

Rec'd 11-17-88

516-3
shelf-0 \$1.00

BOATING IN OREGON COASTAL WATERS



OREGON STATE MARINE BOARD
OREGON STATE UNIVERSITY EXTENSION/
SEA GRANT PROGRAM

Revised Edition 1988

Extension Manual 3

NOTE: Green and black colors are identical in meaning. In 1983, the Coast Guard began a 6 year program to convert black buoys to green. By 1989, the job should be completed.

Red and Green (Preferred Channel) Buoy
Topmost band red; preferred channel is to left of buoy; no number.

Red
Green

Can Buoys 3, 5, 7
Coloring green, odd numbers increasing toward head of navigation (leave to port).

Lighted Whistle Buoy 1
Green in color; odd number; green light, regular or quick flashing (leave to port proceeding upstream).

Mid Channel Buoy
No number; red and white vertical stripes (should be passed close to, on either side). Light: white with Morse A flashes.

Main Channel

Secondary Channel

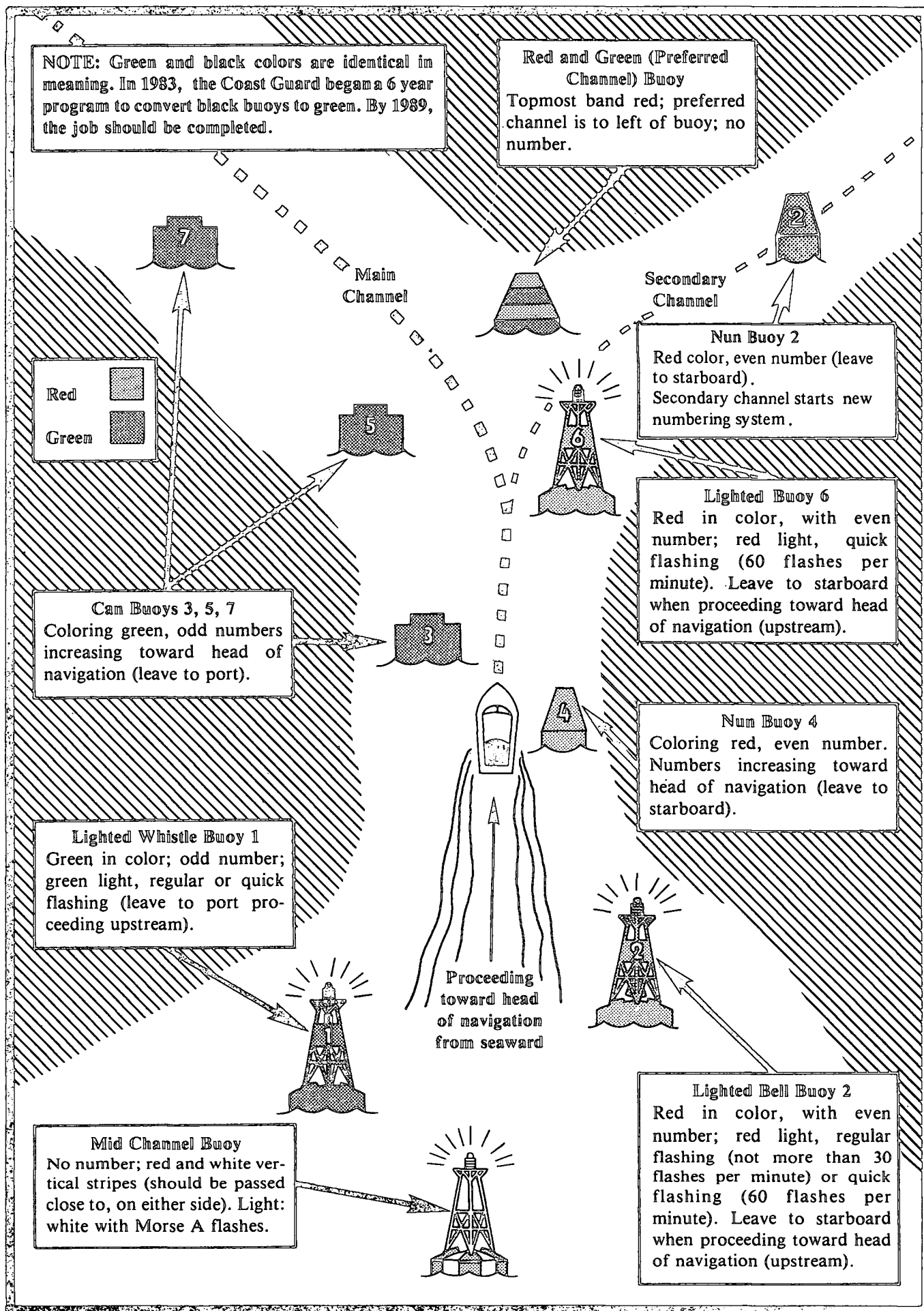
Nun Buoy 2
Red color, even number (leave to starboard). Secondary channel starts new numbering system.

Lighted Buoy 6
Red in color, with even number; red light, quick flashing (60 flashes per minute). Leave to starboard when proceeding toward head of navigation (upstream).

Nun Buoy 4
Coloring red, even number. Numbers increasing toward head of navigation (leave to starboard).

Proceeding toward head of navigation from seaward

Lighted Bell Buoy 2
Red in color, with even number; red light, regular flashing (not more than 30 flashes per minute) or quick flashing (60 flashes per minute). Leave to starboard when proceeding toward head of navigation (upstream).

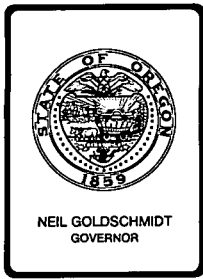


Boating in Oregon Coastal Waters

Fifth Revised Edition 1988

**Oregon State Marine Board
Salem 97310**

**Oregon State University Extension/Sea Grant Program
Corvallis 97331**



State Marine Board

3000 MARKET ST. N.E., No. 505, SALEM, OREGON 97310-0650 PHONE 378-8587

Dear Coastal Boater,

Boating in Oregon Coastal Waters has been prepared to help you navigate our beautiful, but sometimes hazardous, coastline.

Navigating along the Oregon coast presents difficult challenges to the most experienced boat operator. Sand shoals or bars, river and tidal currents, ocean swells and winds can combine to create dangerous conditions to vessels of all sizes. Pleasant sea and weather conditions can change quickly on the open ocean and bar entrances.

Operating a boat safely on the Oregon coast requires proper preparation, good boat handling skills and knowledge of the entrances. This publication will serve you as an excellent guide to coastal boating. It contains photographs and charts of each bar entrance as well as local hazard information. Coastal Waters also provides general boat operation information, references and phone numbers to help you on your trip.

Reading this guide is just part of the preparation involved in safely navigating the coast. If you are new to boating on the Oregon coast, we recommend you take a trip or two with an experienced coastal boat skipper. Also check in with the Coast Guard for advice about local conditions.

Novice boaters should strongly consider taking a boating course offered by the U.S. Coast Guard Auxiliary or the U.S. Power Squadron. A fine correspondence course, "Boating Basics," is offered by the State Marine Board.

We hope all your experiences on the Oregon coast are enjoyable.

**Oregon State Marine Board
Doug Heider, Chairman
Bill MacHugh
Randy Cummings
Don Christensen
Carl Fisher**

CONTENTS

Buoy Markings	inside front cover	U.S. Coast Guard Stations	8
Going Somewhere? (Float Plan)	5	U.S. Coast Guard Auxiliary Patrols	8
Storm Signals	6	Crossing the Bar	8
Storm Warnings	6	Tides	9
Storm Warning Display Stations	6	Capsizing	9
Rough Bar Advisory Signs	6	Termination of Use on Coastal Bars	9
Marine Emergency and Distress		Fog	9
Radio Procedures	6	Knots to Know	10
U.S. Coast Guard Search and Rescue		Dangers Near Large Vessels	11
Stations with Standard		Required Safety Equipment	11
4-Watt CB Equipment	7	Recommended Safety Equipment	11
Signalling for Assistance	7	Coastal Bars, Bays, and Rivers	11
Aids to Navigation	7	Suggestions for Further Reading	11-12
Charts for Coastal Waters	8	Coast Map	12

Coastal Bars, Bays, and Rivers

Columbia River	13-15	Yaquina Bay	30-31
Nehalem River	16-17	Alsea Bay	32-33
Tillamook Bay	18-19	Siuslaw River	34-35
Netarts Bay	20-21	Umpqua River	36-37
Cape Kiwanda	22	Coos Bay	38-39
Necanicum River	23	Coquille River	40-41
Salmon River	23	Port Orford	42-43
Nestucca Bay	24-25	Rogue River	44-45
Siletz Bay	26-27	Chetco River	46-47
Depoe Bay	28-29	Winchuck River	48

ACKNOWLEDGMENT

The publication of this manual has been made possible through the cooperation of the Thirteenth Coast Guard District, which provided information regarding hazardous areas and permitted reprinting of information from various *Bar Guides*.

OREGON STATE MARINE BOARD

Doug Heider, Hillsboro, *Chairperson*
Carl O. Fisher, Portland
Bill MacHugh, Albany
Randy Cummings, The Dalles
Don Christensen, Salem
Paul Donheffner, *Director*

OREGON STATE UNIVERSITY EXTENSION SERVICE

Extension/Sea Grant Program
Bruce DeYoung, *Leader*

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 _____
Home phone number _____ Business phone number _____

Boat type _____ Color of hull _____
Color of trim _____ Registration number _____
Name _____ Make _____ Length _____ Other _____

Engine: Type _____ Horsepower _____ Normal fuel (gallons) _____

Number of persons aboard (including operator) _____

Name	Age	Address/Phone Number
_____	_____	_____
_____	_____	_____
_____	_____	_____

Survival Equipment:

Lifejackets (number) _____ flares _____ mirror _____
Flashlight _____ food _____ paddles _____
Water _____ cushions _____

Radio _____ Frequencies _____

Itinerary:

Depart _____ from _____ on _____ (time, date)
Going to _____ or _____
Expect to return by _____ (time, date) and in no
event later than _____

Other Information _____

Auto license number _____ Trailer license number _____

If not returned by _____ call the Coast Guard or local
authority 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.

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 listening to local radio stations, Coast Guard radio, or the Weather Service VHF/FM broadcasts. The Weather Service broad-

casts 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, station.)

Rough Bar Advisory Signs

The Coast Guard has established a standard rough bar advisory sign. Its position changes from port to port and is included in the bar descriptions that follow.

The sign is 6' x 6' white, diamond-shaped daymark with a bright orange border, carrying the words "ROUGH BAR" in black letters. Two alternate flashing amber 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

D 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 in a distress, call the **Coast Guard** on channel 16 (the distress and calling frequencies). In this situation, you will normally be shifted to a common working frequency (channel 22A), allowing the distress frequency to remain open.

