

Disaster Recovery in Hawai'i Volcanoes National Park: Public Scoping – Frequently Asked Questions

Q: What is the proposed action?

A: Under the proposed action, the National Park Service would:

- Demolish three damaged structures at Uēkahuna Bluff on the Kīlauea summit (the former Jaggar Museum, the Okamura Building and the Geochemistry Annex)
- Repair, expand and restore access to the existing overlook area at Uēkahuna adjacent to the former Jaggar Museum
- Replace the Jaggar Museum visitor center function with a new building near the existing Kīlauea Visitor Center (KVC)/headquarters facility near the park entrance.
- KVC and its auditorium would still be used for administrative offices, K-12 educational programs, and public presentations.
- Realign Crater Rim Drive near the park entrance and install a roundabout to improve safety
- Allow USGS to construct a replacement field station adjacent to the ball field by Kilauea Military Camp in the park.

Q: Why can't Jaggar Museum and the USGS-operated buildings be restored?

A: The Jaggar/USGS HVO complex is surrounded by cracks and active faults and the area continues to subside on the crater side due to the caldera collapse, undermining slope stability and the building foundations. Significant investment in repairs or replacements of these buildings, which are closest to the cliff edge, would be undermined by continued ground movement at the site.

Q: Were the comments provided by the public during civic engagement in May and June 2020 incorporated into the proposed action?

A: The comments received during civic engagement were analyzed and summarized in a comment summary report. This report was provided to the planning team for review prior to the value analysis workshop held in July 2020 to ensure the public comments were considered and utilized during a value analysis workshop that resulted in the selection of a preferred alternative.

Q: How many public comments were received?

A: 159 pieces of correspondence from nine states were received during the civic engagement comment period. Comments included topics such as from visitor experience, roads and congestion, natural resources, cultural resources, and specific comments on the concepts provided. The Comment Summary Report can be viewed on the project website at: <https://parkplanning.nps.gov/HAVODisasterRecovery>.

Q: In the proposed action, would Kīlauea Visitor Center and a new Jaggar Museum- facility both serve visitors?

A: A new visitor center building located near the existing KVC and administrative headquarters building will replace the loss of Jaggar Museum facility. The existing KVC headquarters building would be used for offices, special events like theater presentations, and K-12 educational programming.

Q: What are the next steps after public scoping?

A: The NPS and USGS will incorporate comments received during public scoping to refine the proposed action during design development that will be incorporated into an environmental assessment (EA). The draft EA will be distributed for public comment later this year.

Q: What is the timeline for implementing the results of this planning process?

A: The proposed action could be implemented following environmental analysis within the next one to four years.

Q. How do I submit comments?

A: The public can submit their comments on this project between February 9 and March 9, 2022 in the following ways:

- **Online:** The preferred method for comments is to submit comments via the NPS Planning, Environment, and Public Comment (PEPC) website: <https://parkplanning.nps.gov/HAVODisasterRecovery>
- **Phone:** There is a dedicated phone line for receiving comments. You can leave a detailed message or request someone calls you back: 808-460-6212.
- **Attend a Virtual Meeting:** Hawai'i Volcanoes National Park and USGS will host two virtual public meetings on Thursday, February 24, from noon to 1 p.m. and again from 6 p.m. to 7 p.m. The Disaster Recovery Project presentation is at the top of the hour:

February 24, 2022 12 p.m. to 1 p.m. HST

- Join the online meeting: <https://swca.zoom.us/j/91430664015>
- If you do not have access to internet, you can join by phone: (888) 475-4499 US Toll-free; Meeting ID: 914 3066 4015

February 24, 2022 6 p.m. to 7 p.m. HST

- Join the online meeting: <https://swca.zoom.us/j/97252271515>
- If you do not have access to internet, you can join by phone: (888) 475-4499 US Toll-free; Meeting ID: 972 5227 1515

Comments will not be accepted by fax, email, or any other way than those specified above. Bulk comments in any format (hard copy or electronic) submitted on behalf of others will not be accepted. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us to withhold your personal

identifying information from public review, we cannot guarantee that we will be able to do so.

