

## KAHANA AREA DESCRIPTION

Kahana Bay and Beach are located on the east coast of O‘ahu. The beach is composed of calcareous sand with terrigenous alluvium from Kahana Stream. The beach is protected from the full energy of northeast tradewind waves and refracted north swells by shallow fringing reef on either side of the bay and sandbars in the wide, gently-sloping surf zone. Sand accumulates in Kahana Bay, and contributes to shoreline accretion, because tradewind-generated currents deliver sand from the shoreline and reef flats to the north.

Averaged along the shoreline, Kahana Beach (transects 0 - 41) has experienced long-term accretion at 1.4 ft/yr. The highest accretion rates, up to 2.1 ft/yr, are found near the middle of the beach (around transect 14). Evidence for accretion at Kahana Beach is also visible in young pine trees growing out onto the beach, advancing the vegetation line seaward. Plots of historical shoreline positions at each transect show that accretion has continued at an approximately constant rate at transects 0 - 28 since 1928. Accretion has slowed or turned to erosion at transects 29 - 41 since 1967, with mild return to accretion in 2015.

Previous studies also found long-term accretion at Kahana Beach (Hwang, 1981).

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

<sup>1</sup> Hwang, D. (1981) "Beach changes on O‘ahu as revealed by aerial photographs", State of Hawaii, Department of Planning and Economic Development.

Keywords:

O‘ahu; Kahana Bay