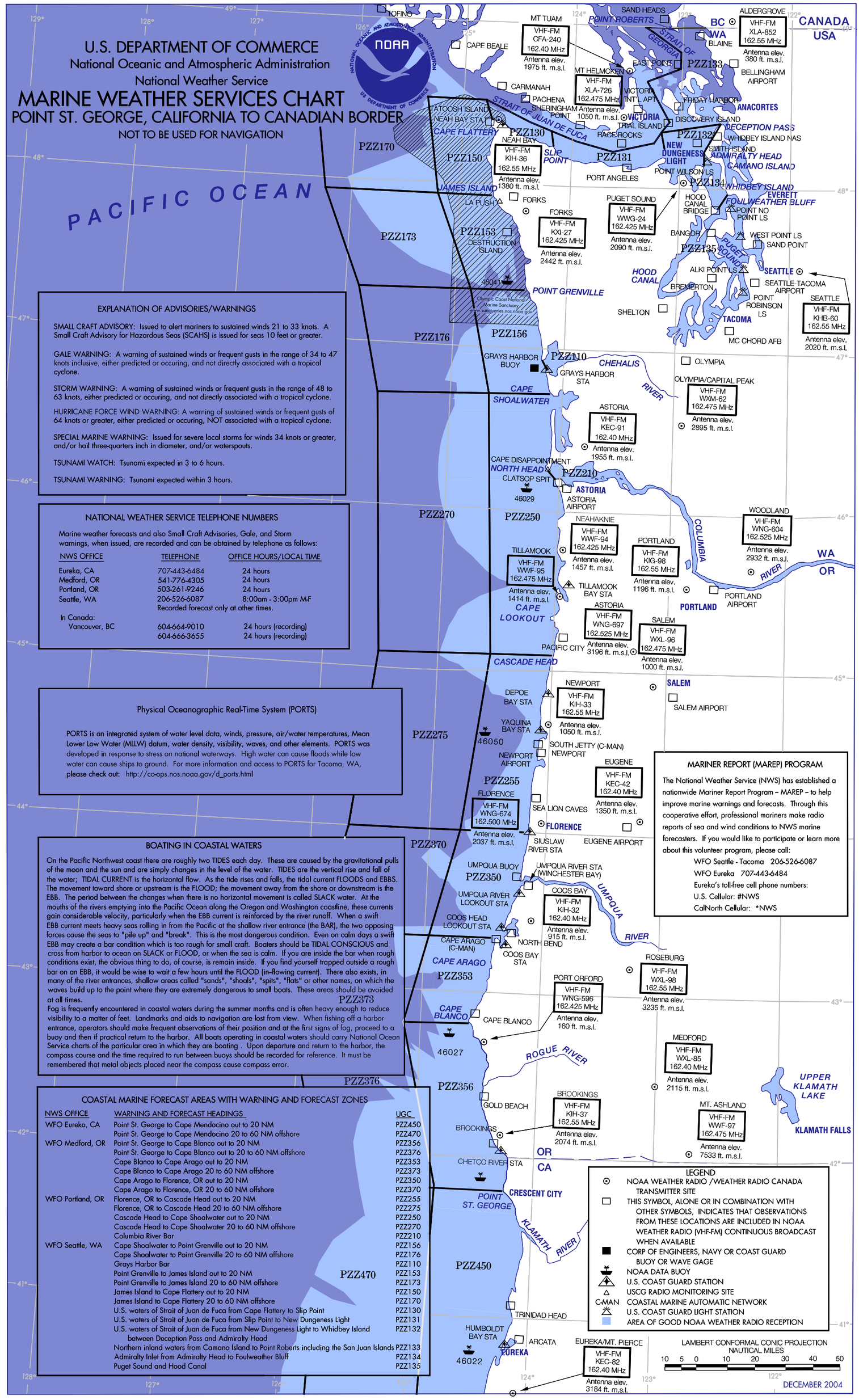
MSC-10—POINT ST. GEORGE, CA TO CANADIAN BORDER

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

MARINE WEATHER SERVICES CHART
POINT ST. GEORGE, CALIFORNIA TO CANADIAN BORDER

NOT TO BE USED FOR NAVIGATION



EXPLANATION OF ADVISORIES/WARNINGS

SMALL CRAFT ADVISORY: Issued to alert mariners to sustained winds 21 to 33 knots. A Small Craft Advisory for Hazardous Seas (SCAHS) is issued for seas 10 feet or greater.

