

**Kīlauea Volcano – 2018**  
**Summit and Lower East Rift Zone (LERZ)**  
**Brief Overview of Events April 17 to**  
**October 5, 2018**

- **September 5, 2018**
  - USGS VAN issued—Volcano Alert Level for ground-based hazards changed from WATCH to ADVISORY. This means volcanic activity has decreased significantly but continues to be closely monitored for renewed activity. The Aviation Color Code is also being lowered from ORANGE to YELLOW. It has been 30 days since lava has been active at the surface of Kilauea Volcano. HVO monitoring shows low rates of seismicity, steady, relatively low rates of deformation across the volcano, and only minor gas emissions at the summit and East Rift Zone (ERZ). These observations indicate that resumption of eruption or summit collapse is unlikely in the near-term.
- **September 3-October 4, 2018.**
  - October 4 No significant incandescence is visible. Early overflight at Pu`u `O`o and the Fissure 8 cone showed no lava was present.
  - October 3 webcam images of the Fissure 8 cone show that a portion of the crater wall near the northern spillway are has slowly shifted during the past 2 weeks, indicating some instability of the cone in this area.
  - September 21 M-3.5 earthquake occurred at 1:56 a.m. HST on Kilauea South Frank.
  - September 16-October 4 No incandescence is visible. Seismicity and ground deformation remain low at the summit of Kilauea.
  - September 14-15 the collapse pit is the central part of a slowly subsiding lava surface that previously filled the Fissure 8 cone. Minor incandescence still visible overnight while minor fuming is visible during the day. September 13's small slow lava flow was probably a layer of incandescence that was gradually exposed in the collapse pit.
  - September 13 the collapse pit within the Fissure 8 cone was no longer incandescent, but a glowing spot just west of the pit that appeared September 11 got wider and may be a very small, slow lava flow moving along the west edge of the collapse pit. Summit tilt returned to deflationary motion, however tiltmeters throughout the volcano are affected by rainfall—continued monitoring of this trend.
  - Minor amounts of incandescence from a collapse pit within the Fissure 8 cone on September 11 and 12. Very minor fuming visible from a small spatter cone located towards the back of the cone. Small lava flows have been observed as previous days, with none extending outside the walls of the cone.
  - September 10 a small collapse pit formed within the Fissure 8 cone over the past day, exposing hot material underneath and producing an increase in incandescence. No surface flow as associated with this event. Small lava flows have been observed as previous days, with none extending outside the walls of the cone.
  - Minor amounts of incandescence and fume continue to be visible within the Fissure 8 cone on September 9. Small lava flows have been observed within the Fissure 8 cone as previous days with no change in overall activity. Tiltmeter in Kilauea's middle East Rift Zone continue to record small amounts of inflationary tilt—a sign of refilling of the rift zone.
  - Small amounts of incandescence were visible within the Fissure 8 cone overnight September 8. However, no changes to the glowing area, which suggests stationary sources. Small lava flows observed in Fissure 8 cone as previous days with no change in overall activity. Pu`u `O`o crater experienced a series of small collapses which produced episodes of visible brown plume throughout the day (most prominent at about 10:30 a.m. HST)—generated small tilt offsets and seismic energy recorded by nearby geophysical instruments. The collapses had no discernable effect

on other parts of the rift.

- September 7 no incandescence was visible at Fissure 8 from helicopter overflight and UAS drone views. Small lava flows observed within the Fissure 8 cone—none extending outside the walls of the cone—no change in overage activity from previous days.
- Small amount of incandescence was visible from the Fissure 8 cone for a brief period overnight on September 6. Small lava flows have been observed within the Fissure 8 cone, however none extend outside the walls of the cone—there is no change in overall activity from observations over the past several days. Tiltmeter in Kilauea’s middle East Rift Zone have recorded small amounts of inflationary tilt, which may be a sign of refilling of the rift zone—current rates are much smaller than those measured during major eruptive activity and are not changing rapidly.
- On September 5 at 5:31 a.m. HST, a Magnitude 3.1 earthquake occurred below Kilauea’s South Flank [likely an aftershock of the Magnitude 6.9 earthquake from early May]. No incandescence was visible on the Fissure 8 spillway. Weak lava activity continues in the Fissure 8 cone as reported September 4.
- UAS crew confirmed September 4 that weak lava activity was present in the Fissure 8 cone, with no lava extending outside the walls of the cone and no flows heading down the spillway.
- Seismicity remains low and ground deformation is negligible at the summit of Kilauea Volcano. On the lower East Rift Zone, the crew on September 3 overflight confirmed that weakly active lava continues to fill the deep crater in the Fissure 8 cone with no lava extending outside the walls of the cone and no flows heading down the spillway. Other vents were steaming due to morning rains. Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced.
- **August 29-September 2, 2018.**
  - On September 2, ground crews have no view of the crater inside the Fissure 8 cone but report the Fissure 8 is quiet when viewed from a safe distance with no visible fume.
  - On September 1 afternoon overflight, incandescence was observed in the Fissure 8 cone, with reports of activity extending into early evening. In addition to a persistent spot of spattering, lava slowing covered the 65-by-15 m (210-by-45 ft) crater floor by evening. Webcam views showed weak incandescence occasionally reflected on the eastern spillway wall from the crater overnight suggesting that the lava in the crater remained active.
  - September 1 ground crews report Fissure 8 cone is quiet and only steam is coming from just uprift, around Fissures 9 and 24.
  - 8/31 overflight crews saw no incandescence anywhere on the flow field and coastal area. Fissure 8 continue to fume.
  - Seismicity remains low and ground deformation is negligible at the summit of Kilauea Volcano. On the lower East Rift Zone, no incandescence was visible in the Fissure 8 cone nor was there any lava entering the ocean from 8/29 morning overflight. Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced.
  - The most recent deformation results in the LERZ do not show patterns that would be consistent with rift opening or closing. If the subsurface magma intrusion is cooling, those effects are not yet strong enough to be detectable.
  - HVO will continue to closely monitor Kilauea’s seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
  - August 31 Summit tiltmeter UWE was repaired and reinstalled. HVO crews are working to restore communication with several monitoring stations on the east side of the island that was disrupted by the passage of Hurricane/Tropical Storm Lane. White out conditions could occur on the new lava field due to the interaction of heavy rain and still-hot flows.
- **August 27-28, 2018.**
  - Seismicity and ground deformation are negligible at the summit of Kilauea Volcano.

On the lower East Rift Zone, a small lava pond was visible deep within the Fissure 8 cone, but lava was no longer visible in the cone. A single small lava dribble was oozing lava from the Kapoho Bay lobe from an HVO August 27 overflight and August 28 UAS flight. A sand bar still blocks the Pohoiki boat ramp. Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced.

- HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
- Hurricane/Tropical Storm Lane has had little effect on the eruption aside from minor rockfalls at the summit and increased Pu'u 'Ō'o and LERZ steaming; however, HVO lost communication with several monitoring stations on the east side of the island. White out conditions could occur on the new lava field due to the interaction of heavy rain and still-hot flows.
- **August 25-26, 2018.**
  - Seismicity and ground deformation are negligible at the summit of Kilauea Volcano. On the lower East Rift Zone, a small lava pond was visible deep within the Fissure 8 cone from a Hawaii County Fire Department overflight this morning. A few ocean entries were oozing lava and laze plumes were minimal from HVO overflights earlier this week. Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced.
  - HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
  - Major Hurricane Lane is moving west away from the Island of Hawaii although flooding remains a problem—the hurricane has had little effect on the eruption aside from minor rockfalls at the summit and increased Pu'u 'Ō'o and LERZ steaming; however, HVO lost communication with several monitoring stations on the east side of the island. White out conditions could occur on the new lava field due to the interaction of heavy rain and still-hot flows.
- **August 22-24, 2018.**
  - Major Hurricane Lane is forecast to pass to the west of the Island of Hawaii—should not have a significant effect on the eruption aside from minor rockfalls at the summit and increased Pu'u 'Ō'o and LERZ steaming. White out conditions could occur on the new lava field due to the interaction of heavy rain and still-hot flows.
- **August 20-24, 2018.**
  - On August 21, the two small areas of incandescence, gas jetting, and spatter from August 20 appeared crusted over.
  - Seismicity and ground deformation are negligible at the summit of Kilauea Volcano. On the lower East Rift Zone, incandescence is at the coast near Ahalanui where a few ocean entries are oozing lava. On August 20 morning overflight, USGS scientists flying over Fissure 8 noticed a change in the vent from yesterday—gas jets were throwing spatter—fragments of glassy lava (light gray deposits)—from small incandescent areas deep within the cone. This activity is an indication that the lower East Rift Zone eruption may be paused rather than pau (over). Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced; the combined rate is lower than at any time since late 2007. On August 21, SO<sub>2</sub> smells were noticed.
  - HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
- **August 19, 2018.**
  - Thunderstorms and heavy rains that drenched windward parts of the Big Island yesterday afternoon (Saturday, August 18) compromised several seismic stations and GPS receivers that are used to monitor earthquakes and ground deformation on Kilauea and Mauna Loa volcanoes. HVO's monitoring network has many built-in redundancies, so real-time data acquisition was not compromised.
- **August 18-19, 2018.**

