

Kaua'i Water Use & Development Plan Update
Second Series of Public Meetings
August 29, 2023
Līhu'e Neighborhood Center
5 PM to 7:00 PM

ATTENDANCE:

KDOW: Joseph Tait (Manager and Chief Engineer), Michael Hinazumi (Deputy Manager), Jason Kagimoto (Engineering Division Head), Regina Flores (Engineering Division, Water Resources & Planning, WRP Section Head), Erin Doi, Margie Mills (Engineering Division, WRP Section), Scott Suga (Engineering Division, Project Management Section), Jonell Kaohelauli'i (Public Relations, PR)

Fukunaga & Associates, Inc. (Consultant): Jon Nishimura, Amanda Waki, Amanda Miyahara

PURPOSE:

The purpose of this series of five (5) public meetings is to present the draft Kaua'i Water Use and Development Plan (KWUDP) Update and its findings.

The intent of this series of meetings is to create an understanding of the purpose and intent of the KWUDP Update and the context in which it is being developed. The public meetings give the community an opportunity to provide feedback and express any concerns that they may have on the KWUDP Update.

The meeting started with an introduction by Jason Kagimoto and was followed by a presentation by Fukunaga & Associates. The draft KWUDP Update is posted on KauaiWater.org/KWUDP.asp.

DISCUSSION:

These notes reflect the questions and concerns voiced by attendees at the Līhu'e meeting. (Q = question; A = answer; C = comment.)

- 1) C: The General Plan states that there will be a 10 million gallon per day (mgd) deficit by 2035, which seems contrary to the KWUDP Update findings (sustainable yield is higher than the full build-out scenarios and projected demands).
 - A: The sustainable yield (SY) is the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source. However, it is noted that SY does not consider the feasibility of developing the ground water and should not be equated to developable ground water. SY is not pumped groundwater (developed ground water supply). The deficit mentioned in the County of Kaua'i's General Plan may be in reference to the gap between current pumpage (developed

ground water supply)/existing infrastructure, including storage and distribution system, and future water demand projections.

- 2) Q: How much KDOW water is supplied by the Grove Farm surface water treatment plant (SWTP)?
A: KDOW purchases approximately 2.45 mgd of surface water from the Grove Farm SWTP. [The SWTP is rated for a capacity of 3 mgd and has a maximum capacity of 4 mgd. By agreement between the DOW and Grove Farm, DOW is required to accept a minimum of 2 mgd from the SWTP.]
- 3) Q: Is the County of Kaua'i (COK) planning to buy the Grove Farm SWTP?
A: The DOW is currently evaluating the feasibility of acquiring the Grove Farm SWTP.
- 4) Q: If we're paying for Grove Farm to process the surface water and we're paying for the infrastructure, is that reflected in our water bills? At what point do we stop?
A: The costs to process, operate and maintain the system to provide safe drinking water are calculated into the DOW's water rates similarly to the DOW's own systems. The DOW is in the process of evaluating the feasibility of acquiring the Grove Farm SWTP.
- 5) Q: What permits are required, and what departments require permits for KDOW?
A: KDOW obtains permits from CWRM to drill and develop their own wells. Grove Farm is the owner of the Grove Farm SWTP and is responsible to obtain all necessary permissions to operate the SWTP.
- 6) Q: The County pays for 2/3 of Grove Farm's operating cost every month. When CWRM evaluates the SY, do they consider that at some point in time, the percentage that's taken can shift? Grove Farm also doesn't have the appropriate permits to divert water. How much of that is considered?
A: The operation of the Grove Farm SWTP and its allowance to withdraw water are not known to KDOW and its consultant and is not reflected in this plan.
- 7) C: Grove Farm is diverting water, and they don't have the appropriate permits. According to Hawaii Revised Statutes (HRS) §171-58, the right to any mineral, surface, or groundwater shall not be included in any lease agreement, or sale as this right is reserved to the State. Grove Farm can't sell water that they don't own. The public is paying \$2 million per month, and we're paying their operating fees. In the January 2019 Board of Water Supply Manager's Report, Grove Farm doesn't know how much water is being used; it took a mediator to determine how much water is being diverted. The diversion amount is very important when it comes to SY and the ability to provide surface water.

