

Wave Monitoring

NSW Coast

Background

Manly Hydraulics Laboratory collects wave data for the Office of Environment & Heritage (OEH) to provide essential input to design, construction and performance monitoring of coastal projects. The wave monitoring network was developed in response to a series of destructive storms during the 1970s and includes seven wave sensing buoys moored between 5 and 12 kilometres offshore. The buoys telemeter information to onshore recording stations before transfer to the wave database at MHL.

Project Scope

The wave monitoring network was established to provide reliable long-term wave data statistics for coastal management and design. The system has evolved with a capability to supply near real-time coverage of wave conditions off the NSW coastline.

Our Role

MHL manages all aspects of the wave data collection network including:

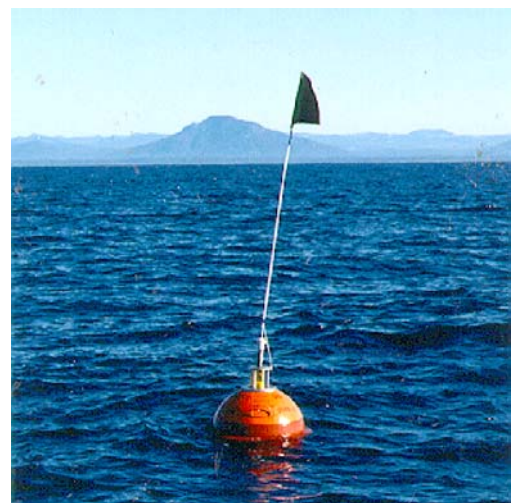
- the maintenance, calibration and deployment of wave monitoring buoys
- data management, quality control, analysis and archiving
- provision of historical data and access to near real-time data via the internet.

Outcomes

The NSW wave monitoring network is one of the world's most comprehensive wave data sets. Over the years the data has been extensively used in coastal investigations, design and management. More recently near real-time data is available to the community via the internet and is utilised by the Bureau of Meteorology for coastal waters forecasts, storm warnings and verification of computer wave models. In the future the database will provide baseline data to monitor possible changes in the NSW wave climate due to future climatic change.



Beach erosion at Cronulla, June 1974



Wave monitoring buoy off NSW coast

KEY FEATURES

- Operation of seven wave monitoring buoys
- Management and quality assurance of extensive wave database
- Dissemination and analysis of historical wave data
- Community access to near real-time data via the internet
- Provision of data to Bureau of Meteorology for coastal forecasts and storm warnings