KAHUKU POINT AREA DESCRIPTION

Kahuku Point is on the north shore of Oʻahu and forms the northern tip of the island. The shoreline is composed mostly of exposed limestone shelf with 'perched' calcareous beach above the water line. Beach rock is also prevalent. Kaihalulu Beach (transects 63-80) and Hanakaʻilio Beach (transects 81 -98) are found in two bays between limestone headlands. Shoreline position is highly variable at these beaches as limestone outcrops are intermittently exposed and buried by shifting sands. The area is exposed to north and west swells during winter months and easterly tradewind waves year-round.

Long-term shoreline change rates (1949-2015) calculated for Kaihalulu Beach indicate moderate rates of erosion, approaching -0.6 ft/yr near the middle of the beach. Historical shorelines show that Kaihalulu has been less erosive since 1967. Shoreline data from the 1910 and 1932 T-sheets were omitted from this area due to overall poor data quality.

Long-term shoreline change rates (1928- 2015) for Hanakaʻilio Beach indicate that the beach has been stable or accreted in the mid-portions and erosive on the east and west ends (approaching -0.1 ft/yr). Plots of historical shoreline position show high variability at Hanakaʻilio. As a result, long-term rates have high uncertainty at most transects at Hanakaʻilio Beach. Shoreline data from the 1910 and 1932 T-sheets were omitted from this area due to overall poor data quality.

A previous study by Hwang (1981) found 77 ft of erosion to the water line from 1949-1967 at Kaihalulu Beach (transect 2 in his study) but no significant change to the vegetation line.

For more information see: http://www.soest.hawaii.edu/asp/coasts/oahu/index.asp

[1] Hwang, D. (1981) "Beach changes on Oʻahu as revealed by aerial photographs", State of Hawaii, Department of Planning and Economic Development.

[2] Sea Engineering, Inc. (1988) "Oʻahu shoreline study", City and County of Honolulu, Department of Land Utilization.

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Oʻahu; Kahuku Point; Kaihalulu Beach; Hanakailio Beach