NATIONAL WEATHER SERVICE SOUTHERN REGION SUPPLEMENT 04-2003
APPLICABLE TO NWSI 10-310
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Operations and Services
Marine and Coastal Weather Services, NWSPD 10-3

Marine Weather NWSI 10-310

SOUTHERN REIGON COASTAL MARINE FORECAST SERVICES

OPR: W/SR11x5 (M. Bailey) **Certified by:** W/SR1 (J.Ladd)
Type of Issuance: Routine.

SUMMARY OF REVISIONS: This supplement supersedes Southern Region Supplement 04-03 dated September 28, 2006, filed with NWSI 10-310.

The following changes were made to this issuance:

1. Removed redundant policy that was in this Supplement and the overarching Directive.
2. Added descriptions for waves/seas for the main forecast and also bays.
3. Added criteria for Small Craft Advisory For Hazardous Seas.
4. Standardized the day and night periods of the CWF into 12 hour periods through Day 5 night.

<signed> October 31, 2011
Bill Proenza Date
Regional Director

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1. Introduction.

This Supplement provides additional guidance and instructions for the Coastal Waters Forecast (CWF). Written instructions cannot address every situation. Operational personnel must exercise initiative and professional judgment to minimize risk to public safety and property in instances when written instructions do not provide appropriate guidance.

2. Coastal Waters Forecasts.

2.1 Abbreviations.

Abbreviations and contractions will not be used in the main body of the forecast. This will allow our products to be read with ease by customers and partners. Additionally, the information can be easily heard on NOAA Weather Radio All Hazards.

2.2 Forecast Periods.

Several Southern Region (SR) coastal WFOs have been producing the CWF in separate 12 hour day and night periods through Day 5. These WFOs have noted significant improvement in the winds and seas wording when a 12-hour issuance through Day 5 is combined with 6 hour sampling for the Wind and Wave Height grids in the CWF formatter. The improvement is most notable during transitional events such as a frontal passage or onset of return flow. Therefore, SR WFOs will now produce the CWF with 12-hour day and night periods through Day 5 (nighttime period). The option remains to combine periods past Day One, but only for very stable weather conditions.

The early morning forecast will cover:

Today	(Issuance time to 6PM local time)	1st Period
Tonight	(6PM to 6AM)	2nd Period
Day 2	(6AM to 6PM)	3rd Period
Day 2 Night	(6PM to 6AM)	4th Period
Day 3	(6AM to 6PM)	5th Period
Day 3 Night	(6PM to 6AM)	6th Period
Day 4	(6AM to 6PM)	7th Period
Day 4 Night	(6PM to 6AM)	8th Period
Day 5	(6AM to 6PM)	9th Period
Day 5 Night	(6PM to 6AM)	10th Period

The late afternoon forecast will cover:

Tonight	(Issuance time to 6AM local time)	1st Period
Tomorrow	(6AM to 6PM)	2nd Period
Tomorrow Night	(6PM to 6AM)	3rd Period
Day 2	(6AM to 6PM)	4th Period

Day 2 Night	(6PM to 6AM)	5th Period
Day 3	(6AM to 6PM)	6th Period
Day 3 Night (Optional)	(6PM to 6AM)	7th Period
Day 4	(6AM to 6PM)	8th Period
Day 4 Night	(6PM to 6AM)	9th Period
Day 5	(6AM to 6PM)	10th Period
Day 5 Night	(6PM to 6AM)	11th Period

2.3 Forecast Content. (Reference Section 2.3.5 of NWSI 10-310.)

a. Regional Definitions. (Reference Section 2.3.5.c of NWSI 10-310.)

(1) SMALL CRAFT ADVISORY

The criteria for issuing a SMALL CRAFT ADVISORY (SCA) in Southern Region are average wind speeds of 20 knots or greater, and forecast seas of 7 feet or greater. When wind speeds are below 20 knots, A SMALL CRAFT ADVISORY FOR HAZARDOUS SEAS (SCAHS) will be issued for sea/wave conditions deemed locally significant, based on user needs, and should be no lower than 7 feet. C**onditions must occur for two or more hours to validate an SCA or SCAHS forecast**. SCAs will be headlined when criteria are met, or expected to be met, for the first period, and SCAs may be issued that begin in the second and third periods when forecaster confidence is high. SCAs beginning in the first, second, or third period may extend beyond the third period as conditions warrant. SCAs will not be initiated beyond the third period.