A: [Grove Farm provides sustainable stewardship for 37,000 acres of Kaua'i lands that include vital watersheds, habitats, reservoirs, farming/ranching irrigation systems, public water storage and transmission lines.

In the early 2000's, in partnership with KDOW, to reduce our Island's dependence upon our precious underground aquifers, Grove Farm invested over \$10 million and provided the land to build a state-of-the-art surface water treatment plant to provide an added 3 million gallons per day to supplement our Island's drinking water supply. The plant is professionally managed with water quality oversight provided by both DOW and the State Department of Health. DOW currently reimburses Grove Farm a total of \$1.90 per 1,000 gallons to cover the plant's operational costs. All water from the plant is provided directly to DOW.]

8) Q: Have any native Hawaiian organizations been consulted with the KWUDP Update?

A: Yes, a Stakeholder Advisory Group (SAG) has been established that represent a broad spectrum of Kaua'i's community, including native Hawaiians. Debra Lee-Jackson, Peter Kea, and Billy Kaohelaui'i are all members of the SAG. Billy is the Aha Moku representative for Kaua'i. [The SAG is encouraged to be a conduit to the public and to share information with community organizations and the public and to provide feedback.]

9) Q: Why was the Department of Hawaiian Home Lands (DHHL), Wailua tract not able to procure water in 2007?

A: The Department of Land and Natural Resources (DLNR) is responsible to prepare the State Water Projects Plan (SWPP), which inventories future State projects and their water demands. In 2017, the SWPP was updated for DHHL only, and included an analysis on how DHHL's future demands are proposed to be met (new or existing well, new or existing water system, surface water, etc.). The 2017 DHHL SWPP is available [here](#). [In 2007, there was not enough KDOW capacity in the Līhu'e-Hanamā'ulu water system due to source and storage deficiencies to supply water to DHHL's Wailua tract's planned development. It is the responsibility of any developer (inclusive of DHHL) to provide water service by either developing their own water source and/or constructing storage and transmission infrastructure.]

10) Q: The KWUDP Update evaluated projected future demand and full build-out (FBO) demands. Now we're talking about DHHL and homestead uses. Are we planning for that FBO scenario regardless of what's in the General Plan? Is there water available?

A: The General Plan and Zoning FBO water demands include DHHL's projected future use, which was reported in DHHL's Island Plans and in the 2017 DHHL SWPP. KDOW is currently working with DHHL on DHHL's tract in Hanapēpē.

