

See page 15 for an expanded legend.

Boating in Oregon Coastal Waters

Oregon Sea Grant

and

Oregon State Marine Board

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Credits

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Oregon

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April 1999

Dear Coastal Boater,

Oregon's coast is a beautiful but sometimes hazardous place to boat. *Boating in Oregon Coastal Waters* 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 change 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 and charts of each bar entrance as well as local hazard information. It also provides general information on boat operations. We recommend that as part of your preparation, you check in with the U.S. Coast Guard for advice and updates about current local conditions.

Consider *Boating in Oregon Coastal 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 urge you to take a boating course offered by the U.S. Coast Guard Auxiliary or the U.S. Power Squadron. You can also contact the Marine Board for information about the correspondence course *Oregon Boating Basics*. You can reach the board by mail, P.O. Box 14145, Salem, OR 97309-5065; by phone, (503) 378-8587 (for TTD, press space, then extension 222); or by e-mail, <marine.board@state.or.us>.

Information on classes, regulations, and publications is available at the Marine Board Web page www.osmb.state.or.us. There is also a boating safety course on the Internet at www.boatus.com>.

Safe and happy boating on Oregon's coast!

Oregon State Marine Board Rick Wren, Bend, Chairperson Court Boice, Gold Beach Tom O'Connor, Lake Oswego Nancy Hungerford, Oregon City Jim Whitty, Coos Bay

GOING SOMEWHERE?

Leave a float plan with a friend or relative. If you make changes in it, let that person know before you go. Should disaster strike, a few minutes could mean a lifetime of difference. Here's a sample plan:

Name of boat operator	<u> </u>			
	r Business phone number			
Roat type	(Color of bull		
			Other	
			Normal fuel (gallons)	
Liigine. Type	11013cp0	WC1	rvormai ruci (ganons)	
Number of persons abo	oard (including o	perator)		
Name	Age	Address/I	Phone Number	
Survival Equipment:				
lifejackets (number	r)	_ flares	mirror	
flashlight	food	paddl	es	
water	cushions			
Radio	Frequencies			
Itinerary:				
Depart	from_	on	1	_ (time, date)
Going to		or		
Expect to return by	у		(time, date)	
and in no evo	ent later than			
Other information				
Auto license number_		Trailer	license number	
•			call the Coast Guard	l or
local authori	ty at			

- Upon your return, notify the person to whom the float plan was given.
- If you were reported to the Coast Guard as overdue, notify them of your arrival.

This form is available from the State Marine Board.

What's Inside

Contents

Buoy markings	inside front cover
Going somewhere? (float plan)	4
HEADING OUT	6
Aids to navigation	6
Charts for coastal waters	6
U.S. Coast Guard Auxiliary patrols	7
Hazards	7
Crossing the bar	7
Tides	8
Fog	9
Dangers near large vessels	9
WEATHER AND BAR CONDITIONS	10
Storm signals	10
Storm warning display stations	10
Commercial broadcast stations	10
Rough bar advisory signs	10
Termination of use on coastal bars	10
U.S. COAST GUARD STATIONS	11
Marine emergency and distress radio proce	edures11
Signaling for assistance	12
Required safety equipment	12
Recommended safety equipment	12
Suggested reading	13

RESTORING OREGON'S SALMON AND STEELHEAD.. 46-7

Coastal Bars, Bays, & Rivers

Coastal bars, bays, and rivers	14
Columbia River	15–17
Nehalem River	18
Tillamook Bay	20
Netarts Bay	22
Cape Kiwanda	23
Necanicum River	24
Salmon River	24
Nestucca Bay	25
Siletz Bay	26
Alsea Bay	
Depoe Bay	
Yaquina Bay	
Siuslaw River	
Umpqua River	34
Coos Bay	36
Coquille River	
Rogue River	
Chetco River	
Port Orford	
Winchuck River	45



Heading Out

Aids to navigation

Oregon coastal waters are marked for safe navigation by the IALA* system of buoyage. This system employs a simple arrangement of colors, shapes, numbers, and light characteristics to indicate on which side of a buoy a boater should pass when proceeding in a given direction. The expression "red right returning" has long been a saying of seafarers to remind them that red buoys should be on the starboard (right) side when traveling from the open sea upstream into bays. Likewise, green buoys are on the port (left) side when traveling back to port.

Conversely, when proceeding toward the sea (downstream), red buoys are to port (left side) and green buoys are to starboard (right side). These buoys—their numbers, colors, and characteristics—are plotted on all nautical charts.

Buoys should not be considered permanent fixtures. They may be missing, adrift, or moved from their charted position by heavy storms, unusual tides, or collisions. Some buoys shown on charts are in position only during the summer; the Coast Guard removes them each fall to prevent winter storms from carrying them away. Off Newport, for example, buoys #2 and #3 are gone in winter.

Whistles, bells, and gongs, which are attached to some buoys, are

activated by the movement of the sea; when the sea is calm, they may sound irregularly.

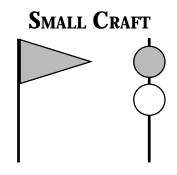
Buoys are anchored by a scope of chain that allows the buoy considerable leeway to move with the wind and current. Keep well clear when passing and never moor to a buoy—it is a punishable federal offense.

To help boaters 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 rectangle. They are mounted on skeleton towers or on pilings and may be in the water or on shore. Consult the appropriate navigation chart for locations of range markers. Steering a course that keeps the two range markers in line while operating in a channel marked by buoys will keep the boat within the navigable channel.

A useful reference on navigation aids is the Coast Guard publication, *Light List*, volume VI, Pacific Coast and Pacific Islands.

Charts for coastal waters

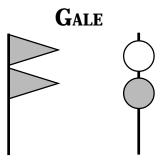
Charts of the Pacific coast are available from the U.S. Department of Commerce's National Ocean Service, which has also begun putting the most up-to-date versions of its charts on-line via its World Wide Web site at http://mapindex.nos.noaa.gov/>..



Daytime Signal

Night Signal

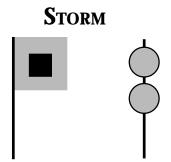
One RED pennant is displayed by day and a RED light over a WHITE light at night to indicate winds as high as 33 knots (38 m.p.h.) or sea conditions considered dangerous to small craft operations are forecast for the area.



Daytime Signal

Night Signal

Two RED pennants are displayed by day and a WHITE light above a RED light at night to indicate that 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 RED flag with a BLACK center is displayed during daytime, and two RED lights at night are displayed 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 that winds 48 to 63 knots (55 to 73 m.p.h.) are forecast.

^{*} International Association of Marine Aids to Navigation of Lighthouse Authorities

The on-line charts are not suitable for navigation but are useful for planning and other purposes.

A catalog of available charts— Nautical Chart Catalog 2, United States Pacific Coast Including Hawaii, Guam and Samoa Islands lists all charts produced for the West Coast by the National Ocean Service and is available free from Distribution Branch, (N/CG33) National Ocean Service, 6501 Lafayette Avenue, Riverdale, MD 20737-1199.

Individual charts—in print or on CD-ROM, in formats suitable for use in computer-based navigation systems and geographic information systems (GIS)—may also be purchased from the address above.

In Oregon, charts may be purchased from authorized National Chart Agents*:

Astoria: Englund Marine Supply Co Inc

Foot of 15th St

Aurora: Mentor Plus

22781 Airport Rd NE

Brookings: Chetco Chandlery Ltd

16118 Lower Harbor Rd

Lorings Lighthouse Sport Goods

554 Chetco Ave

Coos Bay: Charleston Basin Tackle Shop

4565 Kingfisher Rd

Englund Marine Supply Co Inc

5080 Cape Arago Hwy

Eugene: Libra Books Inc

856 Olive St

Wright Communications

2824 Stark St

Florence: Siuslaw Marina

06516 Hwy 126

N Bend: Oregon Pacific Company

1760 Sheridan

Newport: Englund Marine Supply Co Inc

880 SE Bay Blvd

Schiewe Marine Supply

103 SE Bay Blvd

Portland: Alder Creek Kayak Supply Inc 250 NE Tomahawk Island Dr

Boater's World Jantzen Beach Ctr Captain's Nautical Supply Inc

138 NW 10th Ave

Fisherman's Marine & Outdoor

1120 N Hayden Meadow Dr

Rodgers Marine Electronics 3445 NE Marine Dr

West Marine Products

021 1176 N Hayden Meadows

Salem: Travel Exchange

145 Liberty St NE

Silverton: The Compass Rose

209 Lewis St

Winchester Bay: Stockade Market

Beach Blvd

U.S. Coast Guard Auxiliary patrols

A nationwide association of boaters, the United States Coast Guard Auxiliary is a nonmilitary organization whose main purpose is the promotion of safe boating. Auxiliary members include yachtsmen, commercial fishermen, and others experienced in handling small vessels and knowledgeable in small boat safety.