- The lull in activity at Kilauea Volcano continues. At the summit, seismicity and deformation are negligible. On the lower East Rift Zone, the only incandescence is at the coast near Ahalanui where a few ocean entries are oozing lava. Sulfur dioxide emission rates at both the summit and LERZ are drastically reduced; the combined rate is lower than at any time since late 2007.
- Earthquake and deformation data show no net accumulation, withdrawal, or significant movement of subsurface magma or pressurization as would be expected if the system was building toward a resumption of activity.
- HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
- **August 17, 2018.**
  - USGS VAN issued—Alert Level for ground-based hazards changed from WARNING to WATCH. This change indicates that the hazards posed by crater collapse events at the Kilauea summit and lava flows at the Lower East Rift Zone (LERZ) are diminished. However, the change does not mean with absolute certainty that the LERZ eruption or summit collapses are over. It remains possible that eruption and collapse activity could resume. Although no signs of imminent hazardous activity are present at this time residents of the region near recently active fissures should stay informed, heed Civil Defense warnings, and be prepared, if necessary, to self-evacuate. Aviation color code remains at ORANGE.
  - HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, and maintain visual surveillance of the summit and LERZ.
- **August 15, 2018.**
  - Pacific Tsunami Warning Center [PTWC] reports a 6.5-M earthquake occurred at 11:57 a.m. HST near Andreanof Island, Alaska—there is NO tsunami threat to Hawaii.
- **August 14-16, 2018.**
  - Kilauea Volcano has remained quiet for over a week, with no further collapse events at the Summit, and with the exception of a small, crusted-over pond of lava deep inside the Fissure 8 cone and a few scattered ocean entries, no lava flowing in the lower East Rift Zone (LERZ).
  - Earthquake and deformation data show no net accumulation, withdrawal, or significant movement of subsurface magma or pressurization.
  - It is too soon to tell if this change represents a temporary lull or the end of the LERZ eruption and/or summit collapse activity. HVO will continue to closely monitor Kilauea's seismicity, deformation, and gas emissions for any signs of reactivation, including overflights of the rift zone and summit as needed, supplemented with unmanned aerial systems (UAS) flights and daily visual observations. Field crews will be deployed to the LERZ and summit areas.
- **August 13, 2018.**
  - Although the lull in eruptive activity on the LERZ continues, it is common for eruptions to go through periods of diminished output, or to pause completely, only to return with renewed vigor days, weeks, later. Resumption of the activity on the LERZ could occur at any time, and residents should remain informed and heed Hawaii County Civil Defense messages and warnings.
  - A gas plume billows up from Fissure 8 and a small lava pond is circulating sluggishly within its confines. The only "red" lava visible on the flow field is the oozing into the ocean between the Kapoho Bay and Ahalanui area coastline. Fresh black sand, created as molten lava is chilled and shattered by the surf, is being transported to the SW by longshore currents and accumulated in the Pohoiki boat harbor, which is now blocked by a sandbar. The westernmost ocean entry is about 1 km from the harbor.
  - Kilauea summit seismicity continues to be low, with only 3 located earthquakes per hour [maximum magnitude of M-2.1]. Summit deflation remains negligible
  - Lava delta hazard continues.

- SO<sub>2</sub> gas emissions from the Summit, Pu`u `O`o, and the Lower East Rift Zone are all at low levels. On August 5-6, LERZ emission were ~200 tons/day; Pu`u `O`o were 200-300 tons/day, and Summit [last measured July 19] were ~100 tons/day.
- **August 12, 2018.**
  - Activity and lava output from Fissure 8 remains low—although a lull in activity continues it is common for eruptions to go through periods of diminished output, or to pause completely, only to return with renewed vigor days, weeks, later. A gas plume billows up from Fissure 8 but the only “red” lava visible on the flow field is the oozing into the ocean between the Kapoho Bay and Ahalanui area coastline. Fresh black sand, created as molten lava is chilled and shattered by the surf, is being transported to the SW by longshore currents and accumulated in the Pohoiki boat harbor.
  - Kilauea summit seismicity continues to be low, with only 1-2 located earthquakes per hour [maximum magnitude of M-2.2]. Summit deflation remains negligible
  - Lava delta hazard continues.
  - SO<sub>2</sub> gas emissions from the Summit, Pu`u `O`o, and the Lower East Rift Zone are all at low levels. On August 5-6, LERZ emission were ~200 tons/day; Pu`u `O`o were 200-300 tons/day, and Summit [last measured July 19] were ~100 tons/day.
- **August 11, 2018.**
  - Activity and lava output from Fissure 8 remains low—it is common for eruptions to go through periods of diminished output, or to pause completely, only to return with renewed vigor days, weeks, later. Two small ponds of lava were observed in the Fissure 8 cone—one pond was stagnant and crusted over; the other slowly circulates and is incandescent. A gas plume billows up from Fissure 8; low-level steaming from a handful of other inactive fissures. Lava is oozing at several points along the coastline creating a wispy laze plume. The southwestern-most flow margin has not advanced significantly toward the Pohoiki boat ramp
  - Fissure 8 cinder cone height is currently about 30 m (100 ft) with a very broad base.
  - Kilauea summit seismicity continues to be low, with only 2-3 located earthquakes per hour [maximum magnitude of M-2.0]. Summit deflation remains negligible
  - Lava delta hazard continues.
  - SO<sub>2</sub> gas emissions from the Summit, Pu`u `O`o, and the Lower East Rift Zone are all at low levels. On August 5-6, LERZ emission were ~200 tons/day; Pu`u `O`o were 200-300 tons/day, and Summit [last measured July 19] were ~100 tons/day.
- **August 10, 2018.**
  - Activity and lava output from Fissure 8 remains low and no signs of reactivation or new intrusion—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day and overnight. UAS footage showed the pond of lava within the vent has receded, and was about 40 m (130 ft) below the highest point on the cinder cone’s rim.
  - Kilauea summit seismicity continues to be low, with less than 5 located earthquakes per hour. Summit deflation is negligible
  - Lava delta hazard continues.
  - SO<sub>2</sub> gas emissions from the Summit, Pu`u `O`o, and the Lower East Rift Zone are all at low levels. On August 5-6, LERZ emission were ~200 tons/day; Pu`u `O`o were 200-300 tons/day, and Summit [last measured July 19] were ~100 tons/day.
- **August 9, 2018.**
  - Activity and lava output from Fissure 8 remains low and no signs of reactivation or new intrusion—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day and overnight. Up-rift of Fissure 8—Fissures 9, 10, and 24, and down-rift Fissures 13, 23, 3, 21, and 7 continue to steam. A crusted lava pond was observed deep within the fissure 8 cone this morning—it may be at a depth near the pre-eruption ground surface. Numerous small streams of lava oozing into the ocean near Ahalanui, creating weak plumes of laze. The southern flow margin remained close to Isaac Hale Beach park, but had not appreciably advanced toward the Pohoiki

boat ramp. Lava was also observed entering the ocean along the northern Kapoho lobe.

- Kilauea summit remains quiet, except for small occasional rockfalls. This continues a significant departure from the pattern of seismicity and deformation over the past several months. The deformation at the summit as measured by tiltmeter and GPS instrument has stopped.
- Summit and LERZ changes considered together imply that the rate of magma leaving the summit to feed the Lower East Rift Zone eruption has decreased. How long this condition will persist is unknown. It is possible that outflow will pick up again, resulting in renewed summit area deflation leading to another collapse event and renewed eruption vigor on the LERZ. HVO will continue to monitor for any signs of change in activity.
- At 6:50 a.m.HST, a M-4.4 earthquake occurred on the south flank of Kilauea. No threat of tsunami and no significant effect on the status of Kilauea activity except to generate a brief dust plume from Pu`u `O`o.
- Lava delta hazard continues.
- Volcanic gas emissions remain similar to what has been observed over the past three months. No active lava observed in Pu`u `O`o from an overflight on August 6 and 7.

- **August 8, 2018.**

- Activity and lava output from Fissure 8 remains low—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day and overnight. No helicopter overflight due to Hurricane Hector.
- Kilauea summit remains quiet, representing a significant departure from the pattern of seismicity and deformation over the past several months. The deformation at the summit as measured by tiltmeter and GPS has virtually stopped.
- Summit and LERZ changes considered together imply that the rate of magma leaving the summit to feed the Lower East Rift Zone eruption has decreased. How long this condition will persist is unknown. It is possible that outflow will pick up again, resulting in renewed summit area deflation leading to another collapse event and renewed eruption vigor on the LERZ. HVO will continue to monitor for any signs of change in activity.
- The National Park Service reports that the Keauhou Ranch Fire on Mauna Loa, which is mainly within Hawaii Volcanoes National Park, continues to burn in multiple locations and is two miles north of Highway 11. The fire more than doubled in size overnight and is now 3,205 acres.
- Lava delta hazard continues.
- Volcanic gas emissions are similar to what has been observed over the past three months. No active lava observed in Pu`u `O`o from an overflight on August 6.

- **August 7, 2018.**

- Activity and lava output from Fissure 8 remains low—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day and overnight. It remains too early to tell whether this is just a pause in activity. Helicopter overflight crew observed a small active lava lake within the Fissure 8 cone, a weak gas plume, and a drained upper lava channel. The surface of the lava lake was about 5-10 m below the spillway entrance. Small active ooze-outs near the coast on the Kapoho Bay and Ahalanui lobes were greatly diminished. Active lava remains close to the Pohoiki, boat ramp at Isaac Hale Park, but has not advanced significantly toward it.
- Kilauea summit remains quiet, representing a significant departure from the pattern of seismicity and deformation over the past several months. The deformation at the summit as measured by tiltmeter and GPS has virtually stopped.
- Summit and LERZ changes considered together imply that the rate of magma leaving the summit to feed the Lower East Rift Zone eruption has decreased. How long this condition will persist is unknown. It is possible that outflow will pick up again, resulting in renewed summit area deflation leading to another collapse event and renewed eruption vigor on the LERZ. HVO will continue to monitor for any signs of

change in activity.

- National Park Service reports that the Mauna Loa brush fire has burned approximately 1,500 acres and is not contained as of 4:00 p.m. No structures are threatened at this time.
- Lava delta hazard continues. Cracks parallel to the shoreline are developing in the lava delta near Kapoho and Vacation Lots—a reminder that lava deltas are inherently unstable and prone to collapse, one of the many hazards associated with ocean entries.
- Volcanic gas emissions are similar to what has been observed over the past three months. No active lava observed in Pu`u `O`o from an overflight on August 6.

- **August 6, 2018.**

- Activity and lava output from Fissure 8 remains low—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day and overnight. Helicopter overflight crew this morning reported a weak to moderately active bubbling lava lake within the Fissure 8 cone, a weak gas plume, and a completely crusted lava channel. Later, field ground crews found the upper channel largely devoid of lava confirming that the channel is empty to at least the vicinity of Kapoho Crater where a short section of spiny active lava in a channel was present. Small active ooze-outs near the coast on the Kapoho Bay and Ahalanui lobes. Lava continues to ooze into the ocean along a broad flow front and laterally toward Pohoiki, but was still about 70 m (230 ft) southeast of the boat ramp at Isaac Hale Park.
- Kilauea summit remains quiet, representing a significant departure from the pattern of seismicity and deformation over the past several months. The deformation at the summit as measured by tiltmeter and GPS has virtually stopped.
- Summit and LERZ changes considered together imply that the rate of magma leaving the summit to feed the Lower East Rift Zone eruption has decreased. How long this condition will persist is unknown. It is possible that outflow will pick up again, resulting in renewed summit area deflation leading to another collapse event and renewed eruption vigor on the LERZ. HVO will continue to monitor for any signs of change in activity.
- Lava delta hazard continues.
- Volcanic gas emissions are similar to what has been observed over the past three months—gas measurements of the Pu`u `O`o plume taken today indicated a reduced SO<sub>2</sub> emission rate of August 3. No active lava observed in Pu`u `O`o crater from an overflight today.