GALE WARNING: A warning of sustained winds or frequent gusts in the range of 34 to 47 knots inclusive, either predicted or occuring, and not directly associated with a tropical cyclone.

STORM WARNING: A warning of sustained winds or frequent gusts in the range of 48 to 63 knots, either predicted or occuring, and not directly associated with a tropical cyclone.

HURRICANE FORCE WIND WARNING: A warning of sustained winds or frequent gusts of 64 knots or greater, either predicted or occuring, NOT associated with a tropical cyclone.

SPECIAL MARINE WARNING: Issued for severe local storms for winds 34 knots or greater, and/or hail three-quarters inch in diameter, and/or waterspouts.

TSUNAMI WATCH: Tsunami expected in 3 to 6 hours.

TSUNAMI WARNING: Tsunami expected within 3 hours.

NATIONAL WEATHER SERVICE TELEPHONE NUMBERS

Marine weather forecasts and also Small Craft Advisories, Gale, and Storm warnings, when issued, are recorded and can be obtained by telephone as follows:

NWS OFFICE	TELEPHONE	OFFICE HOURS/LOCAL TIME
Eureka, CA	707-443-6484	24 hours
Medford, OR	541-776-4305	24 hours
Portland, OR	503-261-9246	24 hours
Seattle, WA	206-526-6087	8:00am - 3:00pm M-F
	Recorded forecast only at other times.	
In Canada:		
Vancouver, BC	604-664-9010	24 hours (recording)
	604-666-3655	24 hours (recording)

Physical Oceanographic Real-Time System (PORTS)

PORTS is an integrated system of water level data, winds, pressure, air/water temperatures, Mean Lower Low Water (MLLW) datum, water density, visibility, waves, and other elements. PORTS was developed in response to stress on national waterways. High water can cause floods while low water can cause ships to ground. For more information and access to PORTS for Tacoma, WA, please check out: http://co-ops.nos.noaa.gov/d_ports.html

BOATING IN COASTAL WATERS

On the Pacific Northwest coast there are roughly two TIDES each day. These are caused by the gravitational pulls of the moon and the sun and are simply changes in the level of the water. TIDES are the vertical rise and fall of the water; TIDAL CURRENT is the horizontal flow. As the tide rises and falls, the tidal current FLOODS and EBBS. The movement toward shore or upstream is the FLOOD; the movement away from the shore or downstream is the EBB. The period between the changes when there is no horizontal movement is called SLACK water. At the mouths of the rivers emptying into the Pacific Ocean along the Oregon and Washington coastline, these currents gain considerable velocity, particularly when the EBB current is reinforced by the river runoff. When a swift EBB current meets heavy seas rolling in from the Pacific at the shallow river entrance (the BAR), the two opposing forces cause the seas to "pile up" and "break". This is the most dangerous condition. Even on calm days a swift EBB may create a bar condition which is too rough for small craft. Boaters should be TIDAL CONSCIOUS and cross from harbor to ocean on SLACK or FLOOD, or when the sea is calm. If you are inside the bar when rough conditions exist, the obvious thing to do, of course, is remain inside. If you find yourself trapped outside a rough bar on an EBB, it would be wise to wait a few hours until the FLOOD (in-flowing current). There also exists, in many of the river entrances, shallow areas called "sands", "shoals", "spits", "flats" or other names, on which the waves build up to the point where they are extremely dangerous to small boats. These areas should be avoided at all times.