During boating season, auxiliary patrols supplement and assist the 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 stay in constant communication with the regular Coast Guard patrol boats and lookout towers. Boaters may hail these vessels for information about bar conditions, tides, weather, and so forth. The regular Coast Guard often relies on auxiliary vessels to help disseminate weather reports, bar and sea conditions, and other vital information. When hailed by a Coast Guard Auxiliary boat, you

*Authorized dealers as of December 1998. A current list is available on the National Ocean Service Web site:

http://chartmaker.ncd.noaa.gov/ocs/text/states.html

should heave to and heed the information. In the event of trouble, auxiliary vessels stand by to give assistance.

HAZARDS

Crossing the bar

Most boating accidents and fatalities on the coastal bars result from capsizing. A boat is much more apt to capsize when crossing the bar from the ocean because the seas are on the stern and the operator has less control of the steerage. When looking at the bar from seaward, you don't see the front of the seas or breakers; consequently, the bar may appear much calmer than it really is.

Boaters should take every precaution when uncertain about bar conditions. Radio the Coast Guard or call another boat operator who can tell what the bar condition is. If necessary, circle the sea buoy, **but make every effort to avoid danger.**

Stability, a vital factor for boats cruising in coastal waters, can be aided by proper loading. An improperly loaded or overloaded craft is susceptible to capsizing. Overloading increases the risk of seas breaking aboard. It is extremely important that boats operating along the coast have adequate freeboard.

If you are caught unexpectedly 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. Preserving your boat's stability is most important—a sudden shift of the passengers' weight in a small boat could prove dangerous. In fact,

stability will be vastly improved in a small boat if passengers lie down in the bottom of the boat as near the center line as possible. Make sure everyone aboard is wearing a personal flotation device before crossing.

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

The coastal waters of Oregon always carry a large number of drifting logs and deadheads, especially after storms, spring freshets, and unusually high tides. Boaters should always be on the lookout for logs, deadheads, and other floating debris.

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.

One of the greatest risks a boater can encounter is getting caught in a shallow river entrance to the Pacific—the bar—when a swift ebb current is meeting incoming westerly waves. Such conditions result in the two opposing forces

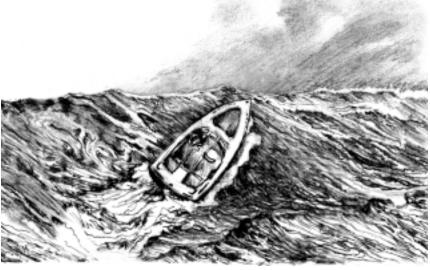


This boat is showing the correct way to maneuver into a wave.

meeting to pile up water and waves that break with tremendous force. Even on days when the sea is relatively calm, a fast-moving ebb has the potential to create a bar situation that could be too rough for small craft.

Boaters must always be conscious of the stage of the tide. Except on the rare occasion when the tide is unusually calm, or when you observe that the bar is down, cross from harbor to ocean on the slack or on the flood tide, when the sea is calmest.

If you find yourself inside the bar when heavy sea conditions exist, stay there. If you are 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 dominant. If you are trapped outside a rough bar with a southwester developing 40-knot or better



Ilustration by Sue Crawford

This boat is about to broach.

winds, whether to stay at sea with a sea anchor or risk crossing the bar becomes a matter of judgment and experience. If possible, run to another port with more favorable bar conditions.

Many river entrances contain sands, shoals, spits, or floats, on which waves build to the point where they become extremely dangerous to small boats. These areas should always be avoided.

Fog

Fog is often encountered in coastal water and may be 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 your location, so that at the first sign of fog you can proceed to a sea buoy or, if practical, return to harbor.

A good, properly calibrated compass is essential for operating a vessel along the coast. A vessel attempting to run in the fog without steering a compass course could wander aimlessly. When leaving and returning to the harbor, you should record the compass course and the time required to run between buoys for reference. Remember to keep the area around the compass clear of iron or other ferrous metal objects, since they can cause compass errors.

In addition to tidal currents, there are currents that run north and south along the beaches, sometimes referred to as the "southerly set" and the "northerly set." Careful operations are necessary in foggy weather to insure that these currents do not carry your boat off course or farther from the

harbor entrance than normally would be expected.

Operating a boat in fog requires that you proceed at a slow speed and keep a sharp lookout; stop occasionally and listen for other vessels, buoys, and the surf. If you become lost or unsure of your whereabouts, it is wise to anchor and wait for the fog to lift or help to arrive.

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

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 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 Navigational Rules for more information).

Dangers near large vessels

Large commercial ships frequently enter and leave the Columbia River, Yaquina Bay, and Coos Bay; ocean-going tugs make use of many smaller ports. The size of those ships makes them less maneuverable than smaller boats. Because of their deep drafts, they are required to stay within the dredged ship channel.

Accordingly, the Navigational Rules give deep-draft ships the right of way within narrow channels in all circumstances. When underway, such huge ships cannot stop readily because of their weight. Their momentum through the water will carry them forward for a great distance even after they have stopped or reversed engines. Common sense, courtesy, and the law (the rules of the road) require that small boaters give these vessels a wide berth. A good rule of thumb is to stay at least one ship length (500–600 feet) away from the ship's bow, and at least 100 feet from the ship's side as it passes.

Boaters must realize that ship pilots have a blind spot in their line of view from the bridge to the ship's bow. If a ship is bearing down on a smaller craft, the prudent boat operator will alter course promptly so the pilot will know his or her intentions. Remember: once the large vessel is on the bar or within the bay, it must remain in the channel or run aground.

If you are drifting off a harbor entrance and see a large freighter or tanker coming toward you, get underway immediately and clear the channel. In many ship-small boat collisions, it is later found that the smaller craft's engine was slow to start, resulting in a disaster that could have been avoided.

From May through October, the 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 them or cut in close to them. They cannot stop or turn easily.

WEATHER AND BAR CONDITIONS

Storm signals

Storm signals are displayed at U.S. Coast Guard stations, marinas, public piers, and other locations along the Oregon coast. These warning signals predict 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 represent forecasts; the wind may be calm when the signal is hoisted. It's also important to realize that the wind might be blowing or that the seas are rough enough to make boating dangerous even when no warnings are up and skies overhead are blue.

Safe boaters make it an unbreakable rule to stay ashore 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—the phrase "small craft" includes boats of many sizes and designs. The Coast Guard can and will tow in boaters who refuse to heed their warnings.

Storm warnings cover a wide range of wind speeds and sea conditions. Mariners should regard storm warnings as signals that wind and sea conditions may be dangerous, or as a forecast of potentially dangerous conditions. More detailed information may be obtained by telephone or by listening to local radio stations,

Coast Guard radio, or the National Weather Service VHF/FM broadcasts. The Weather Service broadcasts on frequencies of 162.4 and 162.550 MHz with transmitters at Astoria, Newport, Coos Bay, and Brookings.

Storm warning display stations

(USCG day stations)

Washington Stations

Cape Disappointment

Oregon Stations

Tillamook Bay harbormaster Depoe Bay Yaquina Bay Siuslaw River Umpqua River (Winchester Bay)

Coos Bay Chetco River

Commercial broadcast stations

The following coastal stations broadcast storm warnings and sea condition reports:

- KTIL, Tillamook 104.1 FM, daily, early morning
- KNPT, Newport 1310 AM, Twice daily, and at USCG request
- KURY, Brookings 910 AM, 95.3 FM, hourly or more if bar is rough
- KBBR, Coos Bay 1340 AM, hourly, as notified by USCG

Rough bar advisory signs

The Coast Guard has established a standard rough bar advisory sign whose location may vary from port to port. The standard sign is a 6-foot by 6-foot, white, diamond-shaped daymark with a bright orange border, with the words "ROUGH BAR" in black letters. Two alternate flashing amber lights are activated 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.

If you arrive at a harbor where a Coast Guard station is located, and after surveying the bar notice that it is too rough to attempt crossing into port, contact the Coast Guard via VHF channel 16 for advice and assistance.

Termination of use on coastal bars

Federal law designates certain "regulated boating areas" in the following Oregon bars and channel entrances:

Columbia River Nehalem River
Tillamook Bay Netarts Bay
Siletz Bay Depoe Bay
Yaquina Bay Siuslaw River
Umpqua River Coos Bay Bar
Coquille River Chetco River

Check with local Coast Guard stations for the specific termination of use areas.

