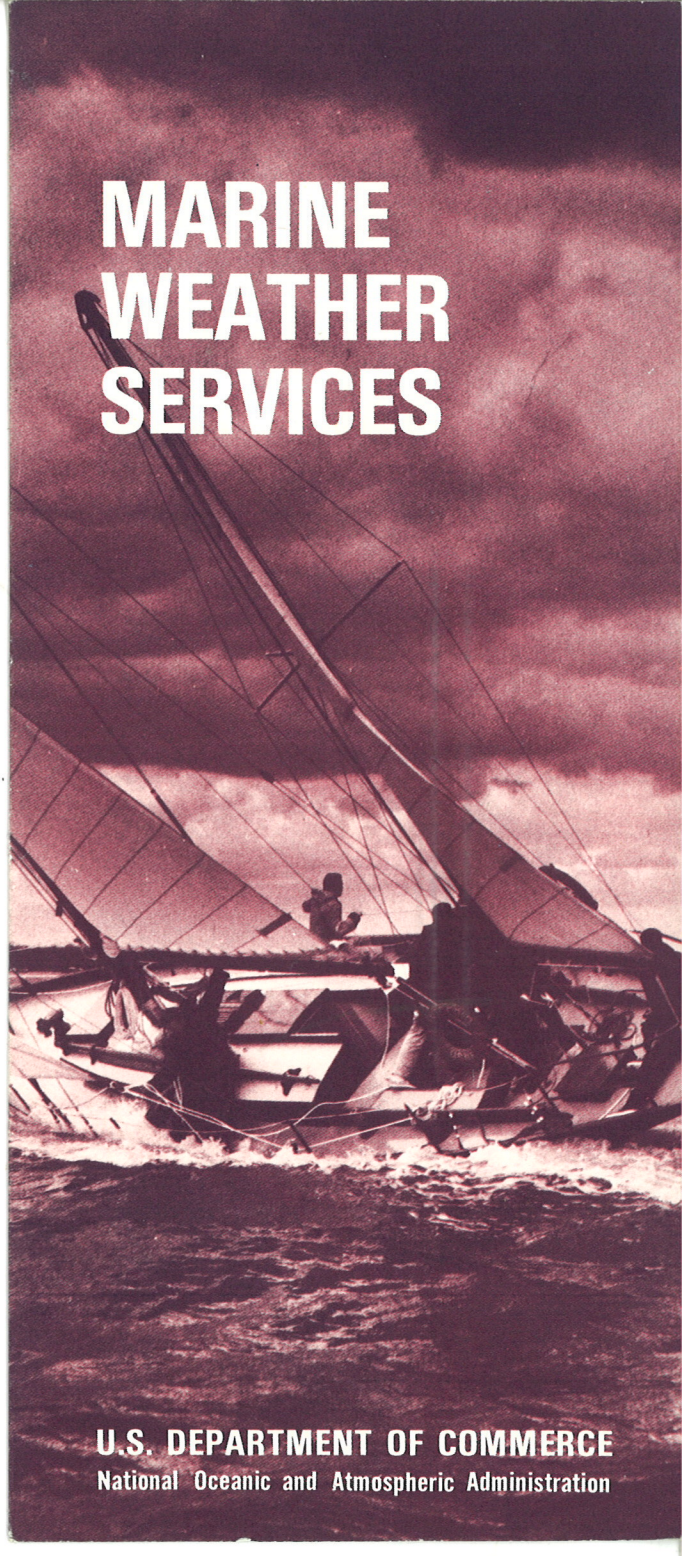
MARINE WEATHER SERVICES



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

Few people get closer to weather than those who sail the turbulent boundary between air and water, and few have a greater need for timely information on the state of the environment—information available from NOAA, the National Oceanic and Atmospheric Administration of the U. S. Department of Commerce.

NOAA's National Weather Service provides marine weather reports, forecasts, and warnings which serve all who sail for commerce, livelihood, or recreation.

This pamphlet describes some of the marine weather products and displays of the National Weather Service. Know them, use them, and navigate safely.

WEATHER WARNINGS AND FORECASTS

Weather forecasts for boating areas in the United States and Puerto Rico are issued every six hours by the National Weather Service. Each forecast covers a specific coastal area, as for example, "Eastport, Me., to Merrimack River, Mass." If strong winds or sea conditions hazardous to small-boat operations are expected, forecasts include a statement as to the type of warning issued and the areas where warnings are in effect.

Similar forecasts and warnings are issued for numerous inland lakes, reservoirs, and river waterways throughout the country. Daily advices indicating expected stream flow, river gage heights, and flood warnings as required are also issued by the National Weather Service.

Latest forecasts are available over AM and FM radio, television, and marine radiotelephone broadcasts. Radio stations in cities along principal rivers include stream flow and river data in their weather messages. When storm and flood warnings are in effect, all stations make frequent broadcasts of these advices as a service to small-craft operators, the general public, and other interests.

