

The Weather Report

BY BILL BIEWENGA

With the many weather sources available to today's sailors, a reliable forecast is a click or a call away.

WHETHER WE'RE RACING OR cruising, we all face the same conditions when we are on the water, but how we react to the influences of weather may vary depending on our cruising platform or our racing goals. Weather information is available almost everywhere. But some sources are better—more accurate or more useful—than other ones. The better our weather information, the better our chances of scoring a bullet or simply enjoying our time underway.

Today's sailors have numerous ways of collecting weather information on board. Some use a VHF radio; others, cell phones. Some may have e-mail or even Internet access delivered via a satellite link of one type or another. Others may have an SSB radio or a weatherfax machine. Each of these systems will help gather particular types of weather information.

Reading the Weather

Getting the weather information you need is only part of the process of putting it to good use. You need to know how to understand and apply that information while cruising. This process isn't difficult, but it does take some time and effort. There are a number of books on the subject, and you can find them through marine bookstores such as Armchair Sailor (Newport, R.I.), Bluewater Books (Ft. Lauderdale, Fla.) and Landfall Navigation (Stamford, Conn.). You can even buy them online at sites like amazon.com or barnesandnoble.com.

The list of critical topics includes how to interpret weather maps; how extratropical low-pressure systems evolve and what elements contribute to their strength or weakness; and how wind direction and barometric pressure will help you gain an insight into where you are located relative to a low-pressure system. Some authors also cover local conditions and how they relate to larger-scale weather features.

Some weather information comes in text form, such as written forecasts for specific locations. Some is presented in graphic form, including maps, satellite images or graphs. Still other weather information is delivered by voice, such as

VHF or HF weather broadcasts. All of it helps in one way or another.

Making Sense Of It All

While helping someone with a weather routing problem or providing weather information from my office, I'll often have a selection of websites visible on my screen. These may include the latest surface-analysis map, a view of real-time weather observations for the location of interest, a text forecast prepared by the National Weather Service (NWS) or another government agency, an infrared satellite image, a looped radar image and the latest tide, wind and barometric data.

If there's a computer on board your boat, you can access the same dizzying mass of information. To cut it down to a manageable size, you must ask yourself two questions: What kind of information do I want and from what locations? Preparing for a two-day coastal cruise is, of course, very different from preparing for a Newport-Bermuda Race or planning a transoceanic passage. You may use some of the same weather sites, but the time you spend preparing and analyzing data will differ.

The offshore navigator or long-distance cruising sailor may collect data for weeks or even months before departure, not only to study trends, but also to determine the degree to which the information is accurate: Are those 48-hour or 96-hour forecasts reliable? Only checking the actual conditions that evolve in the specified time frame will tell, of course, but the comforting news is that most weather information available today is considerably more accurate than it was just a decade ago.

Geostationary satellite pictures from around the world are available from several sources. New ones may be only minutes old, while reference images may be downloaded from archives. Oceanographic resources can be accessed through a list maintained by the National Oceanic and Atmospheric Administration (NOAA) at <http://www.ndbc.noaa.gov/links.shtml>. The lineup



Maps showing sea-surface temperatures are now available via subscription from such satellite-radio services as WxWorx.



Easy night passages under sail will provide the savvy navigator with the opportunity to gather weather reports for the next 24 hours and beyond.

includes links to the websites of the Scripps Institute, Woods Hole Oceanographic Institute, and many other oceanographic institutions.

You can connect to a wealth of weather information from around the world at the World Meteorological website at:<http://www.worldweather.org/>. This site links to weather services from Hong Kong to South Africa, and to scores of other sources for data and forecasts in between. If you can't find the information you're looking for there, hundreds of weather sites are located at <http://cirrus.sprl.umich.edu/wxnet/servers.html>, which hosts government, university and research sites from around the United States. The type and depth of information can be mind-boggling, but by

cruising the web you can develop a list of sites that satisfy your particular weather-information requirements.

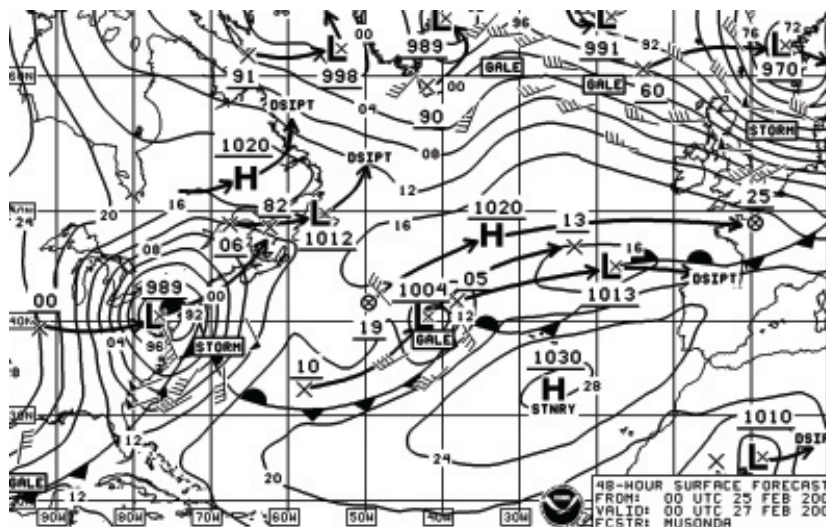
If the prospect of having to choose among all these alternatives is a bit daunting, you might try www.wxadvantage.com. Here, I have tried to aggregate some of the best sites available on the web into one location for mariners around the globe. By following the instructions on using the site, you can select a variety of pop-up screens that will give you the latest, most appropriate weather information. By arranging these pop-ups, you can easily compare, say, the latest surface-analysis map side-by-side with an animated satellite image. You can also call up text forecasts to fill out your understanding about what's happening.