The regulation states: "The use of individual recreational boats can be terminated on the above-named bars or entrances when rough seas create a hazardous condition." The regulation is enforced by specially trained Coast Guard boarding officers.

U.S. COAST GUARD STATIONS

Location Telephone Cape Disappointment (Ilwaco, Wash.) (360) 642-2382* Astoria (USCG Group/ Air Station) (503) 861-6211 Tillamook Bay

(Garibaldi) (503) 322-3531

Depoe Bay (541) 765-2124 Yaquina Bay

(Newport) (541) 265-5381 Siuslaw River

(Florence) (541) 997-2486

Umpqua River

(Winchester Bay) (541) 271-2138

Coos Bay

(Charleston) (541) 888-3266

Chetco River

(Harbor) (541) 469-3885

Marine emergency and distress radio procedures

Speak slowly and clearly. Call:

1. If you are in distress (that is, when threatened by grave and imminent danger), transmit the International Distress Call on channel 16: "MAYDAY, MAYDAY, MAYDAY. This is (your vessel's VHF call number and name repeated three times)."**

2. If you need information or assistance from the Coast Guard (other than when in distress), call the Coast Guard on channel 16 (the distress and calling frequency). In such cases, you will normally be shifted to a common working frequency (channel 22A), allowing the distress frequency to remain open.

CB channel 9 distress frequency is not a reliable method for reporting marine emergencies. VHF-FM channel 16 is more reliable, as is use of a cellular phone (see Coast Guard stations, this page).

If you're aboard a vessel in trouble, state the following:

- 1. Who you are (your vessel's VHF call number and name).
- 2. Where 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 vicinity are confusing).
- If you require Coast Guard assistance and whether you are in immediate danger.
- 4. 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.
- 7. Present seaworthiness of your vessel.
- 8. 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 reporting 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.
- 3. Description of the vessel in distress or difficulty (see item 8, above).
- 4. Your intentions, course, speed, etc.
- Your radio call sign, name of your vessel, listening frequencies, and schedule.

Aircraft wishing to direct surface rescue craft to a boat in distress will use the international signal, circling the surface craft, opening and closing the throttle or changing propellor 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 MHz 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.

^{*} Emergency/Search and Rescue only

^{**} If you have the radiotelephone alarm signal available, transmit it before 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 those on watch, and it is to be used only to announce that a distress call or message is about to follow.

Signaling for assistance

In addition to the legally required visual distress signals, a boat in distress can use one or more of the following recognized distress signals:

- Fire a gun or other explosive device into the air at about oneminute intervals.
- 2. Continuously sound any fogsignal apparatus.
- 3. Shoot flares or rockets skyward.
- 4. Send a message by radiotelephone.
- 5. Wave both arms from alongside the body to over the head in an up-and-down motion.
- Wave any orange-red flag, or a garment of any size that can be attached to a fishing pole or long rod, side to side over your head.
- 7. On the major axis of the flag, tie a 72-inch, flourescent, orangered cloth inscribed with an 18-inch black circle and an 18-inch black square, 18 inches apart. This type of signal should also be tied to a hatch or cabin top for ready spotting by aircraft.
- 8. SOS by spotlight.

Rendering assistance to mariners is one of the Coast Guard's primary functions, and all Coast Guard stations are on constant alert for vessels 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.

Required safety equipment

Under Oregon law, children age 12 and under are required to wear a Coast Guard-approved personal flotation device at all times on boats that are underway. Exceptions include when the child is below deck or in an enclosed cabin, when a child is on board a sailboat and is tethered by a lifeline attached to the sailboat, or when a child is on board a U.S. Coast Guard-inspected passenger-carrying vessel.

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

Federal regulations are contained in *Federal Requirements for Recreational Boats*, available from your local Coast Guard station.

Boats operating on coastal waters must be equipped with visual distress signals. The rules governing those signals vary according to the size of your boat and its type of propulsion. For further information, ask for a copy of *Visual Distress Signals for Recreational Boaters* at your local Coast Guard station.

Recommended safety equipment

In addition to equipment required by law, the prudent boater will carry the following extra gear:

- 1. Anchor with suitable line for anchoring
- 2. Survival suits for all crew members
- 3. Retro-reflective tape on lifejackets, vests, ring buoys, rafts, and survival suits
- 4. 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 1/2 inch in diameter will hold most 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 five to seven 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, however, do not rely on any anchor and line to hold.

Another good practice of careful boaters is to equip their craft with a sturdy, solid towing bitt located near the bow. Fastenings for the towing bitt should go through a metal plate attached to the inside of the hull to prevent the bitt from pulling out, in the event the craft is taken under tow during an emergency. Small bow rings, standard on many modern trailer boats, are not strong enough for towing at sea. They frequently break under stress, with disastrous results.

Suggested reading

Chapman, Charles F., *Chapman Piloting: Seamanship & Small Boat Handling.* 1996. New York: Hearst Books, Motor Boating and Sailing Division.

Crawford, William P., *Mariner's Weather*: 1992. W.W. Norton.

Oregon Boating Facilities Guide.
Salem, OR: Oregon State Marine
Board.

Nautical Chart Catalog 2: United
States Pacific Coast Including
Hawaii, Guam, and Samoa
Islands. Riverdale, MD: U.S.
Department of Commerce,
National Oceanic and Atmospheric Administration, National
Ocean Survey. Free from NOS
and NOS agents.

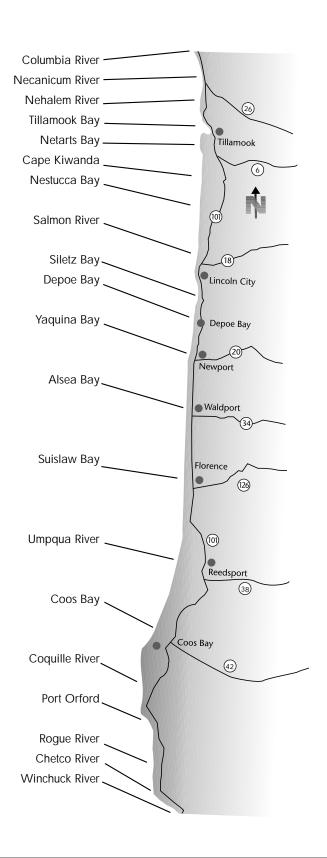
Oregon Boating Basics. Correspondence course. Salem, OR:
Oregon State Marine Board.

Oregon Boater's Handbook. Salem, OR: Oregon State Marine Board.

U.S. Coast Pilot 7: California, Oregon, Washington, and Hawaii. 1997. Washington D.C.: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey.



Oregon's Coastal Rivers & Bays



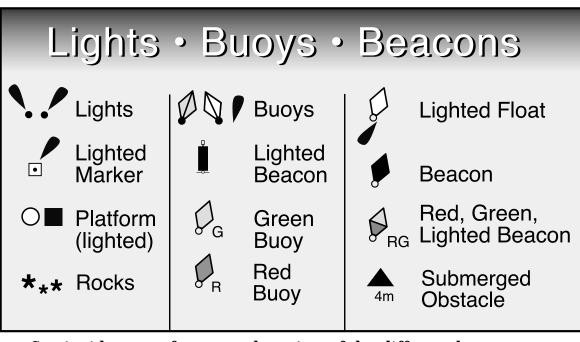
Coastal bars, bays, & rivers

Each bar, bay, or river entrance on the Oregon coast summons its own set of challenges. The following pages present information on these waters that every boater should know before operating in them. Descriptions are illustrated with aerial views of the channel entrances and with annotated charts. Danger areas are represented on the charts by shading. In addition to buoys, aides 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.



COLUMBIA RIVER
(SEE NEXT PAGE)

August 1998



See inside cover for an explanation of the different buoys.

COLUMBIA RIVER

Danger Areas

- A. Chinook Spur and upper, lower, and middle Sand Island spurs are built on two rows of staggered pilings. Currents flowing through these pilings attain a velocity of five knots or more. A boat that becomes disabled or is maneuvered in such a way that it comes in contact with any of these spurs is almost sure to suffer damage. Even large boats have capsized in these areas. Give these spurs a wide berth and never get close to them on the upcurrent side.
- **B. Clatsop Spit** is an unpredictable area of the river entrance. During flood currents and slacks, it may be relatively 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 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.

