



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

JUL 25 2016

Alec Wong  
Clean Water Branch, Environmental Management Division  
Hawai'i Department of Health  
P.O. Box 3378  
Honolulu, Hawai'i 96801-3378

Dear Mr. Wong:

The United States Environmental Protection Agency (EPA) has reviewed the Mahaulepu Watershed-Waiopili Ditch Sanitary Survey, Kaua'i Part 1, dated March 2016 (Sanitary Survey) and associated water quality data. EPA appreciates Hawai'i Department of Health's (DOH) efforts to identify the sources of bacteria impacting watersheds on the Island of Kaua'i.

The water quality data indicates that Waiopili Stream (also known as Waiopili Ditch) is exceeding Hawai'i's approved water quality standards (WQS) for enterococcus which is found at HAR § 11-54-8(b) and (c). Hawai'i adopted EPA's 2012 Recreational Water Quality Criteria on November 15, 2014 setting limits for enterococcus.<sup>1</sup> EPA approved this water quality standard on May 20, 2015. As described in EPA's Fact Sheet accompanying the recommended recreational criteria, the criteria "are designed to protect primary contact recreation, including swimming, bathing, surfing, water skiing, tubing, water play by children, and similar water contact activities where a high degree of bodily contact with the water, immersion and ingestion are likely."

In reviewing the data and Sanitary Survey, EPA notes that all enterococci samples collected by Hawai'i DOH exceeded the recreational water quality standard (p. 77, Table 1). Specifically, sampling sites closest to the coastline indicate enterococcus values 40-50 times above the water quality standard. The significant magnitude of water quality standards exceedance at the mouth of the Waiopili Stream and the proximity to coastal recreation waters provides a reasonable expectation that the coastal recreation waters in the area are being adversely impacted. The Waiopili Stream mouth, like many coastal stream mouths across the Hawaiian Islands are used for recreational purposes by people visiting the beach. Also, the most recent Gillin's Beach sample collected and analyzed by Hawai'i DOH (April 19, 2016) exceeded the standard (478 MPN/100 mL).

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<sup>1</sup> HAR 11-54-8(b) enterococcus content shall not exceed a geometric mean of 35 colony forming units per one hundred milliliters over any 30 day interval. HAR 11-54-8(c) a Statistical Threshold Value (STV) of 130 per one hundred milliliters shall be used for enterococcus. The STV shall not be exceeded by more than 10 percent of samples taken within the same 30 day interval in which the geometric mean is calculated.

As a recipient of a BEACH Act grant, Hawai'i DOH is required to post signs at beaches when water quality standards for pathogen or pathogen indicators are not met at coastal recreation waters. Specifically, the BEACH Act [CWA 406(c)(6)] requires Hawai'i DOH to have "measures for the posting of signs at beaches or similar points of access, or functionally equivalent communication measures that are sufficient to give notice to the public that the coastal recreation waters are not meeting or are not expected to meet applicable water quality standards for pathogens and pathogen indicators."

Regardless of the source, elevated enterococcus levels can pose a potential public health risk to people who recreate in the impacted water. *See*, Recommended Recreational Water Quality Criteria, Office of Water 820-F-058, November 2012 at 3.5.2. In order to protect public health, Hawai'i DOH must post a sign informing the public that the water flowing across the beach does not meet Hawai'i's recreational water quality standards. In addition to posting signs, EPA strongly advises Hawai'i DOH to immediately implement public health protection measures such as limiting access and conducting information outreach to the general public. These actions, among other preventative measures, would be beneficial to protecting the public health of Kaua'i residents and visitors.

EPA also urges Hawai'i DOH to continue its investigation of the source of the bacteria. We have reviewed the Sanitary Survey conducted by Hawai'i DOH and have significant concerns with its conclusions and Hawai'i DOH's reliance on the survey to make decisions about posting signs at coastal recreation waters. EPA is also concerned that many of the conclusions drawn from the Sanitary Survey are not appropriately supported or contradict existing data. For example, Hawai'i DOH has concluded that the former Aqua Engineers sludge/forage project site is not a source, based on one sample taken from a cave which may receive groundwater flow from the Aqua Engineers' site. However, this site, which was used to dispose municipal sewage sludge from 2003-2014 may continue to be a source of fecal indicator bacteria. Hawai'i DOH should conduct a more thorough evaluation and continue to evaluate other potential sources, such as injection wells and cesspools, from adjoining watersheds.

EPA is also concerned that the analysis of bacteria sources in Waiopili Stream may have occurred without a plan containing specific quality assurance and quality control (QA/QC) measures for inland stream monitoring. These plans ensure data of known and documented quality which will allow for Hawai'i DOH to draw supportable conclusions. EPA recognizes that Hawai'i DOH has a plan for coastal monitoring and is developing a plan for inland stream monitoring. As required by your acceptance of grant funds from EPA for data collection, a QA/QC plan must be reviewed and approved by EPA prior to any further inland surface water sampling.

In addition to continued discussions about Waiopili Stream, EPA would like to discuss Hawai'i DOH's measures for posting signs at beaches throughout the State. We will contact you to set up a time to discuss these issues. We look forward to assisting Hawai'i DOH in protecting public health. If you have any questions please feel free to contact me at [woo.nancy@epa.gov](mailto:woo.nancy@epa.gov) or (415) 972-3409.

Sincerely,



Nancy Woo  
Assistant Director, Ecosystems Branch  
Water Division

cc: Stuart Yamada, HDOH