- 11) Q: Will DOW play a role in supporting the State DHHL so that they don't remove or decommission the surface water reservoirs so that they can be available to support future agriculture by small homestead farmers? If so, how will you support?
- A: The State Department of Agriculture (DOA) is responsible to prepare the Agricultural Water Use and Development Plan (AWUDP), which inventories the larger irrigation systems and assesses their rehabilitation potential and needs. KDOW does not own or manage reservoirs and surface water irrigation systems. [KDOW and DOA are currently trying to establish an initiative to identify which reservoirs could remain and which reservoirs can be removed.]
- 12) Q: Has the County taken a position in the State's intent to decommission the Wailua reservoir? The State is preparing an Environmental Impact Statement (EIS) and will reach out to COK.
- A: The KDOW has not been in discussion with the State to decommission the Wailua reservoir. The KDOW has concern if the decommissioning of the reservoir would result in an increase of potable water demand for non-potable usage. Comments will be provided during the State's EIS comment period.
- 13) Q: Where is the water coming from that fills the Waitā Reservoir?
- A: [From the 2004 AWUDP, the Waitā Reservoir is fed by surface waters from perennial streams and are diverted through man-made ditches. More information on the Waitā Reservoir may be found in the 2019 AWUDP Update (public review draft, available [here](#)) and the 2004 AWUDP, available [here](#).]
- 14) Q: Is water diverted from Hanapēpē River to provide agriculture water for Kaua'i Coffee? How much is diverted daily?
- A: The Kaua'i Coffee Irrigation System was assessed in the 2004 AWUDP, which can be found [here](#). A description of the Kaua'i Coffee Irrigation System is included in the KWUDP Update along with a figure of streams and diversions [see 20101 Sections 2.2 and 3.5.3 and Appendix B].
- 15) Q: Where is the 6.9 mgd diversion?
- A: [This is in reference to the Irrigation of Agricultural Lands table for the Hanamā'ulu aquifer system area (ASYA) shown in the presentation.] 6.87 mgd is the total declared surface water flow from diversions for the Hanamā'ulu ASYA. These diversions were declared in 1989 as part of the interim instream flow standards (IIFS), set by the Commission on Water Resource Management (CWRM). See Appendix B of the KWUDP Update for a list of the declared stream diversions.
- 16) C: The Kaua'i County Council did not accept the COK Important Agricultural Lands (IAL) Study.

A: [The Kaua'i County Council did accept the IAL Study, however it was not adopted as it is not a plan and does not provide policies and therefore does not need to be adopted by charter].

17) Q: How do you assess the quantity of water in our aquifers? How do you know how big the aquifer is? Is there science involved?

A: CWRM establishes the SY estimates, which is based off of several models and utilized the precautionary principle when selecting the SY for each ASYA, and in general, selected the most conservative sustainable yield. The SY was published in the Water Resource Protection Plan (WRPP) prepared by CWRM and is available [here](#). Kaua'i has the most complex geology because of its age, and multiple overlapping layers of geologic formations. Please see Appendix F of the 2019 WRPP for a detailed discussion of how the SY is estimated.

18) Q: How can the public access information about Kaua'i's aquifers?

A: Information about Kaua'i's aquifers are included in the WRPP, see the response to the previous question for a link to the report.

19) C: Streams and aquifers are related.

20) Q: The SY was determined over how long of a period?

A: [The SY published in the 2019 WRPP Update were generally established by selecting the most conservative sustainable yield estimates from the available data sets. See Appendix F of the 2019 WRPP Update for more information.]

21) Q: Does the FBO scenario take into account an estimated gallons per household? Are homes/residents given priority over golf courses, resorts, etc.?

A: The FBO scenario analyzed the maximum water needs if all land is developed to the highest extent allowed by current land use plans and policies (General Plan and zoning), including areas of land designated or zoned as residential, resort, etc. The FBO approach applied standard water use rates [e.g., 500 gallons per single-family unit per day]. The purpose of this analysis was to determine if the existing land use plans and policies are sustainable.

22) Q: Do you know how many aqueducts we have in Hawai'i? How far in the data did you go to project the water use?

A: No, we do not know how many aqueducts there are in Hawai'i. In terms of the data, the SY is from CWRM. The existing water use is from CWRM (well pumpage), DOH (sanitary surveys), and KDOW (water meter data) and future water use was projected based on population projections. The FBO scenario analyzed the maximum water needs if all land is developed to the highest extent allowed by current land use plans and policies (General Plan and zoning).

23) Q: How do you determine whether an ASYA is “sensitive” or “less sensitive”? What are the criteria for this determination?

A: All of the ASYAs on Kaua’i are not considered sensitive as the FBO scenarios and the existing and future demands are all less than the SY. The Hanamā’ulu ASYA has a General Plan FBO scenario that is approximately 80% of the SY, but even with the SY being conservatively low and the FBO being conservatively high, it is still not considered sensitive. If the FBO scenarios were higher than the SY, the ASYA would be considered “sensitive” and the land use policies (General Plan and zoning) would need to be analyzed in greater detail.