Q: Why is it important for the USGS to be located within the park?

A: There is a critical need for USGS HVO to return to a field station inside Hawai'i Volcanoes National Park, which encompasses Mauna Loa and Kīlauea, two of the most active volcanoes on earth. A facility in the park is vital as a base of operations for volcano hazards monitoring and research that support park management and public safety in Hawai'i. The loss of the HVO-occupied Okamura building at Uēkahuna Bluff in 2018 forced HVO to relocate staff outside of the park most of which has created significant inefficiencies in workflow and will result in delays in response time when activity resumes in the summit region the Southwest Rift Zone or from Mauna Loa. Critical radio and telemetry infrastructure remain intact and will continue to function near the site of the Okamura building, however it has been determined that a field station to support operations, research, and crisis response within the park will be constructed in a more stable area. For more than 100 years, these volcanoes have been a laboratory for fundamental research by USGS and many other scientists into how volcanoes work.

Q: What functions will occur at the USGS field station inside the park, and how will these functions differ from the main science facility in Hilo?

A: The field station will be designed to be highly adaptable to changing requirements in the future depending on the state of the volcanoes and the nature of the scientific work USGS is conducting in the summit area. HVO will use the field station to safely house equipment and materials needed to support volcano monitoring, research, and crisis response for eruptions on Kīlauea and on Mauna Loa.

Other activities will include storage of monitoring equipment and spare parts inventory, storage and charging of batteries, light instrumentation fabrication, and rock, water, and gas sample processing. Both HVO and Pacific Islands Ecosystems Research Center - Kīlauea Field Station (PIERC-KFS) scientists will use the field station for field campaign staging and employee rest during fieldwork, support of NPS-approved Unmanned Aerial System (UAS) operations, as well as a space for meetings and briefings with NPS managers, HVO staff, and visiting scientists.

Some outreach and education activities could occur in association with the field station such as training for NPS commercial operators, presentations to visiting school groups, etc. In contrast, the Hilo campus will house permanent offices for USGS staff and be the primary organizational home, archives, primary warehouse and laboratories, and crisis response operational facility.

Q: What is the current stability of the Uēkahuna area? What rates of motion have been observed since the end of the 2018 eruption?

A: A project to monitor the stability of the Uēkahuna bluff area is being led by a NPS geomorphologist in coordination with USGS and UH Hilo. Radar satellite data (InSAR) shows that the primary contributor to motion of the near-caldera bluff area has been inflation of the shallow magmatic system of Kīlauea, which affects a broad region of the

summit. InSAR data do not show significant small-scale motion that might be interpreted as instability of the near-caldera bluff. However, this is an evolving situation and earthquake-related motions of parts of the caldera below the bluff indicate that continued monitoring is warranted.

Q: Will visitors and staff be safe if access is restored to the viewing platform?

A: Ground deformation is being monitored so that the park can take management action as necessary to respond to these changes. Existing facilities proposed to be reoccupied on an interim basis are located further from the area showing continued creep. The park has installed a monitoring system similar to what was installed inside Nāhuku (Thurston Lava Tube) that will enable the park to receive electronic alerts if subsidence rates increase. Given the current level of activity at Kīlauea, ongoing motion related to the 2018 summit collapse and return of inflation at the Kīlauea summit is the primary concern. Current motion is very slow and no sudden failure of the ground surface is expected. Over the long term, the area is at risk of vog, ashfall, and other possible hazards when there is eruptive activity at the summit caldera area.

Q: What are long-term geological hazards in the Uēkahuna area?

A: The Uēkahuna area is exposed to four primary long-term geological hazards. It could be overrun by lava flows if the caldera fills; this last happened about 600 years ago. It could be covered by volcanic ash, blocks, and bombs from large explosive eruptions, as happened repeatedly between 500 and 200 years ago. It could be subject to impacts by volcanic gas during certain wind conditions, mainly sulfur dioxide, if lava continues to erupt within the caldera or degasses during shallow storage just under the caldera, as throughout the 19th and 20th centuries until May 2018. Large earthquakes could shake the area and cause parts of the caldera wall to fall and perhaps crack adjacent ground; this most recently happened in 2018.

