty. Breakers are almost always present in this area. Even when it appears to be 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.

Channel

Rogue River channel lies along the north jetty. Under existing conditions a channel 13 feet deep and 300 feet wide, extending from the ocean to the inner end of the north jetty, is provided. Boaters are urged to use and stay within this channel. The river entrance is subject to frequent shoaling and depth changes. Do not rely on charted depths.

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 area, and these boats tend to crowd each other. Because trolling is the method of fishing most frequently used, lines are sometimes accidentally caught in boat propellers. Should this happen, the disabled boat should immediately anchor or call for aid. A northwest wind or ebb tide could set a boat into a dangerous area in a matter of minutes.



PHOTO COURTESY U.S.

S. ARM CORPSOF ENGINEERS SUMMER 1946. Danges Areas Frank area. This urea is alle of manyrooks ar in tide the necks and the area ut as a ing. by water, and navigable but voided at all times. This area is

B. Jetty and shoal areas. These areas are extememly dangerous at all times

Chetco River

because of submerged rocks and breakers. Two rocks in this area may be seen at low tide. Avoid this area at all

Range Markers

The range marker consists of a red rectangular shape with a black vertical stripe mounted on a skeleton tower. By steering a course that keeps the two range markers in line, you will remain within the channel.

Rough Bar Advisory Sign

Position on Coast Guard fuel dock: faces NNW.

Bar Condition Reports

KURY (910 kHz): summer, every daylight hour.







Oregon's coast abounds with seabirds and marine mammals. In fact, over 1.1 million seabirds of thirteen species...more than Washington and California combined...breed on Oregon's coastal rocks and islands. The threatened Steller sea lion and three other marine mammal species call these coastal rocks home. Many others migrate along the Oregon coast. Nearly all rocks along the Oregon coast are within the National Wildlife Refuge system. Many provide

crucial habitat. All are important to wild fe



Boats Can Interfere With Marine Wildlife

Boats around refuge rocks can disturb wildlife almost any time of the year. Animals are especially wary April through September, the all important nesting and rearing season.

Seabirds often nest in dense colonies on the surface of the rock or in crevices. When frightened by a boat's close approach, noise or speed, hirds nee the nest in panic; eggs or chicks are knocked over the side or left exposed to predatory gulls and crows. Stampeoing seation adults can trample and kill small pups.

Even anchored quietly near the base of a rock during certain critical times, your boat may discourage abults from returning with ford or inhibit wong birds from leaving the rock and heading to sea to be on their own.

Your boat can cause seemingly minor disturbances: But when combined with many others, small disruptions can add up to discourage nesting or breeding for the year. Birds of mammals may abandon the rock altogenes.

Remember, you and your boat are visitors. *Please be a courteous guest.*

Please, Follow These Guidelines Around Coasta Rocks

• Stav back! As a general rule approach no more than 500 feet. It sells or sea form are present, stay back 1000 feet. Tou won't know you are too close until it's top late and an mais flee!

• Approach and depart cautiously. This minimizes noise and movement. This gives both you and the animals time to acjust.

• Avoid sudden movement and loud noises when operating near birds or mammals. Remember, these are vuldanimals.

conditions change! Don't assume that a safe stance one day will be the same the next, even at the ame site. Be cautious every time out.

• Observe! Once you feel you have anchored a safe distance away, take a few moments to watch the birds and mammals through your binoculars. If they bob and weave their heads, make alarm sounds or move off the rocks, pick up and move back.

• Be Aware! State and federal laws prohibit harassing marine mammals, seabirds and threatened or endangered species. These guidelines will aid you when navigating around coastal rocks.



• For information on Coastal National Wildlife Refuges, call the US Fish and Wildlife Service at 1-(541) 867-4550



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