



DEPARTMENT OF HEALTH

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Hawai'i Department of Health to establish 10 new ambient air quality monitoring stations on Hawai'i Island

HONOLULU, HI – The Hawai'i Department of Health (DOH) will install 10 additional permanent air quality monitoring stations to measure fine particles (PM_{2.5}) and sulfur dioxide (SO₂) on Hawai'i Island to enhance data collection efforts for vog conditions around the island. There are currently five permanent stations on Hawai'i Island in Hilo, Mountain View, Pahala, Ocean View and Kona.

Although specific locations have not been determined, DOH has identified general areas where monitoring is needed, including South Kohala, North Kona and South Kona on the west side of the island. When all of the stations are in place, DOH's ambient air monitoring network will have a total of 25 stations statewide, including two National Park Service stations located at Hawaii Volcanoes National Park.

DOH is inviting Hawai'i Island residents to submit their suggestions for locations of these additional permanent air quality monitoring stations to enhance response efforts to the ongoing Kilauea eruption. When fully operational, the additional air quality monitoring stations will provide real-time data from different areas of the island so emergency responders can advise residents and visitors on appropriate actions they can take to protect their health and safety.

"The input we have received from residents during community meetings has been invaluable," said Dr. Bruce Anderson, health director. "We want to encourage ongoing dialogue so we can better address their concerns and ensure an effective response."

Air quality monitoring stations measure particulates, or pollution including ash in the air, and gases such as sulfur dioxide. Monitors closer to the Kilauea East Rift Zone also gauge levels of hydrogen sulfide in the air. Data are used primarily to provide air pollution updates to the public in a timely manner, identify trends, forecast air quality, correlate air quality to health effects, guide emergency management activities, and support air pollution studies.

Anderson noted that each air quality monitoring station contains sophisticated equipment that yields reliable data for informed decision-making. A fully-loaded station with a shelter can cost as much as \$120,000 each. Site modifications that include security and fencing or electrical access can add to this cost. Installing a station typically takes from a few months up to a year to complete, but DOH is speeding up the process to obtain air quality data faster.

Selecting an air quality monitoring station is based on rigorous U.S. Environmental Protection

Agency (EPA) regulatory requirements. The following are factors considered in the decision-making process:

- Atmospheric conditions: This includes the effects of buildings, terrain, and heat sources or sinks on air trajectories that can produce anomalies of pollutant concentrations. Meteorology is also considered in determining the geographic location of a site as well as the height, direction, extension of sampling probes, and prevailing wind conditions.
- Logistics: This includes procurement, site security, set-up and maintenance, and transportation of material and personnel for the monitoring operation.
- Security risks: DOH is considering installing air quality monitoring sites at schools since they offer secure areas to minimize the threats of theft and vandalism. As additional benefits, the schools will have access to data to determine the best actions for students, such as sheltering in place and whether it is safe to go outdoors for recess. It can also serve as a learning tool for the students.
- Economics: DOH considers the economics of each air quality monitoring site, including the resources required for site acquisition, site preparation, data collection activities, instrumentation, installation, maintenance, data retrieval, data analysis, quality assurance, and data interpretation.

The community should base their recommendations for air quality monitoring station locations on these factors and email their suggestions to the DOH's Clean Air Branch at cab@doh.hawaii.gov by Wednesday, June 27, 2018.

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