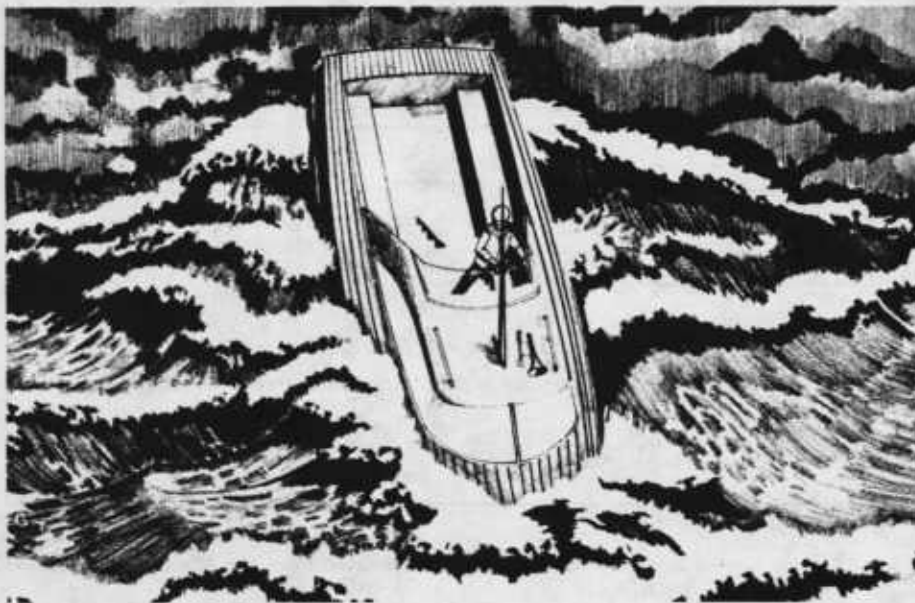
If you're aboard a vessel in trouble, state:

1. **Who** you are (your vessel's VHF call number and name).
2. **Where** you are (your vessel's position in latitude/longitude 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.
4. **What** is wrong (nature of distress — or difficulty, if you are not in distress).
5. Kind of assistance required.
6. Number of persons aboard and the condition of anyone injured.
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 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 7, 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 frequency is not a reliable method for reporting marine emergencies. VHF-FM channel 16 is more reliable.

Signalling for Assistance

Rendering assistance to mariners is one of the primary functions of the Coast Guard. The following signals are recognized as indicating a vessel in distress and requiring assistance. (These are in addition to the carriage of required visual distress signalling devices on coastal waters. See page 11.) A boat in distress 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 a harbor where a Coast Guard Station is located and, after surveying the bar, notices it is too rough to make an attempt to cross into port, it is suggested that the operator contact a Coast Guard patrol vessel by using any of the standard distress signals to attract attention or by circling one of the buoys.

Aids to Navigation

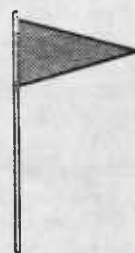
Oregon Coastal waters are marked for safe navigation by the lateral system of buoyage. This system employs a simple arrangement of colors, shapes, numbers, and light characteristics to reveal the side on which a buoy should be passed when proceeding in a given direction. The expression "red right returning"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

Conversely, when proceeding toward the sea (downstream), red buoys are to port (left side) and black/green buoys are to starboard (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, #3 and #4 are gone in winter.



Small Craft



DAYTIME SIGNAL



NIGHT SIGNAL

One RED pennant 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.) and/or sea conditions considered dangerous to small craft operations are forecast for the area.

Gale



DAYTIME SIGNAL



NIGHT SIGNAL

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.

Storm

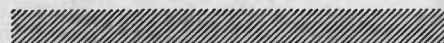


DAYTIME SIGNAL



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 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. Usually range markers are international orange and white in color and rectangular or diamond-shaped. 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 the West Coast by the National Ocean Service. Copies of the catalog are available free from: Distribution Branch, N/CG 33, 6501 Lafayette Ave., Riverdale, MD 20737-1199.

Charts and related publications of the National Ocean Service can also be purchased in Oregon from the authorized National Chart Agents listed below:

<i>Astoria:</i>	* Englund Marine Supply Co., Foot of 15th St.
<i>Brookings:</i>	Lorings Lighthouse, Sporting Goods, 554 Chetco Ave.
<i>Eugene:</i>	Wright Communications, 985 Conger St.
<i>Florence:</i>	Siuslaw Marine, 06516 Highway 126
<i>Garibaldi:</i>	Old Mill Marina, 3rd and American
<i>Harbor:</i>	Hanscom's Center, 16399 Lower Harbor Road
<i>Newport:</i>	Oregon State University, Hatfield Marine Science Center, Public Wing

*Agent handles U.S. Coast Guard publications.

<i>South Beach Marina:</i>	South Beach Marina, Marine Science Drive.
<i>North Bend:</i>	Oregon-Pacific Company, Inc., 1760 Sheridan St.
<i>Portland:</i>	Captain's Nautical Supplies, 817 SW Second Ave. Fisherman Marine Supply, 901 N. Columbia Ave. Progress Electronics Co. of Oregon, 5160 N. Lagoon Ave. Rodgers Marine Electronics, 3445 NE Marine Dr.
<i>Winchester Bay:</i>	Shannon's Sport Shop, Beach Blvd.

U.S. Coast Guard Stations

Location	Telephone
Tillamook Bay — Garibaldi	322-3531
Depoe Bay — Depoe Bay	765-2123
	765-2124
Yaquina Bay — Newport	265-5382
Siuslaw River — Florence	997-2486
Umpqua River — Winchester Bay	271-2137
Coos Bay — Charleston	888-3266
Chetco River — Harbor	469-2242
Cape Disappointment — Ilwaco, Washington	(206) 642-2381 or 642-2382

U.S. Coast Guard Auxiliary Patrols

A nationwide association of boaters, the United States Coast Guard Auxiliary is a nonmilitary organization administered by the Coast Guard, and its 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 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 recreation when operated within their limitations. Stability is a vital factor for boats cruising in coastal waters, and stability can be aided by proper loading. An improperly loaded or overloaded craft loses its stability, and is very susceptible to capsizing. Overloading increases the risk of seas breaking aboard. It is extremely important that boats operating along the coast have adequate freeboard.

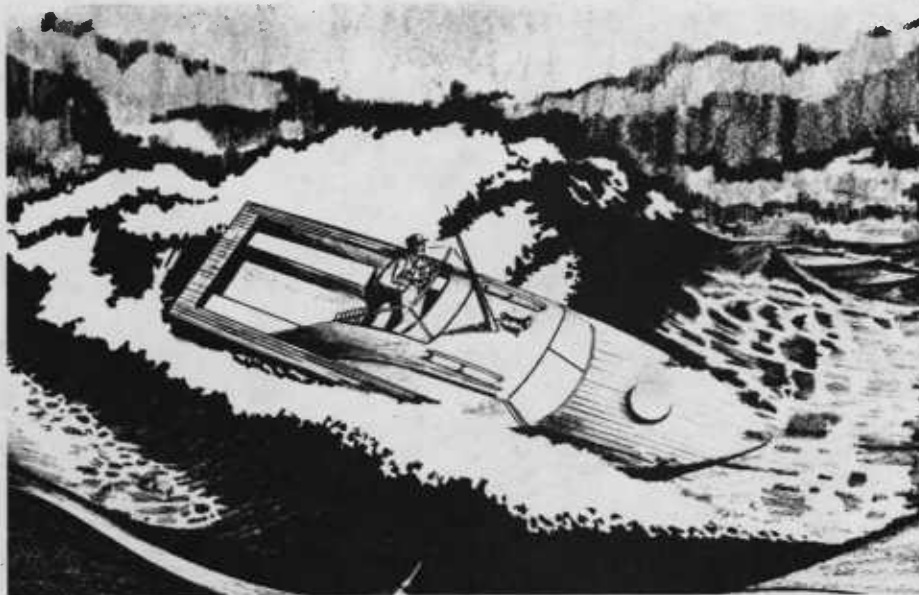
Most boating accidents and fatalities on the coastal bars result from capsizing. A boat is much more apt to capsize when crossing in as the seas are on the stern, when the operator does not have as much control of the steerage. When looking at the bar from seaward, one does not see the front of the seas or breakers; consequently, the bar may be much rougher than it appears.

When there is the least uncertainty about 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 westerly waves. Such conditions result in the two opposing forces meeting to pile up water and waves 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 some few days when there is unusual calm or unless observation shows that the bar is down, cross from harbor to ocean on the slack or the flood tide, when the sea is calmest.

Veteran seamen advise all boat operators, if they are still inside the bar when heavy sea conditions exist, 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 southwest developing 40-knot or better winds, it becomes a matter of judgment and experi-

ence, 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 sands, shoals, spits, or floats, on which waves build to the point that they become extremely dangerous to small boats. These areas should always be avoided.

Capsizing

One of the most basic precautions for all boaters is to wear a Coast Guard-approved personal flotation device (PFD) in any time of danger. Without a PFD, chances for surviving a sinking or capsizing in the cold waters off the Oregon coast are greatly reduced. If the boat capsizes, keep all persons together in one group, to help one another and to improve chances for rescue. It is far easier and quicker to locate and rescue a group than to find scattered individuals. Also, in a group, each person can help others stay afloat longer.

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

Federal law designates certain "Regulated Boating Areas" in the following Oregon bars and channel entrances:

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

These areas are within the limits of the shaded area on the bar charts in this manual. Check with local Coast Guard Stations for specific areas.

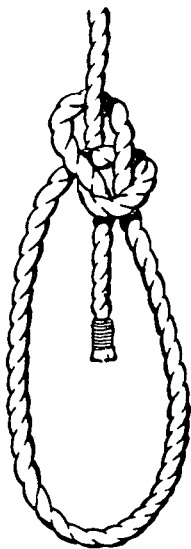
The regulation states: "The use of individual recreational boats can be terminated on the above-named bars or entrances when rough seas create a hazardous condition." The regulation will be enforced by specially trained Coast Guard boarding officers.

