

“CDIP data are invaluable in the safe planning of our shorelines. We routinely use this essential data in the coastline wave erosion and flooding studies that we perform.” - Ronald M. Noble P.E., President, Noble Consultants, Inc.

RECREATION & TOURISM

Coastal Data Information Program

Approximately \$200 million is spent annually on coastal tourism in San Diego County. Sandy beaches and good water quality are essential to continued growth of



COASTAL DATA INFORMATION PROGRAM

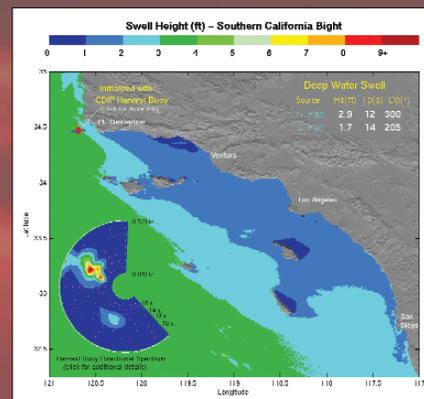
this industry. The long term objective of SIO beach processes research is to provide the scientific basis for improved management of sandy beaches. The Coastal Data Information Program (CDIP) and the Southern California Beach Processes Study (SCBPS), both associated with the Southern California Coastal Ocean Observing Systems (SCCOOS), monitor waves and coastal erosion, with the goal of understanding the complex processes that can lead to severe erosion of one beach, with little sand loss on beaches just a few miles away.

California beach Tourism and Recreation is 22.1% of the national total. In 2000, the Gross State Product due to tourism and recreation at the beach is \$22.4B. This is the largest part of the California ocean economy and also the fastest growing while the next largest is Transportation.

The total GSP from the ocean economy in the SCCOOS area is \$26.6 billion while the total for the state of California is \$42.8 billion. SCCOOS represents a bit more than half of the state's total ocean economy, which comprises for all practical purposes, Tourism and Recreation and Transportation.

Water quality on ocean beaches in Southern California is sometimes degraded by runoff from small streams and storm drains. Studies underway at Huntington Beach, CA are aimed at quantifying the transport and dispersal of surf zone water with support from the California State Coastal Conservancy through the California Ocean Current Monitoring Program (COCMP). A specific goal is calibration and validation of real time, operational models for surf zone alongshore currents. Managers can use this information to better manage beach closures, closing polluted beaches and leaving unpolluted beaches open. The study includes surf zone mixing (with dye, using surf capable vessels). We anticipate that similar localized experiments will be conducted in future years at particularly problematic beaches.

The Coastal Data Information Program (CDIP) provides coastal wave height nowcasts and forecasts. These are disseminated in real-time on the website (cdip.ucsd.edu and sccoos.org) and produced by linking NOAA Wave Watch III forecasts of offshore waves with CDIP's coastal refraction-diffraction wave model. During extreme wave events, this helps prepare beach residents and coastal towns for avoiding disaster. Recreational beach goers, such as surfers and SCUBA divers, check these images regularly. During energetic wave events, the CDIP website receives approximately 150,000 hits. This resource is also accessed by several surf companies within California who grab and repackage the wave information in a “surf” friendly mode for display on their website and messaging to cell phones.



Swell height nowcast & forecast models within the California Bight.