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

The south jetty has a section broken away on the outer end. The broken section is under water, close to the surface. If you are relatively close and your engine fails, the flood or ebb current will take you across the submerged jetty. Boaters should use extra caution in the area from the visible tip of the jetty to buoy #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.

C. Jetty A, which is southeast of Cape Disappointment, presents a particularly strong danger when the current is ebbing. Water flowing out of the river is deflected by the jetty, and frequently the current reaches eight knots. 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. Small craft should avoid the shallow, sandy area when heavy seas are running because of the surf that breaks on the beach. Look for the entrance marked by daymarks one and two and 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, give the breakers at least a half-mile clearance. On these same summer days, "sneakers"—unusually large swells coming in from the sea—can suddenly begin 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 four feet are present. Breakers are much wider and have more velocity than in other areas. Conditions can change in minutes with tide current changes.

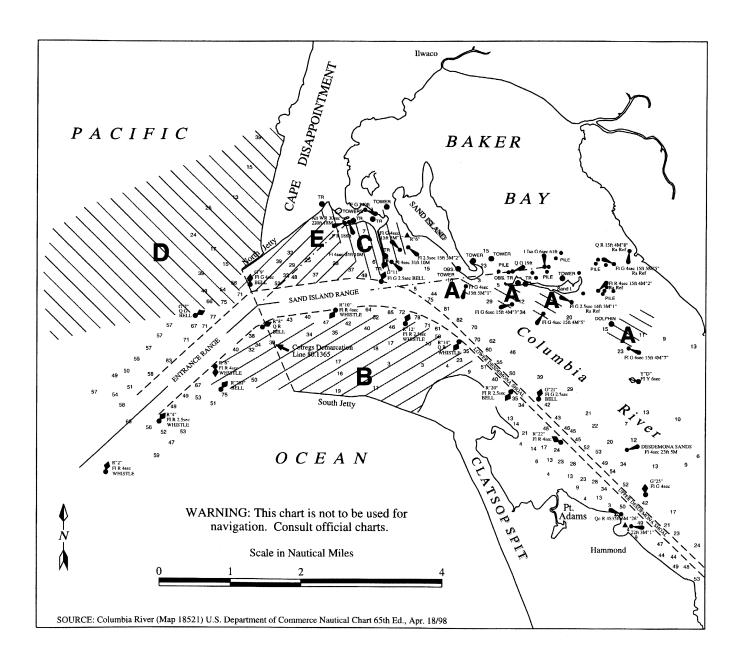
BAR CONDITION REPORTS

KAST, Astoria (1370 kHz): periodically throughout the day, 7 days a week.

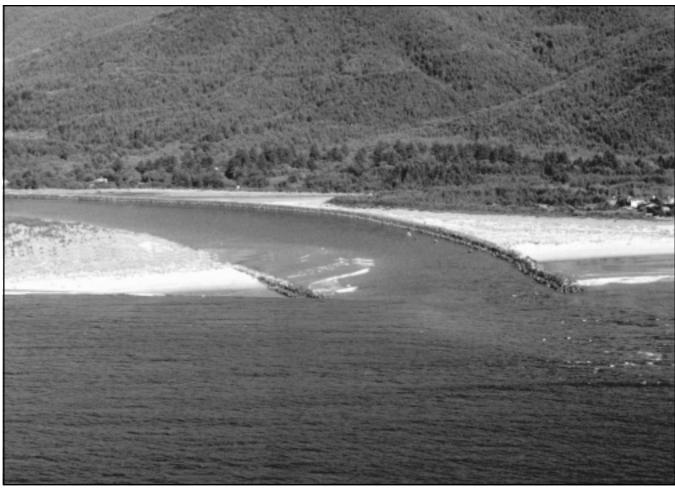
WEATHER CONDITIONS

KPD485 (1610 kHz)

16



COLUMBIA RIVER



August 1998

Nehalem River

DANGER AREAS

- **A. Crab Rock.** Crab Rock is located about 150 yards southeast of Jetty Fisheries Resort docks and is a hazard to small boats when it is covered by water. The hazard is sometimes marked by a privately maintained red buoy just westward of the rock. If the buoy is present, stay to the right of it when outbound and to the left when inbound.
- **B. 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. Boaters proceeding out should stop just inside the entrance and carefully evaluate the bar. If the bar is breaking, do not cross. If you decide to cross, pick the calmest area and proceed, but do not attempt to turn around if the bar is breaking.

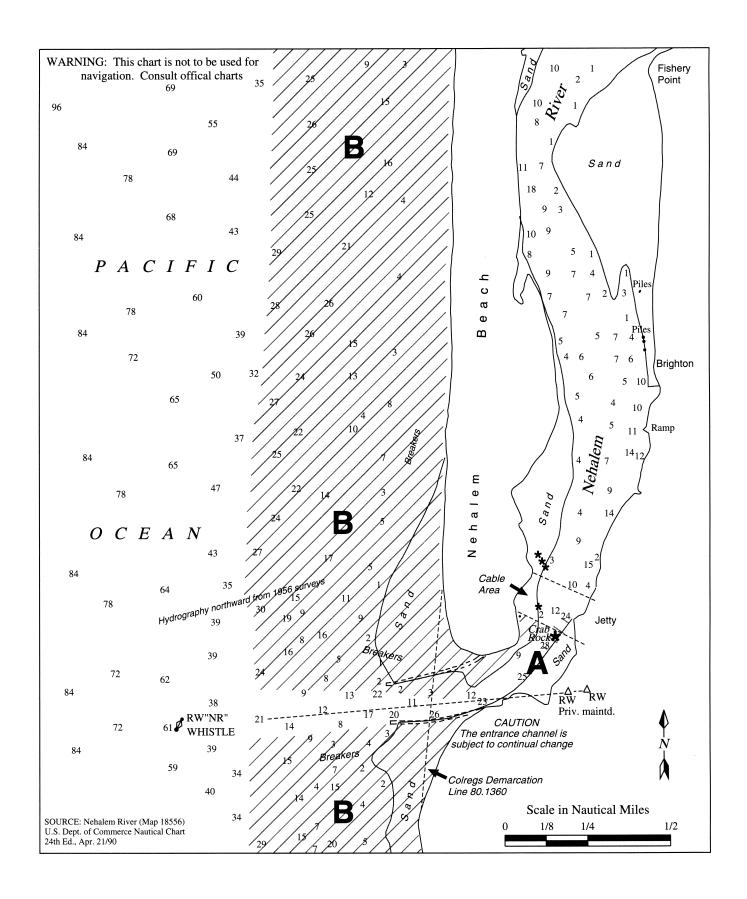
ENTRANCE

The best water is close to the south jetty. The channel seaward of the jetties is continually shifting, and familiarity 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, Tillamook (104.1 FM); daily, in the early morning. During the summer, the Coast Guard broadcasts bar conditions on VHF channels 16 and 22 only when a Coast Guard boat is patrolling the area.

18



Nehalem River



August 1998

TILLAMOOK BAY

DANGER AREAS

- A. Bar area. The entire area between the beach and the 20-foot curve is bar area and breaks on the ebbing tide. The water runs out from four to six knots on the average and is very strong. Boaters proceeding out should stop in the channel east of the seaward end of the breakwater and carefully evaluate the bar. If you decide 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. Avoid the sunken jetty and use caution in the channel south of it.
- **C. Middle grounds.** Shoaling makes this area unpredictable and hazardous; it should be avoided.
- **D. South jetty.** About 100 yards of the outer end of the south jetty is submerged. Use caution and avoid the sunken jetty when entering or exiting.

CHANNEL

Tillamook Bay channel lies just south of the north jetty. Navigate with extreme caution. This channel changes constantly because of continuous 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.

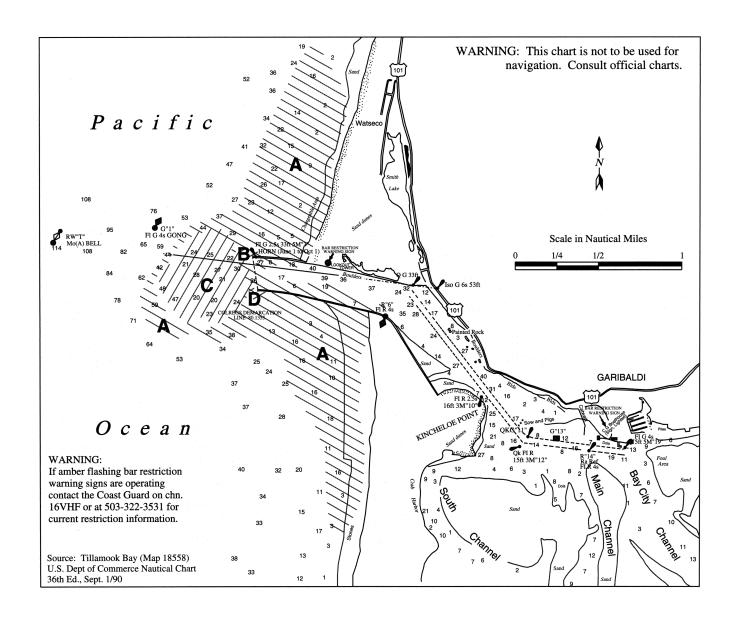
ROUGH BAR ADVISORY SIGNS

One sign is positioned on the Coast Guard boathouse; another is located on the Coast Guard lookout tower on the north jetty. Both signs are lighted when seas exceed four feet or the bar is restricted.