Of these four hazards, lava flows and explosions would leave deposits that would permanently change the entire Uēkahuna area. Volcanic gas would affect the entire area but would be present only when lava was in the caldera or just under the surface. Earthquake shaking, wall collapse, and ground cracking would be brief events most likely confined to near the wall of the caldera. Earthquake shaking is probably the only hazard that will appear without forewarning.

Q: Will Crater Rim Drive be rebuilt so visitors can drive around the entire Kīlauea caldera like before the 2008 eruption?

A: Rebuilding the badly damaged southwest section of Crater Rim Drive is not being actively considered at this time, but other parts of the road have been or are being repaired. Due to the scale of damage and the potential impact of rerouting the road, if there is a future proposal to reestablish the road, it will go through a separate planning process, similar to this one.

Q: Will Crater Rim Trail west of Uēkahuna or any of the closed portions of Crater Rim Trail reopen to the public?

A: Reopening Crater Rim Trail west of Uēkahuna or west of Keanakākoʻi will be

assessed if air quality conditions improve. As long as there is a lava lake, the air quality can be too hazardous to reopen the trail.

Q: Why do Hawaiians consider Uēkahuna sacred?

A: There are many reasons Uēkahuna is considered sacred by some Native Hawaiians and other groups. One reason is that Uēkahuna bluff is the highest vantage point for observing Kīlauea caldera, also known as Kaluapele (the pit of Pele). Pelehonuamea (Pele who shapes the sacred land), is the Polynesian volcano demigod who makes her permanent home inside Kaluapele, specifically inside Halema'uma'u, the summit crater. Pele may leave her home periodically for eruption sites outside of the crater, but she always returns. Hawaiians and others come to Uēkahuna to connect with and pay homage to Pele and her family, most preferring to do so privately, beyond the gaze of visitors. According to oral history, Pele manifests herself in molten lava, and in the steam and volcanic gases that emanate from the volcano.

Q: What are some of the cultural resources of the summit area?

A: The crater, up to the rim of Kaluapele, is a nationally significant property listed on the National Register of Historic Places. Other resources that have been either listed or determined eligible for listing on the State or National Registers include Crater Rim Drive, the Crater Rim Historic District, the Kīlauea Administration and Employee Housing Historic District, and the Kīlauea Military Camp Historic District. Additionally, there are historic buildings, archeological sites, cultural landscapes, and small-scale features that have been identified within or adjacent to the proposed project areas.

Q: What are some of the natural resources in the summit area?

A: The Kīlauea summit area encompasses native wet forest, seasonally dry woodland, and pioneer plant communities on young lava, and highly altered areas (lawns, parking lots, buildings). Plant species include threatened Hawaiian catchfly, endemic trees like koa and 'ōhi'a and tree ferns; animal species include threatened nēnē, endangered 'ōpe'ape'a, native crickets and forest birds.

Q: What is the geological significance of this area?

A: The summit area of Kīlauea includes a complex young collapse caldera and upper rift zone features at one of the world's most well-exposed and well-studied, active basaltic shield volcanoes. This caldera sits atop a dynamic magma reservoir system that is constantly changing, giving rise to earthquakes, gas emissions, and ground deformation.

More than a century of observation and instrumental monitoring and scientific study have produced fundamental insights into how volcanoes work. Exposures of the Keanakāko'i tephra, an important deposit indicative of the explosive nature of Kīlauea volcano at times, blanket the area and are the subject of ongoing research. Cracks and fault scarps expose historic and prehistoric lava flows and older tephra deposits that hold clues to the history and future of Kīlauea. For students of basaltic volcanism and volcano hazards, there are few better places on earth to witness and study active volcanic processes and the products of eruptions.