Fog is frequently encountered in coastal waters during the summer months and is often heavy enough to reduce visibility to a matter of feet. Landmarks and aids to navigation are lost from view. When fishing off a harbor entrance, operators should make frequent observations of their position and at the first signs of fog, proceed to a buoy and then if practical return to the harbor. All boats operating in coastal waters should carry National Ocean Service charts of the particular area in which they are boating . Upon departure and return to the harbor, the compass course and the time required to run between buoys should be recorded for reference. It must be remembered that metal objects placed near the compass cause compass error.

MARINER REPORT (MAREP) PROGRAM

The National Weather Service (NWS) has established a nationwide Mariner Report Program – MAREP – to help improve marine warnings and forecasts. Through this cooperative effort, professional mariners make radio reports of sea and wind conditions to NWS marine forecasters. If you would like to participate or learn more about this volunteer program, please call:

WFO Seattle - Tacoma 206-526-6087
WFO Eureka 707-443-6484
Eureka's toll-free cell phone numbers:
U.S. Cellular: #NWS
CalNorth Cellular: *NWS

COASTAL MARINE FORECAST AREAS WITH WARNING AND FORECAST ZONES

NWS OFFICE	WARNING AND FORECAST HEADINGS	UGC
WFO Eureka, CA	Point St. George to Cape Mendocino out to 20 NM	PZZ450
	Point St. George to Cape Mendocino 20 to 60 NM offshore	PZZ470
WFO Medford, OR	Point St. George to Cape Blanco out to 20 NM	PZZ356
	Point St. George to Cape Blanco out to 20 to 60 NM offshore	PZZ376
	Cape Blanco to Cape Arago out to 20 NM	PZZ353
	Cape Blanco to Cape Arago 20 to 60 NM offshore	PZZ373
	Cape Arago to Florence, OR out to 20 NM	PZZ350
	Cape Arago to Florence, OR 20 to 60 NM offshore	PZZ370
WFO Portland, OR	Florence, OR to Cascade Head out to 20 NM	PZZ255
	Florence, OR to Cascade Head 20 to 60 NM offshore	PZZ275
	Cascade Head to Cape Shoalwater out to 20 NM	PZZ250
	Cascade Head to Cape Shoalwater 20 to 60 NM offshore	PZZ270
	Columbia River Bar	PZZ210
WFO Seattle, WA	Cape Shoalwater to Point Grenville out to 20 NM	PZZ156
	Cape Shoalwater to Point Grenville 20 to 60 NM offshore	PZZ176
	Grays Harbor Bar	PZZ110
	Point Grenville to James Island out to 20 NM	PZZ153
	Point Grenville to James Island 20 to 60 NM offshore	PZZ173
	James Island to Cape Flattery out to 20 NM	PZZ150
	James Island to Cape Flattery 20 to 60 NM offshore	PZZ170
	U.S. waters of Strait of Juan de Fuca from Cape Flattery to Slip Point	PZZ130
	U.S. waters of Strait of Juan de Fuca from Slip Point to New Dungeness Light	PZZ131
	U.S. waters of Strait of Juan de Fuca from New Dungeness Light to Whidbey Island between Deception Pass and Admiralty Head	PZZ132
	Northern inland waters from Camano Island to Point Roberts including the San Juan Islands	PZZ133
	Admiralty Inlet from Admiralty Head to Foulweather Bluff	PZZ134
	Puget Sound and Hood Canal	PZZ135

LEGEND

- NOAA WEATHER RADIO /WEATHER RADIO CANADA TRANSMITTER SITE
- THIS SYMBOL, ALONE OR IN COMBINATION WITH OTHER SYMBOLS, INDICATES THAT OBSERVATIONS FROM THESE LOCATIONS ARE INCLUDED IN NOAA WEATHER RADIO (VHF-FM) CONTINUOUS BROADCAST WHEN AVAILABLE
- CORP OF ENGINEERS, NAVY OR COAST GUARD BUOY OR WAVE GAGE
- NOAA DATA BUOY
- U.S. COAST GUARD STATION
- USCG RADIO MONITORING SITE
- C-MAN COASTAL MARINE AUTOMATIC NETWORK
- U.S. COAST GUARD LIGHT STATION
- AREA OF GOOD NOAA WEATHER RADIO RECEPTION