Fog

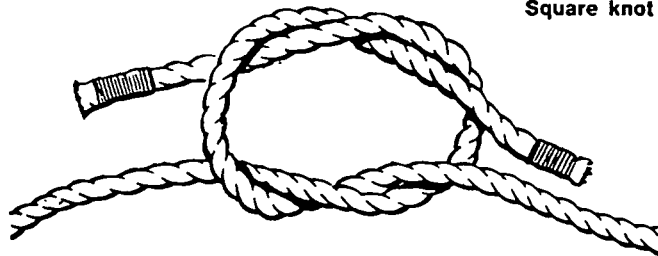
Fog is often encountered in coastal waters and is usually thick enough to hide all landmarks and other aids to navigation. When cruising or fishing along the coast or harbor entrance, make frequent observations of location, so at the first signs of fog, it will be possible to proceed to a sea buoy or,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

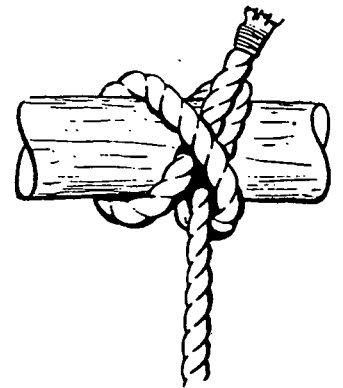
In addition to the tidal currents, there are currents that run along the beaches north and south. These are sometimes



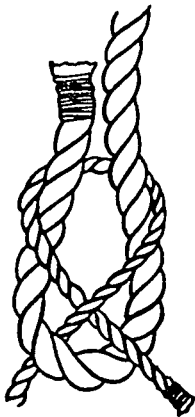
Bowline



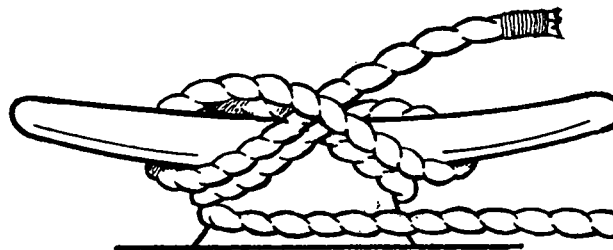
Square knot



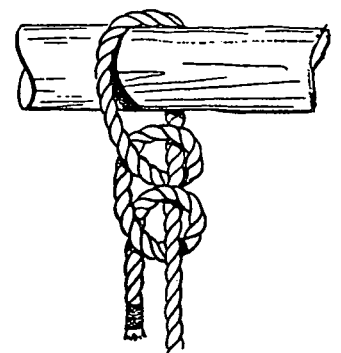
Clove hitch



Becket bend



Correct method of making fast to a cleat



Two half hitches

Knots to Know

Knowing how and when to tie a few basic knots is indispensable for safe boating. Practice tying at least those shown here. The Coast Guard recommends knowing how to tie a **bowline** quickly in case the boater ever has to be towed to safety. It is a reliable knot for tying a line to any hardware eye or shackle. Use the **square knot** for tying together two lines of the same diameter. Beware of mistakes when tying the square knot; it is all too easy mistakenly to tie the treacherous granny knot when attempting a square knot. For connecting two lines of different size, use the **becket bend**. (The square knot will not hold with lines of different size.) A good knot — actually a hitch rather than a knot — for quickly securing a line to any vertical pole or post is the **clove hitch**. Use it only for a temporary tie-down. A second easy and reliable hitch for the same usage is the “turn” with 2 **half hitches**. Finally, be able to **wrap a line about a cleat properly** so that the line will hold yet can be easily unfastened using the free end of the line.

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 ocean-going 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 channels the Navigation Rules give deep-draft ships the right of way under all circumstances. When underway, such huge ships cannot stop readily, because of their tonnage. Their momentum through the water will carry them forward for a great distance despite engines being stopped or reversed. Common sense, courtesy, and the law (the Rules of the Road) require that small boaters let these vessels have a wide berth.

Boaters must realize there is a blind spot in the pilot's 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 in order that the pilot 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 immedi-

ately and clear the channel. In many ship-small 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 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 visual distress 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. Retroreflective tape on life jackets, 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 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 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.

Coastal Bars, Bays, and Rivers

Each bar, bay, 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 descriptions are illustrated with aerial views of the channel entrances and annotated 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).

Condon, Edward J., *Marine Fires: Preventing Them, Fighting Them*, Oregon State University Extension/Sea Grant Program Publication SG 44 (Corvallis, 1977). Single copies free from Agricultural Communications, OSU, Corvallis, OR 97331-2119.

Condon, Edward J., *Six Ways to Sink Your Boat*, Oregon State University Extension/Sea Grant Program Publication SG 33 (Corvallis, revised 1980). Single copies free from Agricultural Communications, OSU, Corvallis, OR 97331-2119.

Condon, Edward J., and Edward Kolbe, *Radar Reflectors for Boats*, Oregon

State University Extension/Sea Grant Program Publication SG 41 (Corvallis, 1978). Single copies free from Agricultural Communications, OSU, Corvallis, OR 97331-2119.

Crawford, William P., *Mariner's Notebook: A Guide to Boating Fundamentals*, latest edition (San Francisco: Miller Freeman Publications, Book Division).

A Guide to Oregon Boating Facilities, 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 Better Boating, 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.

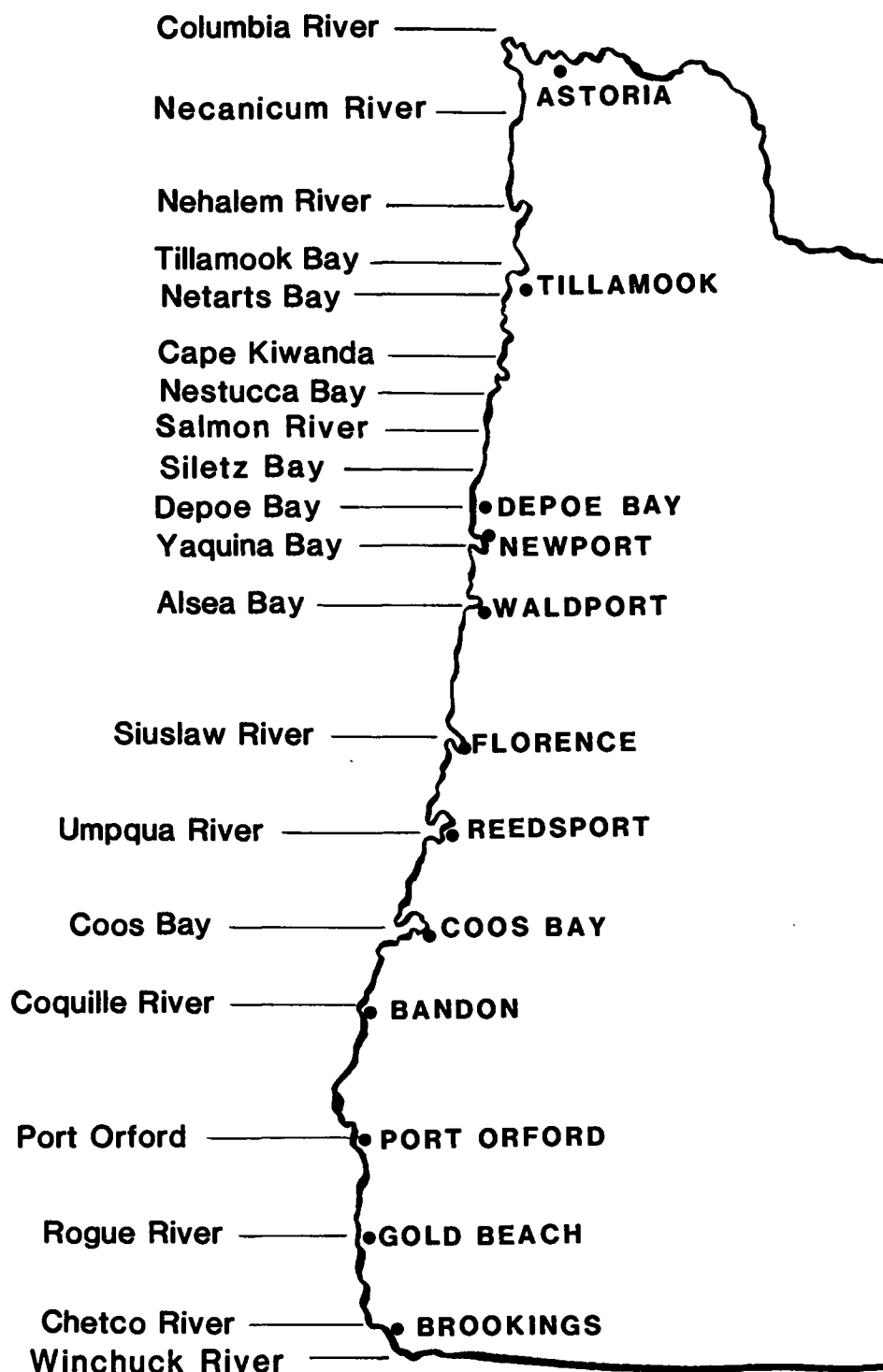




PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS,
SUMMER 1986

COLUMBIA RIVER (See pages 14-15)

Columbia River

Danger Areas

- A. Chinook Spur, Upper, Lower, and Middle Sand Island Spurs** are built on two rows of staggered pilings. Currents flowing through these pilings attain a velocity of up to 5 knots. 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 been capsized in these areas. Give these spurs a wide berth and never get close to them on the up-current side.
- B. Clatsop Spit** is the 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. The south jetty has a section broken away on the outer end. The broken section is under water, close to the surface. Boaters should use extra caution in the area from the visible tip of the jetty to buoy #2SJ. On the flood, a dangerous rip can occur over the sunken jetty.
- 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.** Breakers are 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 half-mile clearance. Many times on these same summer days "sneakers," unusually large swells coming in from the sea, suddenly commence breaking $\frac{1}{4}$ to $\frac{1}{2}$ 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. Conditions can change in minutes with tide current changes.

Bar Condition Reports

KVAS (1230 kHz) and KAST (1370 kHz): 15 minutes before and after the hour.



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

Nehalem River

Danger Areas

- A. Crab Rock.** Crab Rock is located about 150 yards southwest 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. Boats proceeding out should stop just inside the entrance and carefully evaluate the bar. If a decision is made to cross, pick the calmest area and proceed, 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.

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.

