

PUNALU‘U AREA DESCRIPTION

Punalu‘u is located on the northeast coast of O‘ahu. The beach is composed of calcareous sand with terrigenous alluvium around Kaliuwa‘a and Punalu‘u stream mouths. Shallow fringing reef protects the shoreline from the full energy of north-east tradewind waves and refracted north swells. The beach is lined with sea-walls and homes located close to the shore.

The beach between Kālaipāloa Point and Kaliuwa‘a Stream (transects 1 - 23) has experienced moderate to high long-term erosion with rates up to -1 ft/yr at Kālaipāloa Point resulting in loss of the beach at transects 1 - 8. The remainder of the beach between Kaliuwa‘a and Punalu‘u streams (transects 31 - 151) has experienced variable alongshore rates less than or equal to 0.6 ft/yr. Waves wash up to the base of seawalls in other sections at high tide and overwash Kamehameha Highway when the waves are large.

Previous studies (Hwang, 1981; Sea Engineering, 1988) found little net change to the shoreline from 1949-1988 in this area; as their shoreline proxy, the vegetation line, was typically stabilized by seawalls.

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

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

² Sea Engineering, Inc. (1988) "O‘ahu shoreline study", City and County of Honolulu, Department of Land Utilization.

Keywords:

O‘ahu; Punalu‘u; Kaliuwa‘a stream; Kalaipalooa Point