

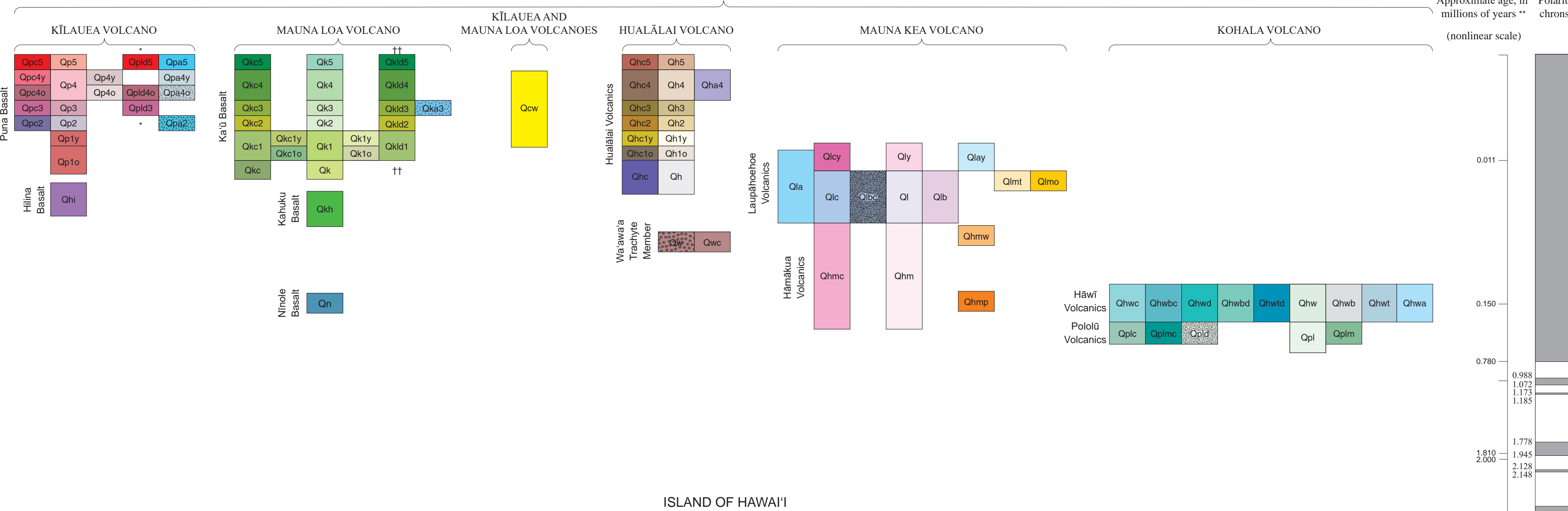
Base from U.S. Geological Survey National Map
North American Datum 1983
Universal Transverse Mercator Projection, UTM zone 5
Coastline generated from 2018 mapping
THIS MAP IS NOT INTENDED FOR NAVIGATION

Geology from Wolfe and Morris (1996a), as derived from electronic GIS depiction by Truesdell and others (2006)
For Hualalai, modified to show revisions of youngest lava flows as mapped by Kaulakaua and others (2002). For Mauna Kea, modified to show distribution of Pohoiki and others (1987). For Kilauea, modified to show distribution of Kilauea eruption, as of December 2018, using data provided by U.S. Geological Survey's Hawaiian Volcano Observatory. Some geology along Kilauea's southwest rift zone from unpublished data of C.A. Neal, D.R. Sherrod, and D.A. Swanson, which leads to slightly different interpretation of age for some units.
Edited by Carolyn Donlin, Sarah Nagerson, Claire Landowski, and Phil Frederick; digital cartographic production by Katie Sullivan, D.R. Sherrod, and J.E. Robinson
Manuscript approved for publication December 2, 2019

CORRELATION OF MAP UNITS

[Boxes without color show ages of correlative stratigraphic formations on adjacent islands not depicted on this sheet]