LAMBERT CONFORMAL CONIC PROJECTION
NAUTICAL MILES
10 5 0 10 20 30 40 50

DECEMBER 2004

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USCOMM-NOAA-DC-A5741
NOAA-PA-200463

DISCREPANCY REPORTS SOLICITED
Reports of discrepancies in this chart and any other comments are appreciated and will be used in preparing the next edition.

Email to: marine.weather@noaa.gov

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NOAA WEATHER RADIO BROADCASTS

CITY	STATION	FREQUENCY	BROADCAST TIMES
Eureka/Mt. Pierce, CA	KEC-82	162.40 MHz	Continuously
Astoria, OR	KEC-91	162.40 MHz	Continuously
Astoria, OR	WNG-697	162.525 MHz	Continuously
Brookings, OR	KIH-37	162.55 MHz	Continuously
Coos Bay, OR	KIH-32	162.40 MHz	Continuously
Eugene, OR	KEC-42	162.40 MHz	Continuously
Florence, OR	WNG-674	162.500 MHz	Continuously
Medford, OR	WXL-85	162.40 MHz	Continuously
Mt. Ashland, OR	WWF-97	162.475 MHz	Continuously
Neahaknie, OR	WWF-94	162.425 MHz	Continuously
Newport, OR	KIH-33	162.55 MHz	Continuously
Portland, OR	KIG-98	162.55 MHz	Continuously
Port Orford, OR	WNG-596	162.425 MHz	Continuously
Roseburg, OR	WXL-98	162.55 MHz	Continuously
Salem, OR	WXL-96	162.475 MHz	Continuously
Tillamook, OR	WWF-95	162.475 MHz	Continuously
Forks, WA	KXI-27	162.425 MHz	Continuously
Neah Bay, WA	KIH-36	162.55 MHz	Continuously
Olympia/Capitol Peak, WA	WXM-62	162.475 MHz	Continuously
Puget Sound, WA	WWG-24	162.425 MHz	Continuously
Seattle, WA	KHB-60	162.55 MHz	Continuously
Woodland, WA	WNG-604	162.525 MHz	Continuously

These VHF-FM radio stations, locations shown on the map, are operated by the National Weather Service. This is a continuous broadcast, 24 hours a day. Broadcasts are updated every 3 to 6 hours and amended as required. In addition to state and local public forecasts, weather and wave observations from shore stations, buoys, and gages, the following marine information is included:

1. Marine forecasts and warnings for coastal waters (out to 60 miles), including Strait of Juan de Fuca and the inland waters of western Washington, and Grays Harbor and Columbia River Bar forecasts.
2. Offshore waters forecast (60-250 miles offshore) from Cape Flattery, WA to Point Conception, CA.
3. State forecasts and local public forecasts.
4. Selected weather observations from Coast Guard, buoys, and other stations in western Oregon, western Washington, northern California, and southwestern British Columbia.

Whenever severe weather warnings are necessary, the broadcasts will be updated and the transmission devoted to "up-to-the-minute" information on storm dangers.

