



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

March 16, 2021
Honolulu, Hawai'i

Addendum to the December 15, 2020 Commission Meeting, [Item B-3](#):

Approval of an After-the-Fact Variance with Special Conditions to
Water Resources International, Inc., Ka'upulehu Water Company, and
Trustees of the Estate of Bernice Pauahi Bishop dba Kamehameha Schools
Ka'upulehu Potable Well 12 (Well No. 8-4755-004)
TMK (3) 7-2-003:003, Ka'upulehu, Hawai'i

WELL OWNER:

Ka'upulehu Water Company
P.O. Box 1119
Kailua-Kona, Hawai'i 96745

LANDOWNER:

Kamehameha Schools
567 South King Street, Suite 200
Honolulu, Hawai'i 96813

DRILLER/PERMITTEE:

Water Resources International, Inc.
P.O. Box 44520
Kamuela, Hawai'i 96743

MOTION TO DEFER:

Commission deferred Item B-3 (see <https://files.hawaii.gov/dlnr/cwrm/submittal/2020/sb20201215B3.pdf> and meeting minutes at <https://files.hawaii.gov/dlnr/cwrm/minute/2020/mn20201215.pdf>) with the applicants continuing to dialogue with staff and comeback to the Commission within 90-days with updated recommended action items.

SUMMARY OF REQUEST:

Ka'upulehu Potable Well 12 (Well No. 8-4755-004)

Applicant has a pending request for Chairperson's approval for an after-the-fact variance with special conditions of the Ka'upulehu Potable Well 12 (Well No. 8-4755-004) that was completed to a depth

greater than the ¼ depth limit of the basal thickness as specified by the 2004 Hawaii Well Construction and Pump Installation Standards (2004 HWCPIIS).

REPLACED RECOMMENDATION SECTION IN ENTIRETY WITH:

That the Commission:

Approve an after-the-fact variance from the 2004 Hawai'i Well Construction and Pump Installation Standards Section 2.2 to drill beyond the ¼ aquifer thickness limitation for the Ka'ūpūlehu Potable Well 12 (Well No. 8-4755-004), subject to the standard conditions in Exhibit 3b and the following special conditions:

1. The above joint and several Parties be responsible to:
 - i. Fund and develop a study of the rising chloride levels at the Ka'ūpūlehu Irrigation Wells 1 and 2 sites (State Well Nos. 4757-001 and 4757-002), and the final scope of work, timeline, and annual progress report delegated to the Chairperson for approval;
 - ii. Fund and develop one deep monitoring well (drilled to salt water depth), the location and design delegated to the Chairperson for final approval.
 - iii. Work with and allow CWRM staff to monitor the deep monitor well as part of its Kona monitoring network for twenty years ending December 31, 2042.

REPLACED EXHIBIT 8 IN ENTIRETY WITH:

Replace Exhibit 8 dated December 7, 2020 with Exhibit 8 dated March 10, 2021 Scope of Work for Chloride Study and Development of Monitoring Well.

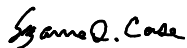
Ola i ka wai,



M. KALEO MANUEL
Deputy Director

Exhibit 8: Dated March 10, 2021 Scope of Work for Chloride Study and Development of Monitoring Well

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE
Chairperson

PROPOSED SCOPE OF WORK
March 10, 2021

Pursuant to the request from Staff of the Commission on Water Resource Management (“Commission”), the following provides a proposed Scope of Work (“SOW”) related to the request for a variance for Ka‘ūpūlehu Potable Well 12 (Well No. 8-4755-004), TMK (3) 7-2-003:003, Ka‘ūpūlehu, Hawai‘i, and is submitted by and on behalf of Ka‘ūpūlehu Water Company (“KWC”) (Well Owner), Water Resources International, Inc. (“WRI”) (Driller) and Tom Nance Water Resource Engineering (“TNWRE”) (Consultant).

SOW Item No. 1: Salinity Study

SOW Item No. 1 is a study of the rising chloride levels at the Ka‘ūpūlehu Irrigation Wells 1 and 2 sites (State Well Nos. 4757-001 and 4757-002) (“Salinity Study”). The Salinity Study will study both wells but will be conducted using Well No. 4757-001 only. The following identifies the Tasks, Party/Parties, and Timelines and Milestones associated with Well No. 4757-001.

<i>Tasks¹</i>	<i>Party/Parties</i>	<i>Timeline and Milestones²</i>
Prepare outline of scope of study	KWC	Completed
Pull motor and column pipe/line shaft	KWC	Approx. 90-120 days from final approval of Well 12 variance and SOW
Modify well head for capped and locked sampling site	KWC	As soon as pump is pulled
Quarterly CTD profile and video log	KWC TNWRE	Quarterly for four quarters to commence 30-60 days after pump is pulled
**Nitrogen and other nutrient analysis of grab samples from Irrigation Well 1 and pumped samples from the other irrigation wells	KWC TNWRE	30-60 days after CTD profile is completed
**Historical use data for irrigation wells	KWC TNWRE	30 days after approval to release data
**Review of current well construction and pump installation details for all irrigation and potable wells based on CWRM and contractor information	KWC	30-90 days

¹ Use of ** in this column denotes tasks that may be undertaken and completed concurrently.

² All dates are approximate estimates.

Prepare and submit Salinity Study to CWRM	KWC TNWRE	120-180 days after completion of final quarterly CTD profile and video log
Reinstall pump	KWC	Pump will be reinstalled after work on Salinity Study is completed

SOW Item No. 2: Makai Monitoring Well

SOW Item No. 2 is the funding and development of one deep monitoring well, drilled to salt water depth, through the conversion of the Hualalai Makai Well (State Well No. 4859-001) to a deep monitoring well (“Makai Monitoring Well”).

The constructed depth of Makai Monitoring Well shall be deepened to sea water salinity of 34.8 ppt, unless fresh water is encountered or the well depth reaches 500 feet below the existing water level of the Hualalai Makai Well (State Well No. 4859-001), whichever occurs first. Monitoring will be conducted at the Makai Monitoring Well by Commission staff and the well will be available for monitoring for a term of twenty (20) years. After expiration of this term, it will be sealed if no longer in use and if required by the Commission, or may be used for monitoring, production or other Commission-approved use.

The following identifies the Tasks, Party/Parties, and Timelines and Milestones associated with SOW Item No. 2.

<i>Task</i>	<i>Party</i>	<i>Time After CWRM Approval</i>
Acquire land for use	KWC	6-12 months
Entitlements and easements	KWC	1-2 years
Apply to CWRM for permit to drill to depth	WRI	90-120 days
Re-grade access and prep well site	WRI	30-60 days
Construct monitoring well to new depth	WRI	120-180 days
CTD profiles (1 wet season and 1 dry season) with grab samples for analysis of nitrogen and other nutrients, with data to be submitted to CWRM as an addendum to the Salinity Study	KWC, TNWRE or other qualified consultant	To commence 30-60 days after monitoring well is constructed to new depth