Leveraging ERDDAP to Enhance CDIP Data Access

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Abstract
The Coastal Data Information Program (CDIP) at Scripps Institution of Oceanography operates an array of wave observing moored buoy stations along the coastlines of the US, with primary funding from the US Army Corps of Engineers. CDIP’s ERDDAP servers are configured to disseminate realtime and historic wave buoy data, and are used to generate data products efficiently for both internal and external users. Additionally, they are playing a role in our new research focus that involves storing and visualizing operational models and forecasts of wave conditions. These ERDDAP servers provide access to ocean data in support of FAIR data compliance, enhancing the value of the data to both the public and the research community.

CDIP plots the latest Surface Current Speed and Direction with data served from ERDDAP.

CDIP’s Extreme Wave Events page uses ERDDAP’s Latitude, Longitude, time filters and OrderByMax function to quickly find the latest extreme waves. ERDDAP offers handy functions for ordering by Variable, Min, Max, Mean, Sum, Closest, Count, Limit as well as other optional constraints.

ERDDAP offers a web interface for easy out of the box tables, graphs and maps.

ERDDAP’s REST API services allows CDIP and other users to build useful and interesting products.

CDIP’s network of Datawell Waverider buoys has grown to > 85 active stations nationwide, spanning Hawaii/Pacific, CONUS, Alaska & Puerto Rico.

ERDDAP aggregates CDIP’s archive and realtime NetCDF datasets. A REST API call to ERDDAP returns CSV and makes it easy to build custom interactive climatology plots showing 24 years of wave and temperature data for buoy station 028 - San Monica Bay, CA.

CDIP Wave-Dp Data Portal

Visit https://cdip.ucsd.edu/