- **August 5, 2018.**

- Fissure 8 continues to erupt lava with lower lava levels—significance of this change is not yet clear and hazardous conditions remain in the area—HVO crews and UAS will continue monitoring activity throughout the day. Helicopter overflight this morning confirmed significant reduction in lava output from Fissure 8 and field geologists observed low levels of fountaining and largely crusted lava in the spillway and channel system downstream. Few sluggish seeps and ooze-outs near Halekamahina and Kapoho Crater. Lava continues to ooze into the ocean along a broad flow front and laterally toward Pohoiki, but was still about 70 m (230 ft) southeast of the boat ramp at Isaac Hale Park.
- Kilauea summit remains relatively quiet, representing a significant departure from the pattern of seismicity and deformation over the past several months.
- Summit and LERZ changes considered together imply that the rate of magma leaving the summit to feed the Lower East Rift Zone eruption has decreased. How long this condition will persist is unknown. It is possible that outflow will pick up again, resulting in renewed summit area deflation leading to another collapse event and renewed eruption vigor on the LERZ. HVO will continue to monitor for any signs of change in activity.
- Lava delta hazard continues.
- Volcanic gas emissions remain very high.

- **August 4, 2018**

- In the evening, reduced output of lava from Fissure 8—significance of this change is

not yet clear and hazardous conditions remain in the area. HVO and UAS crews will continue monitoring and tracking changes overnight. Changes also occurred in the summit—the most recent collapse event occurred August 2 at 11:55 a.m. HST—rates of earthquakes began to increase soon after as it typically does, but today the rate decreased to a low level without a collapse event and the rate of deformation at the summit measured by tiltmeter and GPS instruments is also much reduced—Summit and LERZ changes considered together imply that the rate of magma leaving the summit has decreased.

- Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No overflows this morning. The lower lava channel to Kapoho cone shifted west about 0.25 km and is now feeding lava into the southwest sector of the lower flow field. Lava channel levels appear generally low—incandescent to about 4.5 km (2.8 mi) from the vent, with the lava moving sluggishly at a fairly low velocity. However, lava is still flowing farther beneath the crust to the vicinity of Kapoho Cone and seeping out of both sides of the channel and starting small fires burning adjacent vegetation.
- Laze hazard continues. Lava delta hazard continues.
- Volcanic gas emissions remain very high.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit. Earthquake in the Summit continues.

- **August 3, 2018**

- Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. Overflows from August 2 ceased by about 9 pm., but the fires were still burning. This morning, lava levels in spillway and velocity is fairly low.
- At 2:24 p.m. HST, a M-4.1 earthquake occurred at the summit caldera that produced a rockfall. This was not a collapse event. But summit seismicity is high and a collapse event is likely to occur later today.
- Laze hazard continues. Lava delta hazard continues.
- Volcanic gas emissions remain very high.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit. Earthquake in the Summit continues.
- Gas measurements of the Pu`u `O`o plume indicated an emission rate of over 1,000 tons/day of SO<sub>2</sub>, the highest rate from this vent in several years. No active lava observed in Pu`u `O`o.

- **August 2, 2018**

- In the afternoon and evening, multiple overflows occurred; one headed north toward Noni Farms Road, and started a small fire. Further downstream overflows were concentrated in the wide lava field south-southwest of Kapoho Cone, and igniting small fires burning vegetation.
- Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No overflows occurred and the lava channel levels were low—lava was still visible in part of the northern braid, but the lower section was only weakly incandescent. During today's overflight, lava within the channel generally appeared to be at a lower level than in previous days. The southern margin of the flow has not advanced westward and remains about 175 m (0.1 mi) from the boat ramp at Isaac Hale Park. Lava continues entering the ocean along a broad 2 km (1.2 mi) flow front.
- At 11:55 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami. With each summit collapse, rocks in the crater walls are shaken loose, widening the crater. Since May 16, 2018, the crater depth has more than tripled and the diameter has more than doubled.
- On July 13, a tiny "island" formed just offshore of the Kapoho ocean entry. Today,



that feature—likely a submarine tumulus of lava that built up underwater and emerged above sea level—is no longer an "island." It now looks more like a peninsula, attached to the coast by a black sand tombolo, a sandy isthmus, creating a feature known as a "tied island." If it will withstand wave erosion over time remains to be seen.

- Laze hazard continues. Lava delta hazard continues.
- Volcanic gas emissions remain very high.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **August 1, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No significant overflows occurred and the lava channel levels appeared low. A pooling of active lava formed at the channel bend just west of Kapoho Crater. The southern margin of the flow has not advanced westward and remains about 175 m (0.1 mi) from the boat ramp at Isaac Hale Park. Lava continues entering the ocean along a broad 2 km (1.2 mi) flow front centered near the former Ahalanui Beach Park, also known as "Warm Ponds".
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 31, 2018**
  - In the afternoon, a brush fire started near the PGV access road at the south edge of the Fissure 8 channel and burned much of the vegetation around the road and the west side of Pu`u Honua`ula that caused damage to our telemetry hubs that relayed data from several geophysical instruments in the area including PGcam.
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No overflows occurred and lava levels in the more distant portions of the channel system appear low. The southern margin of the flow remains about 175 m (0.1 mi) from the boat ramp at Isaac Hale Park. Distant from the coast, a few ooze-outs to the west occurred that were non-threatening to Pohoiki.
  - At 7:59 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
  - At 12:30 a.m. HST, a M-4.5 earthquake occurred at the summit of Kīlauea. This was not a collapse event. But summit seismicity is high and a collapse event is likely to occur later today.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit..
- **July 30, 2018**
  - Fissure 8 continues. As of 6 a.m. HST, lava from Fissure 8 was moving in an open channel all the way to the central flow field southeast of Kapoho Crater. There, it crusted over and fed numerous active tongues of lava that entered the ocean along a broad (2 km, or 1.2 mi) coastal flow front centered near the former Ahalanui Beach Park. The distal fissure 8 flow margin had not advanced, and remained less than 175 m (0.1 mi) from the Pohoiki boat ramp in Isaac Hale Park. Lava along the western edge of the flow was fuming, so it could start oozing from that edge.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.

- Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
- Earthquakes continue at the Kilauea summit at a rate of 25-35 earthquakes per hour.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 29, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No overflows occurred although the channel is near full. The southern margin of the flow remains about 175 m (575 ft) from the boat ramp at Isaac Hale Park.
  - At 12:10 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami.
  - At 10:02 p.m. HST, a M-4.1 earthquake occurred on Kilauea's south flank at a depth of 7 km.
  - Laze hazard continues. Lava delta hazard continues—the lava delta is unstable because it is built up to 800 m (0.5 mi) from the former coastline on unconsolidated lava fragments and sand and this loose material can easily be eroded away by surf, causing the new land to become unsupported and slide into the sea.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Earthquakes continue at the Kilauea summit at a rate of 25-30 earthquakes per hour.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 28, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. Small overflows occurred after the 2:37 a.m. Kilauea summit event; one may have ignited a brush fire on Halekamahina, an older cinder-and-spatter cone to the west of Kapoho Cone, producing a large dark smoke. The southern margin of the flow remains about 175 m (575 ft) from the boat ramp at Isaac Hale Park.
  - At 2:37 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 27, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No new overflows although channel is nearly full. The southern margin of the flow remains less than 175 m (0.1 mi) from the boat ramp at Isaac Hale Park.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 26, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No new overflows occurred. Lava movement in the channel sluggish. The southern margin of the flow remains less than 175 m (0.1 mi) from the boat ramp at Isaac Hale Park.
  - At 12:09 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami.

- Laze hazard continues. Lava delta hazard continues.
- Volcanic gas emissions remain very high.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 25, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. The lava flow in the Ahalanui area has not extended significantly westward in the past day. The southern margin of the flow remains about 145 m (475 ft) from the boat ramp at Isaac Hale Park.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 24, 2018**

Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent to the ocean entry at Ahalanui. No increase in lava output or overflows from Fissure 8 after the 6:41 a.m. summit collapse event. Ooze outs along the edge of the lava flow in the Ahalanui area has caused the flow to expand westward. The southern margin of the flow is about 175 m (575 ft) from the boat ramp at Isaac Hale Park.

  - At 6:41 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 23, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Ahalanui. Overflows occurred but were mostly confined to the existing flow field and stalled before threatening any nearby homes. The southern margin of the flow is about 500 m (0.3 mi) from the boat ramp at Isaac Hale Park. A new lobe has started from the southern lobe and is active along its southwestern margin slowly heading toward the ocean.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 22, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Kapoho. The southern margin of the flow is about 500 m (0.3 mi) from the boat ramp at Isaac Hale Park.
  - State Highways reports that the 8:53 p.m. collapse event caused additional damage to Highway 11 between the 28 and 32 Mile Markers near Volcano.
  - At 8:53 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.5 earthquake with no threat of tsunami.
  - Collapse of Kilauea's caldera floor has exposed South Sulphur Bank, prominent in the mid-19<sup>th</sup> century but covered as lava flows filled the caldera. The height of the bank, now more than 65 m (213 ft), increases about 2.5 m (9 ft) with each collapse event at Kilauea's summit.

