Australian Government

Bureau of Meteorology

Tasmanian Marine Weather Services Newsletter

August 2010

Change in Ocean Warning Areas for the South East

From the 30th of August the ocean waters warning area of Sydney and Melbourne will be combined into one larger area called Melbourne. This change is for ocean waters only and the new zone is shown on the map above.

US Recreational Boaters Heed the Weather

Boaters are getting more weather savvy, and it shows. Between 1997 and 2008, the number of weather-related recreational boating accidents dropped from 419 to 262, and weather dropped from eighth to ninth in the U.S. Coast Guard's list of "Top Ten Contributing Factors" in recreational boating accidents.

Boaters who stay alert to weather changes and take appropriate action safeguard their property and the lives of those on board. If caught out on the water by a fast moving storm, here's what to do:

- Reduce speed, keeping just enough power to maintain headway.
- Make sure everyone on board is wearing a life jacket.
- Turn on your running lights.
- If possible, head for the nearest shore that is safe to approach.
- Head the boat into the waves at a 45-degree angle.
- Keep the bilges free of water.
- Seat any passengers low in the boat, near the center line.
- If the engine fails, trail a sea anchor from the bow of the boat to keep it headed into the waves. (A bucket can work as a sea anchor in an emergency.)
- Anchor the boat if necessary.

New Computer Model for the Bureau of Meteorology

The Bureau of Meteorology has been in the process of changing its 'base' computer models. The new models have been chosen for their accuracy and reliability and will feed directly into existing Bureau products such as the 7 day marine wind maps and many other products.

http://www.bom.gov.au/australia/charts/viewer/index.shtml

There are new products for mariners that will help with their planning and boating safety. On the broad scale are the synoptic charts (weather maps) that extend out to 7 days. There are charts every 3 hours for the first three days and then 6 hourly onwards. These charts are handy whether you are looking to cross the Tasman, go for a days boating or planning an outdoor function a week out. There are a selection of elements to choose from including wind, temperature and dew point. Once you choose an individual element you can look at the changes as you go up in the atmosphere, 3,000 ft (gradient), 5000 ft, (850Hpa) up to high levels in the atmosphere 37,000 ft (200Hpa).

More specifically for mariners if you change the domain name via the dropdown menu to WAVEWATCH there are more specific marine products including significant wave height and direction, two swell heights and directions and peak period.

Peak period is the period of first (most dominant) swell wave. This information is helpful for crossing river bars or operation close inshore.
See http://www.afloat.com.au/afloat-magazine/2009/october-2009/Weather for more details on long period swell wave and their effects.
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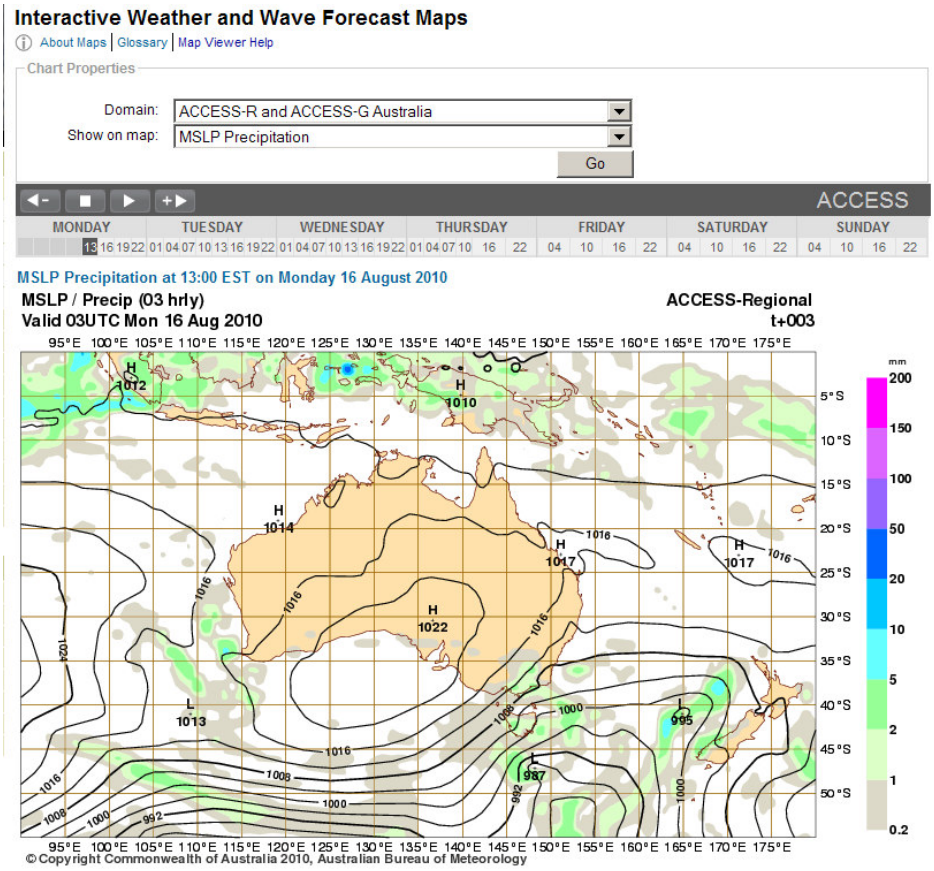
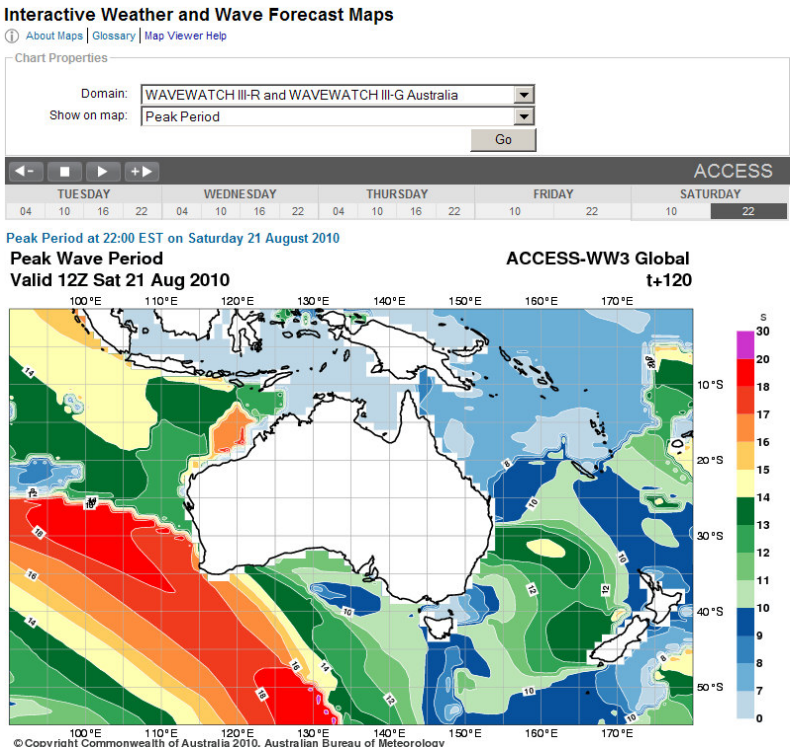