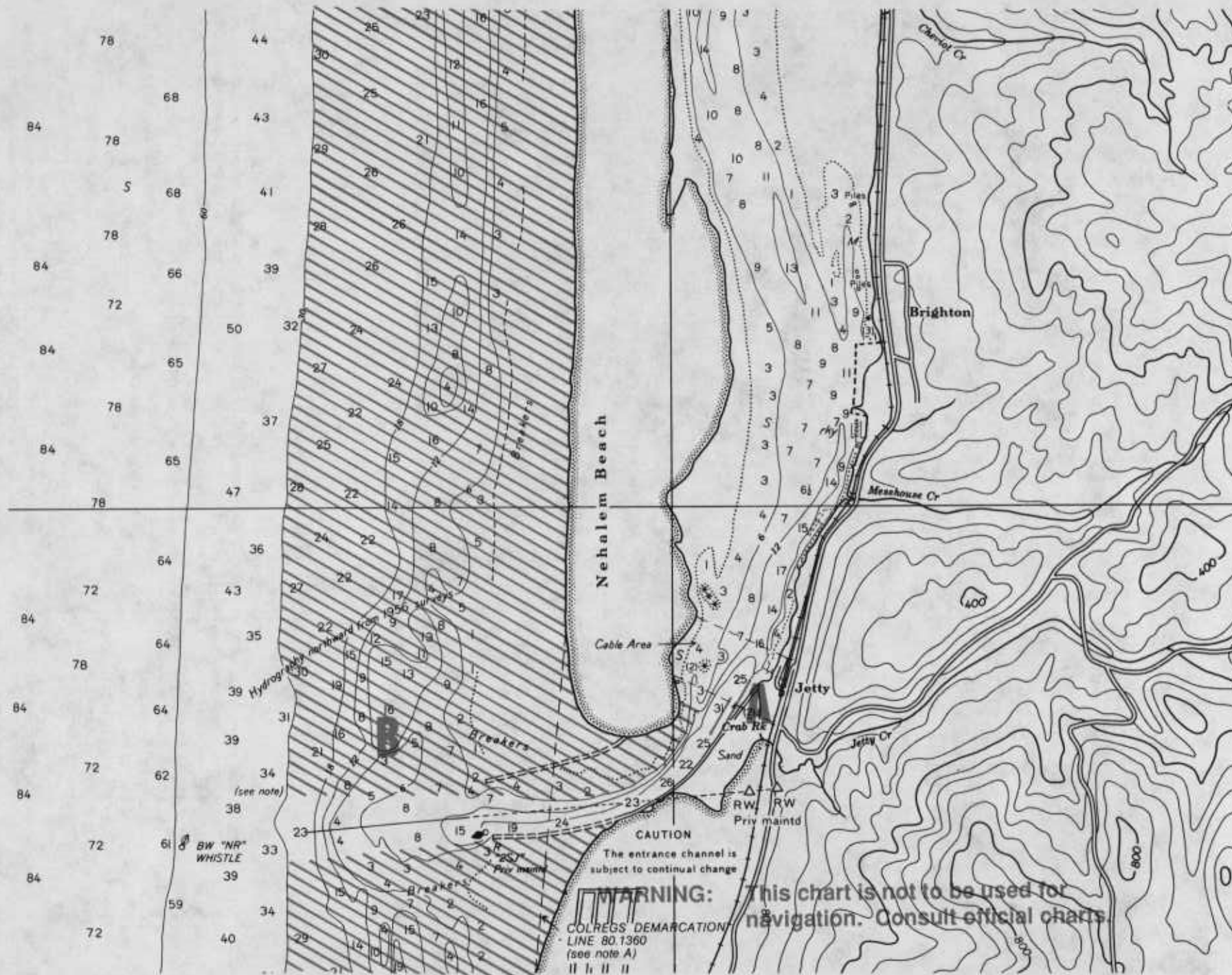




PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, JULY 1984.

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 current. The water runs out from 4 to 6 knots on the average and is 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. 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

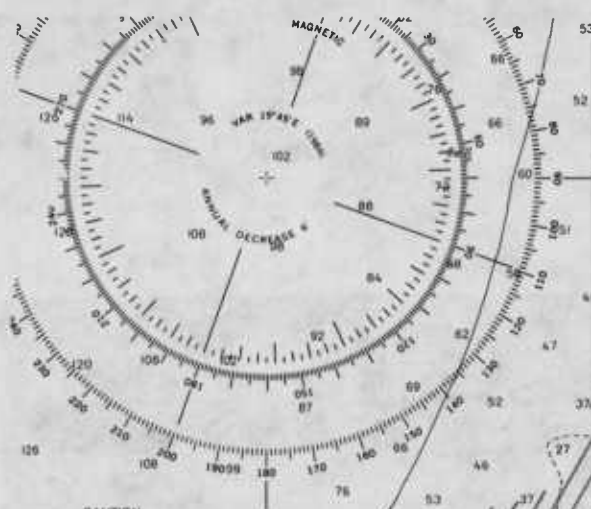
on channel conditions from the Coast Guard or other authoritative local sources. Do not rely on the range markers without first inquiring whether they mark the present channel location.

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.



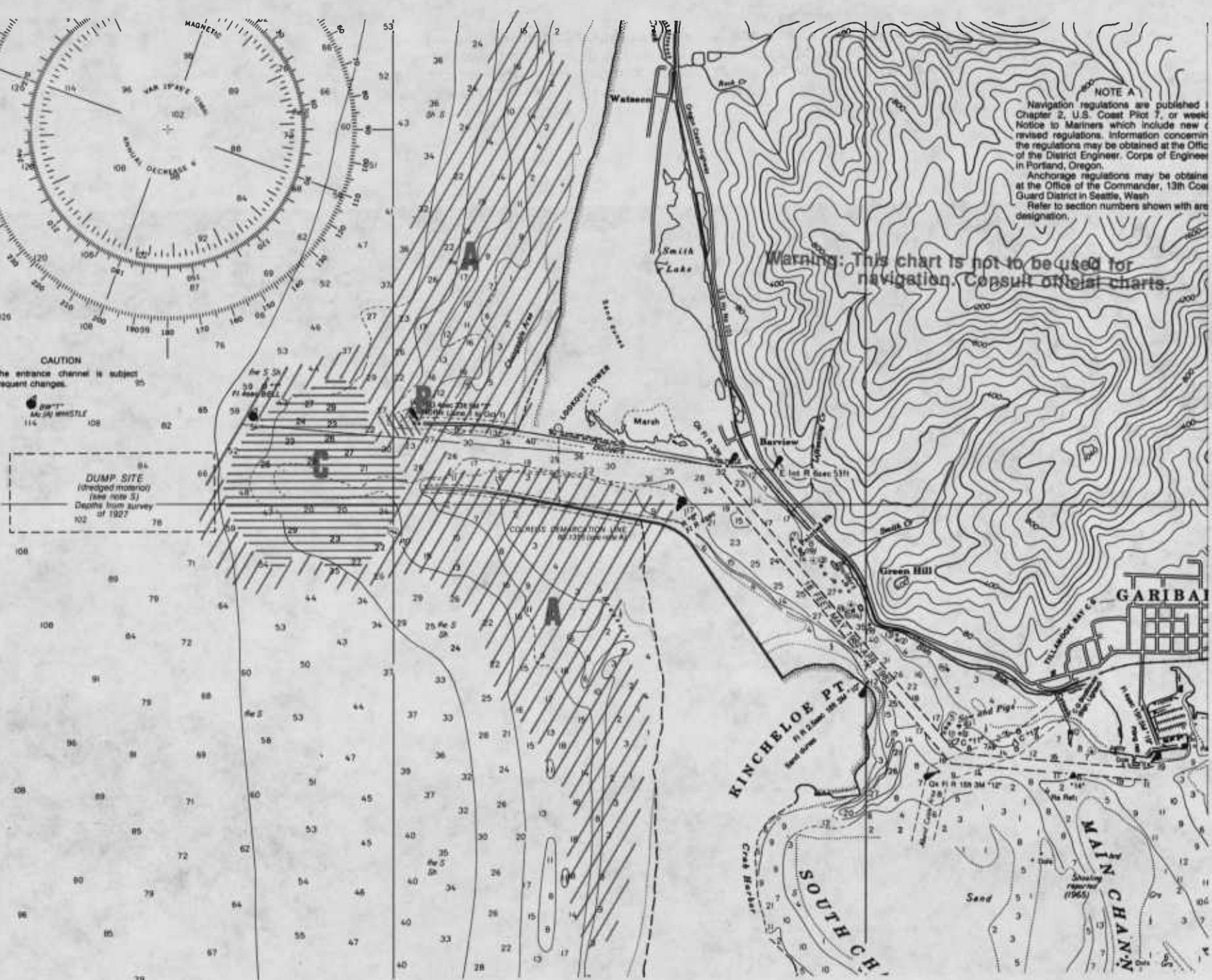
CAUTION
The entrance channel is subject to frequent changes.

09° 11' M
114
108

DUMP SITE
(shredded material)
(see note 3)
Depths from survey of 1927

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7, or weekly Notice to Mariners which include new or revised regulations. Information concerning the regulations may be obtained at the Office of the District Engineer, Corps of Engineers in Portland, Oregon.
Anchorage regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Wash.
Refer to section numbers shown with are designation.

Warning: This chart is not to be used for navigation. Consult official charts.





Netarts Bay

Netarts Bay is shallow with numerous sand bars 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 sport fishing and crabbing inside the bay. Boats fishing inside the bay should exercise caution on the ebb tide when near the bar, as the strong current can pull a small boat out over the bar and into the surf.