- Laze hazard continues. Lava delta hazard continues—the lava delta is unstable because it is built up to 800 m (0.5 mi) from the former coastline on unconsolidated lava fragments and sand and this loose material can easily be eroded away by surf, causing the new land to become unsupported and slide into the sea.
- Volcanic gas emissions remain very high.
- Pele’s hair from Fissure 8 continue to be falling downwind of the fissure.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 21, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Kapoho. The channelized `a`a flow west of Kapoho Crater continues and feeds lava into the ocean entry, with no significant overflows. The southern margin of the flow is about 400 m (0.25 mi) from the boat ramp at Isaac Hale Park.
  - At 9:43 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami.
  - Laze hazard continues. Lava delta hazard continues.
  - Volcanic gas emissions remain very high.
  - Pele’s hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 20, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Kapoho. The channelized `a`a flow west of Kapoho Crater continues and feeds lava into the ocean entry. This channel was incandescent its entire length from vent to ocean entry. The southern margin of the flow is about 400 m (0.25 mi) from the boat ramp at Isaac Hale Park.
  - Pele’s hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 19, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Kapoho. The channel is slightly lower with no significant overflows. The channelized `a`a flow west of Kapoho Crater continues and feeds lava into the ocean entry. The southern margin of the flow is about 500 m (0.3 mi) from the boat ramp at Isaac Hale Park.
  - At 4:36 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.4 earthquake with no threat of tsunami.
  - Pele’s hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **July 18, 2018**
  - Fissure 8 continues to erupt lava into the perched channel leading northeastward from the vent toward Kapoho. An increase in lava supply produced several channel overflows destroying homes on Nohea Street in Leilani Subdivision; farther downstream, additional short-lived overflows on both sides of the channel observed. South of Kapoho Crater, the surge produced an `a`a flow that rode over the active southern flow that is still entering the ocean. The southern margin of the flow is about 700 m (0.4 mi) from the boat ramp at Isaac Hale Park.
  - At 1:28 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
  - Pele’s hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 17, 2018**
  - Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent toward Kapoho. The channel is slightly lower with no significant overflows. The southern margin of the flow remained about 750 m (0.5 mi) from the boat ramp at Isaac Hale Park.
  - The floor of Halema'uma'u Crater has dropped 450 m (about 1480 ft) since May 10 when the lava lake surface disappeared from view.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.
- **July 16, 2018**
  - The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent toward Kapoho. The channel is full with no significant overflows. The southern margin of the flow remained about 1 km (0.6 mi) from Isaac Hale Park. Explosions were reported from the main ocean entry.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure.
  - At 11:42 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
  - Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.
- **July 15, 2018**
  - The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent toward Kapoho. Some lava was spilling eastward to form a slowly advancing flow that did not extend beyond areas previously covered in lava; the flow stalled within hours. The channelized flow west of Kapoho Crater continues to be the main ocean entry at the southern edge of the flow front, near Ahalanui Beach Park. This southern boundary was about 900 m (.56 mi) from the boat ramp at Isaac Hale Park.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - At 3:26 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.2 earthquake with no threat of tsunami.
  - Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.
- **July 14, 2018**
  - The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent toward Kapoho. The channelized flow west of Kapoho Crater continues to be the main ocean entry at the southern edge of the flow front, near Ahalanui Beach Park, also known as "Warm Ponds". The southern margin of the flow was about 940 m (0.58 mi) from the boat ramp at Pohoiki.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.
- **July 13, 2018**
  - In the afternoon, at Kapoho Cone, the majority of the flow is heading south into the ocean at Ahalanui.
  - The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent toward Kapoho. The channelized flow west of Kapoho Crater continues to be the main ocean entry at the southern edge of the flow front, in the direction toward Pohoiki. Lava continues to ooze out at several points on the 6 km (3.7 mi) wide flow

front into the ocean. A tiny new island of lava formed a few meters offshore and is oozing lava. This island is about 6-9 meters (20-30 ft) in diameter and possibly a submarine tumulus that built up underwater and emerged above sea level.

- The 7:08 p.m. HST collapse/explosive event this evening was followed by an increase in activity from fissure 8 resulting in channel overflows on the south side of the flow near the vent.
- At 7:08 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.2 earthquake with no threat of tsunami.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 12, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent. Lava levels in the upper channel between Fissure 8 and Pohoiki Road are low this morning, but expected to rise after the next collapse/explosion at Kīlauea's summit. The diverted channelized `a`a flow west of Kapoho Crater advanced to the ocean covering the Kua O Ka La Charter School and Ahalanui Beach Park. The ocean entry continues to be active though several ooze out points on the 6 km (3.7 mi) wide flow front.
- The collapse/explosive event this afternoon was followed by an increase in activity from fissure 8 although lava has not breached the channel and no overflows have been observed.
- At 2:42 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 11, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent. The upper channel between Fissure 8 and Pohoiki Road started overflowing about 8:30 or 9 a.m. HST with a few lobes advancing a short distance beyond previous flows and threatened a few houses on Luana and Nohea Streets. The lobe moving around the west side of Kapoho cone remains active with small brushfires along the edges. By 10 a.m. HST, this channelized `a`a flow had advanced with 2,000 ft of the coast at Ahalanui Beach Park. The ocean entry continues to be active with more centralized building of a broad point into the ocean.
- The collapse/explosive event this morning was followed by an increase in lava from the fissure 8 vent which has produced small overflows from the upper channel that threatened a few homes on Nohea and Luana Streets.
- At 5:46 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 10, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues. Fissure 8 continues to erupt lava steadily into the perched channel leading northeastward from the vent. The significant overflow lobe that was progressing NE towards Cinder Rd is no

longer advancing at this time, and there has been no significant activity on the north side of the Fissure 8 lava channel since the overflows yesterday afternoon. Fissure 22 continues weak spattering.

- July 9's blocked-channel overflow following the west side of Kapoho Cone remains active and small brushfires reported along the margins. Multiple lava ooze outs visible at coast.
- July 9's channel disruption and overflows were caused by blockages that developed along the channel. Additional blockages and resulting overflows are like to occur as long as the activity continues. Cone remains active.
- Earthquake activity at summit is elevated prior to the next anticipated collapse/explosion.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 9, 2018**

- In the afternoon, multiple overflows occurred along both sides of the main lava channel, in an area extending from near the "Y" intersection at Pohoiki Road eastwards to an area just west of Kapoho Crater. Overflows on the upper part of the channel did not extend beyond areas previously covered in lava. Overflows further down the channel reached beyond the flow field, including one flow lobe that is moving northeast from the main channel towards Cinder Road.
- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft spatter cone. As shown by the July 8 thermal map of the flow field, the main lava channel has reorganized and is nearly continuous to the ocean on the south side of the flow. Lava continues to enter the ocean along a 4 km (2.5 mi) long line of small entry points, and continues to expand into Kapoho Beach Lots and north of Four Corners intersection.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 9:20 a.m. HST, a collapse explosion event occurred at Halema`uma`u Crater. The energy released by the event was equivalent to a M-5.3 earthquake, with no threat of tsunami.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 8, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft spatter cone. As shown by the July 6 thermal map of the flow field, the main lava channel no longer directly enters the ocean—the open channel flow ends about 2 km (1.2 mi) inland of the coast. Lava continues to enter the ocean. Lava oozes from the northern edge of the `a`a flow near Lighthouse at Cape Kumukahi. Fissure 22 is weakly spattering.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 2:55 a.m. HST, a collapse explosion event occurred at Halema`uma`u Crater. The energy released by the event was equivalent to a M-5.4 earthquake, with no threat of tsunami.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **July 7, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant

change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows. The spatter cone is about 180 ft (55 m) tall, and fountains rarely rise above the cone. Lava is oozing into the ocean from multiple points primarily along the northern section of a broad flow front. Multiple ooze-outs fed flows on the north and the southwest edge of the main flow but neither had lava actively entering the ocean. Fissure 22 is weakly spattering

- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.

- **July 6, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Lava is oozing into the ocean from multiple points primarily along the northern section of a broad flow front. The large flow from multiple ooze-outs along the northern edge continued to be active between Kapoho Crater and the ocean. Fissure 22 is weakly spattering with a weak flow extending east.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Road closure on Highway 11 in the vicinity of the 30-mile marker near Volcano Country Club due to damage to the roadway.
- At 6:04 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake, with no threat of tsunami.
- Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.

- **July 5, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Lava continues to enter the ocean over a broad area along the shoreline, and is oozing pasty lava in the area of Kapoho Ag and Beach Lots. Small overflows from the channel continued and nearly reached the Beach Road about 0.3 km (0.2 mi) north of Four Corners.
- Fissure 22 is sporadically spattering.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Road closure on Highway 11 in the vicinity of the 30-mile marker near Volcano Country Club due to damage to the roadway.
- At 1:20 p.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.2 earthquake, with no threat of tsunami.
- Inward slumping of the rim and walls of Halema'uma'u continues in response ongoing subsidence of the summit.

- **July 4, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from Fissure 8 spatter cone continued to supply lava to the open channel with intermittent, small short-lived overflows, that flows to the ocean at the Kapoho coastline. Fountains heights rarely rise above the rim of the 180 ft spatter cone. Lava continues to enter the ocean over a broad area along the shoreline, and is oozing pasty lava in the area of Kapoho Ag and Beach Lots and a flow near the Four Corners area.
- Fissure 22 continued spattering about 50-80 m above conical spatter cone and



feeding a short lava flow that is moving slowly to the northeast along the edge of earlier flows.

- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 10:19 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. The energy released by the event was equivalent to a M-5.3 earthquake, with no threat of tsunami.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

• **July 3, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Fissure 8 continued to be very active and continues to feed lava to the open channel that flows to the ocean at the Kapoho coastline. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Intermittent small, short-lived overflows from channel observed. Lava continues to enter the ocean over a broad area along the shoreline, and is oozing fresh lava at Kapoho Beach Lots.
- Geologist witnessed an “apartment-sized” blockage within the lava channel (near the Kapoho cone) give way and was pushed down stream by the pressurized lava behind.
- Fissure 22 continued spattering about 50-80 m above conical spatter cone and feeding a short lava flow that is moving slowly to the northeast along the edge of earlier flows.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 2:17 a.m. HST, a collapse explosion event occurred at Kīlauea's summit that produced a ash-poor plume of 1,000-2,000 ft above the ground (5,000-6,000 ft asl). The energy released by the event was equivalent to a M-5.1 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

• **July 2, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8's 180 ft (55 m) spatter cone continued to feed lava to the open channel that flows to the ocean at the Kapoho coastline. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Intermittent small, short-lived overflows from channel observed. Lava continues to enter the ocean over a broad area along the shoreline, and is oozing fresh lava at Kapoho Beach Lots. Fissure 22 is spattering about 50-80 m above conical spatter cone and feeding a short lava flow that is moving slowly to the northeast along the edge of earlier flows.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 1:24 a.m. HST, a collapse explosion event occurred at Kīlauea's summit. Radar indicated an ash-poor plume rose ~1200 ft above the ground surface (~5,200 ft asl). The energy released by the event was equivalent to a M-5.3 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

• **July 1, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8's 180 ft (55 m) spatter cone continued to feed lava to the open channel that flows to the ocean at the Kapoho coastline. Each morning, HVO field crews conduct an overflight of the lava channel to determine if there have been any overflows—intermittent small, short-lived overflows continue to occur, but rarely extend beyond the existing flow field—no active overflows were observed on this morning overflight. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Lava continues to enter the ocean over a

broad area along the shoreline, and is oozing fresh lava at Kapoho Beach Lots. Fissure 22 active with spattering above conical spatter cone and feeding a short, sluggish lava flow to the northeast along the edge of earlier flows. Fissures 7, 21, and 13 heavily steaming.

- Fissure 8 flows through the open channel, beginning at the 180 ft (55 m) spatter cone to the ocean at Kapoho coastline is about 13 km (8 mi).
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 30, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to supply lava to the open channel that flows to the ocean at the Kapoho coastline, with small, intermittent short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft (55 m) spatter cone. Lava continues to enter the ocean over a broad area along the shoreline, and is oozing fresh lava at Kapoho Beach Lots. Fissure 22 active and producing a short flow.
- Whirlwind above the lava channel captured on video. A whirlwind form when hot gasses rise and punch through the cooler air above, to create a vertical column of hot air. Depending on wind conditions, the rising column of air can begin to rotate, creating a whirlwind.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 2:51 p.m. HST, a collapse explosion event occurred at Kīlauea's summit producing an ash-poor steam plume that rose 500 ft above the ground (4,500 ft asl) and drifted SW. The energy released by the event was equivalent to a M-5.3 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 29, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8's 180 ft (55 m) spatter cone continued to supply lava to the open channel that flows to the ocean at the Kapoho coastline, with small, intermittent short-lived overflows. Fountain heights rarely rise above the rim of the 180 ft spatter cone. Lava continues to enter the ocean over a broad area along the shoreline and is oozing fresh lava at Kapoho Beach Lots. Thermal map shows the lava channel has crusted over about 0.8 km (0.5 mi) inland of the ocean entry; lava is moving beneath the crust and into still-molten interior of earlier flows before it enters the sea.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 7:51 a.m. HST, a collapse explosion event occurred at Kīlauea's summit producing an ash-poor steam plume that rose 500 ft above the ground (4,500 ft asl) and drifted SW. The energy released by the event was equivalent to a M-5.2 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 28, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to feed the open channel to the ocean at the Kapoho coastline. Lava continues to enter the ocean over a broad area.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 4:49 a.m. HST, a collapse explosion event occurred at Kīlauea's summit

producing an ash-poor steam plume that rose 1,000 ft above the ground (5,000 ft asl) and drifted SW. The energy released by the event was equivalent to a M-5.3 earthquake.

- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 27, 2018**

- In the afternoon, Fissure 8 continues to be active and feed the open lava channel to the ocean at Kapoho. The flow is expanding south along the shoreline, and is oozing fresh lava at Kapoho Beach Lots.
- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to feed the open, voluminous lava channel. Small overflows occurred on both sides of the upslope portion of the channel—none has extended past the existing flow field. Lava continues to enter the ocean along the southern Kapoho coastline primarily through the open channel, but also along a 1 km (0.6 mi) wide area with multiple laze plumes from smaller oozing lobes.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 26, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to supply lava to the open channel with small, short-lived overflows. Lava is entering the ocean on the southern portion of the flow front primarily through the open channel, but also along a 1 km (0.6 mi) wide area with multiple laze plumes from smaller oozing lobes. The spatter cone is 180 ft tall at its highest point, and fountains occasionally rise above the 180 ft point. Fissure 22 weak spattering and tiny flows around the base of the cone. Minor incandescence at Fissure 16/18.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Halema`uma`u was approximately 1 km (0.6 mi) across and about 85 m (~280 ft) deep. After the lava lake surface disappeared from view on May 10, the depth was more than 325 m (1,070 ft) below the Halema`uma`u crater floor. The crater is now 1 x 1.3 km (0.6 to 0.8 mi) in dimension, and the depth is 400 m (1,300 ft) below the caldera floor.
- At 10:41 p.m. HST, a collapse explosion event occurred at Kīlauea's summit producing an ash-poor steam plume that rose 1,000 ft above the ground and drifted SW. The energy released by the event was equivalent to a M-5.3 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 25, 2018**

- In the afternoon, fountains from Fissure 8 spatter cone continue to supply lava to the open channel with small, short-lived overflows. The lava flow front at the coast broadened southward and is now nearly 2 miles in width. Fissure 22 weakly active.
- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to supply lava to the open channel to the ocean at the Kapoho coastline. No significant overflows since yesterday.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Aviation Color Code ORANGE.
- At 5:03 p.m. HST, a collapse explosion event occurred at Halema`uma`u Crater. The

energy released by the event was equivalent to a M-5.3 earthquake and was no threat for tsunami.

- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 24, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 180 ft tall spatter cone continued to supply lava to the open channel to the ocean at the Kapoho coastline. Fissure 16/18 minor incandescence with recent tiny flows near vent. Fissure 22 tiny glow.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 8:35 p.m. HST, HVO reduced Aviation Color Code from RED to ORANGE. Collapse/explosion events have not been producing significant ash plumes rising more than 10,000 ft asl—the threshold that could pose a significant hazard to aviation.
- At 4:32 p.m. HST, a collapse explosion event occurred at Kīlauea's summit, producing an ash-poor steam plume that rose 2,000 ft above the ground (<6,000 ft asl). The energy released by the event was equivalent to a M-5.3 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response The energy released by the event was equivalent to a M-5.3 earthquake. ongoing subsidence of the summit.

- **June 23, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues with no significant change in the past 24 hours. Lava fountains from the Fissure 8 spatter cone continued to supply lava to the open channel to the ocean at the Kapoho coastline. Minor overflows from the channel. Fissure 22 incandescence but no spattering or flow.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 4:34 p.m. HST, a collapse explosion event occurred at Kīlauea's summit, producing an ash-poor steam plume that rose 500-1000 ft above the ground (4,500- 5,000 ft asl). The energy released by the event was equivalent to a M-5.3 earthquake.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 22, 2018**

- The eruption in the lower East Rift Zone (LERZ) continues. Lava fountains from the Fissure 8 spatter cone continued to flow in the well-established channel to the ocean at the Kapoho coastline. A dominant ocean entry on the south edge of the flow front is producing a large laze plume. Minor overflows from the channel. Fissures 6 inactive. Fissure 16/18 some incandescence and Fissure 22 weak lava fountain.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 6:52 p.m. HST, a collapse explosion event occurred at Kīlauea's summit, producing an ash-poor steam plume that rose 500 ft above the ground (4,500 ft asl). The energy released by the event was equivalent to a M-5.3 earthquake with no threat of tsunami.
- At 8:30 a.m HST at Halema'uma'u crater, several benches—sections of the former crater rim and adjacent Kīlauea caldera floor that have incrementally dropped or slumped into the crater as the summit area has subsided since early May—are clearly visible within the crater.

- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 21, 2018**
  - In the afternoon, Fissure 8 spatter cone continue to feed the established channel. No major changes since the morning.
  - The eruption in the lower East Rift Zone (LERZ) continues. Lava fountains from the Fissure 8 spatter cone continued to feed the well-established channel to the ocean at the Kapoho coastline. No overflows from the channel. Fissures 6 weakly active. Fissure 16/18 and 22 some incandescence.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - Halema`uma`u parking lot fell into the crater this past week.
  - At 1:13 p.m. HST, a gas and ash emission from a collapse event occurred at Kīlauea summit. The energy of the event was equivalent to a magnitude-5.3 earthquake with no threat of tsunami.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 20, 2018**
  - Lava fountains up to 187 ft tall from Fissure 8 in the evening. Fissure 16 mild spattering.
  - In the afternoon, Fissure 8 spatter cone continue to feed the established channel. Fissure 6, and 16 only fuming.
  - The eruption in the lower East Rift Zone (LERZ) continues. Lava fountains from the Fissure 8 spatter cone continued to feed the well-established channel by traveling 13 km (8 mi) to the ocean at the Kapoho coastline, where several entries are active. Fissures 6, 15, and 16 are periodically oozing lava and streaming.
  - Lava has added about 380 acres of new land into the sea.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - Halema`uma`u parking lot fell into the crater this past week.
  - At 4:22 a.m. HST, a gas and ash emission from a collapse event occurred at Kīlauea summit, producing a plume of about 6,000 ft asl.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 19, 2018**
  - In the evening, fountain heights from Fissure 8 was 165-246 ft high.
  - In the afternoon, another small, sluggish overflow along a section of Luana Street is advancing northwest. Fissure 6, 15, and 16 are oozing lava and fume.
  - Eruption of lava continues from the lower East Rift Zone (LERZ). Fissure 8 lava fountains showered spatter onto the cone and continued to feed the well-established channel to the ocean entry at Kapoho. Small overflows were observed on the north side of the channel near Pohoiki Road, with one breakout spreading slowly beyond the flow boundary. Lava was entering the ocean at two entries. Fissures 16/18 continued to ooze lava. Fissure 6 mild spattering continues. The flow field is relatively stable with little change to its size and shape for the past few days. The overall width of the flow boundary at the coast is about 1.5 miles across.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - At 2:24 p.m. HST, a 4.4 magnitude earthquake occurred in the vicinity of the south side of Kīlauea Volcano—there is no tsunami threat.
  - At 5:05 a.m. HST, another gas and ash emission from a small subsurface explosion occurred at Kīlauea summit, producing a plume of about 5,000 ft asl.

- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 18, 2018**
  - Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Lava fountains continued from Fissure 8 spatter cone and continued to feed the well-established channel to the ocean entry at Kapoho. Occasional minor lava spills over the channel levees. The ocean entry remains fairly broad along the length of the flow front. Fissures 16/18 continued to ooze lava. Fissure 6 mild spattering continues. The flow field is relatively stable with little change to its size and shape for the past few days.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - At 6:13 a.m. HST, a large earthquake beneath the summit of Kīlauea was felt and heard (roaring sounds) by nearby residents. Followed by a plume of 5,000 ft asl.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 17, 2018**
  - Late in the evening, lava fountains ranged from 60-165 ft from Fissure 8.
  - In the afternoon, fountains as high as 165 ft rose from the Fissure 8 spatter cone and continue to feed the channel that flows to the ocean at Kapoho.  
Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Lava fountains from Fissure 8 spatter cone continued to feed the well-established channel to the ocean entry at Kapoho. Occasional minor lava spills over the channel levees. The ocean entry remains fairly broad along the length of the flow front. Fissures 16/18 continued to ooze lava. Fissure 6 weakly spattering.
  - Lava covers 5,914 acres (9.24 square miles). 533 homes were destroyed reported by Hawai'i County Civil Defense.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - At 6:26 a.m. HST, another gas and ash emission produced by a subsurface explosion at Kīlauea's summit occurred with plume of 5,000-7,000 ft asl.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 16, 2018**
  - In the afternoon, Fissure 6 (*originally reported as Fissure 15*) active with mild spatter. Occasionally, lava spills over the channel levees. Fissure 8 continues.
  - Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Lava fountains from the 170 ft-tall Fissure 8 spatter cone continued to produce fountain heights of 185 to 200 ft and continued to flow through the well-established channel to the ocean entry at Kapoho. The ocean entry remains fairly broad along the length of the flow front. Fissures 16/18 continued to ooze lava.
  - Lava is building a seaward delta that is approximately 320 acres in size.
  - Lava covers 5,914 acres (9.24 square miles). 467 homes were destroyed reported by Hawai'i County Civil Defense.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - At 10:22 a.m. HST, another gas and ash emission produced by a subsurface explosion at Kīlauea's summit.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 15, 2018**
  - Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in

the area of Leilani Estates. Fissure 8 lava fountains continues with heights reaching 200 ft from within the growing cone of cinder and spatter and continued to feed the channel to the ocean entry at Kapoho. The ocean entry is active along the length of the flow front. Fissures 16/18 continued to ooze lava.

- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Halema`uma`u was approximately 1 km (0.6 mi) across and about 85 m (~280 ft) deep. After the lava lake surface disappeared from view on May 10, the depth was more than 325 m (1,070 ft) below the Halema`uma`u crater floor. The crater is now 1 x 1.3 km (0.6 to 0.8 mi) in dimension, and the depth is 370 m (1,210 ft).
- At 12:05 p.m. HST, an explosion occurred in the summit region of Kilauea, producing a plume of nearly 10,000 feet asl. The energy of the event was equivalent to a magnitude-5.3 earthquake with no threat of tsunami.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 14, 2018**

Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Fissure 8 lava fountains continues with heights reaching 200 ft from within the growing cone of cinder and spatter and continued to feed the channel to the ocean entry at Kapoho. The ocean entry is active along the length of the flow front. Fissures 16/18 continued to ooze lava. Upwelling continues.

- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- At 3:19 a.m. HST, an explosion occurred in the summit region of Kilauea, producing a plume of 6,000 feet asl.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 13, 2018**

- Evening fountains reached 174 ft from within the growing cone of cinder and spatter,
- In the afternoon, Fissure 8 continued to produced 100-130 feet lava fountains.
- Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Fissure 8's 130-140 feet lava fountains from within the growing cone of cinder and spatter. The activity continued to feed the channel to the ocean entry at Kapoho which produced a towering steam plume from a focused ocean entry point. Weak lava activity at Fissures 16/18 continued. More dispersed upwelling continues.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- An explosion occurred at 3:39 a.m. HST in the summit region of Kilauea, with plume heights of 7,000 to 8,000 feet asl.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.

- **June 12, 2018**

- In the afternoon, Fissure 8 continued to produced fountains encircled by a 115 feet spatter cone.
- Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. The line of closely spaced lava fountains from Fissure 8 continued with heights of 160 feet, just higher than the spatter cone around them. The activity continued to feed the channel to the ocean entry at Kapoho. On the east side of Fissure 8, a minor pond overflowed slightly. Weak lava activity at Fissures 16/18 continued. The ocean entry was more distributed over a broader front with many small plumes and two larger entries and corresponding plumes. Upwelling continues.

- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- An explosion occurred at 1:52 a.m. HST in the summit region of Kilauea.
- Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 11, 2018**
  - In the afternoon, the three closely spaced lava fountains at Fissure 8 are erupting with fluctuating heights below the 115 feet high spatter cone around it up to 180 feet. The evening, lava fountain heights reached 160 feet, just higher than the spatter cone around them.
  - Eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. The three closely spaced lava fountains from Fissure 8 continued with heights of 115-130 feet and continued to feed the channel to the ocean entry at Kapoho. Fissure 8 channel is nearly full with no spillovers. Weak lava activity at Fissures 16/18 continued. Littoral bursts at the ocean entry. Upwelling area offshore still active.
  - The new lava delta is about 250 acres in size.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - There were two explosions in the summit region of Kilauea. The first occurred at 12:46 a.m. HST, and the second larger one at 4:43 a.m. HST.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 10, 2018**
  - By afternoon, three closely spaced lava fountains at Fissure 8 are erupting with heights of 130-180 feet. In the evening, heights were 150-180 feet.
  - Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Lava fountains from Fissure 8 continued with heights of 130-180 feet that continue to feed the channel to the ocean entry at Kapoho. Overnight near the Four Corners region, the channel was incandescent and flowing. Minor lava activity at Fissures 16/18 continued.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - A small explosion occurred at 12:51 a.m. HST in the summit region of Kilauea.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing subsidence of the summit.
- **June 9, 2018**
  - Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Lava continued to erupt from Fissure 8, with fountain heights of 130-180 feet and continued to supply lava to the ocean entry at Kapoho. No significant changes in the Fissure 8 flow field. The steam plumes rising from the ocean flow front was visibly smaller and areas of upwelling offshore was less distinct. The diminished plumes are due to change in atmospheric conditions rather than a change in Fissure 8 output. Fissure 22 was incandescent and minor lava activity at Fissures 16/18; less fuming from Fissures 24, 9 and 10 than yesterday.
  - As of 6:30 a.m. HST, the lava delta at the Kapoho lava entry is about 200 acres in size—the lava delta formed over the past six days when the lava entered the ocean on June 3<sup>rd</sup>.
  - Laze hazard from lava entering the ocean continues.
  - Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
  - A small explosion occurred at 4:48 a.m. HST in the summit region of Kilauea.
  - Inward slumping of the rim and walls of Halema`uma`u continues in response ongoing



subsidence of the summit.

- **June 8, 2018**

- In the evening, fountain continued with heights of 200-220 feet. Two vigorous steam plumes rising from the ocean flow front. Strong thermal upwelling in the ocean extending up to 1000 yards out to sea from the visible lava front. Fissure 9, and 10 were emitting heavy gas and steam.
- In the afternoon, lava eruption continued at Fissure 8 with fountain heights of 220 feet. No significant changes in the Fissure 8 flow field and the two large plumes at the broad ocean entry. The Kapoho Beach Lots boundary has not changed.
- Following a magnitude-3.2 earthquake at the summit, twelve rockfalls were recorded in Pu`u `O`o between 10:31 and 10:56 a.m. HST. A prominent red dust plume was produced around 10:50 a.m. HST but dissipated quickly.
- Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Overnight, lava fountaining at Fissure 8 reached heights of 220 feet and continued to feed a lava channel flowing east to the Kapoho Bay area. No significant changes in the Fissure 8 flow field. Fissure 24 is incandescent; Fissure 24, 9, and 10 are fuming heavily.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- A small explosion occurred at 2:44 a.m. HST in the summit region of Kilauea. Ash plume from satellite data suggest heights of 10,000 ft above sea level.
- Inward slumping of the rim and walls of Halema`uma`u continues in response to ongoing subsidence of the summit.

- **June 7, 2018**

- Late in the evening, lava fountaining at Fissure 8 continues with heights between 170-200 feet.
- In the afternoon, lava fountaining at Fissure 8 fluctuated with heights between 190 and 215 feet and continued feeding a lava channel flowing east to the ocean entry in the Kapoho Bay area. The lava delta is 1.2 miles wide in the Vacationland/Waopae area and the flow is expanding northward through Kapoho Beach Lots. A large area of upwelling offshore suggests the presence of lava flowing on the ocean floor.
- Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates. Overnight, lava fountaining at Fissure 8 fluctuated, reaching heights of 230 feet and continued to feed a lava channel flowing east to the Kapoho Bay area. The northern lobe and the west side of Four Corners cinder pit lobe from Fissure 8 was reported as no activity. Lava is entering the ocean along a broad front at Vacationland and Kapoho Bay.
- Laze hazard from lava entering the ocean continues.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Inward slumping of the rim and walls of Halema`uma`u continues in response to ongoing subsidence of the summit.

- **June 6, 2018**

- In the afternoon, lava was continuing to enter the ocean in the area of the Vacationland subdivision. Fissure 8 fountain heights diminished to 130-210 feet.
- Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates and Lanipuna Gardens. Vacationland has been completely covered by lava and expanded north by 100 m within Kapoho Beach Lots.
- Laze hazard from lava entering the ocean.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- A small explosion occurred at 4:07 p.m. HST in the summit region of Kilauea with ash plume that rose to about 10,000 ft.
- Inward slumping of the rim and walls of Halema`uma`u continues in response to ongoing

subsidence of the summit.

- **June 5, 2018**

- Vigorous eruption of lava continues from the lower East Rift Zone (LERZ) fissure system in the area of Leilani Estates and Lanipuna Gardens. Fountain heights of 150-180 feet at Fissure 8 continued and are feeding a channel transporting flow to the east to the ocean entry in the Kapoho Bay area. Fissure 8 flow is continuing to form a lava delta with continuing advances into the surviving parts of Kapoho Beach Lots and Vacationland neighborhoods
- Laze hazard from lava entering the ocean.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- A small explosion occurred at 4:32 a.m. HST in the summit region of Kilauea with plume of 5000 ft asl. Pacific Tsunami Warning reports the event as an M-5.6 earthquake—the earthquake was not large enough for tsunami threat.
- Earthquake activity at the summit has dropped after Tuesday morning's small explosion, but is slowly rising, following the pattern of the past weeks.