VOLCANIC AND INTRUSIVE ROCKS ON THE ISLAND OF HAWAII

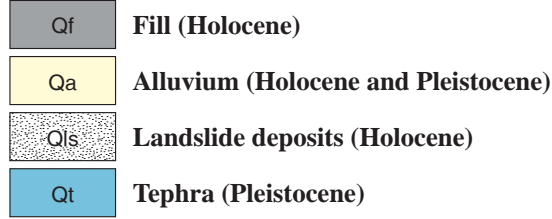


* The one occurrence of unit Qp15 is on Kilauea's northeast flank and shown labeled.
The four occurrences of unit Qp15a are scattered broadly along Kilauea's south flank and shown labeled.
Two occurrences of unit Qp15b are on Kilauea's northeast flank and two are on the southwest.
† All occurrences of Qk15 units (5.4,3,2,1) are on Mauna Loa's west flank and labeled separately.

LIST OF MAP UNITS

[See Description of Map Units (in pamphlet) for complete unit descriptions. Some unit exposures on the printed or plotted map are too small to distinguish the color for unit identification. These units are labeled where possible, and unlabeled units are attributed in the database]

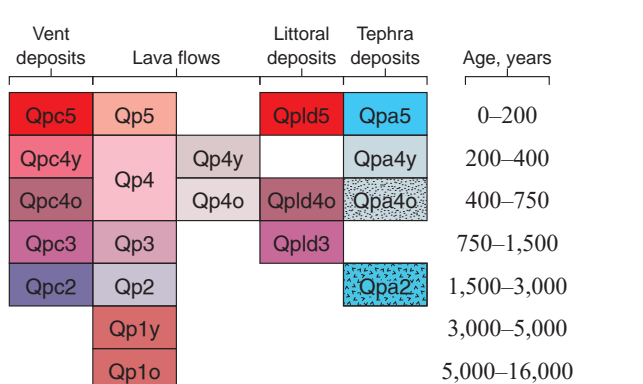
SURFICIAL DEPOSITS



VOLCANIC AND INTRUSIVE ROCKS ON THE ISLAND OF HAWAII

KILAUEA VOLCANO

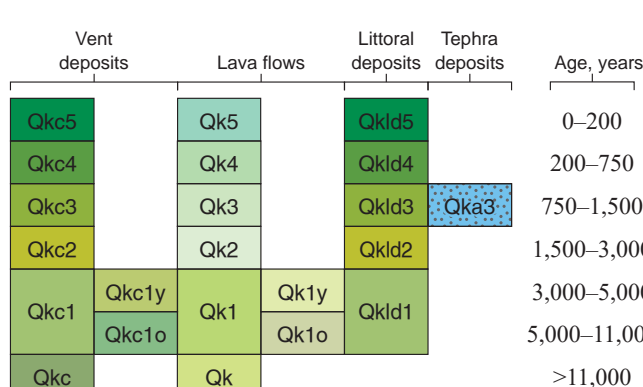
Puna Basalt (Holocene and Pleistocene)—Divided according to the following matrix (y, younger; o, older)



Hilina Basalt (Pleistocene)

MAUNA LOA VOLCANO

Ka'u Basalt (Holocene and Pleistocene)—Divided according to the following matrix (y, younger; o, older)



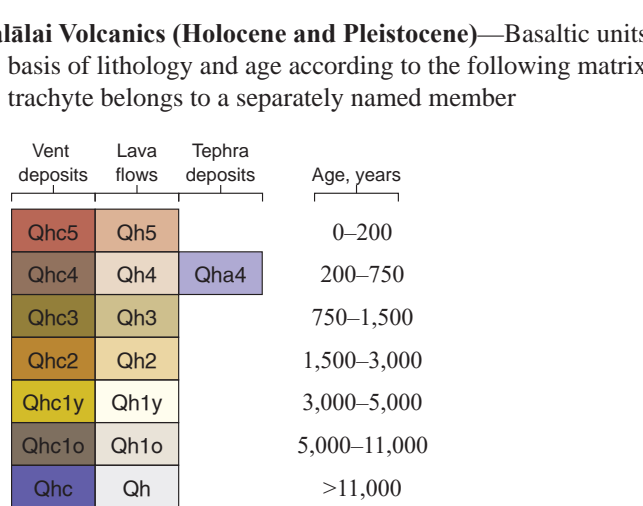
Kahuku Basalt (Pleistocene)

Nihoa Basalt (Pleistocene)