MARINE WEATHER SERVICES CHARTS

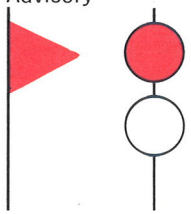
Broadcast schedules of radio stations, National Weather Service office telephone numbers, and locations of warning display stations, are shown on Marine Weather Services Charts, issued periodically for the following areas:

- MSC-1 Eastport, Me. to Montauk Point, N.Y.
- MSC-2 Montauk Point, N.Y. to Manasquan, N.J.
- MSC-3 Manasquan, N.J. to Cape Hatteras, N.C.
- MSC-4 Cape Hatteras, N.C. to Savannah, Ga.
- MSC-5 Savannah, Ga. to Apalachicola, Fla.
- MSC-6 Apalachicola, Fla. to Morgan City, La.
- MSC-7 Morgan City, La. to Brownsville, Tex.
- MSC-8 Mexican Border to Point Conception, Calif.
- MSC-9 Point Conception, Calif. to Point St. George, Calif.
- MSC-10 Point St. George, Calif. to Canadian Border
- MSC-11 Great Lakes: Michigan and Superior
- MSC-12 Great Lakes: Huron, Erie and Ontario
- MSC-13 Hawaiian Waters
- MSC-14 Puerto Rico and Virgin Islands
- MSC-15 Alaskan Waters

Copies of these charts are available at local marinas and marine chart dealers, or by ordering from: Distribution Division (C44)
National Ocean Survey
6501 Lafayette Ave.
Riverdale, Maryland 20854—Price 25¢

Display Signals

SMALL CRAFT*
Advisory

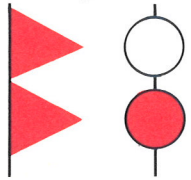


DAYTIME: Red Pennant.

NIGHTTIME: Red Light Over White Light.

Indicates: Forecast winds as high as 33 knots and sea conditions considered dangerous to small-craft operations.

GALE
Warning

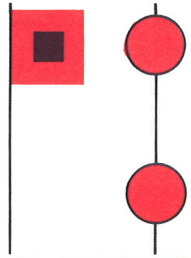


DAYTIME: Two Red Pennants.

NIGHTTIME: White Light Over Red Light.

Indicates: Forecast winds in the range 34-47 knots.

STORM
Warning

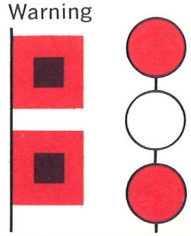


DAYTIME: Square Red Flag With Black Square Centered.

NIGHTTIME: Two Red Lights.

Indicates: Forecast winds 48 knots and above no matter how high the wind speed. If the winds are associated with a tropical cyclone (hurricane), storm warnings indicate forecast winds of 48-63 knots.

HURRICANE
Warning



DAYTIME: Two Square Red Flags With Black Squares Centered.

NIGHTTIME: White Light Between Two Red Lights.

Indicates: Forecast winds of 64 knots and above, displayed only in connection with a hurricane.

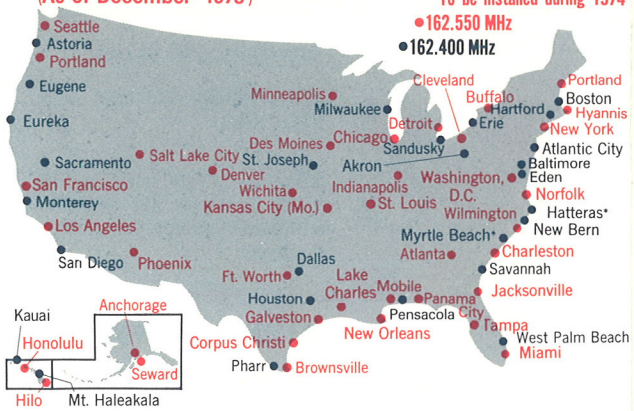
*Small Craft Advisories cover a wide range of wind and sea conditions, and the "small craft" category includes boats of many sizes and designs. The Small Craft Advisory should alert the mariner to determine immediately the reason for the display by tuning his radio to the latest marine broadcast. Deciding the degree of danger is left up to the boatman, based on his experience and the size and type of boat.

Hurricane warnings are not issued for the Pacific coast north of Pt. Arguello, Calif.; in Alaska; or for the Great Lakes.

NOAA VHF Radio Weather

(As of December 1973)

*To be installed during 1974



The National Weather Service provides mariners with continuous broadcasts of the latest weather information from the locations shown above. These NOAA VHF-FM Radio Weather transmissions repeat taped messages every four to six minutes. Tapes are up-dated periodically, usually every two to three hours, and amended as required to include the latest information. Messages include weather and radar summaries, wind observations, visibility, sea and lake conditions, and detailed local and area forecasts, as well as information tailored to the needs of boating enthusiasts and others who use the water for work or recreation. When severe weather warnings are in order, routine transmissions are interrupted and the broadcast is devoted to emergency warning operations.

NOAA VHF-FM broadcasts 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 frequencies 162.550 and 162.400 MHz require narrow-band FM receivers of ±5 kilohertz deviation. In selecting a suitable receiver, special attention should be paid to the manufacturer's rating of the receiver's sensitivity. Generally speaking, a receiver with a sensitivity of 1 microvolt or less should pick up a broadcast at a distance of about 40-50 miles, depending upon antenna height and terrain features.

WEATHER RULES FOR SAFE BOATING

Before setting out:

1. Check local weather and sea conditions.
2. Obtain the latest weather forecast for your area from radio broadcasts.

When warnings are in effect, don't go out unless you are confident your boat can be navigated safely under forecast conditions of wind and sea. Be cautious when you see warning displays at U. S. Coast Guard stations, yacht clubs, marinas, and at other coastal points.

While afloat:

1. Keep a weather eye out for:
   the approach of dark, 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. Heavy static on your AM radio may be an indication of nearby thunderstorm activity.
3. Check radio weather broadcasts for latest forecasts and warnings.
4. If a thunderstorm catches you afloat:
   —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).

What about navigation? Do you have the NOAA National Ocean Survey charts and other publications covering your part of coastal or Great Lakes waters? Check your local office of the National Weather Service or National Ocean Survey for information on how and where to get these and other essential aids to navigation.

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National Oceanic and Atmospheric Administration
National Weather Service
NOAA/PA 70029 (Rev. 1974)

For sale by the Superintendent of Documents,
U.S. Government Printing Office,
Washington, D.C. 20402 Price 25 cents.