HIGH SEAS RADIOTELEPHONE WEATHER BROADCASTS FOR NORTH PACIFIC

CITY	STATION	FREQUENCY (kHz)	BROADCAST TIMES/UTC
Point Reyes, CA	NMC (USCG)	4426.0 (A3J)	0430, 1030
		8764.0 (A3J)	0430, 1030, 1630, 2230
		13089.0 (A3J)	0430, 1030, 1630, 2230
		17314.0 (A3J)	1630, 2230

Transmission mode: Single Sideband, suppressed carrier

HIGH SEAS RADIOTELEX (SITOR) WEATHER BROADCASTS FOR NORTH PACIFIC

CITY	STATION	FREQUENCY (kHz)	BROADCAST TIMES/UTC
Point Reyes, CA	NMC (USCG)	8416.5	0000, 1800
		16806.5	0000, 1800

OTHER MARINE WEATHER SERVICES CHARTS AVAILABLE

MSC-1	Eastport, ME to Montauk Point, NY	MSC-8	Mexican Border to Point Conception, CA
MSC-2	Montauk Point, NY to Manasquan, NJ	MSC-9	Point Conception, CA to Point St. George, CA
MSC-3	Manasquan, NJ to Cape Hatteras, NC	MSC-10	Point St. George, CA to Canadian Border
MSC-4	Cape Hatteras, NC to Savannah, GA	MSC-11/12	Great Lakes
MSC-5	Savannah, GA to Apalachicola, FL	MSC-13	Hawaiian Waters
MSC-6	Apalachicola, FL to Morgan City, LA	MSC-14	Puerto Rico and Virgin Islands
MSC-7	Morgan City, LA to Brownsville, TX	MSC-15	Alaskan Waters
		MSC-16	Guam and the Northern Mariana Islands

These charts are also posted at: http://www.nws.noaa.gov/om/marine/pub.htm

Copies of these charts are available from:
FAA/National Aeronautical Charting Office
Distrubition Division, AVN-530
6303 Ivy Lane, suite 400
Greenbelt, MD 20770
(301) 436-8301
(800) 638-8972 toll free, U.S. only
(301)436-6829 FAX
Email: 9-AMC-chartsales@faa.gov
http://chartmaker.ncd.noaa.gov
or your local chart agent: http://chartmaker.ncd.noaa.gov/nsd/states.html

Nautical charts for navigating these coastal areas are available from local marinas, marine supply stores, and the above address.

NOAA Weather Radio (NWR), Specific Area Message Encoder (SAME), and NWR Coverage

NOAA Weather Radio broadcasts on 162.40, 162.425, 162.45, 162.475, 162.50, 162.525 and 162.55 MHz can usually be received 20-40 miles from the transmitting antenna site, depending on terrain and the quality of the receiver used. Where transmitting antennas are on high ground, the range is somewhat greater, reaching 60 miles or more. The VHF-FM frequencies used for these broadcasts require narrow-band FM receivers. The National Weather Service recommends receivers having a sensitivity of one microvolt or less for a quieting factor of 20 decibels.

Some receivers are equipped with a warning alarm device that can be turned on by means of a tone signal controlled by the National Weather Service office concerned. This signal is transmitted for 13 seconds preceeding an announcement of a severe weather warning.

In addition, the Federal Communications Commission (FCC) has approved the special SAME code to delineate marine areas. Mariners with NWR receivers equipped with SAME should check out:

http://www.nws.noaa.gov/om/marine/wxradio.htm
for information on how to program their receivers.

For a listing of marine area and zone codes for SAME, go to:
http://www.nws.noaa.gov/geodata/catalog/wsom/html/marinewreas.htm

The NOAA Weather Radio coverage areas are estimates. For these maps, transmitter antenna performance are assumed to be omni-directional. As a result, actual coverage can be diffrent from that depicted on this map. Coverage that is significantly different than depicted on this map should be reported to the local NWS forecast office.

BUOY AND C-MAN DATA AVAILABLE VIA E-MAIL (FTPMAIL)

Current buoy and C-MAN data is now available in a very compact form via http:, ftp, or e-mail (FTPMAIL).