BAR CONDITION REPORTS

KTIL, Tillamook (104.1 FM); daily in the early morning. Call the Coast Guard, (503) 322-3434, 24-hours a day for weather and bar conditions. For emergencies, call the Coast Guard 24-hours hours a day at (503) 322-3246. The Coast Guard also broadcasts bar conditions on VHF channels 16 and 22.

20



TILLAMOOK BAY



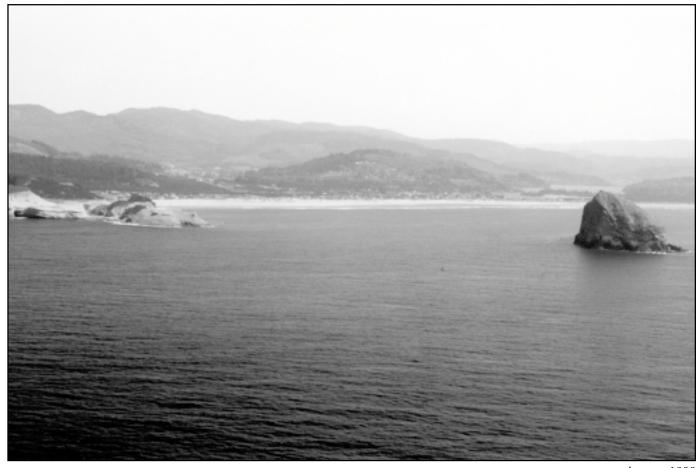
August 1998

NETARTS BAY

Netarts Bay is shallow with numerous sandbars that are exposed at low water. There are no jetties at this entrance. Very few boats cross the bar, and they cross only when the most favorable conditions exist.

There is considerable sportfishing and crabbing inside the bay. Boats fishing inside the bay should exercise caution on the ebb tide when near the bar, since the strong current can pull a small boat out over the bar and into the surf.

22

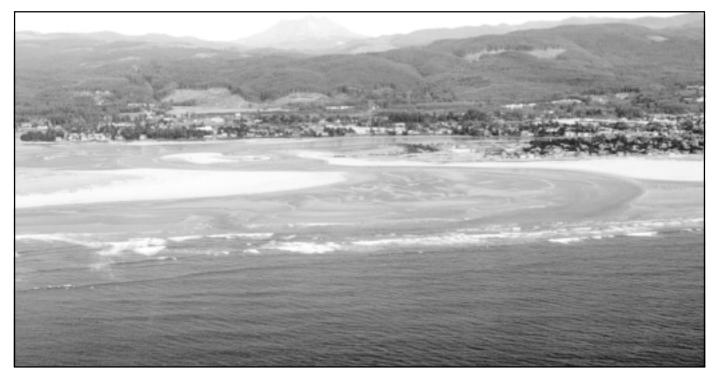


August 1998

CAPE KIWANDA

One of the great attractions at Cape Kiwanda is the launching and landing of the dory fishing fleet from the beach, through the surf. Dory fishermen report that spectators can create a serious hazard, however, when they crowd the beach to watch the dories land.

For their own protection, spectators are asked to give the dories considerable room for landing, as the dorymen have very little control over their craft while the surf is moving them up onto the beach.



August 1998

NECANICUM RIVER

Dangerous—not suitable for crossings.



August 1998

SALMON RIVER

Dangerous—not suitable for crossings.



August 1998

NESTUCCA BAY

Continual shoaling and shifting of sandbars makes the entrance to Nestucca Bay difficult or impossible to enter, and so it is rarely used. To the north of the entrance, Cape Kiwanda gives protection from northwesterly winds that predominate during the summer months.



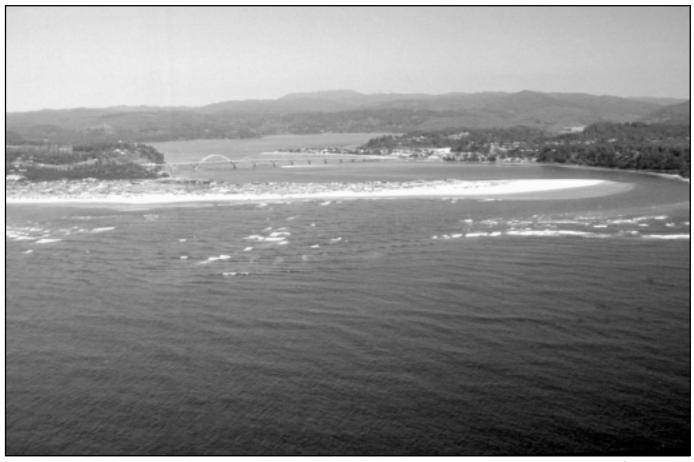
August 1998

SILETZ BAY

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

Most boat traffic is concentrated on the river or in the bay channels. Because there are no jetties and the channel is shallow, surf is usually present. On the strong ebb tide, the current reaches five to seven knots at the entrance, enough force to pull an underpowered vessel or one having engine failure over the bar into the surf.

26

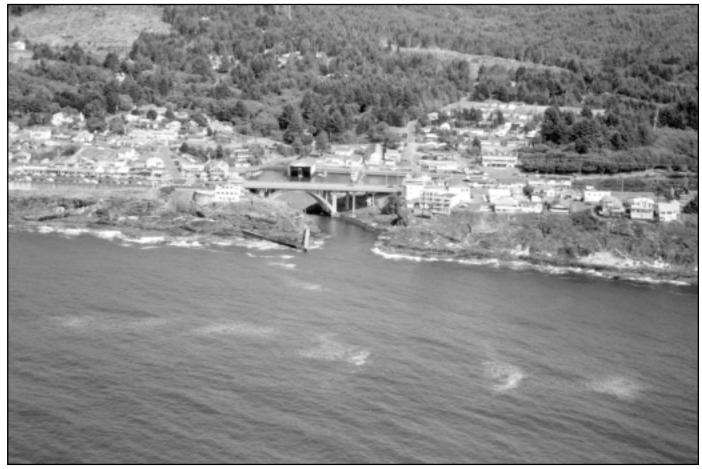


August 1998

ALSEA BAY

There are no jetties at Alsea Bay. With the bar shifting frequently, the entrance is unstable.

Fishing or crabbing near the mouth of the bay can be dangerous if the boat motor fails on an ebb tide. Boaters should have an anchor ready when operating near the entrance.



August 1998

DEPOE BAY

DANGER AREAS

- **A. North reef.** Once a boat has cleared the entrance, waters to the north are hazardous until the red bell buoy is reached. The seas break 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. Boaters coming from the south should never use this area as a shortcut to the channel. Avoid this area at all times.
- C. Channel from the red bell buoy in. 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 the red bell buoy.

ENTRANCE

The entrance should not be attempted at night or in rough weather without consulting local fishers. Boats over 50 feet should not enter the bay without checking with the harbormaster and the Coast Guard.

