INTERACTIONS BETWEEN SEA WATER AND CORAL REEFS IN KANEOHE BAY, OAHU, HAWAII

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ABSTRACT

This study, covering a period of eight months, was undertaken to determine if measurable changes in characteristics occur in sea water passing over a shallow coral reef. The parameters studied include salinity, temperature, current velocities, dissolved oxygen, pH, dissolved organic carbon and particulate organic and suspended inorganic carbon. Staining and microscopic observations were made to supplement the other data.

The results showed noticeable increases in oxygen, pH, particulate organic and inorganic carbon abundance in the central portion of the reef, which were attributed to the influence of extensive growths of benthic algae found on the seaward edge. Dissolved organic carbon concentration increased gradually across the reef, and there is evidence that inorganic carbonate is being accumulated on the leeward side of the reef.