NETARTS BAY

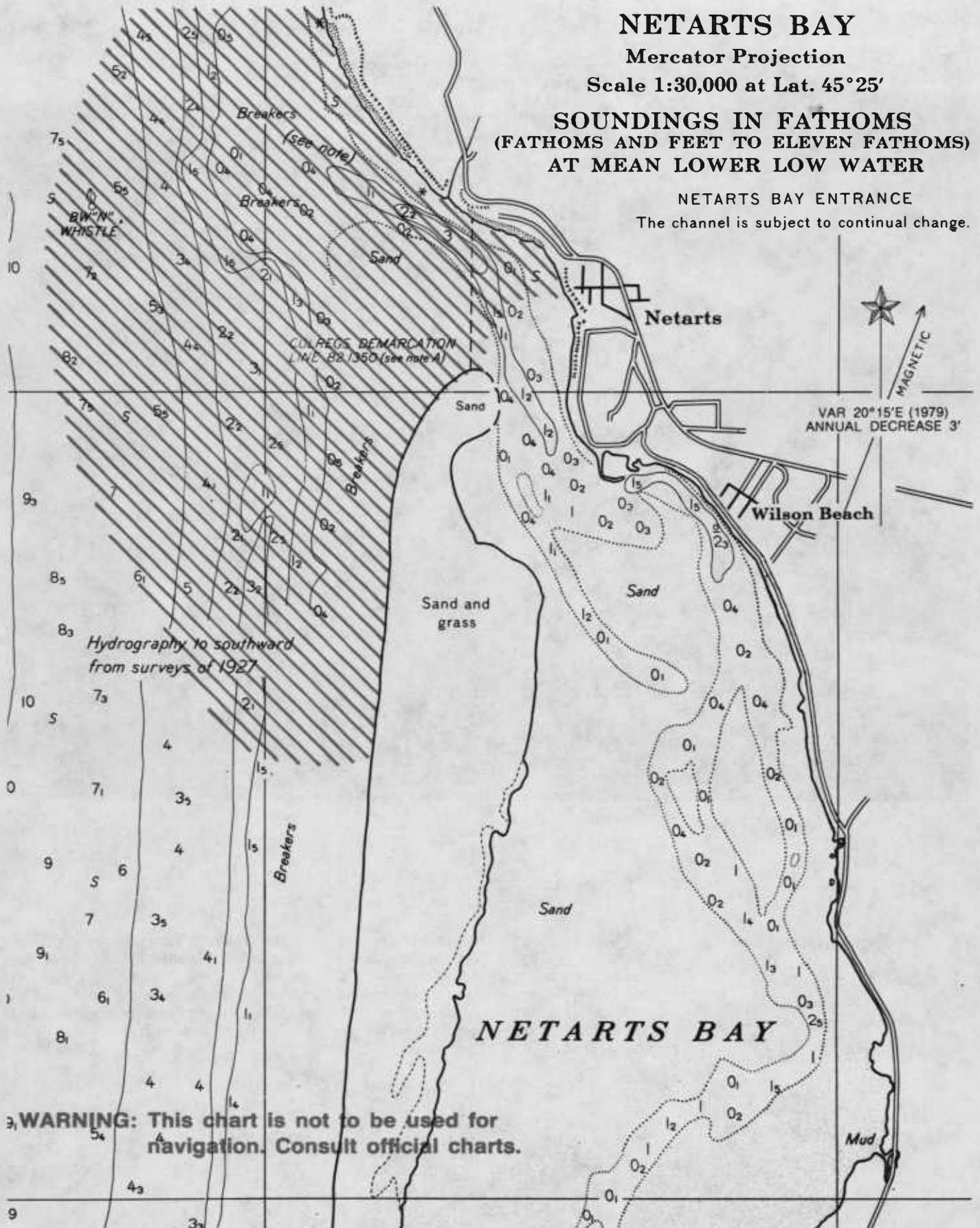
Mercator Projection

Scale 1:30,000 at Lat. 45°25'

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER

NETARTS BAY ENTRANCE

The channel is subject to continual change.





Cape Kiwanda

One of the great attractions at Cape Kiwanda is dory fishing, with the dories being launched and landed through the surf. Dory fishermen report that spectators can create a serious problem, as they crowd around on the beach to watch the dories land.

Spectators, for their own protection, are requested to allow the dories considerable amount of room for landing, as the surf moves the dories up on the beach, and it is at this point that dorymen have very little control over their craft.



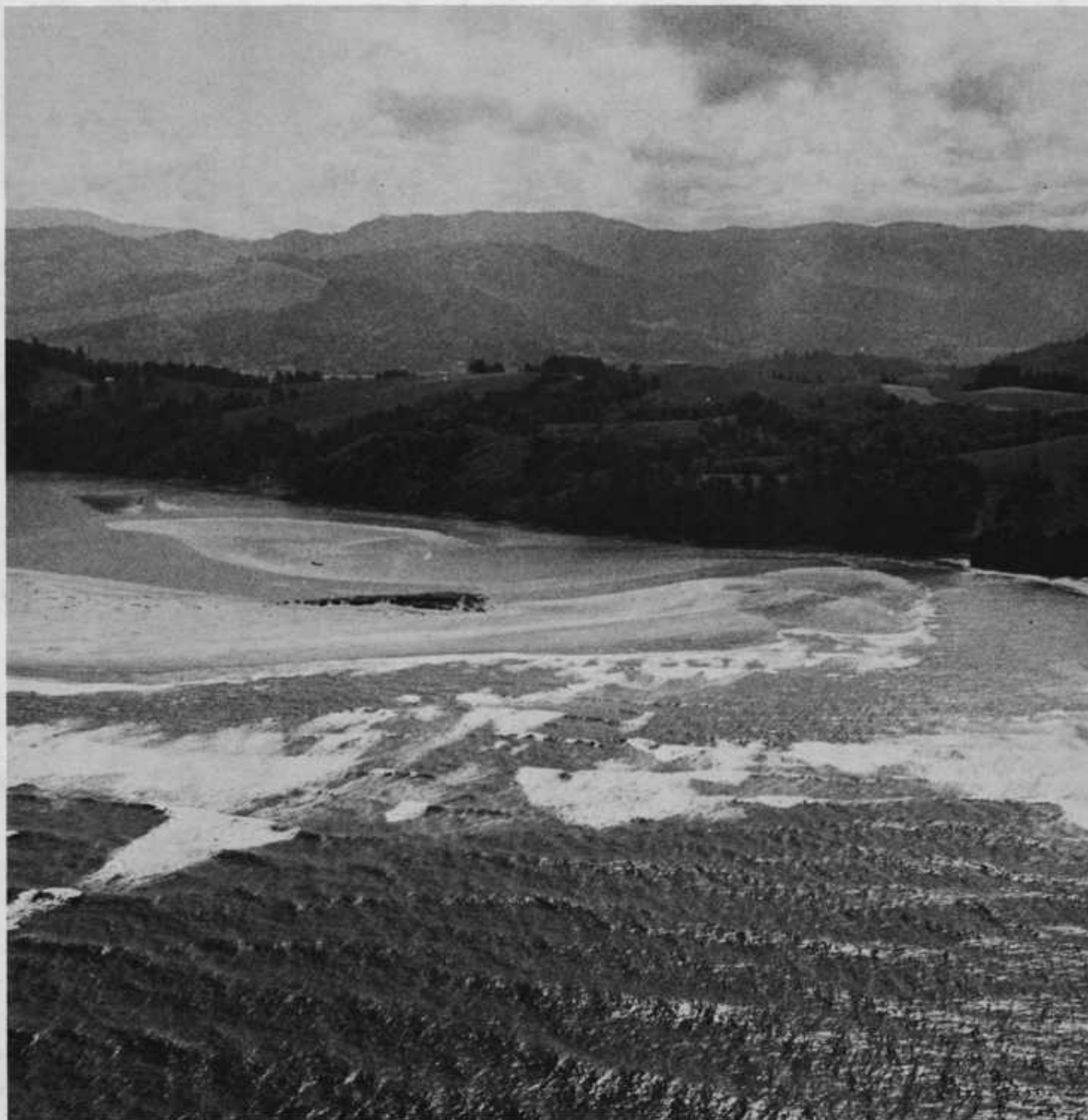
NECANICUM RIVER

Dangerous—not suitable for bar crossings.



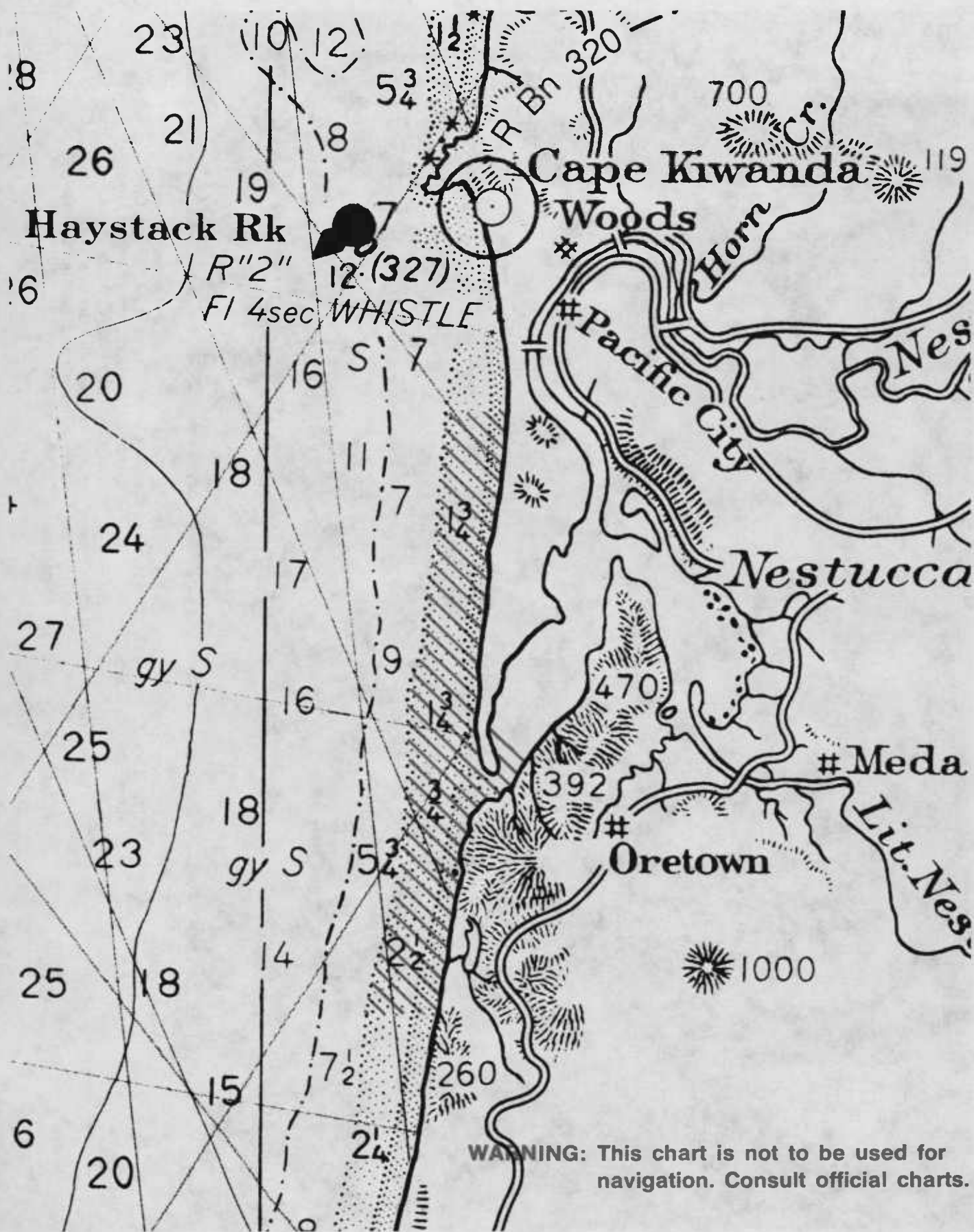
SALMON RIVER

Dangerous—not suitable for bar crossings.



Nestucca Bay

Entrance to Nestucca Bay is used rather infrequently because of the continual shifting of sand bars and shoaling. To the north of the entrance is Cape Kiwanda, giving protection from northwesterly winds, which are predominant during the summer months.





Siletz Bay

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 ocean.