KILAUEA AND MAUNA LOA VOLCANOES

HUALALAI VOLCANO

Hualalai Volcanics (Holocene and Pleistocene)—Basaltic units divided on basis of lithology and age according to the following matrix; whereas the trachyte belongs to a separately named member



Wa'awa'a Trachyte Member (Pleistocene)—Divided into:

Lava flow
Scoria cone

MAUNA KEA VOLCANO

Laupahoehoe Volcanics (Holocene and Pleistocene)—Divided into two informally named volcanic members and an intervening formally named glacial member, thus:

Younger volcanic rocks member (Holocene and Pleistocene?)—Divided into:
Scoria cones
Lava flows

Tephra-fall deposits

Older volcanic rocks member (Holocene and Pleistocene)—Divided into:
Tephra-fall deposits (Holocene and Pleistocene)

Scoria cones (Pleistocene)—Unit is mapped separately as:

Two cones with benmoreite composition

Lava flows (Pleistocene)—Unit is mapped separately as:

Benmoreite lava flows

Makana Glacial Member (Pleistocene)—Divided into:

Till

Outwash

Hamauna Volcanics (Pleistocene)—Consists of:

Basalt—Divided into:

Vent deposits

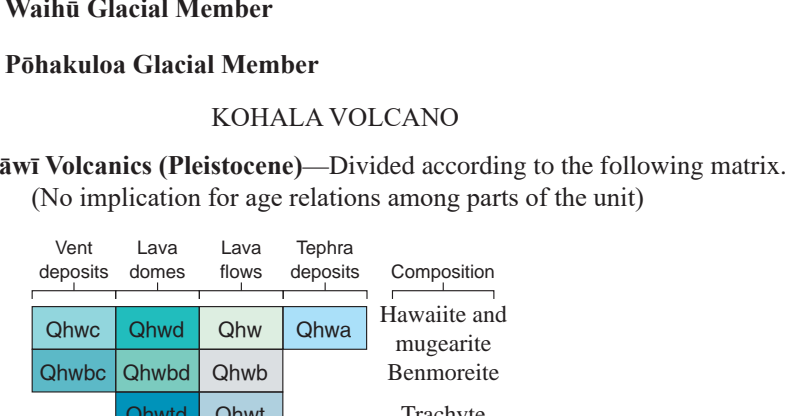
Lava flows

Waipi'o Glacial Member

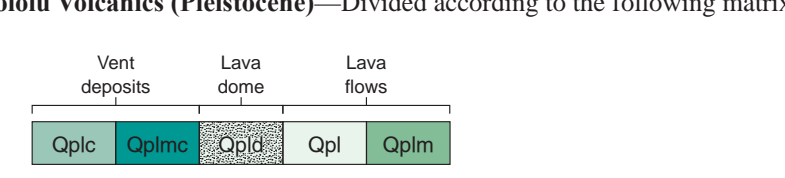
Pohakulo Glacial Member

KOHALA VOLCANO

Hawi Volcanics (Pleistocene)—Divided according to the following matrix. (No implication for age relations among parts of the unit)



Pololu Volcanics (Pleistocene)—Divided according to the following matrix



EXPLANATION OF MAP SYMBOLS

Contact—Approximately located. Internal contacts define separate lava flow sequences within the unit
Fault—Dashed where approximately located; dotted where concealed. Ball
Paleoshoreline—Coastline before the 2018 Kilauea eruption



Aerial oblique photograph showing a view south-southwest to an active vent at fissure 8 during the 2018 lower east rift zone eruption, Kilauea, Hawaii. Lava of this date flowed 8 kilometers northeast and wrapped around Kapoho Crater and then southeast into the ocean. U.S. Geological Survey photograph by J.J. Major, June 18, 2018.