Via http:
http://www.ndbc.noaa.gov/data/latest_obs/

Via ftp:
ftp://www.ndbc.noaa.gov/data/latest_obs/

Via e-mail (FTPMAIL)
http://weather.noaa.gov/pub/fax/buoydata.txt (instructions)

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body:
```
open www.ndbc.noaa.gov
cd data
cd latest_obs
get 42007.txt
get gdil1.txt
quit
```

CANADIAN VOICE MARINE WEATHER FORECASTS

CITY	TRANSMITTER SITE	FREQUENCY (kHz/MHz)	BROADCAST TIMES/(PST)
Vancouver, BC	Mt. Parke	161.65 (Ch. 21B)	Continuous broadcast
	Bowen Island	162.475	Continuous broadcast
	Aldergrove	162.55 (XLA-852)	Continuous broadcast
Victoria, BC	Mt Helmcken	162.475 (XLA-726)	Continuous broadcast
	Mt. Tuam	162.40 (CFA-240)	Continuous broadcast
	Sheringham Point	2054	0520, 0820,1120 1420,1720,2020 2320
Tofino, BC	Alberni	162.40	Continuous broadcast
	Amphitrite Point	2054	0450, 0750,1050 1350,1650,1950 2250
		4125	0930,1530,2100
	Mt. Ozzard	161.65 (Ch. 21B)	Continuous broadcast
	Nootka	162.40	Continuous broadcast
	Eliza Dome	162.55	Continuous broadcast
	Cape Lazo	162.55	Continuous broadcast

WEATHER NOTES

One feature of nearly all of the small boat harbors on the Oregon and Washington coasts is that each is located on the mouth of a river, which means that each has a bar where the water is more shallow than the main channel. During times of change in tide, the water across these bars becomes very rough, often making passage of small boats hazardous. The ebb tide usually has the rougher water. Care must be taken to time departure and return to avoid these rough bar conditions.
On the Oregon coast, during the summertime, the wind often increases to strong north to northwest during afternoon and evening hours. Sport boat fisherman who are unfamiliar with the coast should be particularly alert for small craft advisories that may be posted for these hours. Depending on the expected weather, it may be desirable to plan on returning to port before noon to avoid the strong winds in the afternoon.

Radiofax charts for the Northwest Pacific are posted at:

http://weather.noaa.gov/fax/ptreyes.shtml

Comments on the schedule or quality of charts
Email: Timothy.Rulon@noaa.gov

NOAA Weather Radio

Channel	Frequency
CH WX 1	162.550
CH WX 2	162.400
CH WX 3	162.475
CH WX 4	162.525
CH WX 5	162.450
CH WX 6	162.500
CH WX 7	162.425

BROADCASTS OF MARINE WEATHER FORECASTS AND WARNINGS BY MARINE RADIOTELEPHONE STATIONS

CITY	STATION	FREQUENCY (kHz)	BROADCAST TIMES/(PST)
Astoria, OR	NMW (USCG)	2670 157.1 MHz (Ch. 22A)	9:33 am, 9:33 pm
North Bend, OR	NOE (USCG)	2670 157.1 MHz (Ch. 22A)	10:03 am,10:03 pm
Humboldt Bay, CA	NMC-11 (USCG)	2670 157.1 MHz (Ch. 22A)	7:03 am, 7:03 pm 8:15 am, 3:15 pm
Port Angeles, WA	NOW (USCG)	2670 (AJ3) 157.1 MHz (Ch. 22A)	10:15 am, 10:15 pm
Portland, OR	NMW44	157.1 MHz (Ch. 22A)	9:45 am
Seattle, WA	NMW43 (USCG)	157.1 MHz (Ch. 22A)	10:30 am,10:30 pm

WEATHER RULES FOR SAFE BOATING

Before setting out:

Obtain the latest available weather forecast for the boating area. The NOAA Weather Radio continuous broadcasts (VHF-FM) are the best way to keep informed of the expected weather and sea conditions.
If you hear on the radio that warnings are in effect, don't venture out on the water unless you are confident your boat can be navigated safely under forecast conditions of wind and sea.