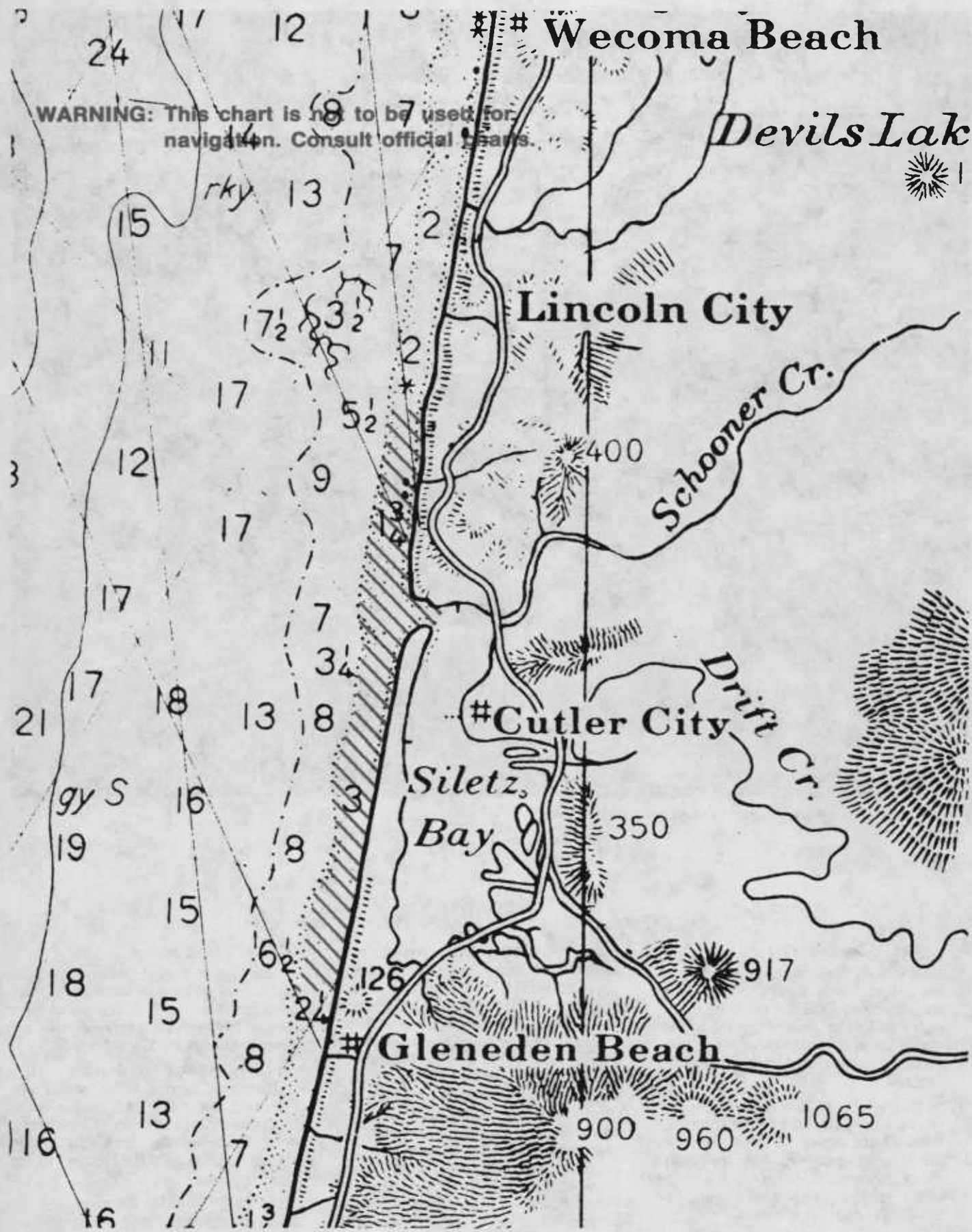




PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, SUMMER 1986.

Depoe Bay

Danger Areas

- A. **North Reef.** Once a boat has cleared the entrance, any waters to the north are hazardous until the red gong 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 in this area. Boats coming from the south should never use this area as a short cut to the channel. This area should be avoided by boats at all times.
- C. **Channel from red bell buoy in (approx-**

imately 1000 yards). The passage into and out of Depoe Bay is unusually short and difficult. The Coast Guard recommends studying it before attempting to operate a boat in it. Because the North and South Reefs are so close to the channel, this area sometimes becomes very hazardous. During adverse conditions, breakers from the North Reef will cross the channel and run into the entrance. When this condition exists, it is better to stand by at the entrance buoy until the Coast Guard advises it is safe to enter, or is there to escort boats in. An important rule at Depoe Bay: Never fish between the entrance and the red gong 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.

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 bar crossing restrictions.

Bar Condition Reports

Recorded weather and bar condition reports: 765-2122.

DEPOE BAY

Scale 1:10,000

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER

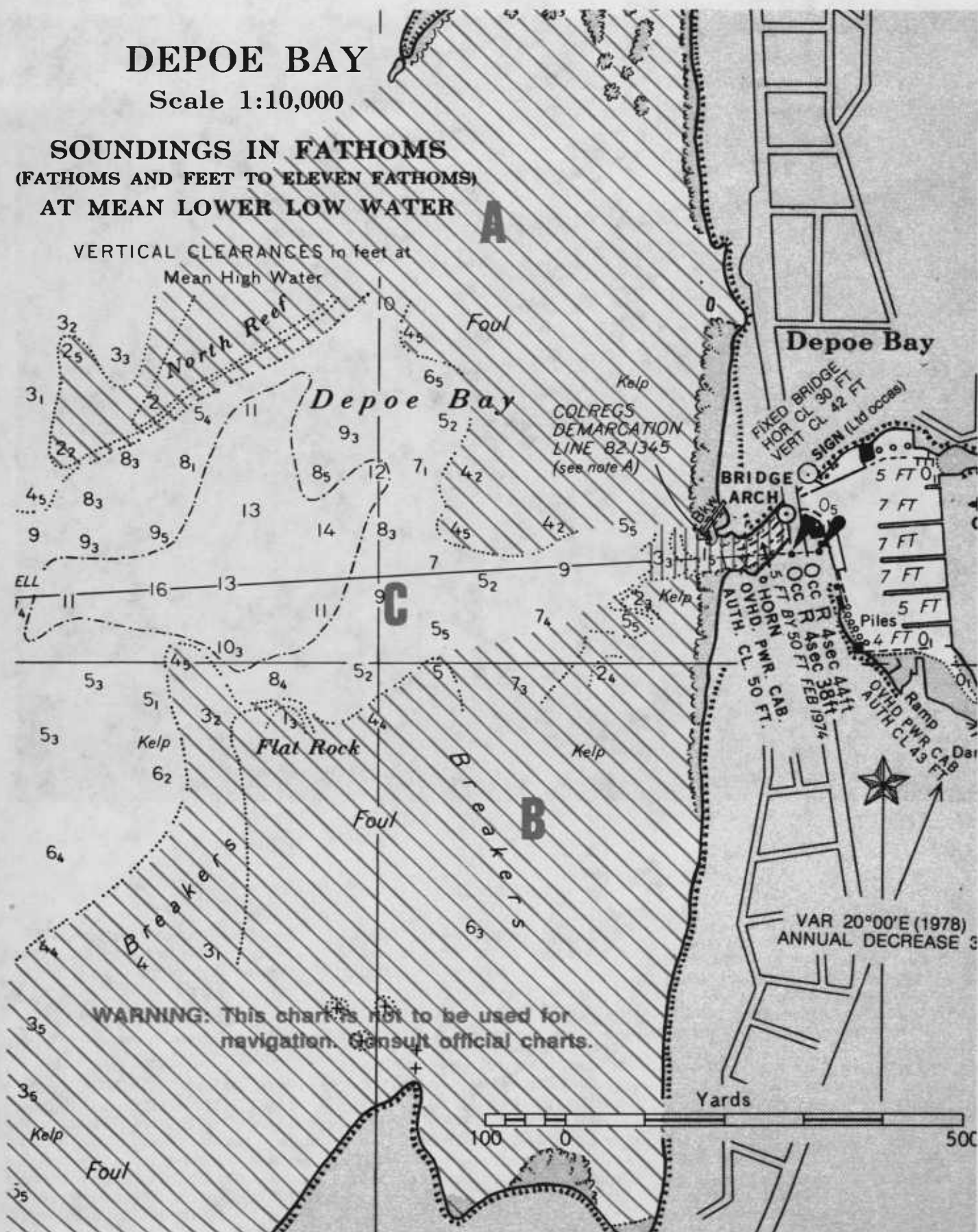




PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, SUMMER 1986.

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 should fail, they will have time to anchor before the current or wind sweeps them onto the rocks.
- B. **North jetty.** This jetty affords excellent protection from northerly winds. However, the same caution should be exercised in running close to it as with the south jetty. 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 always extremely dangerous, even when the winds are light and few breakers are seen. A large swell coming from seaward can cause a tremendous breaker on this reef with little or no warning,

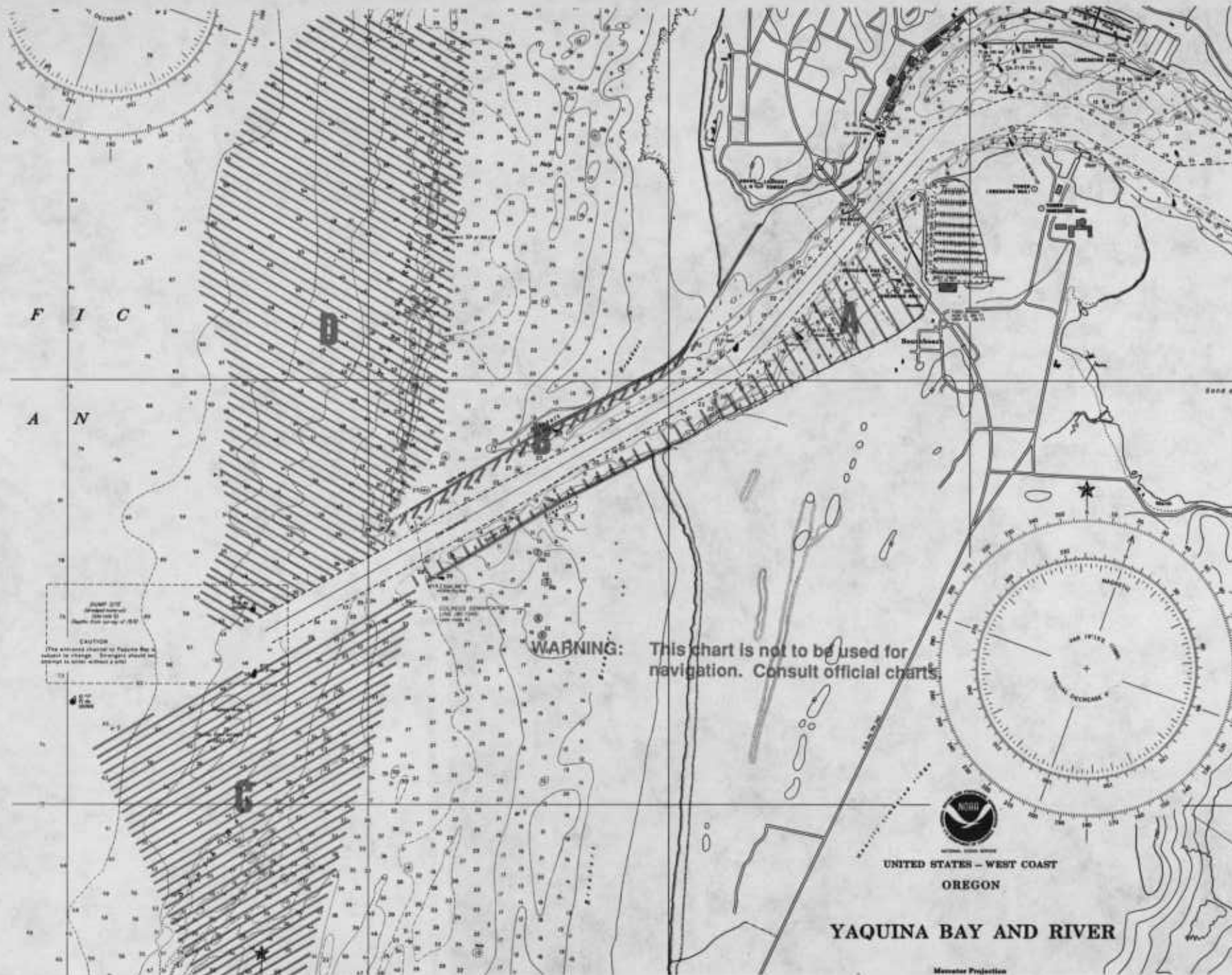
even when the sea is otherwise calm. Never fish close to the reef, and do not turn north between the end of the north jetty and buoy #3.