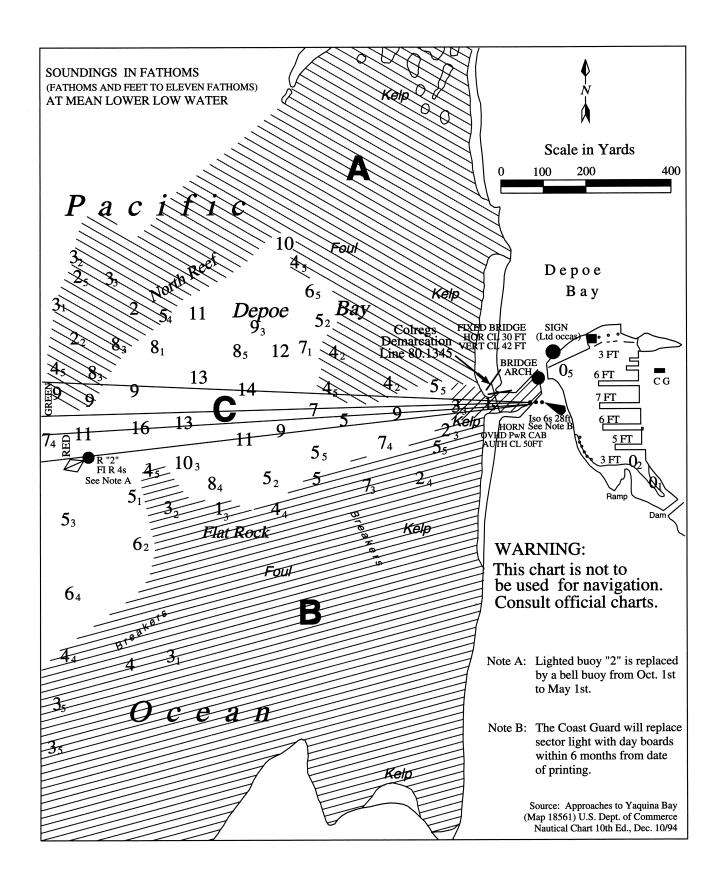
All vessels are required to sound one prolonged (four to six seconds) blast when departing or entering Depoe Bay. Local protocol gives the right-of-way to any inbound vessel.

On a building north of the entrance channel, a **Rough Bar Warning Light** is positioned 25 feet above the water displaying two flashing yellow lights. When lights are flashing, check with Depoe Bay Coast Guard on VHF channel 16 for crossing restrictions. When visibility is less than one nautical mile, the Coast Guard activates its fog signal. The horn then sounds for 2 seconds, once every 30 seconds.

BAR CONDITIONS REPORT

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

28



DEPOE BAY



August 1998

YAQUINA BAY

DANGER AREAS

- **A. South jetty.** There are submerged rocks along the length of the jetty; do not hug the jetty on either side. Boaters should remain in the channel entering and leaving the river so that if their engines fail, they will have time to anchor before the current or wind sweeps them into 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. Be especially cautious of submerged rocks near the 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 you pass buoy #1 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 it has the same surf conditions. 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 can be 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 #1.

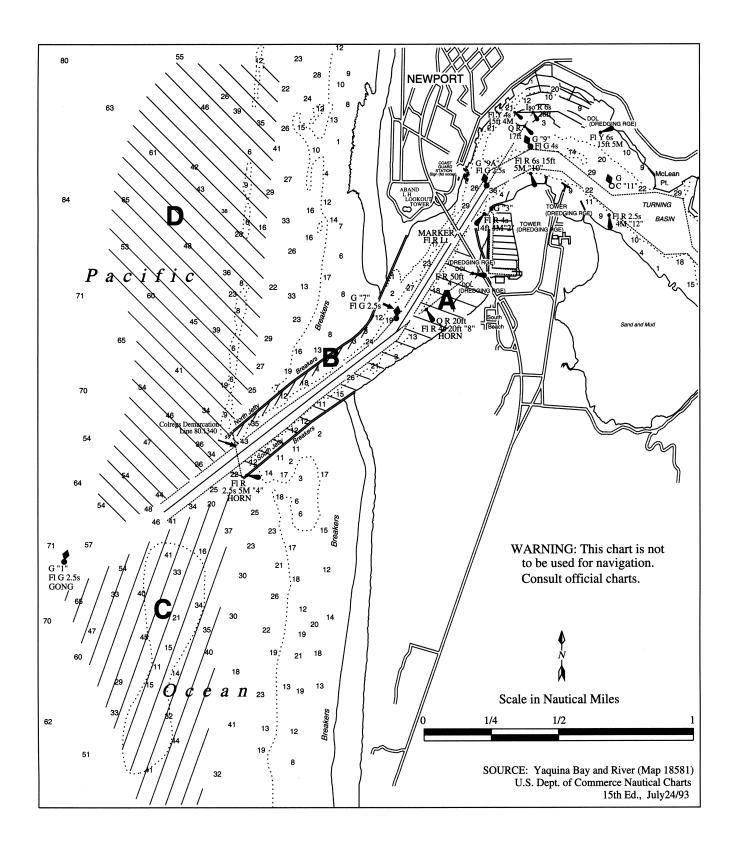
ROUGH BAR ADVISORY SIGN

Positioned on shore, east end of Coast Guard pier.

BAR CONDITION REPORTS

KNPT, Newport (1310 AM); twice daily winter and summer, and at Coast Guard request. Recorded weather and bar condition reports: (541) 265-5511. When the Coast Guard restricts the bar, the restriction applies to the area from the bridge west to the entrance buoy.

30 BOATING IN OREGON COASTAL WATERS



YAQUINA BAY



August 1998

SIUSLAW RIVER

DANGER AREAS

- **A. Shoal water, on the northeast side of the channel**, has a depth of two to three feet at high tide, which extends from C"7" to G"9."
- **B. Shoal water, on the south side of the channel**, extends from buoy #6 to buoy #4 and approximately 50 yards out toward the south jetty tips.
- **C. Outer end of south jetty**. Breakers are almost always present. When the seas are from the southwest or west, breakers may extend to the entrance buoy.
- **D. Outer end of north jetty**. Breakers are almost always present. When the seas are from the west, the breakers may extend to the entrance buoy.

CHANNEL

Siuslaw River channel lies along the northern half of the river entrance. Water depth ranges from 6 to 20 feet. When swells are running from the northwest, boaters 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 channel 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 to 100 yards off the jetty tips.

BRIDGE

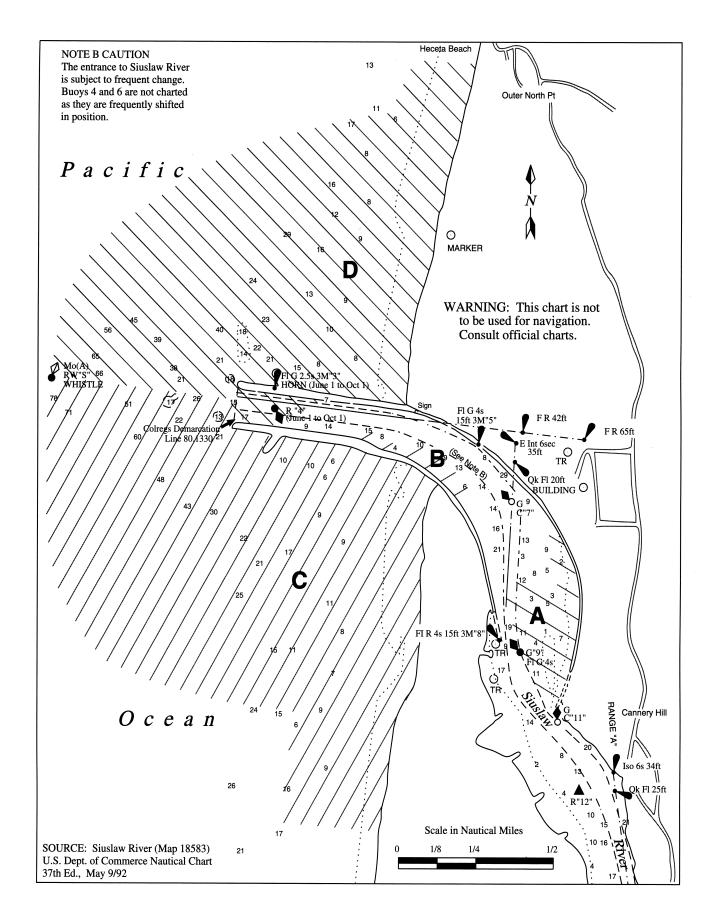
Clearance beneath the Siuslaw River bridge is low. Use caution when crossing under the bridge on the flood tide to avoid damaging superstructure such as antennas and troll poles.

Rough bar advisory sign is positioned on the Coast Guard tower facing 150° true.

