



What is the Hawai'i Mesonet?

The Hawai'i Mesonet is a statewide advanced weather and climate monitoring network of approximately 100 telemetered stations. As of January 2024, there are 62 Mesonet stations across the state (Figure 1) with 24 on Hawai'i Island, 21 on Maui, 3 on Moloka'i, 9 on Oahu, and 5 on Kaua'i.

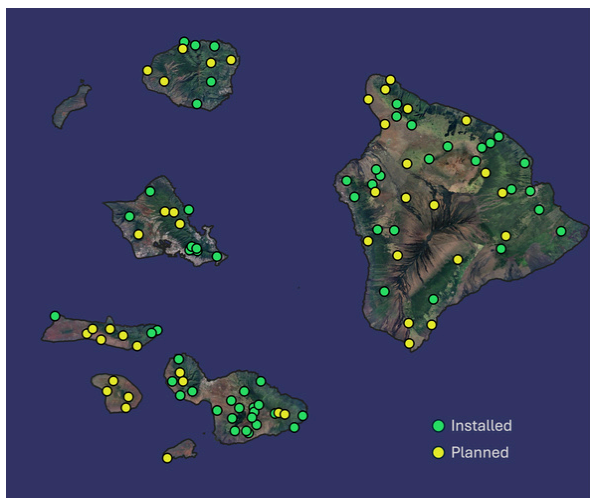


Figure 1. Statewide map of installed and planned Hawai'i Mesonet stations.

What happens to the data?

- Available in real-time through an interactive dashboard (Figure 2)

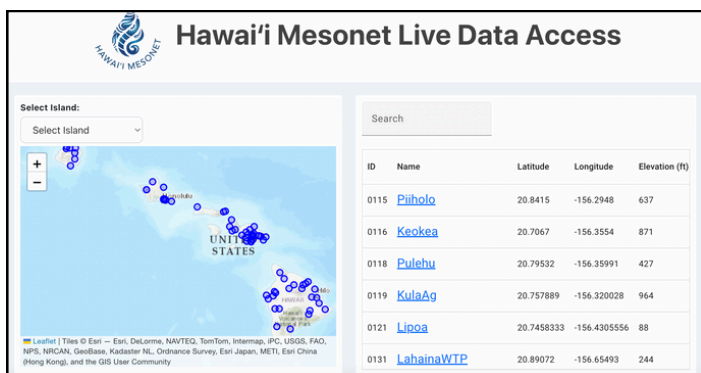


Figure 2. The interactive dashboard allows users to easily access Hawai'i Mesonet data.

- Stored in the Hawai'i Climate Data Portal
- Sent to the National Mesonet data repository



What is the HCDDP?

The HCDDP is a state-of-the-art data repository that has taken almost a decade to develop. Data stored in the HCDDP is quality-controlled and easily accessible for visualization and download. One key feature of the HCDDP is the production of climate maps in near real-time. At midnight each day, maps of temperature, rainfall, and other climate variables are produced. These maps are made easily available for visualization and download each day.

Who needs the data?

Data from the Hawai'i Mesonet is vitally important for a wide range of uses, including weather forecasting, flood warning, fire warning, emergency management, water resource management, agriculture, ranching, cultural resource protection, ecosystem protection, recreation, and research on weather, climate, hydrological processes, ecosystem processes, and many other topics. Access to high-quality, timely, and well-located sources of weather data saves lives, minimizes property loss, protects the environment, and enhances economic vitality.

Station highlight: Lāhainā

In September 2023, in collaboration with the Department of Water Supply, a Hawai'i Mesonet station was installed at the Lāhainā Water Treatment Plant. This station is the first full climate station available on West Maui. The data from this station is already being used to better inform rainfall and temperature maps on the HCDDP and will be used for a fire-risk and fire early warning model being developed by UH researchers.

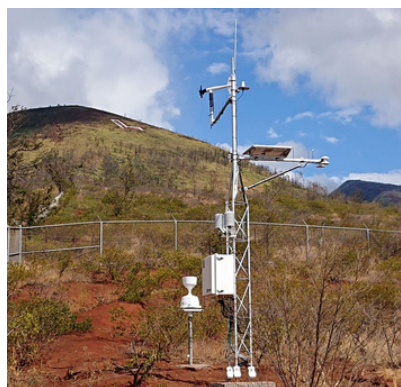


Figure 3. The Lāhainā WTP station, installed in September 2023.

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How is the data being used?



Need for State support

With around \$1.5 million in federal funding and additional support from the University of Hawai'i, the Hawai'i Mesonet will be completed within the coming year. Going forward, this investment will require sustainable funding of around \$600,000 per year for operations, maintenance, and data management. The NOAA National Mesonet Program provides support that will cover around 40% of that amount. Through the DLNR Commission on Water Resource Management, we are seeking long-term state support for the remainder.

Partners









Dr. Thomas Giambelluca
 thomas@hawaii.edu
Contact us
 Hawai'i Climate Data Portal
 hcdp@hawaii.edu