

*“In the busy Port Complex of Los Angeles-Long Beach Harbor, [CDIP] has proven itself as a useful tool to many of the commercial waterways operators as well. Wave model predictions are helpful for trip planning of ferries engaged in the open ocean transits between the Harbor and Catalina Island...Both Ports’ pilot organizations board arriving ships outside the Harbor breakwater and must be aware of the expected height and direction of swell. The knowledge it provides of conditions at the breakwater entrances can also be of value to them. The San Pedro Vessel Traffic Service also uses it as a forecaster of conditions in the outer anchorages to guard against dragging and to promote general anchorage safety.”*

- Capt. R. B. McKenna, Deputy Executive Director, Marine Exchange of Southern California, San Pedro, CA

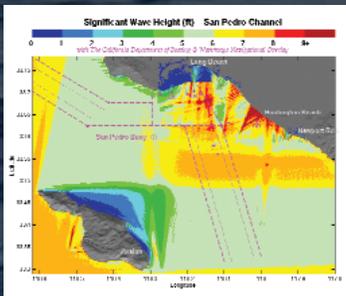
## TRANSPORTATION

### Coastal Data Information Program

The Coastal Data Information Program (CDIP) at the Scripps Institution of Oceanography, a Southern California Coastal Ocean Observing System (SCCOOS) Partner, analyzes and disseminates wave data in near real-time to many users. The data are transmitted in real time to the National Weather Service (National Data Buoy Center - NDBC) hourly, and are accessible on the websites at [sccoos.org](http://sccoos.org) and [cdip.ucsd.edu](http://cdip.ucsd.edu). End-users include the Navy, Coast Guard, Air Force, lifeguards, harbor patrol, coastal planners and managers, commercial fishermen, and the recreational marine community at large. CDIP is a cooperative program between the US Army Corps of Engineers and the California Department of Boating and Waterways.



### COASTAL DATA INFORMATION PROGRAM



In addition to these real-time measurements, CDIP’s wave models are initialized with both sea and swell information from nearby buoys. Harbor models are one of the products widely used for marine transportation. A model of the Long Beach Harbor and the San Pedro Channel is shown in the figure where the north- and south-bound shipping lanes are designated by the purple dashed lines. The predicted wave height is depicted by the various colors with red signifying the most energetic regions.

We measure waves a few miles offshore with “port region buoys” vs. directly at the harbor entrance to predict wave conditions for the harbor approach as well as the harbor entrance (including entrance shoals, etc.). For example, in the San Pedro Channel, overflow shipping traffic waiting to enter the harbor often moor near Huntington Beach. However, this preferred mooring area can experience larger waves than those observed at the port entrance with the implication that port operators need a more regional view of wave conditions. The data from an instrument placed very close to a harbor entrance is often too site specific for use in predicting waves in the neighboring region. In summary, these models are invaluable for all ship traffic, including Harbor Pilots and Ferry operators, for assessing harbor entrance conditions. The value of the data and models will be enhanced in the coming year by including real-time surface current data and models from the California Coastal Conservancy’s California Ocean Current Monitoring Program (SCCOOS and CenCOOS).

[www.sccoos.org](http://www.sccoos.org)

[cdip.ucsd.edu](http://cdip.ucsd.edu)