WEATHER AND BAR CONDITION REPORTS

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

32 BOATING IN OREGON COASTAL WATERS



SIUSLAW RIVER



August 1998

Umpqua River

DANGER AREAS

- A. Middle ground and north spit. The north spit is to the right when proceeding down the Umpqua River, starting from the first rock spar jetty and the long pier on the east side of the channel. The north spit 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 about 1,000 yards seaward. This area is dangerous because a little swell can create large breakers that may 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. 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

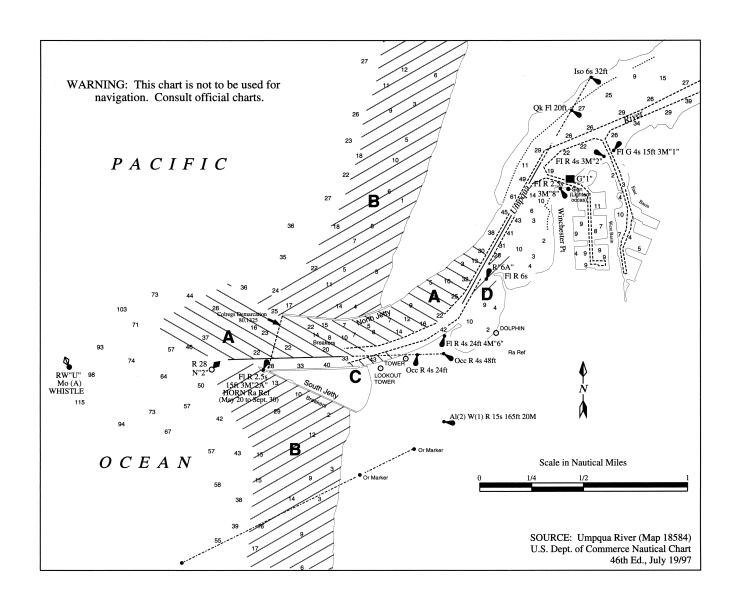
Positioned on shore.

BAR CONDITION REPORTS

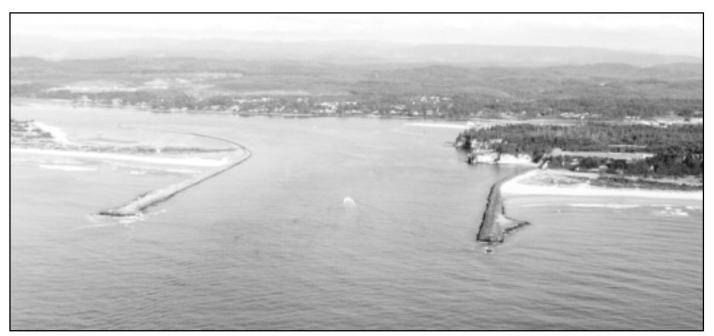
Recorded weather and bar condition reports are available by calling (541) 271-4244.

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

34 BOATING IN OREGON COASTAL WATERS



Umpqua River



August 1998

Coos Bay

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, parallel to the channel from South Slough buoy #4, approximately 450 yards toward South Slough light #2. Presently, nun buoy #2T 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 can buoy #5, directly ahead will be South Slough light #1, marking 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 this 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 that extend 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 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 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 it is strongly recommended that you never cross here.

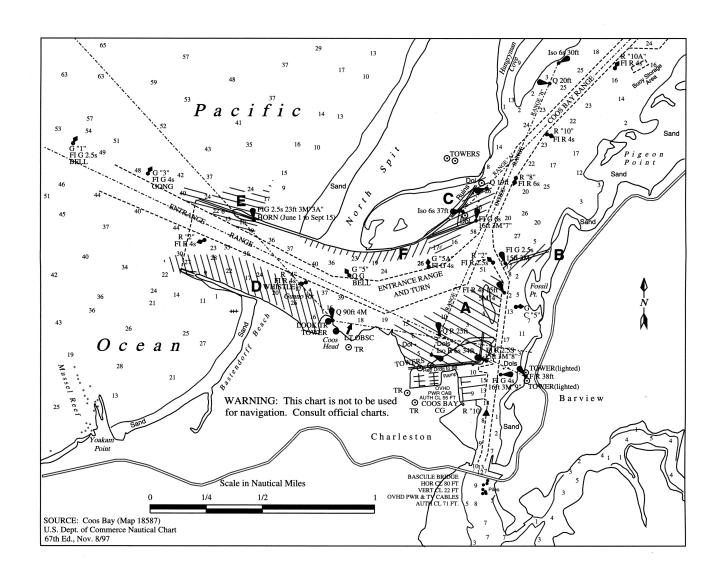
ROUGH BAR ADVISORY SIGN

Positioned eight feet above the water on 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.

BAR CONDITION REPORTS

The Charleston Coast Guard station records weather and bar conditions; you may obtain this information by phoning (541) 888-3102 or (541) 888-3267. KBBR (1340 kHz) broadcasts reports hourly during the summer months and as notified by the Coast Guard. 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.

36 BOATING IN OREGON COASTAL WATERS



Coos Bay



August 1998

Coquille River

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 into the end of the jetty with great force. The inside of the south jetty is a dangerous area, and boaters should remain clear. The prevailing northwest wind could send a powerless boat into 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. The large swells that occur in this area could put a boat onto the 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 very 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 in this area onto the 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*.

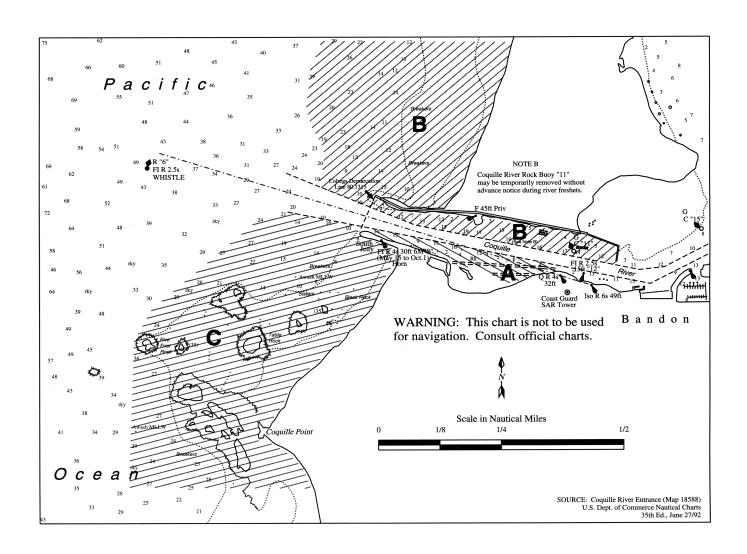
ROUGH BAR ADVISORY SIGN

Positioned on shore, 300 yards west of the Port of Bandon boat ramp on the south side of the channel.

BAR CONDITION REPORTS

Call the Coos Bay Coast Guard station, (541) 888-3266, for reports. There is an active Coast Guard Search and Rescue station in Bandon from Memorial Day to Labor Day.

38 BOATING IN OREGON COASTAL WATERS



Coquille River



August 1998

ROGUE RIVER

DANGER AREAS

- A. Shoal water, south side. Along the south side of the Rogue River channel are shoal water and gravel bars. This shoal water breaks to a height of six feet when a swell is running. Many boaters fishing inside the river or 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 within 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 this sea is running from the west or southwest, this area is very dangerous.

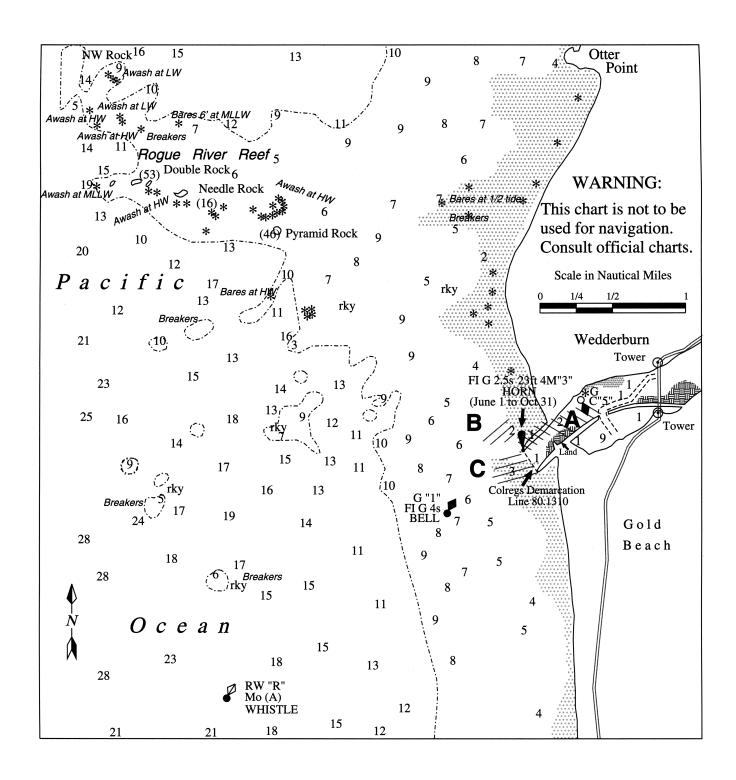
CHANNEL

The 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 they tend to crowd each other. Because trolling is the most frequent fishing method, lines can get caught accidentally in a boat propeller. Should this happen, the disabled boat should anchor immediately or call for aid. A northwest wind or ebb tide could set a boat into a dangerous area in a matter of minutes.

