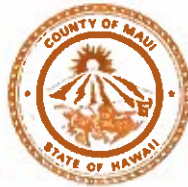


RICHARD T. BISSEN, JR.
Mayor

KEKUHAUPIO R. AKANA
Managing Director

JOHN STUFFLEBEAN, P.E.
Director

JAMES A. LANDGRAF
Deputy Director



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793
<http://www.mauicounty.gov/water>

VIA EMAIL
dlmr.cwrn@hawaii.gov

Dawn N. S. Chang, Chair
State of Hawaii, Department of Land and Natural Resources
Commission on Water Resource Management
1151 Punchbowl Street, Board Room 132
Honolulu, Hawaii 96809

**SUBJECT: Surface Water Use Permit Application (SWUPA-E) for
Kanaha Stream and the Lahaina Water Treatment Facility
(LWTF) in the Kahoma Surface Water Hydrologic Unit (6008)**

Dear Chair Chang,

The County of Maui Department of Water Supply (MDWS) hereby submits a SWUPA-E for our existing use of surface water diverted from Kanaha Stream for treatment at the LWTF in Lahaina, Maui. Our application is comprised of this letter with appendices and the SWUPA-E form. Please find the following information supplementing the SWUPA-E form for existing use:

6. Flow Measurement Information

The Kanaha Stream intake does not have a flowmeter. Diverted water is transported through a pipe that feeds a concrete distribution box above Lahainaluna High School where the water is distributed three ways for MDWS, Lahainaluna High School and Pioneer Mill Company. There is a flowmeter for the Lahainaluna High School. The valve to distribute water for the Pioneer Mill Company is closed. Prior to the distribution box, at approximately 790-foot elevation, water is distributed to property owned by Hans Michel. Overflow at the distribution box is returned through Hans Michel's property back to Kanaha Stream at tax parcel map key (TMK) 4-6-017:012. Influent water flows are measured by a flowmeter before a pre-sedimentation channel that leads to LWTF.

"By Water All Things Find Life"

16. Table 1: Measured or Calculated Use of Water at the Source or End Use (As of the Effective Date of Designation, August 6, 2022)

At the time of Interim Instream Flow Standard (IIFS) adoption, there were no gauges at Kanaha Stream to measure stream flow or diversions. On November 20, 2018 the Commission accepted a recommendation by the MDWS, including action item “Staff shall monitor streamflow by installing and maintaining stream or ditch gauge stations or coordinating with USGS if needed at appropriate stream or ditch locations.”¹ On December 24, 2018, MDWS commissioned the U.S Geological Survey (USGS) to install stream gauges below the pipeline intake and at the pipeline diversion on Kanaha Stream. Contracted tasks include permitting, planning, procurement of equipment and supplies, travel, helicopter sling-loading delivery of materials, transportation, and construction labor. In May 2022, USGS reported progress in securing access to begin gauge installation. To address the landowner’s concerns regarding locations of equipment, USGS proposed alternate stream gauge locations than those originally selected. Because the IIFS order tasked the CWRM staff to install the gauges and identify appropriate stream or ditch locations, MDWS and USGS consulted with CWRM Stream Branch in May 2022. USGS anticipates gauges to be installed by October 2023.

Meanwhile, MDWS has explored installation of an 8-inch to 4-inch reducer at the existing diversion flush-out valve. Until additional wells or other contingency supply is available to service Lahaina customers, reliable production at the LWTF is critical to maintain water service and adequate water for fire flow suppression for the Lahaina community. As such, further water reductions at the LWTF before new wells are in production may be catastrophic and force MDWS to increase pumpage at the Waipuka and Kanaha well fields, which in turn puts additional stress on the Launiupoko Aquifer System that may cause chloride upconing. MDWS declared a Stage 1 Water Shortage for the entire Lahaina water system on June 30, 2022, prohibiting the use of water for irrigation and other non-essential activities. To address the IIFS established on November 20, 2018, MDWS immediately requested design funding for development of additional groundwater sources in the Launiupoko and Honolua Aquifers. Groundwater use permit applications for new use will be sought for two new well fields in the Launiupoko Aquifer System. A draft Environmental Assessment (EA) will be completed for these well development projects.

¹ Staff Submittal Kahoma and Kanaha Interim Instream Flow standards and Commission on Water Resource Management Meeting Minutes of November 20, 2018.

17. Table 2 Land Use Consistency/Efficiency of Use

Please refer to Appendix E. Surface water diverted from the Kanaha Stream and treated at the LWTF is mixed with groundwater from the Kanaha 1 and Kanaha 2 well field and the Waipuka 1 and Waipuka 2 well field for distribution to the southern MDWS Lahaina sub-system, which cannot help serve the northern MDWS service area serviced by the Mahinahina Water Treatment Facility (MWTF) and the Honokohau B Well, the Napili A Well, the Napili B and the Napili C Well.

The MDWS applies for water use under the category MUNICIPAL. However, we identify premise types that compare to the Purpose/Water Use Categories in the SWUPA Form instructions. Please see the table below illustrating the premise type and average consumption.

Lahaina Service Area (Water Use Zone)

Premise Type	Average Consumption (GPD)
County Government	53,992
Commercial	321,563
County Park	32,069
High Rise Multifamily	36,598
Hotel	8,955
Hydrant Temporary	619
Industrial	226,103
Low Rise Multifamily	445,889
Church	23,924
Single Family	999,308
State Government	130,158
State School	7,203
Unknown	32,178
TOTAL:	2,318,559

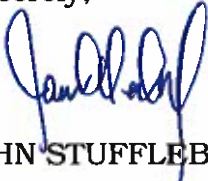
Table 2 in Appendix B notes the Premise Type in Field "A" Purpose/Water Use Category. None of the services are located in the Conservation District but possibly within the Special Management Area (SMA). The MDWS does not verify whether individual end uses require a SMA permit in order to issue a water meter. CDUP and SMA fields are noted as N/A.

Over 85% of MDWS services on this system consist of single family and multi-family customers. In terms of water use efficiency, the average billed water use per service of 495 gpd is significantly lower than the system standard allocation of 600 gpd per unit.


The MDWS conservation program includes demand side and supply side measures that apply island wide. Please refer to Appendix K.

We thank you for your consideration of this request.

Sincerely,



JOHN STUFFLEBEAN, P.E.

 Director of Water Supply

APPENDICES

- A: USGS topographic map with stream and diversion location
- B. Property tax map showing the stream location
- C. Map of service area (location of water use)
- D. Photographs of the Kanaha stream diversion
- E: Item 17. Table 2
- F: Item 17. Property Tax Map with location of use and photograph of the area of use
- G: : Item 18. Irrigation Information, Property Tax Map outlining area and photos of existing use
- H: Ka Pa`akai Analysis
- I. Referenced Department of Hawaiian Homelands Plans and Documents
- J. Photo of well sources, flow meters and end use area.
- K. Maui County Department of Water Supply Conservation Plan