
SENATE RESOLUTION

URGING THE UNITED STATES GEOLOGICAL SURVEY TO CONDUCT
TOPOGRAPHICAL SURVEYS, PARTICULARLY WITHIN LAVA-FLOW HAZARD
ZONES 1 AND 2, TO UPDATE ITS LONG-TERM LAVA-FLOW HAZARD MAP
OF HAWAII ISLAND.

1 WHEREAS, for emergency management purposes, a hazard is an
2 event or condition of the physical environment that results or
3 may likely result in damage to property; injury to or death of
4 individuals; or damage to the environment; and
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6 WHEREAS, active volcanos are natural hazards that can
7 repeatedly threaten public safety; and
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9 WHEREAS, the tephra, ashfall, lahars, volcanic gas, lava
10 flows, pyroclastic density currents, and volcanic landslides
11 from a volcanic eruption can not only lead to an immediate loss
12 of life and property, but also negatively alter the nearby
13 environment for years to come; and
14

15 WHEREAS, there are six volcanoes that are classified as
16 active in the State: Kilauea, Mauna Loa, Hualalai, and Mauna
17 Kea on Hawaii island; Haleakala on the east side of Maui; and
18 Kamaehuakamaloa, an underwater volcano within state waters
19 southeast of Hawaii island; and
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21 WHEREAS, in 1974, the United States Geological Survey
22 (USGS) prepared a map of Hawaii island showing long-term lava-
23 flow hazards based on existing geologic data. This map was
24 updated in 1992 and published as "USGS Miscellaneous Field
25 Studies Map 2193" and is still used today; and
26

27 WHEREAS, USGS Miscellaneous Field Studies Map 2193 divides
28 Hawaii island into nine lava-flow hazard zones that are
29 numerically ranked on a scale of decreasing hazard as the
30 numbers increase; for example, Zone 1 is at highest risk and
31 includes the summits and rift zones of active volcanoes where
32 volcanic vents have been repeatedly active in historic time, and



1 Zone 2 includes areas adjacent to and encompassing the downslope
2 of active rift zones; and
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4 WHEREAS, these zones are designated based on the locations
5 of probable eruption sites, the likely path of lava flows
6 erupting from those sites, the frequency of lava flow inundation
7 of an area over the past several thousand years, and structural
8 and topographical features that would affect the direction of
9 lava flows; and
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11 WHEREAS, USGS Miscellaneous Field Studies Map 2193 is
12 intended to communicate long-term lava-flow hazards but may not
13 reflect the vulnerability of resources that are likely to be
14 affected by lava flows, the value of the lives or property that
15 is threatened by lava flows, nor does it account for the
16 elevation differences within the lava-flow hazard zones; and
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18 WHEREAS, since 1992, while most lava flows erupted from
19 Kilauea Volcano on Hawaii island have remained within the Hawaii
20 Volcanoes National Park, according to the USGS, the volcano's
21 geologic history indicates that future activity will continue to
22 threaten residential areas on the volcano's south flank; and
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24 WHEREAS, the USGS Miscellaneous Field Studies Map 2193 was
25 last updated in 1992, and an update to that map could provide
26 state and county emergency management agencies, and affected
27 residents and businesses to better understand risks from
28 volcanic hazards on Hawaii island; now, therefore,
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30 BE IT RESOLVED by the Senate of the Thirty-second
31 Legislature of the State of Hawaii, Regular Session of 2024,
32 that the United States Geological Survey is urged to conduct
33 topographical surveys, particularly within lava-flow hazard
34 Zones 1 and 2, to update USGS Miscellaneous Field Studies Map
35 2193; and
36

37 BE IT FURTHER RESOLVED that the updated surveys are
38 requested to include more detailed assessments of risk based on
39 elevation differences within each lava-flow hazard zone included
40 in the existing version of USGS Miscellaneous Field Studies Map
41 2193; and
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1 BE IT FURTHER RESOLVED that a certified copy of this
2 Resolution be transmitted to the Director of the United States
3 Geological Survey.