(2) SMALL CRAFT SHOULD EXERCISE CAUTION

The cautionary statement "SMALL CRAFT SHOULD EXERCISE CAUTION" (SCEC) will be headlined for conditions forecast just below SCA criteria **during the first period only**. Specifically, the criteria for headlining SCEC in Southern Region are a wind forecast of 15 TO 20 knots (with the assumption that any 20 knot winds will not occur for two hours) **and/or** sea state forecast at 6 feet. If the sea state forecast is the reason for the SCEC, WFOs should include wording indicating that in the SCEC headline. For example, "SMALL CRAFT SHOULD EXERCISE CAUTION UNTIL SEAS SUBSIDE" could be used.

2.4 Forecast Parameters and Elements. (Reference Section 2.3.8.b of NWSI 10-310.)

2.4.1 Sea State Wording Combinations.

SR WFOs may provide sea state information as either combined sea height (i.e. Significant Wave Height) or a separate wind sea and swell phrase. An example for each is provided below:

Example: Significant Wave Height:
SEAS 8 TO 10 FEET.

Example: Wind Seas and Swell:
WIND WAVES 2 TO 4 FEET… NORTHEAST SWELL 10 FEET.

Include direction from which swell is propagating (8 points of compass) whenever a SWELL is specified

2.4.2 Wave Period.

SR WFOs may provide dominant wave period information, following either the significant wave height or wind seas and swell phrase. Dominant wave period (seconds) is the period with the maximum wave energy. See examples below:

Example: Significant Wave Height and Dominant Period:
SEAS 8 TO 10 FEET. DOMINANT PERIOD 9 SECONDS.

Example: Wind Sea and Swell and Dominant Period:
WIND WAVE 2 TO 4 FEET…NORTHEAST SWELL 10 FEET.
DOMINANT PERIOD 5 SECONDS.

2.4.3 Inland Bays and Waterways.

Inland waters and bays exempted from having detailed sea state predictions should use a general description of sea conditions (i.e., rough, choppy, etc.) when it helps convey the severity of a given situation.

Instead of forecasting explicit wave heights on the inland waters and bays, descriptive terms can be used. This is because the bottom topography (depth) affects the maximum height of the waves when the depth of the water is less than one half the wave length of the waves. If sections of the intra-coastal waterways are only 4 feet deep and the wind is north at 25 knots, you could not have waves any greater than this depth, but there would certainly be very rough conditions for small boats. The following table may be used for a first approximation:

DESCRIPTIVE TERM	WIND SPEED
Smooth	Calm or less than 5 KT
Light Chop	5 to 10 KT
Moderate Chop	10 to 15 KT
Choppy	15 to 20 KT
Rough	20 to 25 KT
Very Rough	>25 KT

Fetch needs appropriate consideration on the inland waters since they are surrounded by the mainland and barrier islands. For marginal choppy conditions, the phrase INLAND WATERS CHOPPY IN EXPOSED AREAS may be included.

3. Surf Zone Forecasts (SRF). (Reference Section 3.0 of NWSI 10-310.)

An office issuing rip current information routinely will use the SRF product as the dissemination vehicle. The "surf zone" is the very narrow area of water between the high tide level on the beach and the sea-ward side of breaking waves. Breaking wave heights, water level set up, and rip currents are a few parameters WFOs can include in their SRFs. SRF content, dissemination times, seasonal or not, etc., are local WFO options and should be developed in coordination with local agencies that have responsibility for beachfront safety. Local policy should be noted in local office instructions.

3.1 Rip Currents. (Reference Section 3.6 of NWSI 10-310.)

Developing a rip current program for a WFO's surf zone area of responsibility is a collaborated effort between beachfront safety personnel (lifeguards, associations, beach patrol, etc.) and WFO personnel.

a. Rip Current Information in the SRF Product.
WFOs that issue rip current information routinely must mention the rip current hazards in the SRF product. See section 3.6.1 of NWSI 10-310 for the rip current qualifier definitions for low, moderate and high risks.

b. Moderate or High Risk. WFOs forecasting a Moderate or High Risk of Rip Currents will headline this information in the SRF.