Rough Bar Advisory Sign

Positioned on shore, west end of Coast Guard pier.

Bar Condition Reports

KNPT (1310 kHz): **summer**, three times daily and at Coast Guard request; **winter**, twice daily and at Coast Guard request. Recorded weather and bar conditions reports: 265-5511. When the Coast Guard closes the bar, the closure applies to the area from the bridge west to the whistler buoy.



YAQUINA BAY AND RIVER

UNITED STATES - WEST COAST
OREGON



Monometer Projection



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

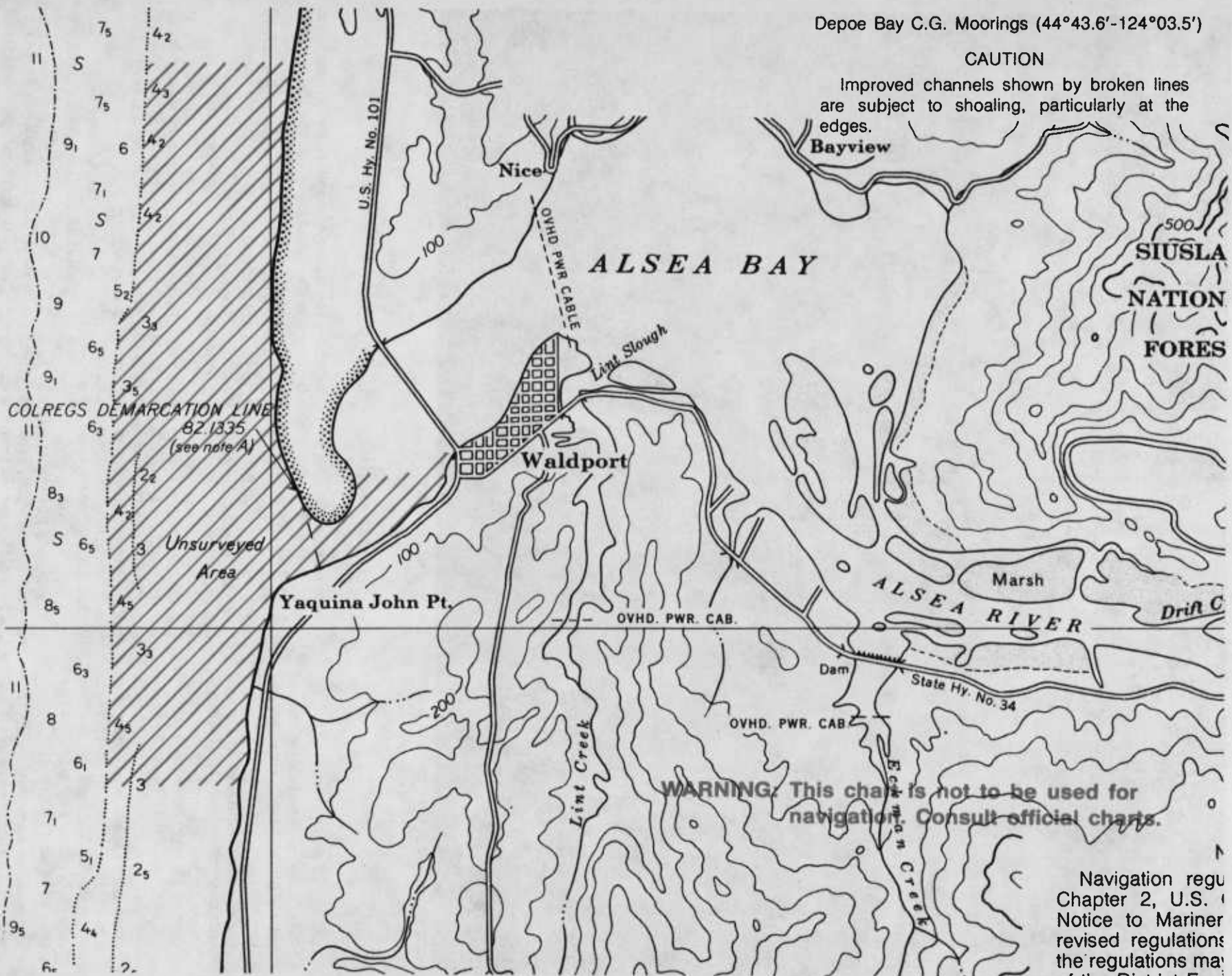
Alsea Bay

There are no jetties at Alsea Bay. With the bar shifting frequently, the entrance is not stable.

Depoe Bay C.G. Moorings (44°43.6'-124°03.5')

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.



WARNING. This chart is not to be used for navigation. Consult official charts.

Navigation regulations Chapter 2, U.S. Notice to Mariner revised regulations the regulations may of the District Court



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

Siuslaw River

Danger Areas

- A. Shoal water, northeast side of channel, has a depth of 2½ to 3 feet of water at high tide.
- B. Shoal water, south side of channel, extends from the lighted #8 buoy, well inside the bar, all the way out to just short of the spur. Breakers in this area are common, even with a small swell running.
- C. Outer end of south jetty. Breakers are almost always present in this area. When the seas are from the southwest or west, breakers may extend out past the whistle buoy.
- D. Outer end of north jetty. Swells break over and just inside the north jetty when the seas are running 3-5 feet,

especially on ebb tide. When the seas exceed 6-8 feet, the breakers may extend all the way out to the gong buoy.

Channel

Siuslaw River channel lies along the northern half of the river entrance. Water depth ranges from 6 to 20 feet. When crossing the entrance, boaters should stay near the south jetty until clear of rough water. 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.

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 Coast Guard tower, facing 150° True.

Weather and Bar Condition Reports

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



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

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 long pier on the east side of the channel. The North Spit has small breakers when a swell is running, and gets rougher as one proceeds along the north jetty. The North Spit is very dangerous because large breakers may come into this area from the Middle Ground. The North Spit meets the Middle Ground at the outer end of the training jetty. The Middle Ground area extends from the north jetty to the black bell buoy. This area is dangerous because a little swell can create large breakers which may capsize a vessel.

Boaters should not linger near the mouth of the river during ebb tide, for 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 area north of the north and south of the south jetty can be very dangerous. Whenever breakers are observed, boaters should avoid this area.
- C. Leaving Salmon Harbor.** When leaving Salmon Harbor, boaters should remain in the main channel until clear of the end of the sea wall, which extends out to #2 fog signal and light.
- D. Training jetty.** Refraction waves are often encountered in this area, creating

extreme choppy conditions.

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 271-4244.



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

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. This area can be crossed by small craft at high water. 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.** Proceeding out from the Charleston Boat Basin in the South Slough Channel, when you are directly between South Slough light #2 and can buoy #3, directly ahead will be South Slough light #1, which marks the end of the submerged jetty. This jetty is visible only at low water. When departing the Charleston Boat Basin, stay to the left of light #1 at all times.
- C. **Sand Spit, North Beach.** This area is dangerous because of shoal waters and submerged jetties. Occasionally, on a strong ebb, there will be breakers in this area. Avoid this area because of the

possibility of going aground or striking submerged jetties and pilings. Note, too, that inbound and outbound tugs with tows, freighters, etc., 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. Breaks are frequently experienced from Coos Bay 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 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.

- G. **Dump sites.** North and South sites should be avoided during periods of heavy swell, especially in winter.

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.





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

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 onto 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 set a powerless boat onto the jetty.
- B. North jetty.** Stay 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).