- **June 4, 2018**

- As of late afternoon, the lava entry had built a delta extending approximately 700 yards into the bay. The flow front is about 500 yards wide.
- Local videographers reported that lava entered the ocean at Kapoho Bay at about 10:30 p.m. HST on June 3. As of 6:30 a.m. HST the lava was constructing a delta in Kapoho Bay extending a few hundred yards into the bay.
- Laze hazard from lava entering the ocean.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Fountains at Fissure 8 continued and are feeding a robust lava channel to northeast along Highway 132 to the Kapoho area.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Following the 3:50 p.m. June 3 M-5.5 explosion, earthquake activity at the summit has been low. Inward slumping of the rim and walls of Halema'uma'u continues in response to persistent subsidence. Earthquake rates are expected to increase with other small explosions, following the pattern of the past weeks.

- **June 3, 2018**

- As of 5:45 p.m. HST, the lava flow was about 245 yards from the ocean at its closest approach point.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Fountains at Fissure 8 continued and are feeding a channelized flow to the northeast along Highway 132 (Pahoa-Kapoho Road) that has crossed Highway 137. The flow is moving downslope toward the ocean through Kapoho Beach Lots. As of 7:30 a.m. HST, the flow front, which extends from Kapoho Beach Road to Kapoho Kai Drive and down to Ililani Road, is 430 yards from the ocean between Kapoho Beach Road and Kapoho Kai Drive.
- At 3:50 p.m. HST, a M-5.5 (preliminary) earthquake occurred in the summit region of Kilauea produced an ash column that reached 8,000 ft.asl—the earthquake was not large enough for tsunami threat.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **June 2, 2018**

- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Fountain heights of 180-220 feet at Fissure 8 continued and are feeding a channelized flow to the northeast along Highway 132 (Pahoa-Kapoho Road) that has crossed Highway 137 (Kalapana-Kapoho Road) at the intersection of the two

highways at 9:30 a.m. HST. The flow continued advancing into Kapoho Crater and Kapoho Beach Lots. At 9:55 a.m. HST, lava entered Green Lake within Kapoho Crater producing a large, steam plume. Other branches of the Fissure 8 lava flow were inactive.

- Fissure 16 was weakly active.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **June 1, 2018**

- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Overnight, Fissure 8 continued to produce 220 feet fountains that continue feeding a channelized flow to the northeast along Highway 132. As of 6:30 a.m. HST, the lava flow front of the Fissure 8 was 0.84 miles above the Four Corners (the intersection of Highway 132 and 137).
- Fissure 18 flows is weakly active with widely scattered lava breakouts; overnight a new flow that branched from the same channel 1.5 miles upslope captured most of the lava output from Fissure 18 and was descending downslope just to the south of the previous flow. Fissure 22 was weakly active with lava pooling around the vent, but as of 9:30 a.m. HST, is inactive.
- Pele's hair from Fissure 8 continue to be falling downwind of the fissure and accumulated in Leilani Estates.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 31, 2018**

- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Laze hazard continues
- At about 7:30 p.m. HST, the Fissure 8 lava flow front that is moving downslope toward the Four Corners area crossed Railroad Avenue.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Overnight, Fissure 8 continued to produce persistent 200-260 feet fountains that continue feeding flow activity to the northeast; one overflow covered the remaining northern part of Makamae Street and crossed Kahukai Street, filling in the area between Makamae and Luana Streets. As of 12:30 p.m. HST, the front of the Fissure 8 flow near Noni Farms Road was 1.9 miles above the Four Corners area. High eruption rates from Fissure 8 formulated a leveed channel along the western edge of the lava flow.
- Fissure 18 feeds the upper part of a lava flow that extends to 1.5 mi from Highway 137; the lower portion of the fissure 18 lava flow stalled about 0.5 mi from the highway. Fissure 2 was weakly active
- Pele's hair from Fissure 8 continue to be falling to the west of the fissure and accumulated in Leilani Estates.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 30, 2018**

- Earthquakes in the summit region continue. An explosion occurred at around 11:00 a.m. HST sent an ash cloud of 12,000 ft above sea level. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Fissure 8 maintained high fountains with sustained heights of 200-250 feet,

and a secondary fountain of 60 feet. The fountaining continued to feed a lava flow that is moving north out of Leilani Estates and then northeast along Highway 132 with three lobes in the vicinity of Noni Farms Road. Fissure 18 also remained active, moving downslope toward Highway 137. Sporadic bursts of activity from Fissures 22, 6, and 13.

- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 29, 2018**

- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. One weak lava ocean entry. Fissure 8 remained very active, with 200 feet fountains. A finger crossed Hwy 132 near PGV access road. Fissures 18 and 16 were weakly active.
- Pele's hair from Fissure 8 are being transported downwind and falling to the west of the fissure.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 28, 2018**

- Explosions at Kilauea Summit continues. An explosion occurred at 4:35 a.m. HST sent an ash cloud of 10,000 ft above sea level. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- A magnitude 4.1 earthquake occurred at 5:39 p.m. HST on the Koa'e fault zone south of the caldera.
- Laze hazard continue
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. One weak lava ocean entry. As of 4:30 p.m. HST, fissures 8, 18, 20, 22, 6/13, and 7/21 reactivated. Fissure 7/21 had the highest fountains.
- As of 6:00 a.m. HST, only fissure 8 and 24 was active.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 27, 2018**

Explosions at Kilauea Summit continues. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.

- Laze hazard continues
- A new Fissure 24 opened between Kupono and Nohea Streets in Leilani Estates Subdivision.
- Vigorous eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Two lava ocean entries are active. Fissure 21 is feeding an `a`a flow that continued to advance on PGV property, but has slowed overnight. Fissure 7 activity increased overnight, producing a large spatter rampart over 100 feet tall from 150-200 feet fountains that are feeding a perched pahoehoe flow 20-40 feet thick.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 26, 2018**

- Explosions at Kilauea Summit continues. An explosion from Overlook Crater at 4:17 p.m. HST produced an ash cloud of 12,000 ft above sea level
- Earthquakes in the summit region continue. The earthquakes and ash explosions are occurring as the summit area subsides and adjusts to the withdrawal of magma.
- Laze hazard continues
- As of this morning, the on-going eruption in Kilauea's lower East Rift Zone has covered approximately 2372 acres (3.7 square miles or 9.6 square kilometers) of land in new lava.
- Eruption of lava continues in the area of Leilani Estates and Lanipuna Gardens. Two lava flows are entering the ocean near MacKenzie State Park. Fissure 22 continues to erupt lava that is flowing to the coast and entering the ocean. Fountains at fissures 6

and 13 feed lava into a channel that reaches the coast and continues entering the ocean. Fissures 7 and 21 are feeding a perched lava pond and pahoehoe flow that covered most of the area between Kaupili and Mohala Streets. The flow front crossed Pahoia Pohiki Road at about 2:30 p.m. HST onto PGV property. Fissure 8 was reactivated. Fissure 17 boomed multiple gas emissions.

- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 25, 2018**

- Explosions at Kilauea Summit continues. At 12:44 p.m. HST, a M-4.0 earthquake occurred in the summit region of Kilauea—not large enough for tsunami threat.
- A new subsidiary pit opened up on the north part of the floor of Halema`uma`u Crater. The vent area is now approximately 90 acres, and anticipate further enlargements as subsidence of Kilauea Caldera, rockfalls and small explosions continue
- Laze hazard continues
- Fissures 7 and 21 crossed Kahukai Road in Leilani Estates
- Two lava flows are entering the ocean near MacKenzie State Park. Fissure 22 continues to erupt lava that is flowing southeast to the coast where lava is entering the ocean. Fountains at fissures 6 and 13 feed lava into a channel that reached the coast and continues entering the ocean. Fissure 17 is barely active
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 24, 2018**

- Explosions at Kilauea Summit continues. An explosion at 6:24 p.m. HST, sent ash clouds of 10,000 ft asl,
- Laze hazard continues
- Three lava flows are entering the ocean between Pohoiki Bay and MacKenzie State Park (Highway 137 mile markers 12 to 14). Fissure 22 continues to erupt lava that is flowing southeast to the coast where lava is entering the ocean. Fissures 6 and 13 feed lava into a channel that reached the coast and entered the ocean.
- As of 6:00 p.m. HST, spattering and fountaining continues from fissures 22, 19, 15, 6, 13, and weak spattering from 17. Lava eruption continues in Leilani Estates and Lanipuna Gardens from fissure 22. Fissure 7 reactivated this morning; the flow covered Kaupili and Mohala Streets.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.

- **May 23, 2018**

- Explosions at Kilauea Summit continues.
- Laze hazard continues
- As of 6:00 p.m. HST, spattering continues from fissures 5, 6, 13, 19, and weak spattering from 17. The fountains from fissure 22 feed a single lava channel that entered the ocean. Fissure 8 reactivated briefly this morning.
- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.
- the summit.

- **May 22, 2018**

- Explosions at Kilauea Summit continues. An explosion at 3:45 a.m. HST, sent ash clouds of 8000 ft asl,
- Laze hazard continues
- As of 5:00 p.m. HST, spattering continues from fissures 5, 6, 19, and weak spattering from 17.
- A new area of fountaining near fissure 23 started this afternoon along the fissure line between Kaupili and Mohala Streets
- As of 6:00 a.m. HST, fountaining at fissures 6, 19, 22, reactivated 5, and 17.
- Fissure 6 flows have been slowly flowing closer to PGV property. Fissure 20 is feeding one flow entering the ocean, while other fissures are supplying additional flows.

