



EXECUTIVE CHAMBERS
HONOLULU

DAVID Y. IGE
GOVERNOR

REQUEST FOR PRESIDENTIAL DISASTER DECLARATION

May 9, 2018

The Honorable Donald J. Trump
President of the United States
The White House
Washington, D.C. 20500

Through: Regional Administrator Robert Fenton
FEMA Region IX
Oakland, CA 94607-4052

Dear Mr. President:

Under the provisions of Section Major Disaster citation (401), of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §5121-5207 (Stafford Act), and implemented by 44 CFR § Major Disaster citation (206.36), I request that you declare a Major Disaster for the State of Hawai'i as a result of the ongoing Kilauea East Rift Zone seismic activity and volcanic eruption beginning May 1, 2018. I request that the declaration authorize the Public Assistance Grant Program for Hawai'i County. In addition, I request the Hazard Mitigation Grant Program statewide.

This disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments; Federal assistance is necessary.

Emergency Proclamations

The Acting Mayor of Hawai'i proclaimed a state of emergency for Hawai'i County, effective May 3, 2018, based on the United States Geological Survey (USGS) Hawai'i Volcano Observatory (HVO) raising the Volcano Alert Level to *Warning*. I took the appropriate action under state law and proclaimed an emergency for Hawai'i County effective May 3, 2018. This proclamation authorized the expenditure of State monies as appropriate to provide for the speedy and efficient relief of the damages, losses, and suffering resulting from the seismic

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activity and lava flow. Furthermore, I directed the execution of the *State of Hawai'i Emergency Operations Plan* in accordance with Section 401 of the Stafford Act.

Description of Event

On May 1, 2018, an earthquake with a 4.0 magnitude occurred in the vicinity of the Kilauea East Rift Zone that caused the wall of Pu'u 'Ō'ō vent to collapse and release lava into the East Rift Zone lava tube network. HVO issued a report that a migration of seismicity and deformation downrift (east) of Pu'u 'Ō'ō indicated that a large area along the East Rift Zone was potentially at risk of a new outbreak, possibly in the lower Puna area.

On May 3, 2018, a 5.0 magnitude earthquake occurred and cracks developed on Mohala Street in the Leilani Estates neighborhood in the Puna District. At 5:35 pm HST, HVO raised the Volcano Alert Level from *Watch* to *Warning*.

The Hawai'i County Civil Defense Agency called for an evacuation of the Leilani Estates and Lanipuna Gardens subdivisions based on the potential threat from the lava intrusion. Based on the 2010 census, these neighborhoods have 835 homes and 1,777 residents.

On Thursday, May 4, 2018 at 4:30 am HST, the lava broke through the surface within Leilani Estates and a 100-foot fountain of lava spewed from the fissure. On Friday, May 5, 2018 a magnitude 6.9 earthquake occurred at 12:32 pm HST, generating a small local tsunami. It was the largest earthquake in Hawai'i since 1975. This earthquake was preceded by a strong magnitude 5.4 earthquake approximately one hour prior. Several aftershocks already occurred, the largest of which was a magnitude 4.8. Aftershocks are expected for several more months. USGS warns that large aftershocks may produce rockfalls and associated ash clouds above the Pu'u 'Ō'ō vent and the Halema'uma'u crater. These ash clouds pose a continuing threat to public health. Several buildings have reported minor damages from the earthquakes. Data from Hazus estimates structural damages from the magnitude 6.9 earthquake at \$4.5 million; however, detailed damage assessments are not possible at this time.

There are currently 14 fissures in the Leilani Estates subdivision. Two are emitting lava and all continue to release hazardous levels of sulfur dioxide (SO₂), hydrogen sulfide (H₂S), hydrogen fluoride (HF), and sulfuric acid (H₂SO₄) gases. HVO warns that additional fissures and related lava flows could appear at any time along the East Rift Zone.

