Science Snapshot report

Physical Coastal Monitoring 2019



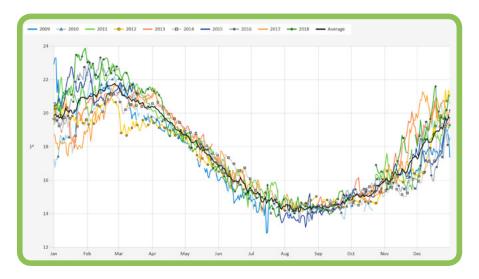
We continue to monitor 53 sites. Cross-sections starting from behind the frontal dune and moving seawards towards the mean sea level mark are measured annually in February at each of the sites. The position of the toe of the frontal dune and the volume of sand on the beach are used to determine a trend index value (see map) for each site. Data from 1990 to 2019 is used in this calculation.



With the inclusion of drone technology within Council, this method of data capture is being investigated to provide more information such as digital terrain models and high resolution imagery. Both datasets will be valuable in monitoring this very dynamic area of the environment and provide useful information for ongoing coastal hazard analysis work.

Wave buoy temperature

In addition to the wave parameters measured by the Council Triaxys wave buoy located 13km north of Pukehina Beach, "surface" temperature is also recorded. The sensor is mounted at the base of the buoy hull and is approximately 0.5m below the water surface. As expected strong seasonal temperature patterns exist (see graph). Year to year variations also exist as the water mass is affected by short, medium and long term climatic factors, such as diurnal solar heating, El Nino Southern Oscillation and Interdecadal Pacific Oscillation.



This information is used for investigating ecological trends within open coast and estuarine environments. Local fisherman also use it to get a picture of what fishing may be like at particular times of the year. Find wave buoy data on our website at: https://www.boprc.govt.nz/environment/maps-and-data/environmental-data/.