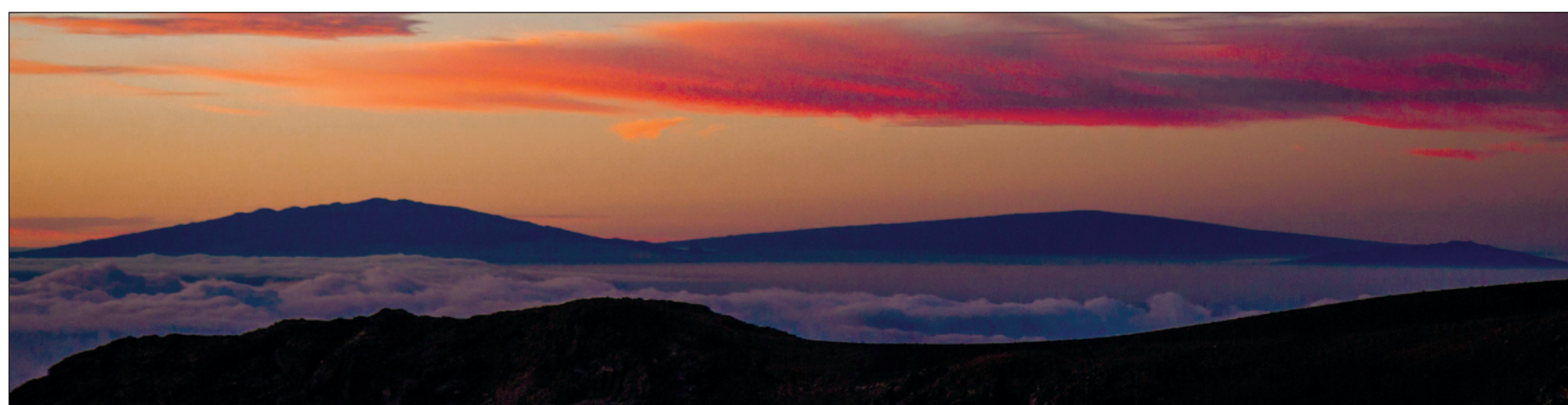
Aerial oblique photograph showing a view south-southwest to an active vent at fissure 8 during the 2018 lower east rift zone eruption, Kilauea, Hawaii. Lava of this date flowed 8 kilometers northeast and wrapped around Kapoho Crater and then southeast into the ocean. U.S. Geological Survey photograph by J.J. Major, June 18, 2018.



Photograph of lava flows from fissure 6 across Pohoiki Road in the lower east rift zone of Kilauea, Hawaii. Downed utility lines are shown draped across the road in the foreground. Large hose in grass on left was a temporary water-supply line installed when ground cracking broke the water main in the area, before inundation by lava rendered most any further habitation. U.S. Geological Survey photograph by C.E. Pancheta, May 23, 2018.



Aerial oblique photograph showing a view west across Halema'uma'u, the main crater in the caldera at the summit of Kilauea. Prominent flat surface in center is Halema'uma'u crater floor, which has subsided more than 100 m after the lower east rift zone eruption of 2018. The deepest part of the pit is 300 m below Halema'uma'u's crater rim. Pale striping (horizontal features left of center) marks the approximate position of the former visitor overlook, closed since 2008. U.S. Geological Survey photograph by K.R. Anderson, June 12, 2018.



Photograph looking southeast to summits of Mauna Kea (left, altitude 4,205 m or 13,796 ft) and slightly lower Mauna Loa (right, altitude 4,169 m or 13,679 ft) on Island of Hawai'i, from the summit of Haleakala, Maui. The many substantial scoria cones on Mauna Kea present a more irregular skyline than seen on Mauna Loa. Photograph by Ralph Howard, October 8, 2018.

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Digital files available at <https://doi.org/10.26309/25080> and <https://doi.org/10.26309/25080>
Suggested citation: Sherrod, D.A., Sinton, J.M., Watkins, S.E., and Brunt, K.M., 2021, Island of Hawai'i, sheet 5 of geologic map of the State of Hawai'i, U.S. Geological Survey Scientific Investigations Map 3143, version 7.2, 5 sheets, scales 1:100,000 and 1:250,000, <https://doi.org/10.26309/25080>.
Associated data for this publication: Sherrod, D.A., Robinson, J.E., Sinton, J.M., Watkins, S.E., and Brunt, K.M., 2021, Geologic map database to accompany geologic map of the State of Hawai'i, U.S. Geological Survey data release, <https://doi.org/10.26309/25080>.

Geologic Map of the State of Hawai'i—Island of Hawai'i

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2021