

Navy Responses to Select FTAC Member Questions

Posted December 26, 2023

Question 1: [Regarding the Nakupuna survey.] What are the total number of households in each of the zip codes for the Red Hill Community and the Oahu Panel?

Navy Answer 1:

Source: The Hawaii Housing Fact Book by UHERO (The Economic Research Organization at the University of Hawaii, June 28, 2023)

Red Hill Community

ZIP CODE	POPULATION	CITY	Housing Units
96701	41,818	Aiea	15,091
96818	59,703	Salt Lake, JBPHH, etc.	20,321
96819	51,712	Kalihi, Moanalua, etc.	12,730

Oahu Panel

POPULATION	CITY	Housing Units
1,015,167	OAHU	359,996
153,233	RED HILL	48,142

Question 2: How was the total number of surveys determined for each – Red Hill 5,008 and Oahu 1,790?

Navy Answer 2: The goal for any survey is to achieve a 95% confidence level, with a sampling error of +/- 5%. Based on Nakupuna's experience in conducting surveys such as this, the expectation was that we would achieve around a 5% response rate. With these expectations, Nakupuna compiled a list of 22,965 residential addresses with Red Hill Community zip codes. Of these they selected a random sample of 5,008 residential addresses to mail surveys to. Together with the responses from those zip codes gathered in the island-wide survey, we had 476 Red Hill completed surveys. The statistical significance of 476 surveys is 4.4% at the 95% confidence level.

For the island-wide survey we wanted a minimum of 700 surveys that would provide a +/-4.5% statistical significance for a random sample. The island-wide survey was conducted using a panel aggregator with a request for adult residents on Oahu. The aggregator sends out requests to people with those demographics to complete the survey (1,790) from which we received 770 completed surveys. Nakupuna then reviewed the surveys for completeness and to ensure they were eligible respondents, then weighted the sample by demographics.

Question 3: "You mentioned that the Navy brought in water testing lab equipment and it is housed at the UH. I would like to know more specifics -- who's lab is it in, are they running tests, how often, how are they obtaining the samples, is the lab certified, by what entity, does the EPA and DOH acknowledge or verify their results, what is the turnaround time, etc. Also, you mentioned the Navy and the UH have proposed groundwater flow models -- do they agree? What are those models? How do each of you gather data to put into these models?"

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Navy Answer 3: In early 2022, the Navy procured and delivered a gas chromatograph/mass spectrometry (GCMS) analytical instrument and appurtenance to the University of Hawaii (UH) Water Quality Lab. This GCMS instrument is similar to equipment used by EPA-certified laboratories on the mainland for the water quality testing done to support Red Hill drinking water and groundwater monitoring. The Navy also paid for the manufacturer to provide the UH lab staff with training on the equipment. In addition, the Office of Naval Research (ONR) provided a \$1.1M grant award to UH for the purchase of additional analytical instrumentation to expand their water testing capabilities.

With regards to any questions pertaining to the related use of this equipment and results verification, we recommend reaching out to the University of Hawaii, DOH, and EPA.

The Navy and University of Hawaii are both developing groundwater flow models planned for completion in late 2024. The Navy and University of Hawaii utilize all of the data collected through the monitoring and site characterization efforts in and around Red Hill. The Navy groundwater data is also available to the public on the environmental section of our Safewaters website.