

# Ota Well Briefing

March 19, 2024

# Timeline

- August 13, 2018 – Application received for Ota Well
- April 20, 2021 – Staff presents Ota Well Construction Permit to the Commission. The Commission defers action and requires GDE Symposium 2.
- 2021-2022 – Hālāwai conducted, where staff reached out to practitioners.
- August 16, 2022 – Upon completion of the Hālāwai, staff presents the Well Construction application and permit conditions to the Commission. Commission approves the requirements with special conditions.

# Timeline (continued)

- September 6, 2022 – National Energy Laboratory of Hawaii Authority (NELHA) and Hawaii Housing Finance and Development Corporation (HHFDC) filed a petition for Contested Case Hearing on the special conditions.
- March 4, 2024 – NELHA and HHFDC requested reconsideration for modification of special conditions 1a and 1d.
- March 5, 2024 – NELHA and HHFDC withdrew its request for a contested case hearing.

# Conditions of August 16, 2022 approval

1. The following mauka to makai mitigation measures shall be special be conditions of the Well Construction Permit, Pump Installation Permit, and Well Certificate that will run with the life of the well and its use:
  - a. Annual contributions of \$13,940/year shall be paid by the Well Owner to the Water Resource Management Fund that will assist DLNR DOFAW with watershed restoration based on the current proposed pump capacity. If pump capacity increases or decreases, then the contribution will be adjusted accordingly based on the Watershed Management Cost-Share Formula. Management costs increase overtime, so it is expected that the management contribution will be revisited every five (5) years.
  - b. There shall be real-time monitoring of rainfall and water levels at the well site by the well owner/operator. This information shall be shared with and reported to the Commission and community that will inform long-term adaptive use and management.

# Conditions of August 16, 2022 approval

- c. Practitioners want to ensure that projects that receive water from the Ota Well (NELHA, HHFDC, DHHL, and DWS) are good stewards of that resource and therefore request that:
  - i. Water is not wasted and is used as efficiently as possible. Water distribution systems should be managed, operated, and maintained to prevent waste.
  - ii. Water should be reused as much as possible. Projects should be designed to take advantage of on-site water reuse instead of immediate disposal into the Wastewater Treatment Plant.
  - iii. Kealakehe Wastewater Treatment Plant should be upgraded to R-1 capability, so water does not have to be injected or released into outfalls.

# Conditions of August 16, 2022 approval

- d. Working with practitioners and 'ohana to determine what resources to inventory and in coordination with the DLNR Division of Aquatic Resources to avoid duplicative efforts, the applicant shall fund, design and implement an annual inventory of resources along the shoreline and nearshore waters of Lanihau 1-2, Moeauoa ahupua'a. At minimum this should include the coastline from the Old Kona Airport State Recreation Area to Royal Kona resort and the coastal waters of Kailua Bay Fisheries Management Area. This annual inventory and data shall be shared with and reported to the Commission and community that will inform long-term adaptive use and management. This data collection could be modeled after the annual NELHA Benthic and Biota Monitoring Program that performs annual characterizations of the anchialine habitats, benthic substrate, and nearshore fish assemblages.

[https://nelha.hawaii.gov/wpcontent/uploads/2022/01/NELHA\\_Biota\\_Report\\_2021.pdf](https://nelha.hawaii.gov/wpcontent/uploads/2022/01/NELHA_Biota_Report_2021.pdf)

# Conditions of August 16, 2022 approval

- e. To ensure better communication and coordination in the region with community, the agencies benefitting from the use of water from Ota Well, including but not limited to NELHA, HHFDC, DHHL, and DWS, shall hold an annual community meeting in Lanihau 1-2, Moeauoa ahupua'a to share updates on these mitigation measures and their respective projects.
2. During the standard 96-hour constant rate aquifer and step-drawdown pump tests, applicant to provide additional monitoring well data collection during pump tests. Specifically, the wells to be monitored and coordinated for water-level data collection during the constant rate pump test shall be:

# Conditions of August 16, 2022 approval

- a. The high-level Komo Monitoring Well (3957-002); basal monitoring wells of Kamakana Deep Monitor Well (3959-001), Keopu Basal Monitor (3858-001), and three (3) existing NPS KAHO monitor wells (4061-001, and 4161-001 & 002) ; and deep confined freshwater monitoring well of Keopu 2 Deep Monitoring Well (3959- 002).
- b. Other production wells to be considered for water-level monitoring during the constant rate test would be HDWS Keauhou QLT Well (4057-001), HDWS Keopu Deep (3957-001), Douter Coffee #1 (3957-004), and HHFDC Keopu #4 (3957-005).
- c. The monitoring shall be subject to well owner and chairperson agreement prior to the pump test.