Left: An example of the new mean sea level and precipitation forecast charts that are now available.



Left: An example of the new mean swell peak period forecast charts that are now available. The longer periods that are forecast for the south west of Western Australia are likely to bring good surfing conditions but hazardous inshore boating and rock fishing.

New Weather Buoy off Tasmania's SW Coast

Keeping a lonely vigil on the weather 600 kilometres southwest of Hobart in a depth of four and a half kilometres is a buoy that is a first for the Southern Ocean. The Southern Ocean Flux Station (SOFS) was deployed in March this year and has been transmitting data in real time back to the Bureau of Meteorology

The buoy measures meteorological elements of wind speed and direction, atmospheric pressure and temperature, sea temperature, relative humidity and precipitation. A "wing" on the buoy keeps the instruments into the wind so as they record undisturbed air. As the wind speed increases the precipitation recorded looses accuracy due to sea spray in air.

The buoy also has many sensors on the mooring at different depths that measure sea water temperature and salinity to a depth of 200 metres. Other sensors on the buoy allow measurements of ocean surface properties such as salinity, carbon dioxide, oxygen, fluorescence and current. Wave recording technology is being developed and wave data will be a parameter in the future.

This buoy will give forecasters a weather observation in the sector where much of Tasmania's severe weather conditions originate. It is bit like have another Maatsuyker Island observing site but further away, giving a greater lead time on the approach of cold fronts or low pressure systems.

Data can be accessed at http://emii3.its.utas.edu.au/sofs/

Remember the wind speed on the graphs are in metres per second (double this figure for knots). Wind directions are directions to, add or subtract 180° to get the more familiar direction from.

New Forecast System for NSW

The Bureau has been operating and evaluating a demonstration weather forecasting system in Victoria since October 2008. The Bureau of Meteorology's New South Wales office will be converting to the same system beginning in September. Mariners that are familiar with NSW forecasts and warnings will notice some changes.

Some new forecast zones will be introduced and some current zones will have name changes. The Mid North Coast forecast area will be divided into smaller zones named Coffs and Macquarie. The South Coast forecast area will be divided into Bateman and Eden areas. The North Coast area will be renamed Byron.

Marine warnings issued for NSW under the new system will give a combined wave height (see Afloat April 2008). The separate sea and swell forecast will be available on the coastal waters forecast.

There will be a new look webpage for Sydney, wind and wave forecast maps with new information on winds, seas, swell and combined wave height for the next 3 days. Mariners will be able to watch how these elements change and the changes in conditions in various areas of the harbour.

Tasmania will convert to the new system in June 2011. In your next marine weather services newsletter will be a comprehensive look at the improvements of the new system.

Praise/Complaints/Queries

If you wish to have an explanation of any marine weather matter please email pubmarine.tas@bom.gov.au or call 03 6221 2081 during normal business hours. Use the same email address and phone number if you wish to be put on the address list for this newsletter.