To ensure maximum notification to users, whether or not a WFO issues a SRF product, forecasting a Moderate or High Risk of Rip Currents will be included in the Day 1 portion of the Hazardous Weather Outlook product (HWO).

To further heighten awareness for a Moderate or High Risk of Rip Currents, rip current information may be disseminated using the Coastal Hazard Message (CFW). In the situation where the Moderate or High Risk of Rip Currents is not coincident with another coastal hazard requiring an Advisory, Watch, or Warning, then the CFW product with VTEC event code */RP.S/* or */CF.S/* may be used to heighten visibility of the rip current hazard. In other situations, the Moderate or High Risk of Rip Currents is coincident with other coastal hazards, such as high surf (VTEC event code */SU.Y/* or */SU.W/*) or coastal flooding (VTEC event code */CF.Y/* or */CF.A/* or */CF.W/*). In these cases, the risk of rip currents may be referenced indirectly within the body of the CFW product through elaboration of the rip current threat, or directly by including the VTEC event code */RP.S/* or

/CF.S/ in the CFW product and elaborating on the rip current threat in the body of the product.

c. Rip Current Call to Action Statements.

WFOs that issue rip current information in their SRF product will always include a call to action statement, even when the risk is low. WFOs should solicit input from local marine customers and partners to ensure call to action statements in the SRF product accurately reflect local coastal structures, established lifeguarding services (or a lack thereof), etc. See Appendix A for examples.

APPENDIX A – Examples of Rip Current Call to Action Statements

Low Risk of Rip Currents

- Although the outlook is for a low risk, rip currents can sometimes occur suddenly and unexpectedly, especially near piers, jetties, or sand bars. For maximum safety, swim near a lifeguard.
- Although the outlook for rip currents is low, weak rip currents can sometimes form. Always supervise those who cannot swim.
- When possible swim near lifeguards.
- Marine conditions do not support the development of rip currents. However, there may be permanent rip currents near the (INSERT SPECIFIC LOCATION) jetty/pier/sandbar. Know how to swim and heed the advice of the beach patrol.

Moderate Risk of Rip Currents

- If caught in a rip current, don't try to fight its seaward pull. Move across the current in a direction following the shoreline.
- If caught in a rip current, stay calm and signal or yell for help. Swim in a direction following the shoreline until the current weakens, and then swim toward shore. If you are not an experienced swimmer and cannot keep yourself afloat for extended periods, do not enter the water. Heed the advice of the beach patrol.
- Never fight a rip current. If you find yourself being pulled out to sea, do not fight the current by trying to swim back to shore. Stay calm and go with the flow. Keep yourself afloat by treading water or swimming parallel to the beach. If no help is available and you need to get back to the beach on your own, swim along with the waves toward the beach.

High Risk of Rip Currents

- When the rip current risk is high, the surf is dangerous for all levels of swimmers. Even those using surf or boogie boards are urged to use extreme caution.
- Rip currents are life-threatening to anyone entering the surf.
- Frequent life-threatening rip currents are expected. Remain in water that is waist deep or less.

Examples of General Call To Action Statements Recommended for Use

For maximum safety, swim near a lifeguard.
Obey all instructions and orders from lifeguards.
Be cautious for possible rip currents at all times.
If in doubt, don't go out.
Don't fight the current; stay calm.
Escape the current by swimming in a direction following the shoreline. When free of the current, swim at an angle -away from the current- toward shore.
If you are unable to escape by swimming, float or tread water. When the current weakens, swim at an angle away from the current toward shore.
If at any time you feel you will be unable to reach shore, draw attention to yourself: face the shore, call or wave for help.
Never swim alone.
Check with the lifeguard before swimming.

APPENDIX B – Forecast Ranges for issuing SCAs and Gale Warnings

If SCAs are being issued based on forecast wind speeds (not sea heights), the accepted forecast wind speed ranges in the CWF are:

15 to 25 knots,
20 knots,
20 to 25 knots, 25 knots, 20 to 30 knots
25 to 30 knots, 30 knots.

Accepted forecast wind speed ranges for Gale Warnings:

25 to 35 knots, 30 to 35 knots, 35 knots, 35 to 40 knots, 30 to 40 knots, 40 knots,
35 to 45 knots, 40 to 45 knots, 45 knots