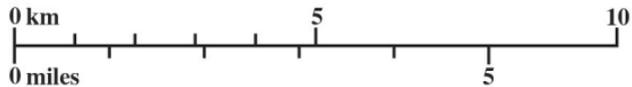


Kahoolawe



Kealaikahiki Channel

Alalākekiki Channel

Lae o Kukui Point

Kūheia Bay

Wa'āiki
Papakaiki
Papakānui

Ahupū Bay

Honokoa Bay

Kanapoe Bay

Kaukaukapapa Bay

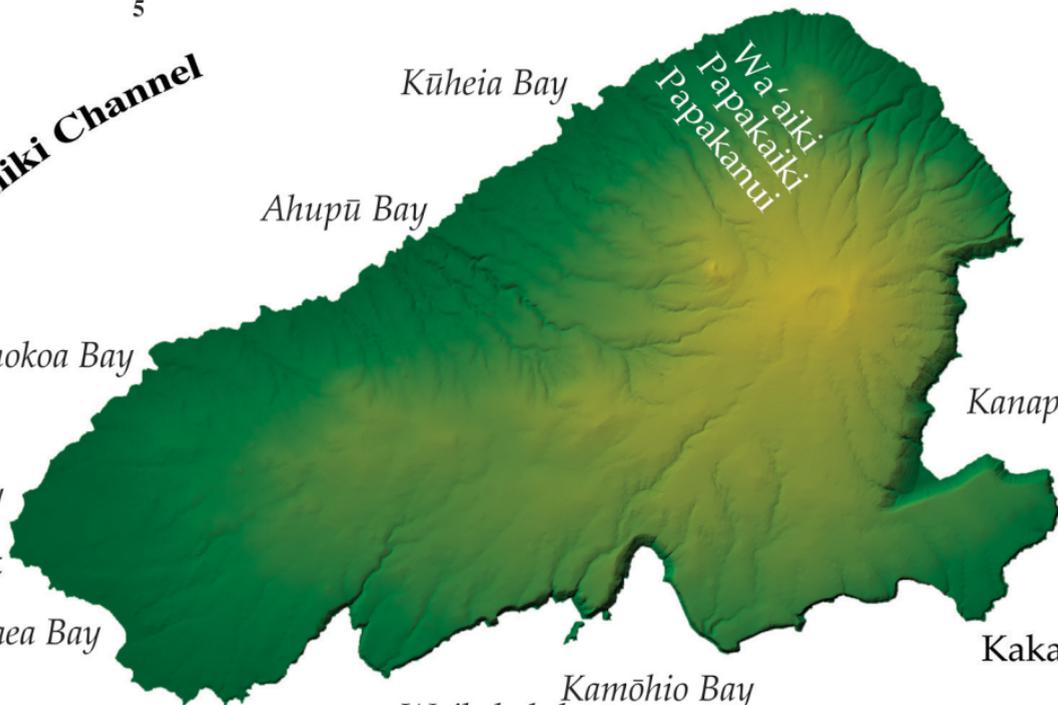
Lae o Kealaikahiki Point

Hanakanaea Bay

Kaka Point

Kamōhio Bay

Waikahalulu
Bay



Kaho'olawe is the smallest of the main Hawaiian Islands, with just 47 km of general coastline that wraps a single shield that formed 1.03 yr Ma. The island is aligned with the southwest rift zone of Haleakalā Volcano on Maui less than 10 km to the northeast, and may be related to the Hana Volcanic Series.

Kaho'olawe has had a complicated history of human exploitation that has affected its terrain and environment, leaving it dry and barren. In the 19th and early 20th centuries, tens of thousands of sheep and goats were raised on the island. Consequent over grazing removed most of the islands vegetation leaving soil exposed to high winds, which eventually removed much of the topsoil. In 1939 the United States Military commandeered the island for use as a bombing and artillery target. Kaho'olawe became the most artillery-impacted island in the Pacific from 1941 to 1945 (Clark 1989). Local efforts to return the island to Hawaiian control began in the mid seventies, and in 1993 the United States Congress turned Kaho'olawe over to the State of Hawai'i, and the Hawai'i State Legislature established the Kaho'olawe Island Reserve. The federal government commenced a cleanup campaign to remove the vast numbers of unexploded ordinance and debris that remain on the island and near shore areas. Because of its long-term status as a federal military site there have been few geologic investigations of Kaho'olawe.

The north shore of the island extends with a northwest exposure for over 18 km from Kuikui Pt. at the north tip of the island to Kealaikahiki at the northwest tip. Along this coast flat pocket beaches of detrital sand lie at the mouths of stream gulches that reach to the center of the island. This coast lies in the lee of West Maui and is moderately protected from north Pacific swells. At the east end of the north shore small stream gulches such as Wa'aiki, Papakaiki,

and Papakanui lie perpendicular to the coast where they drain from the islands interior during infrequent rainy periods. Larger gulches lie along the central north shore where they are separated by low vegetated rocky headlands. Rainy periods draw terrigenous material from the arid tops of the island to the coast where they cloud shallow nearshore waters. Deeper offshore waters are cleared by strong alongshore currents that are controlled by the Kealaikahiki Channel between Kaho'olawe and Lāna'i.

Larger beaches may be found at the heads of several larger bays along the coast such as Kūheia, Ahupū, and Honokoa bays. The western end of the north shore is lined with long, wide white sand beaches supplied by small patches of fringing reef both east and west of the large Honokoa Bay. These beaches extend to the western end of the north shore beyond the broad embayment north of Keanakeiki.

Kealaikahiki Pt. is a low-lying lava headland that lies at the north end of the west coast and is an important modern and historic navigational landmark. The west coast is less than 6 km long and consists primarily of a broad bay bordered to the south by a wide rocky headland. Hanakanaea Bay holds a long, wide white sand beach that slopes gently offshore making it one of the best landing sites for small craft on the island. Accessibility combined with generally calm conditions allowed nineteenth century opium smugglers to utilize the bay and to hide caches of the drug in the dry Kiawe vegetation that lines the backshore, thus the bay is also known as Smugglers Cove (Clark 1989).

The south coast of the island is totally exposed to the ocean, and is irregular, carved into numerous embayments by large stream gulches. Two major embayments at Waikahalulu and Kamōhio reach far inland, and a large

islet lies offshore of the central coast.

The east coast has been cut by wave erosion into blunt sea cliffs up to 240 m high that are essentially unaffected by stream erosion. Kanapou Bay is large: over 3 km wide, and is bordered by the walls of the old Kaho'olawe caldera. This cross section of the eastern edge of the caldera is under-bedded by volcanic tuff and exposures of caldera-filling lavas lie in the head of the bay where they are massive with well developed columnar jointing. Rejuvenated eruptions at five vents along the caldera edge mantled portions of the eastern sea cliffs with spatter and cinder. Kanapou Bay holds a wide calcareous beach and dunes in the backshore. The nearshore waters are shallow but offshore the deep and fast waters of the 'Alalākeiki Channel flow rapidly.