24) Q: Shouldn’t there be one organization in charge of all Kaua’i’s water, above and below the ground?

A: CWRM administers the State Water Code. [CWRM’s mission is to “protect and manage the waters of the State of Hawai’i for present and future generations.”] CWRM’s responsibilities include, but are not limited to, administering the instream use protection program by recommending IFS and IIFS, processing permits for well drilling, pump installation, stream channel alterations, and diversion works construction, and receiving and processing water-related citizen complaints.

25) Q: Who enforces compliance for reporting data? Who verifies that the data is correct? How can we trust the information that’s presented to us if it references information from CWRM that hasn’t been verified?

A: CWRM is responsible for enforcing compliance on reporting groundwater well pumpage and surface water use (diversions). Well pumpage reporting compliance is high, but surface water reporting compliance is lower than desired. CWRM is focusing their efforts on getting the large users to report first. CWRM has a Surface Water Branch that is currently working on verifying the diversion locations from the 1989 IIFS (not the diversion amount). It should be noted that it is more difficult to measure surface water use than ground water use. However, CWRM is making strides in monitoring stream flow, most notably in East Kaua’i by installing surface water gages. The KWUDP is a living document, and we need to rely on the best available information. The KWUDP Update took a preliminary “broad brush” approach to identify any ASYA that is considered sensitive and needs more attention (if FBO > SY). This was not the case for any ASYA on Kaua’i. The FBO compared to SY analysis focuses on domestic, commercial, and industrial demands compared to ground water source.

26) Q: What is the list of priorities for determining the SY?

A: The SY is determined by CWRM, and the methodology is included in the WRPP. [Regarding instream and non-instream uses, a project of the 2019 WRPP Update is to manage instream and non-instream uses to provide reasonable beneficial use while protecting public trust uses. Tasks related to this project include prioritizing streams for developing measurable IFS, continuing to develop measurable IFS, and implementing

and enforcing measurable IFS. This project and tasks are for the goal of “water resources, public trust uses, and water rights are protected and balanced against reasonable beneficial uses.”]

- 27) Q: How are water users allowed to take more water than the current IIFS? I have been living in Hanamā‘ulu Valley my entire life and I have witnessed water levels decrease since I was young. If the farmers can only water their crops every other day, where is the water going to come from to support development?
- A: Users are not allowed to divert more water than what was declared in the 1989 IIFS without petitioning to amend the IIFS. CWRM is responsible to receive and process water-related citizen complaints.
- 28) C: I sent videos of dry streams to CWRM. The response from CWRM was that this may be due to a lack of seasonal rainfall and unusual rainfall may have contributed to lower stream levels. I don’t believe this to be true.
- 29) C: Why does our most precious/valuable resource have limited resources to protect it? CWRM needs additional funding to enforce compliance for reporting data. They currently only have \$19M in funding whereas Oregon has \$224M.
- 30) Q: Will there be an opportunity for the public to have a meeting with CWRM to discuss enforcement and illegal stream diversions?
- A: CWRM has monthly hybrid (in-person and virtual) commission meetings. Before the pandemic, CWRM held some meetings on Kaua‘i. There will be public hearings as part of the KWUDP Update adoption. We will relay the message to CWRM that the public is interested in having a meeting.
- 31) Q: Is there anything helping to invest in the aquifer systems?
- A: KDOW supports the Kaua‘i Watershed Alliance (KWA), whose goal is to provide for the long-term protection of Kaua‘i’s uppermost watershed areas. KDOW provides grant money to the KWA to help protect the watershed.
- 32) C: KDOW provide grants [to the KWA], grants should have more direction into supporting more initiative to expand the watershed.
- 33) Q: Is there any movement to upgrade or are there investments to recharge the aquifer for future generations? Not just upgrading the system taking water? How can the community hold accountability?
- A: [Watershed management is a critical source protection measure. KDOW supports the Kaua‘i Watershed Alliance, whose goal is to provide for the long-term protection of Kaua‘i’s uppermost watershed areas.]