# Conditions of August 16, 2022 approval

3. Pump tests will be used to evaluate the following impacts based on the pump test coordinated with HDWS, USGS, NPS and CWRM, subject to the approval of the chairperson:
  - a. Impacts to high-level production wells of HDWS Keauhou QLT Well (4057-001), HDWS Keopu Deep (3957-001), Douter Coffee #1 (3957-004), HHFDC Keopu #4 (3957-005), by identifying and determining what reduction in water levels would be considered unacceptable in these nearby production wells.
  - b. Impacts and connection between the Ota Well pump test and the basal portions of the KASA by monitoring water-levels at basal observation wells Kamakana Deep Monitor Well (3959-001), Keopu Basal Monitor Well (3858-001), and three (3) existing NPS monitor wells Kaho 1-3 (4061-001, 4161-003 & 002, respectively). and other adjacent high-level production wells (monitor wells (USGS Komo Well (3957- 002) and CWRM Keopu 2 Deep Monitor Well (3858-001).

# Conditions of August 16, 2022 approval

4. Require a tracer/isotope study to gather data and assess differences between the summer/winter seasons to assist in determining flow direction of high-level water from OTA well and possible quantification of the connection between the high-level and basal water in the proximity to the well.
  - a. This study shall be funded by HHFDC and NELHA under the guidance and subject to the approval of the chairperson.
  - b. A draft scope of work for this study shall be submitted to the chairperson for approval no later than August 1, 2021.

# Conditions of August 16, 2022 approval

5. CWRM staff, 'Aha Moku, HHFDC, NELHA, DHHL, NPS, and HDWS shall meet at least once a year to continue collaboration on bulleted proposed "mitigation measures" recommended by NPS and these special conditions above.

# Applicant's requested amendments to conditions

Special Condition No. 1a: From Deputy Director Manuel's modification document dated Oct 3, 2022. Note: Manuel's proposed modifications in red. NELHA/HHFDC modifications in yellow highlight.

"Annual contributions for a period of thirty (30) years of \$13,940/year shall be paid contributed by the Well Owner to ~~the Water Resource Management Fund that will~~ assist DLNR DOFAW Honua'ula Forest Reserve with watershed restora-on based on the current proposed pump capacity. If pump capacity increases or decreases, then the contribution will be adjusted accordingly based on the Watershed Management Cost-Share Formula. Management costs due to inflation increase over time, so this annual contribution it is expected that the management contribution will be revisited every five (5) years. during the active use of the well."

# Applicant's requested amendments to conditions

Special Condition No. 1d: NELHA/HHFDC proposed modifications in red based on consultation with stakeholders.

“Working with practitioners and 'ohana to determine what resources to inventory and in coordination with the DLNR Division of Aqua-c Resources to avoid duplicative efforts, the applicant shall fund, design drill and implement-obtain quarterly samples to two monitoring wells at a depth of approximately 35 feet on public lands and take quarterly samples at the two anchiline ponds ~~an annual inventory of resources along near the shoreline and nearshore waters of~~ in the Lanihau 1-2, Moeauoa ahupua'a. At minimum this should include the coastline from the Old Kona Airport State Recrea-on Area to Royal Kona resort and the coastal waters of Kailua Bay Fisheries Management Area. This annual inventory and data shall be shared with and reported to the Commission and community that will inform long-term adap-ve use and management. ~~This data collection could be modeled ader the annual NELHA Benthic and Biota Monitoring Program that performs annual characteriza-ons of the anchialine habitats, benthic substrate, and nearshore fish assemblages.~~”

# Applicant's requested amendments to conditions

Applicant shall design, fund, and initiate a coastal groundwater monitoring program for the Lanihau 1-2, Moeauoa ahupua'a modelled after the land-based program currently in place at NELHA's HOST Park at Keahole Point. Four sampling locations are conceived: one at each of two anchialine ponds, as well as two new shallow monitor wells. Samples will be drawn from these locations approximately every 3 months (quarterly) and analyzed according to the standard procedures in NELHA's water chemistry laboratory. Results will be reported to the commission and be made publicly available on an annual basis – or sooner should a given test result give cause for concern.

The two shallow monitor wells near the shoreline at locations that have yet to be determined. The intent is for them to be on State or County-owned lands: preliminary concepts include mauka of Makaeo pavilion at "Old-Airport" Beach Park, and vacant land South of Banyan Court public parking lot in Kailua Village. The grounds of Hale Halawai are a possible back-up/alternate location for one of the wells.

The two anchialine ponds are windows on the groundwater flowing from land into the ocean. It is believed that two such features exist within the proposed study area: on the grounds of Hulihe'e palace, and on the grounds of the "Old Thurston Estate", mauka of the King Kamehameha hotel. To the extent that the landowners (or managers) of those properties allow access for periodic sampling, these will be included in the program."