40



ROGUE RIVER



August 1998

CHETCO RIVER

DANGER AREAS

- **A. West jetty rock area.** This area is dangerous because of many rocks and shoaling. At high tide the rocks are covered by water and the area appears navigable but is extremely dangerous. Avoid this area at all times.
- **B. Jetty and shoal areas.** These areas are extremely dangerous at all times because of submerged rocks and breakers. Two rocks in this area may be seen at low tide. Avoid this area at all times.

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.

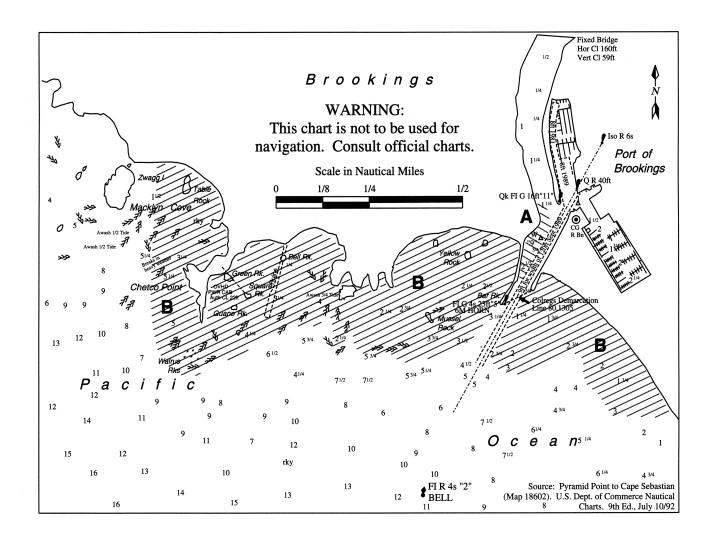
ROUGH BAR ADVISORY SIGN

Positioned on the Coast Guard fuel dock facing northnorthwest.

BAR CONDITION REPORTS

KURY (910 kHz). Hourly or more often if the bar is rough.

42



CHETCO RIVER



August 1998

PORT ORFORD

There is no bar at Port Orford; departure from and entrance to the harbor are direct with the ocean. The harbor is protected from the northwest winds that prevail during the summer months but is exposed to southerly winds, which can cause unfavorable harbor conditions.



August 1998

$\mathbf{W}_{\text{INCHUCK}}$ \mathbf{R}_{IVER}

Dangerous—not suitable for crossings.

RESTORING OREGON'S SALMON AND STEELHEAD

aving Oregon's fish runs is important for everyone. No single agency can do it—it will take a broad cooperative effort between state agencies, the federal government, private groups and organizations, and individual citizens. The Oregon State Marine Board is one of many such organizations dedicated to doing its part. We invite you to become involved and help keep fish habitat healthy and robust. By keeping coastal waters clean, we are protecting juvenile salmon and steelhead smolts which have already struggled through degraded and sometimes polluted inland waterways on their way to the ocean.

HERE ARE SOME SIMPLE WAYS TO GET INVOLVED: Oregon Adopt-A-River

This program helps families, groups, individuals, and businesses adopt their favorite section of Oregon waterway. Volunteers receive support and free materials (handbook, garbage bags, t-shirt, etc.) for use in planning and carrying out their cleanup projects. For more information about Oregon Adopt-A-River and

other waterway activities, call (800) 322-3326.

Nothing Overboard

Practice "nothing overboard" when boating. Use proper waste disposal



Photo: Oregon Forest Resources Institute

facilities for sewage, litter, and plastics. Call the Marine Board for more information, or for locations of clean vessel pump out sites, contact the national hotline at (800) ASK FISH.

Pumping Gas? Changing Oil?

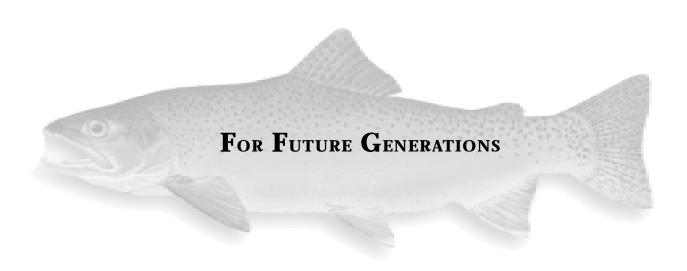
Use care in fueling your boat; fill up carefully to avoid spillage. Avoid overfilling tanks and, remember, fuel expands as it warms.

Change your oil with a spill-proof pump or vacuum tank and wipe up drips with an absorption pad. Recycle used oil and oil filters. In case of a spill, never squirt with a detergent or an emulsifier—this is bad for the environment and illegal.

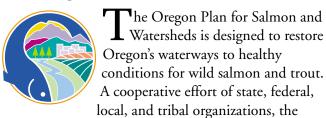
If you see an oil spill, identify and stop the source, then contain the spill with absorbant pads. Notify the Coast Guard at (800) 424-8802 *and* the Oregon Emergency Response System at (800) OILS-911.

Building a Boat?

If you plan to use polystyrene foam on your vessel, you must apply for a "homebuilt boat builder" certificate, in addition to the application for a title. Call the Marine Board's environmental coordinator at (503) 373-1405, ext. 227.



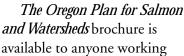
The Oregon Plan



Oregon Plan has a strong foundation of protective regulations, yet is nonregulatory. The Oregon Plan relies heavily on cooperative and voluntary activities to succeed. Getting involved in your local watershed council is an effective way to support recovery efforts.

The commercial and sportfishing industries in Oregon have been heavily affected by complete or partial fishery closures. Forest, agricultural, and mining

industries contribute to salmon recovery by funding restoration projects. Urban areas are developing water conservation programs, improving wastewater treatment facilities to reduce pollution, and reducing activites that degrade riparian areas.



toward improved watershed health and salmon restoration. For free copies, contact the Governor's Natural Resources Office at (503) 378-3589, extension 821, or go on-line to http://www.oregon-plan.org/.



The Oregon State Marine Board's Role

A s the state's recreational boating agency, the Marine Board invites boaters to join our efforts in preserving Oregon's waterways.

- Support Oregon Adopt-A-River. The Marine Board is one of the original sponsors and partners of this program. See page 46 for details.
- Follow polystyrene foam regulations. The most heavily used foam in marine construction, polystyrene foam eventually breaks off, clogging waterways and injuring fish and waterfowl. The white-bead foam used for dock and building flotation must be encapsulated (covered) to prevent polluting leakage. Call the Marine Board for the required permit to use this material.
- Use clean boating practices. The Marine Board contributes to vessel waste disposal facilities and encourages boaters to use other water-friendly practices.

As a boater, you can make a significant contribution to clean water. Contact us for more information: (503) 378-8587, <www.osmb.state.or.us>.



Photo: Bear Creek Watershed Education Program

Notes

Boaters:

Coastal rocks are wildlife refuges

regon's coast abounds with seabirds and marine mammals. In fact, over 1.1 million seabirds of 13 species—more than Washington and California combined—breed on Oregon's coastal rocks and islands. The threatened Steller sea lion and 3 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 wildlife.

Follow These Guidelines Around Coastal Rocks

- Stay back! As a general rule, approach no more than 500 feet. If seals or sea lions are present, stay back 1,000 feet. You won't know you are too close until it's too late and animals flee.
- Approach and depart cautiously. This minimizes noise and movement and gives both you and the animals time to adjust.
- Avoid sudden movement and loud noises when operating near birds or mammals. Remember, these are wild animals.
- Conditions change! Don't assume that a safe distance one day will be the same the next, even at the same 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 wave 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.

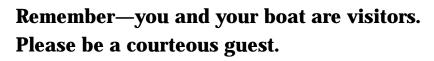
Boats Can Interfere with Marine Wildlife

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, birds flee the nest in panic; eggs or chicks are knocked over the side or left exposed to predatory gulls and crows. Stampeding sea lion adults can trample and kill small pups.

Even when anchored quietly near the base of a rock during certain critical times, your boat may discourage adults from returning with food or inhibit young 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 or mammals may abandon the rock altogether.



For information on Coastal National Wildlife Refuges, call the U.S. Fish and Wildlife Service at (541) 867-4550.