- 34) C: Maui has good GIS maps.
A: KDOW is concurrently working on the Water System Investment Plan (WSIP), which is the long-range plan and one of the items in the scope of work is to update the GIS of the KDOW water systems.
- 35) Q: What is the process for communities to advocate for a fire hydrant in a high risk fire area?
A: A request may be submitted to the DOW Engineering Division for evaluation of the water system to support a fire hydrant.
- 36) Q: Is there a plan to share water from the places that have the most water with those that have less water but a larger demand such as agriculture or density?
A: With regard to agriculture, there are some irrigation systems that can transfer water if they are maintained or repaired. With regard to KDOW's water systems [and other public water systems], there is some interconnectivity but it is very limited. On O'ahu, the Honolulu Board of Water Supply (HBWS) water system is fully interconnected. This is due to the amount of development on O'ahu that makes it possible to fund and support an expansive water system. There is significantly less development on Kaua'i which makes it less feasible to construct, operate, and maintain long transmission water lines to interconnect distant water systems.
- 37) Q: What is COK's strategy to take measures to ensure that what took place on Maui is not going to repeat itself here? Specifically, in regards to the impact of the redirection of water for the sugar plantations has on the current state of the west side.
A: The WSIP is updating the hydraulic model to assess the capacity and health of KDOW's water systems. Evaluation of the KDOW water systems with the hydraulic model will help direct future investment in expanding or upgrading the water systems. In Waimea, there's the Waimea Watershed Agreement, [which is an agreement between DHHL, Kaua'i Island Utility Cooperative (KIUC), and the Agribusiness Development Association (ADC)]. This agreement was developed because there was a case where more than what was needed was being diverted, and the IIFS were amended to prevent future waste. CWRM was involved with the development of the Waimea Watershed Agreement.
- 38) Q: How often is KDOW required to update the WUDP? How long is each WUDP applicable for? The last KWUDP was written in 1990 and so far, the graphs shared have been assigned an end date of 2035. A plan completed and adopted in early 2024 should be planning for more than the next 11 years.
A: Ideally, KDOW would like to update the KWUDP every 5-10 years. The KWUDP Update process was started in 2015 but waited for the new SY numbers to be finalized (in the 2019 WRPP Update).

39) Q: When is the projected time of completion of the report?

A: The next steps is to brief CWRM in Fall 2023. Based on comments received from these public meetings and the CWRM briefing, KDOW will finalize the report and present to CWRM for adoption in 2024.

40) Q: Is there a chain of command graph that shows all the agencies (federal, state, county, community)?

A: Yes, the Hawaii Water Plan handout shows the agencies responsible to prepare the different components (CWRM – Water Resource Protection Plan, DOH – Water Quality Plan, DNLR – State Water Projects Plan, DOA – Agricultural Water Use and Development Plan, Counties Department of Water – County Water Use and Development Plan). The Hawaii Water Plan is described in more detail in Chapter 1 of the KWUDP Update.

41) C: Former U.S. State Representative Kai Kahele asked current U.S. State Representative Ed Case what he is doing about surface water diversions on private land. Rep. Ed Case responded that they only require reporting on state land streams. USGS said if you divert from a stream, you deplete the aquifer, so how can you get an accurate picture of future use? We need to push the State to require anyone who has a diversion on their land to report to CWRM. CWRM hasn't done any enforcement.

NEXT STEPS:

FAINC will brief the Commission on Water Resource Management (CWRM) and revise the KWUDP Update based on comments received from these public meetings and the CWRM briefing. The Pre-Final KWUDP Update will then be presented to the Kaua'i Board of Water Supply, then to CWRM for adoption. It is noted that the CWRM adoption process also includes public hearings.