



Diagnostic Monitoring of Rip Currents on Southern California Beaches

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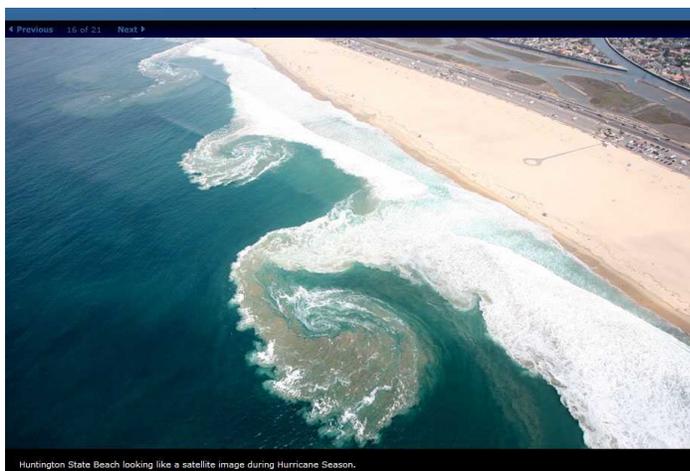
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A pilot project was conducted to train lifeguards to provide surf and rip current observations on Moonlight Beach in Encinitas, California. The observations were used to study the rip current phenomenon in Southern California and to validate different derivations of rip current monitoring indices. The manual observations are used to populate a database that began in 2007 and that now contains more than 400 days worth of rip current observations.

Analysis indicates that during the late spring and summer, rip currents are most often produced by swells originating from the south-southwesterly quadrant and by waves of 2-5 ft heights. During the winter, northwesterly sea swells produce very strong rip currents. During the seasonal transition period, rips are less common.

Using the lifeguard observations, we validated different indices for diagnosing the conditions conducive to rip currents, particularly, moderate-strong rips. We compared the quality of lifeguard observations with data derived from a coastal wave model initialized with off-shore buoy data.

Our interaction with the Southern California lifeguard community has led us to examine rip currents within the context of beach safety. In particular, we consider how rip current danger is dependent not only the wave and surf conditions, but on the behavior of common beachgoers as well.



**Wednesday,
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2:00 - 3:00 p.m.,
E.T.
SSMC#2, Room
2358**

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