To date, 27 homes have been destroyed by the lava. Leilani Estates and Lanipuna Gardens remain under a mandatory evacuation order and emergency

responders are prevented from accessing parts of these neighborhoods due to poisonous gas levels. It is unknown exactly how many residents did not heed the evacuation order and remain in the subdivisions.

There are only three major roadways in this area, all of which are threatened by the current outbreak. If one of these roadways is cut off by lava, communities may be isolated or forced to use alternate routes that will add hours to their drive times. In the worst case scenario, the entire area of the Puna District, which includes 6,000 residents, may become isolated. This figure does not include the large numbers of squatters and unofficial residents living in the area. Cracks have been reported on Highway 130. If Highway 130 is closed to normal vehicular traffic, only two gravel roads are available for evacuation, Railroad Avenue or Government Beach Access Road, which will add over an hour each way to residents' travel time. Another potential evacuation route, Chain of Craters Road, is currently blocked by lava rock from a previous eruption and approximately one mile would need to be cleared before it can be used. Even if Chain of Craters Road is reopened, travel time for residents will increase by an average of two hours each way.

Lower Puna is an area of high poverty and low economic opportunity. A combination of inadequate infrastructure, geographic size, and a limited economic base has supported a growing population with entrenched poverty. All communities impacted by this event meet FEMA's definition of small impoverished communities. Each community: consists of fewer than 3,000 people; is economically disadvantaged, with residents having an annual per capita income less than 80% of the national per capita income; and has an unemployment rate that exceeds the national unemployment rate by 1 percentage point or more. Additionally, the area has not fully recovered from the two presidentially declared disasters in 2014: Tropical Storm Iselle (DR-4194) and the Pu'u 'Ō'ō lava flow (DR-4201).

Current seismic activity and deformation are consistent with continued accumulation of magma within the rift zone. The path of the lava intrusion is southeastward from the Pu'u 'Ō'ō vent. Additional fissure outbreaks producing spatter and lava flows are likely. Locations cannot be forecast with certainty, but new outbreaks thus far have been preceded by ground cracking, then strong steam and volcanic gas release. Areas uprift and downrift of the current fissure zone are the most likely to see further outbreaks.

As more fissures open, the risk of exposure to SO₂, H₂S, HF, and H₂SO₄ increases. Toxic gas exposure increases the need to evacuate additional neighborhoods and possibly conduct search and rescue operations. Should a large-scale evacuation be required, county and state resources would quickly become overwhelmed. A mass evacuation of the lower Puna District would be

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beyond our collective capabilities; federal assistance would be required to successfully conduct these operations.

The Puna Geothermal Venture power plant, which produces 25% to 30% of the island's power, is also located within the area threatened by a new lava outbreak. The power plant was closed and secured as an emergency protective measure; however, hazardous materials remain at the site which pose a potential threat to human life.

State and County Resources

There has been one federal disaster declaration within the past month, DR-4365. The Joint Preliminary Damage Assessment for DR-4365 verified over \$19.7 million in damages, not including the \$40 million to repair state roads.

Since the HVO raised the Volcano Alert Level on May 3, 2018, Hawai'i County and the State of Hawai'i have focused significant energy and resources on the safety of residents threatened by the lava intrusion and accompanying earthquakes and gas emissions.

Hawai'i County and the state of Hawai'i have already drawn upon over \$400,000 in emergency protective measures for the Kilauea East Rift Zone lava flow and earthquakes. Future costs to protect the population for the next 30 days are estimated to exceed \$2.9 million. If large-scale air or sea evacuations are required, these costs will skyrocket. A table of costs is included in Exhibit B. These costs do not include permanent work or any damages incurred from the many earthquakes that have shaken the area. Due to the on-going volcanic eruption, earthquake damage assessments within the worst hit areas are not possible at this time.

Sincerely,



David Y. Ige
Governor, State of Hawai'i

Enclosures:

OMB No. 1660-0009/FEMA Form 010-0-13
Exhibit B: Table of Costs, Public Assistance Grant Program Categories A and B
Exhibit E: Maps
Exhibit F: Photo Chronology