Objectives:
1) Quantify gradients in wave energy and tidal currents in the study area.
2) Investigate the relative importance of waves and tidal currents to sediment resuspension and transport on the low tide terrace.
3) Investigate the influence of the fringing eelgrass meadows on currents, wave velocities, and sediment resuspension and transport by comparing conditions at a vegetated and unvegetated site.
4) Evaluate the distribution of sediment grain sizes at the site, and relate to eelgrass distribution and sediment mobility.

Grain size
Grain size at Possession Point ranges from fine sand to cobbles and boulders. Landslides from the steep bluffs contribute fresh sediment to the nearshore. The coarser grain sizes in the middle of the study area appear to prevent eelgrass colonization.

2007 Deployment: Feb 27 - March 22
Wind and Waves
Northerly winds during storms generate waves with significant wave heights up to 0.75 m at the ADCP north site. Waves at the shallow water sites were directed to the NE (50 deg).

Results from acoustic mapping were used to site instruments inside and outside seagrass meadows.

Tidal Currents
The direction of tidal currents is influenced by the local bathymetry: at each site the strongest currents are shore-parallel. Current speed lower within the eelgrass meadow (Tetrapod So.) than outside it (Tetrapod No.), due to attenuation by the vegetation.

Purpose: Characterize and compare tidal currents and wave energy in the nearshore of Browns Bay and Possession Point.

Thanks to Jamie Grover, Hal Williams, Joanne Ferreira, Kevin O’Toole and Dave Gonzales, Renee Takesue, and Mike Hannum for help with data collection.