While afloat:

1. Keep life jacket on and keep a weather eye out for: the approach of dark and threatening clouds, which may foretell a squall or thunderstorm; any steady increase in wind or sea; any increase in wind velocity opposite in direction to a strong tidal current. A dangerous rip tide condition may form steep waves capable of broaching a boat.
2. Check radio weather broadcasts for latest forecasts and warnings.
3. Heavy static on your AM radio may be an indication of nearby thunderstorm activity.
4. If a thunderstorm catches you while afloat, you should remember that not only gusty winds but also lightning poses a threat to safety.
   - stay below deck if possible.
   - keep away from metal objects that are not grounded to the boat's protection system.
   - don't touch more than one grounded object at the same time (or you may become a shortcut for electrical surges passing through the protection system).
   - Prepare for rough sea conditions.

INTERNET ADDRESSES

National Weather Service Western Region Headquarters
http://www.nws.noaa.gov

National Weather Service Office - Seattle, WA
http://www.wrh.noaa.gov/sew/

National Weather Service Office - Portland, OR
http://www.wrh.noaa.gov/pgr/

National Weather Service Office - Medford, OR
http://www.wrh.noaa.gov/mfr/

National Weather Service Office - Eureka, CA
http://www.wrh.noaa.gov/eka/

National Weather Service - MSC charts
http://www.nws.noaa.gov/om/marine/pub.htm

National Weather Service - Marine Dissemination
http://www.nws.noaa.gov/om/marine/home.htm

National Weather Service Radiofax Products
http://weather.noaa.gov/fax/marine.shtml

NATIONAL WEATHER SERVICE RADIOFAX AND TEXT FORECASTS AVAILABLE VIA E-MAIL (FTPMAIL)

National Weather Service radiofax charts and text forecasts are available via e-mail. The FTPMAIL server is intended to allow Internet access for mariners and other users who do not have direct access to the World Wide Web, but who are equipped with an e-mail system. Turnaround is generally under one hour, however, performance may vary widely and receipt cannot be guaranteed. To get started in using the NWS FTPMAIL service, follow these simple directions to the FTPMAIL "help" file (11 bytes).

Address: ftpmail@weather.noaa.gov
Subject: (not required)
Body: help

Direct any questions to 301-713-1677, extension 128,
Or marine.weather@noaa.gov

NWS PRODUCTS VIA WWV, WWVH HF VOICE

The National Institute of Standards and Technology (NIST) broadcasts a time and frequency service from stations WWV in Boulder, CO and WWVH in Honolulu, HI commonly known to mariners as the "Time Tick" used as an aid in celestial navigation. Included in these are hourly voice broadcasts of current highseas storm warnings for the Atlantic, Pacific and the Gulf of Mexico provided by the National Weather Service.

WWV (BOULDER, CO)
FREQENCIES : 2.5, 5, 10, 15, 20 MHz (AM)

TIMES OF BROADCAST	BROADCAST AREA
8 minutes past the hour	Atlantic highseas warnings
9 minutes past the hour	Atlantic highseas warnings
10 minutes past the hour	Pacific highseas warnings

WWVH (HONOLULU, HI)
FREQENCIES : 2.5, 5, 10, 15 MHz (AM)

TIMES OF BROADCAST	BROADCAST AREA
48 - 51 Minutes past the hour	Pacific highseas warnings

DIAL-A-BUOY

Dial-A-Buoy gives mariners an easy way to obtain reports via a cell phone. Dial-A-Buoy provides wind and wave measurements taken within the last hour at National Data Buoy Center (NDBC) buoy and Coastal-Marine Automated Network (C-MAN) stations. The stations operated by NDBC, part of the National Weather Service, are located in the Atlantic, Pacific, Gulf of Mexico, and the Great Lakes. The Dial-a-Buoy service has since expanded to include stations owned and operated by other organizations including the United Kingdom Met Office and Environment Canada. To access Dial-A-Buoy, dial (228) 688-1948 using any touch tone or cell phone.
For internet users, more information is at: http://seaboard.ndbc.noaa.gov/dial.shtml

DECEMBER 2004

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