US Army Corps of Engineers

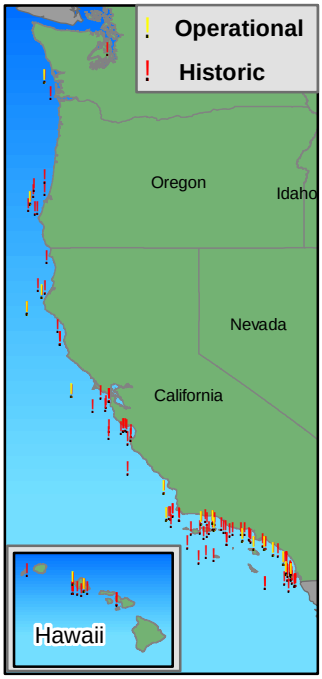
The Coastal Data Information Program

Integrative Oceanography Division

Monitoring and Prediction of Waves and Shoreline Change

*The Coastal Data Information Program (CDIP) measures, analyzes, archives, and disseminates coastal environment data for use by coastal engineers, planners, managers, scientists and mariners (**http:// cdip.ucsd.edu**).*

Facilities and Capabilities



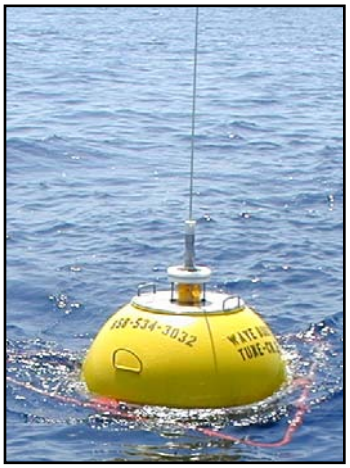
CDIP Station Locations

Founded in 1975, the Coastal Data Information Program (CDIP) has deployed over 130 stations and archived over 80 GB of wave data. Data are disseminated in real time via both the CDIP website, NDBC and NWS weather channel radio broadcasts. Historical data are also available from the CDIP website. This resource is accessed by over 6,000 sites daily and utilized by Corps of Engineers district and division offices in support of both planning and design of structures and beach nourishment projects. The site is also used by the Navy, Marines, Coast Guard, coastal planners and managers, pilots, marine transporters, commercial fisherman, and the beach-going public.

CDIP Research and Modeling

Deep water wave data from a buoy offshore of Pt. Conception (upper left corner of the top figure in right panel) are transferred to CDIP at Scripps every 30 minutes, and used to initialize the numerical model that produces maps of regional wave height on the website (as indicated by the color scale). Specialized maps are produced for harbor entrances using buoys near the mainland (the lower-panel of right figure shows LA-Long Beach Harbor).

Environmental Data



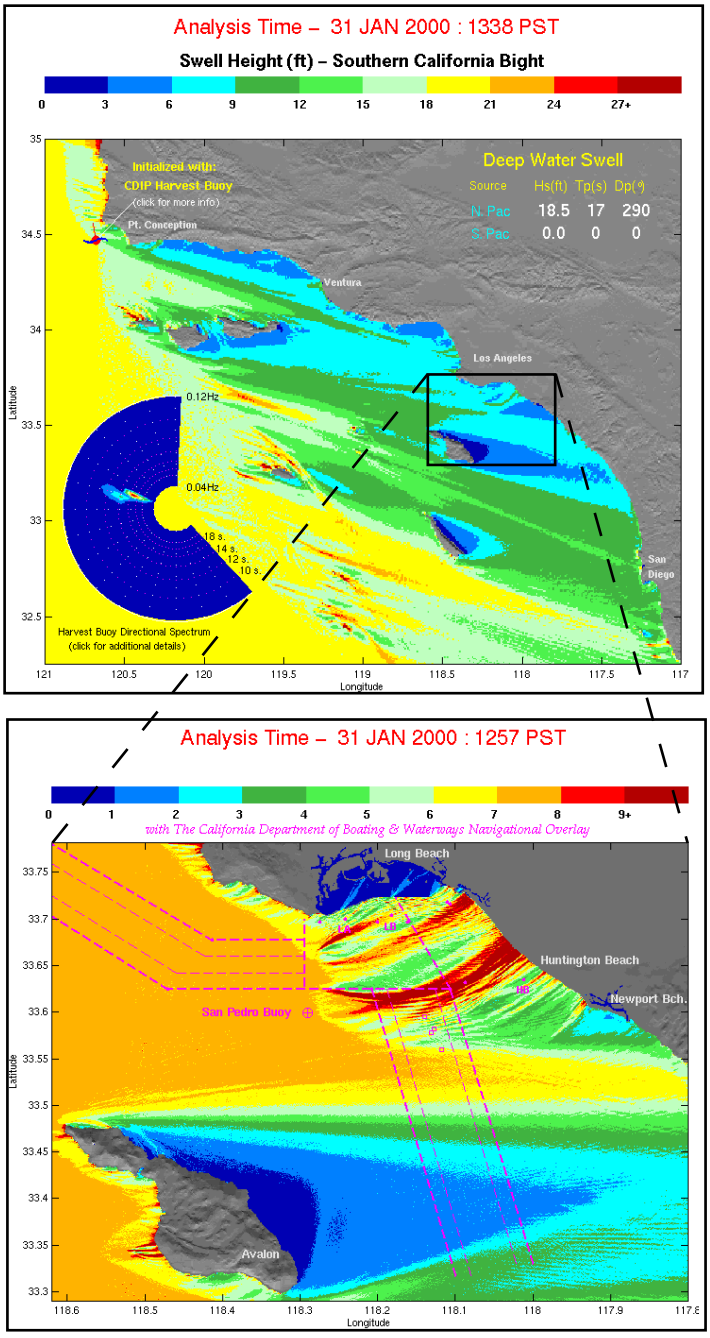
CDIP Directional Waverider Buoy

The following are collected and displayed in near real-time on the CDIP website:

- Wave height, period, & direction
- Air & surface temperature
- Wind speed & direction
- Atmospheric pressure

Coastal & Offshore Wave Height Forecasts

CDIP's coastal wave height forecasts on the website are 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 to avoid disaster.



Regional models displaying significant wave height in the Southern California Bight (upper) and LA-Long Beach Harbor (lower).

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5/2008