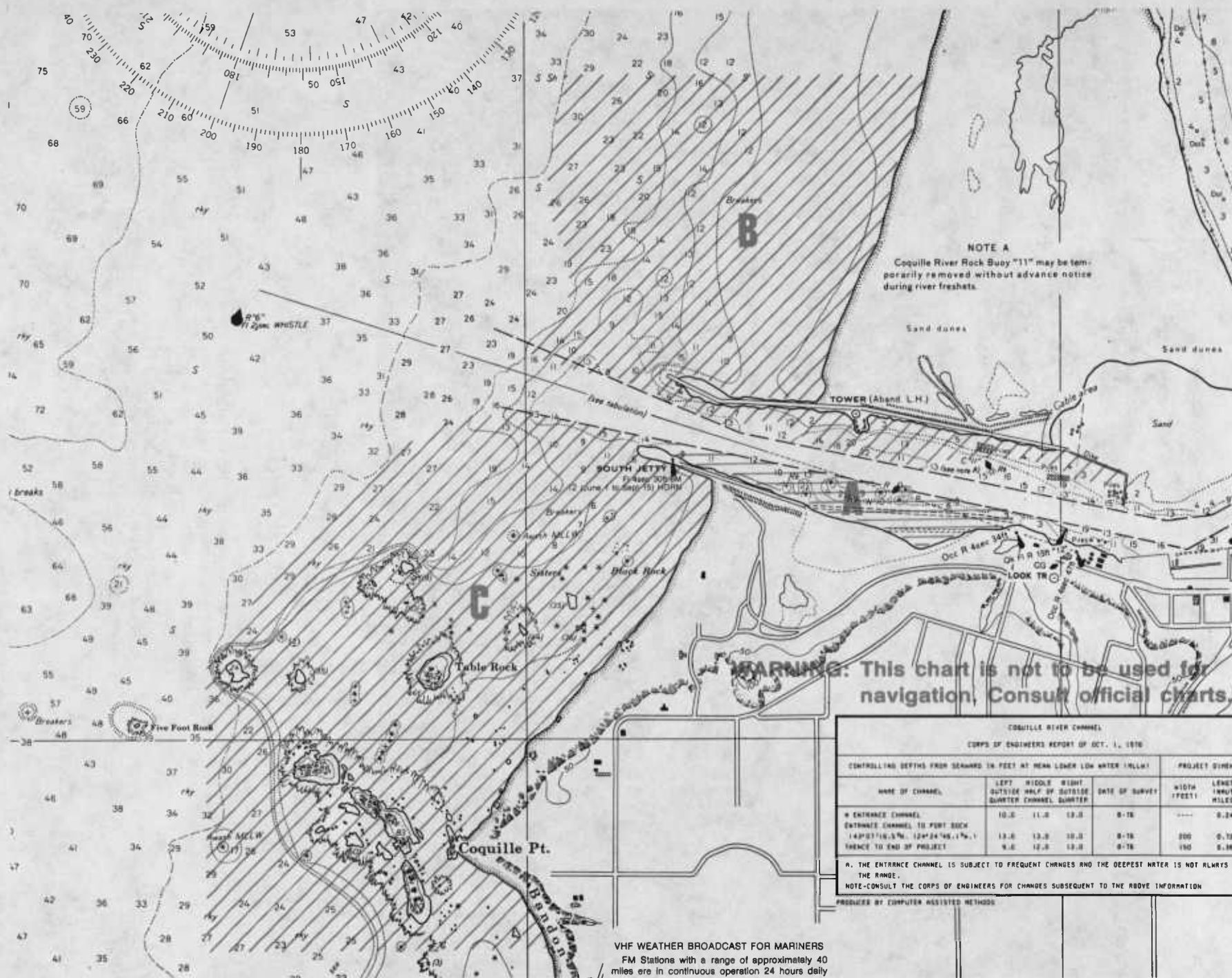




PHOTO COURTESY U.S. ARMY CORPS OF ENGINEERS, SUMMER 1986.

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.





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

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 6 feet when a swell is running. Many boaters fishing inside the river, trolling between the jetties, find themselves set into this dangerous area by northwest winds. If a vessel breaks down in the channel and is not anchored, the northwest wind and ebb tide will set it into this dangerous area in a matter of a few minutes.
- B. **Outer end, north jetty.** Breakers are almost always present in this area 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 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.

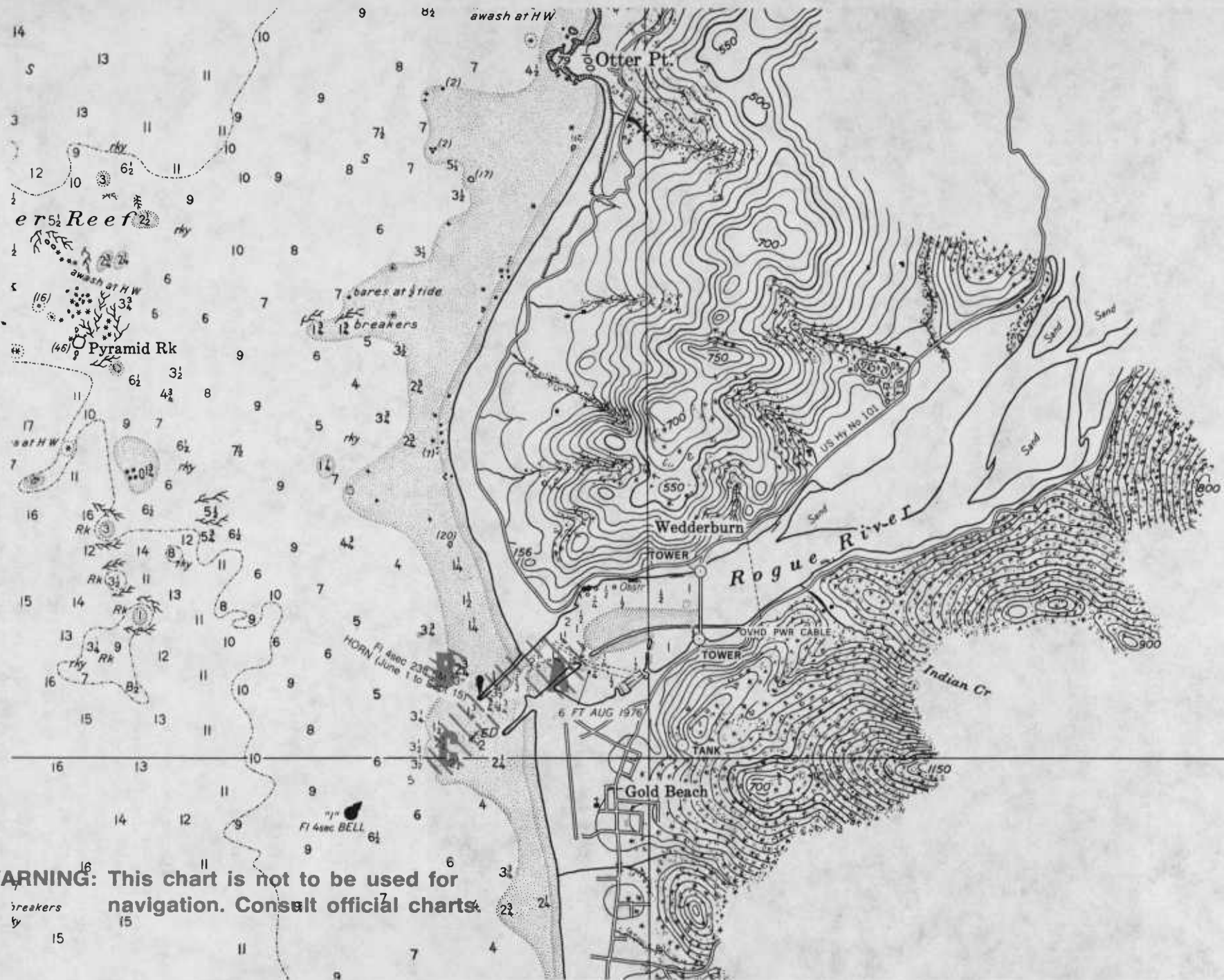
Channel

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.



WARNING: This chart is not to be used for navigation. Consult official charts.



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

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 to be navigable but is extremely dangerous. This area is to be avoided 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 white vertical stripe mounted on a skeleton tower. By steering a course that keeps the two range

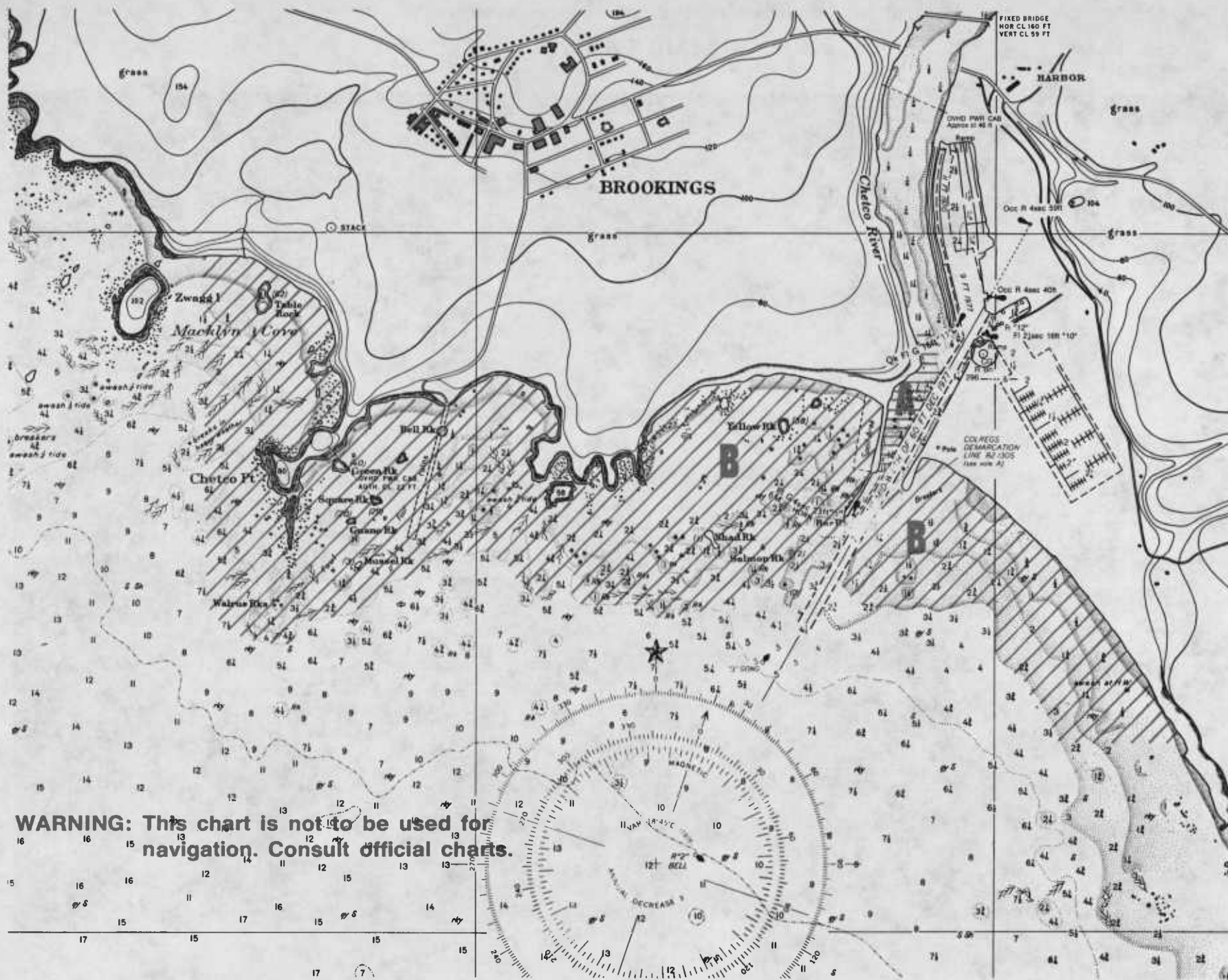
markers in line, you will remain within the channel.

Rough Bar Advisory Sign

Positioned on Coast Guard fuel dock; faces NNW.

Bar Condition Reports

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





WINCHUCK RIVER

Dangerous—not suitable for bar crossings.



Extension Service, Oregon State University, Corvallis, O. E. Smith, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.

The Extension/Sea Grant program is supported in part by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Oregon State University Extension Service offers educational programs, activities, and materials without regard to race, color, national origin, sex, or disability as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.