- Seismicity and deformation continue at the Summit. Additional earthquakes are expected at the summit.
- **May 21, 2018**
  - Explosions at Kilauea Summit continues. An explosion at 12:55 a.m. HST, sent ash clouds of 7000 ft asl, and small events between 2:00 and 4:00 a.m HST, sent combined ash emissions
  - Laze hazards continue
  - Fissure 17 is spattering but its flow is not advancing. Fissure 19 is reactivated, Fissure 22 is very active, producing lava flows that are headed to ocean in channelized, open flows.
  - Fissure 20 lava crack from May 20 has been abandoned.
  - Two flows continue to enter the ocean
  - Seismicity and deformation continue at the Summit. Deflation is ongoing and additional earthquakes are expected as long as the summit continues to deflate.
- **May 20, 2018**
  - Explosions at Kilauea Summit continues
  - River of lava splits into two and both are entering the ocean
  - Laze hazards from lava entering the ocean
  - Approximately 10:45 p.m.HST May 19, a lava flow has crossed Hwy 137 at the 13-mile marker and has entered the ocean.
  - As of the morning, spattering continues from Fissure 20 with lava draining into a large crack. Fissure 6 was spattering with pahoehoe flows reaching Leilani Estates between Pohoiki Road and Leilani. Fissure 19 is weakly active and fissure 18 is producing tiny spatter bursts. Fissure 17 still spattering and occasional steam blasts.
  - Seismicity and deformation continue at the Summit. Deflation is ongoing and additional earthquakes are expected as long as the summit continues to deflate.
- **May 19, 2018**
  - An explosion at Kilauea Summit occurred just before midnight May 18, with plumes of 10,000 ft asl, sending ash toward Pahala and Ocean View. Additional minor explosions occurred overnight
  - As of 9:00 a.m.HST, fountaining occurred at fissures 17; fissures 16-20 have merged into a continuous line of spatter and fountaining.
  - The consolidated fissure 20 crossed Pohoiki Road; another flow from fissure 20 is flowing southward between Pohoiki and Opihikao Roads.
  - The lava flow from Fissure 18 continues to advance slowly and merged into fissure 20
  - Fissure 17 is still active, but only advanced slightly
  - Seismicity and deformation continue at the Summit. Deflation is ongoing and additional earthquakes are expected as long as the summit continues to deflate.
- **May 18, 2018**
  - Late in the afternoon, a fast-moving pahoehoe lava flow from fissure 20 crossed Pohoiki Road
  - Fissure 4 was reactivation around 6:00 p.m.HST
  - New Fissure 23 opened between fissures 1 and 3
  - As of 9:00 a.m. HST, spattering continues from Fissures 15, 17, 18, 20, 21, and 22 with pahoehoe lava flows being erupted from Fissures 17, 18, and 20
  - No explosive eruption of ash has occurred since Thursday morning—additional explosions possible at any time
  - Seismicity and deformation continue at the Summit. Deflation is ongoing and additional earthquakes are expected as long as the summit continues to deflate.
- **May 17, 2018**
  - Explosive eruption at Kilauea summit occurred at 4:17 a.m. HST, with ash clouds of 30,000 ft; ash cloud drifted northeast
  - Aviation Color Code Red continues
  - 5:17 a.m. HST National Weather Service issued Ashfall Advisory in effect until 8

- a.m. HST
  - New Fissure 22 opened in Lanipuna Gardens, just downrift of fissure 19, between fissures 19 and 20
  - New Fissure 21 opened north of Leilani Street, between fissures 3 and 7
  - Fissures 18, 19, and 20 has reactivated in the afternoon
  - Spattering and booming blasts continues from Fissure 17; has not advanced significantly over the past day
  - Fissure 6 is reactivated in the morning with spattering
  - Summit continues to deflate and lava lake continues to drop
- **May 16, 2018**
  - 8:36 a.m. HST: M-4.2 earthquake and subsequent ash plume (estimated to have risen 8200 ft) from summit vent with continued aftershocks
  - Dense ballistic blocks (up to 60 cm) observed in Overlook parking lot
  - Cracks observed on Hwy 11 between mile markers 28 and 29
  - 8:33 a.m. HST National Weather Service cancels Ashfall Advisory since volcanic emission from Halema`uma`u has decreased
  - Aviation Color Code Red continues
  - Lava flows from fissure 17 advanced slightly (only 100 yards) over the past day
  - Fissure 18 weak spattering
  - Fissure 20 reactivated
  - Summit continues to deflate and lava lake continues to drop
- **May 15, 2018**
  - Rock fall and explosions within Halema`uma`u Crater caused an ash plume of around 12,000 ft (3660 m) in the air
  - Increased Aviation Color Code to Red due to increased ash emission from Kilauea.
  - Fissure 13 reactivated with new spatter on road
  - Fissure 6 reopens near Leilani Avenue and Pohoiki Road
  - A new fissure opened in the Lanipuna Gardens Subdivision with two small pads of lava northeast from fissure 19
  - Narrow lava flow from fissure 17 still move slowly toward the ocean at approximately 20 yards (18 m) per hour
  - Minor spattering and small lava pad from Fissure 18
  - Fissure 19 still active at Lanipuna—one house burned on Hinalo Street
  - Summit continues to deflate and lava lake continues to drop
- **May 14, 2018**
  - Fissure 19 opened around 5:46 a.m. HST in Lanipuna Gardens Subdivision with two pads of lava
  - Fissure 17 remains strong with fountaining, spatter, and blasts heard as far away as Mountain View
  - Fissure 18 still active.
  - Summit continues to deflate and lava lake continues to drop
- **May 13, 2018**
  - Fissure 18 opened between 16 and 17, issued a small pads of lava, but was short-lived
  - Fissure 17 opened on Halemahina on the southwest side of Highway 132, starting about 4:30 a.m. HST. Large bombs (2-3 meters or yards in size) thrown up 125 m (400 ft) into air; spatter erupted up to 300 ft (but mostly 100 ft) high; lava flow developing and moving both north and south of fissure
  - Summit continues to deflate and lava lake continues to drop
- **May 12, 2018**
  - Fissure 16 opened as early as 3:00 a.m. HST with 250-meter (820-foot) long flow and died about 2:30 p.m. HST
  - *A fissure that opened about 100 m below fissure 16 was initially called “fissure 17”—but that label was later rescinded after the discovery that it had erupted only steam, but no lava*

- Summit continues to deflate and lava lake continues to drop
- **May 11, 2018**
  - All LERZ fissure eruptions paused, but seismicity and deformation continue, indicating that additional fissures possible
  - Summit continues to deflate and lava lake continues to drop
- **May 10, 2018**
  - All LERZ fissure eruptions paused, but seismicity and deformation continue, indicating that additional fissures possible
  - The lava lake surface disappeared from view, at a depth of more than 325 m (1,070 ft) below the Halema'uma'u crater floor.
  - Summit continues to deflate and lava lake continues to drop
- **May 9, 2018**
  - Summit lava lake continued to drop
  - 8:27 a.m. HST: large rockfall (likely in response to M-3.1 earthquake) and subsequent ash plume (estimated to have risen 6000 ft) from summit vent
  - Cracks opened west of Hwy 130
  - Number of LERZ fissures: 15 (#15 lasted less than an hour)
  - USGS Volcano Activity Notice (VAN) issued re: possible summit explosion(s)
- **May 8, 2018**
  - Number of LERZ fissures: 14
  - Fissure 13 erupted across near the intersection of Leilani and Pohoiki Road, and located between Fissures 1 and 6
  - Fissure 14 opened near Fissure 3 on Kaupili Street
- **May 7, 2018**
  - Number of LERZ fissures: 12
  - Fissure 12 opened in the forest south of Malama Street, shortly after fissure 11 became inactive.
  - Ground cracking extends across Hwy 130
  - 3:15 pm HST: all LERZ fissures inactive, but still heavy steaming and elevated gas emissions
- **May 6, 2018**
  - Number of LERZ fissures: 10
  - Fissure 10 opened near the intersection of Malama and Pomaikai Streets
  - Summit lava lake dropped significantly, roughly 220 m below the crater rim.
- **May 5, 2018**
  - Number of LERZ fissures: 9
  - In the morning, Fissure 7 opened near Makamae and Leilani Street
  - Fissure 8 opened at the edge of Luana Street (near Leilani Street) with fountaining and occasional bursts to 100 m heights, and building a spatter cone.
  - Fissure 9 opened on Kupono Street, with the flow migrating to the west toward Moku Street..
- **May 4, 2018**
  - Number of LERZ fissures: 6 (Fissures 2-6 activated)
  - A new lava fissure 2 commenced around 1:00 a.m. HST on Makamae and Leilani Streets with spatter thrown roughly about 30 m (100 ft) high.
  - At 5:57 a.m. HST, Fissure 3 opened up on Kaupili Street
  - Fissure 4 opened in forest around 10:39 a.m. between Kaupili and Mohala Streets
  - Shortly before 12:00 p.m., Fissure 5 opened near Leilani and Kahukai Street.
  - Fissure 6 opened near Pohiki and Leilani Streets
  - 11:32 am HST: M-5.4 earthquake
  - 12:32 pm HST: M-6.9 earthquake, produced robust ash plume at Pu'u 'Ō'ō
  - 2:37 pm HST: M-5.3 earthquake
  - Beginning of increased seismicity at summit



- **May 3, 2018**
  - 10:30 am HST: magnitude-5.0 earthquake caused additional collapse at Pu‘u Ō‘ō, producing a short-lived plume of reddish ash
  - ~5:00 pm HST: Eruption commenced on LERZ with one vent (fissure) opening in the area of Mohala and Leilani Streets in Leilani Estates Subdivision
  - USGS VAN issued re: onset of eruption in Leilani Estates
- **May 2, 2018**
  - First small ground cracks opened in and adjacent to Leilani Estates (no high temps or steam) in LERZ
  - Summit lava lake began to drop
- **May 1, 2018**
  - Deflationary tilt at summit began
  - USGS VAN issued re: collapse of Pu‘u Ō‘ō and likelihood of lower East Rift Zone eruption
- **April 30, 2018**
  - On East Rift Zone, Pu‘u Ō‘ō crater collapsed, prompting increases in seismicity and deformation down rift of the vent, with seismicity as far east as Hwy 130 in the lower Puna District of the Island of Hawai‘i
- **April 26, 2018**
  - Large overflow onto Halema‘uma‘u crater floor at summit
- **April 24, 2018**
  - USGS VAN issued re: high summit lava lake level and possible overflows
- **April 17, 2018**
  - USGS VAN issued re: pressurization of magma system beneath Pu‘u Ō‘ō