Collecting and Organizing

In preparation for an offshore race, a long-distance coastal cruise or an extended passage, I recommend that you collect

information from a variety of sources, organize it in a ring binder, and compare and contrast the information. Included in this data should be offshore forecasts that are sent out as faxes via single-sideband (HF) radio; buoy or ship reports; long-range, computer-generated models; and any of a variety of satellite images. By collecting such information from the same sources over a period of time, you can develop an understanding of how weather patterns move and evolve, and how fast or slowly these systems are likely to change.

In U.S. waters, the cornerstone of your planning will be the National Weather Service (NWS), whose marine charts are available at <http://weather.noaa.gov/fax/marine.shtml>. They're the same ones sent as weatherfaxes over HF radio, and they may well provide the most comprehensive weather data offshore cruisers receive while underway. Again, however, the prudent skipper learns how to interpret these images as well as assess



Real-time maps like this one, showing primarily high- and low-pressure systems, are now widely available direct from NOAA via the Internet.

their degree of reliability.

Internet-based marine-forecast products can also be found at <http://www.nws.noaa.gov/om/marine/internet.htm> or <http://www.nws.noaa.gov/om/marine/home.htm#dissemination>. A weatherfax user's guide that explains how to use weather maps is available at <http://www.opc.ncep.noaa.gov/UGbegin.shtml>.

Note that the surface-analysis charts available on these sites indicate the conditions that occurred at the "valid" time listed. Ships' reports, buoy data, the shape and location of the various weather systems, and the expected locations of high- and low-pressure centers over the next 24 hours are all included.

The analysis provides a picture of how the weather "looked" at a particular point in time.

Charts from the NWS marine site cover the Atlantic and Pacific Oceans, the Gulf of Mexico, the tropics, Hawaii, Alaska and the Great Lakes. Forecast products include 24-, 48- and 96-hour surface prognoses, as well as upper-atmosphere information. Collecting and printing out this data daily before an extended passage will allow you to compare the forecasts with the analyses and assess their reliability. By color-coding the central isobars of the high- and low-pressure systems with highlighting markers, you can track the shapes

and movements of the various systems. Alternating between the chronologically arranged surface analyses will give you insight into the storm tracks' trend lines on charts that you'll actually be using when you're offshore.

The National Data Buoy Center (NDBC) website (<http://seaboard.ndbc.noaa.gov>) provides near real-time observations of weather conditions for all U.S. waters and offers data going back for up to 24 hours. How hard is that tropical storm bearing down at the Carolinas blowing, and what is the sea state there? What is happening right now at Buzards Bay Tower or at Point Conception?

The NDBC website posts the answers on an hourly basis, and they can be easily accessed using the agency's location maps. Comparing such buoy reports to the surface analysis provided by the corresponding weatherfax helps you put the various pieces of information in perspective and can reinforce their credibility before you head offshore.

Other websites such as <http://www.iwindsurf.com> also provide near-real-time weather observations, and they augment the NDBC reports with private weather observations, airport conditions and other publicly available information.

For specific updates on tropical storms and hurricanes, refer to the National Hurricane Center's site at www.nhc.noaa.gov. Not only are the storms tracked, but specific information about the latest reconnaissance flights, pressure readings and hurricane forecasts also can be accessed.

Important Weather Websites

Computer Models

www.arl.noaa.gov/ready/cmnet.html
www.fnmoc.navy.mil/public

Currents

www.7320.nrlssc.navy.mil/global_nlom32/skill.html
<http://fermi.jhuapl.edu>

Maps

www.opc.ncep.noaa.gov
www.meteoronet.nl/aktueel/brackall.htm

Private Forecasting Services

Commanders' Weather
 603-882-6789
www.commandersweather.com

Fleet Weather Ocean Services
 845-226-8400
www.yachtweather.com

Locus Weather
 207-236-3935
www.locusweather.com

Sailing Weather Services
 617-926-7457
www.sailwx.com

Susan Genett's Real Weather
 401-841-0287
www.realwx.com

Weather Routing Inc.
 516-798-1110
www.wriwx.com

Radar

www.nws.noaa.gov/radar/national.html

Real-Time Observations

www.iwindsurf.com
<http://seaboard.ndbc.noaa.gov>
<http://manati.orbit.nesdis.noaa.gov/doc/oppt.html>

Satellite Imagery for Clouds

<http://weather.msfc.nasa.gov/GOES/>
www.sat.dundee.ac.uk

Text

www.nws.noaa.gov/om/marine/home.htm
www.nws.noaa.gov/om/marine/zone/usamz.htm

Tides

United States:
<http://tidesonline.nos.noaa.gov/geographic.html>

Europe:

<http://tide.frbateaux.net>

Worldwide:

<http://ocean.peterbrueggeman.com/tidepredict.html>

Worldwide National Weather Services

www.worldweather.org