From:	Stephen Holmes
To:	Kariya-Ramos, Suzanne M
Cc:	Chuck Flaherty; Jonathan Likeke Scheuer Ph.D; Ashley Obrey; Cory (Martha) Harden; Jeff Zimpfer; Sharde Mersberg Freitas
Subject:	[EXTERNAL] Keauhou AMP testimony
Date:	Wednesday, August 13, 2025 1:42:01 PM

Suzanne:
Hawaii County is now subject to an EPA AOC or administrative order on consent regarding wastewater infrastructure non-compliance islandwide which includes a requirement for extensive sewering of Kona which will greatly impact flows coming into the Kealakehe Wastewater Plant. Additionally, the County lost a Citizen's Suit under the Clean Water Act in Honolulu federal court and has entered into a settlement to upgrade to R-1 allowing for water recycling and to ongoing discharge to a sump which conveys pollution to nearshore coastal waters. This means that the current average daily flows of around 2 MGD will likely double increasing the amount of water available for reuse.

Any adaptive management plan needs to go beyond just monitoring wells to actual action items to properly meet the requirements of the Public Trust Doctrine in our Hawaii Constitution. Now, with a federal mandate in place, water recycling needs to be incorporated.

Due to the expected high cost of federal compliance (around $1 billion), the County needs a water recycling plan that actually generates revenue. Honolulu has such a successful business model at the Honouliuli WWTP in Ewa. Billions of gallons have been recycled using a public private partnership with Veolia. It has been in operation for over 20 years and Barry Usegawa at the Honolulu Board of Water Supply has managed the contract during that time. It is cheaper than new source water development and an essential part of integrated water resource management. The key is to displace potable water used for irrigation.

Recently, Honouliuli was brought up to full secondary which will greatly increase opportunities for reuse. EPA Region 9 has grant funded One World One Water to assist in this effort. I have reached out to Amy Miller, Director of Enforcement and Compliance Assurance, to provide similar assistance in addressing Kealakehe in Kona. The Countywide AOC includes language that commits EPA to such technical assistance. While Hawaii County really has no water recycling experience, it makes sense to bring in this expertise.

With flows likely increasing to around 4 MGD by connecting unsewered areas, this will be a significant source of water and protect sustainable yield in the Keauhou Aquifer. Again, this is now action that is federally mandated.

Another opportunity in the Keauhou Aquifer area is the County Ulu Wini WWTP which illegally discharges to groundwater that conveys pollution to nearshore waters and has no NPDES permit. It uses injection wells, but the original plan for the low income housing project it serves was to irrigate the grounds. They recently got HUD funding for repairs at the plant, so seeking additional funds for federal compliance that would provide R-1 plus irrigation infrastructure would be possible. In any case, the current situation cannot continue and must be addressed.

Yet another opportunity for water recycling exists at the State Honokohau Harbor operated by DOBOR. Finn McCall is aware that their current discharges are also illegal and commissioned an engineering firm to provide a solution. Originally, the plan was to connect to Kealakehe, but that will not be possible. Displacing potable water used for irrigation is an obvious first target for reuse.

The Kona Airport currently has a treatment plant and does some water recycling, but not all of it. With a State agricultural park just across the highway that uses potable water to irrigate, they would greatly benefit and support acreage that current sits unused for lack of water. Plumerias for leis and crops like papayas are a good match.

During my time on the Honolulu City Council, I was frustrated with the slow response by the State on wise water use. I introduced and got passed water efficiency standards. The City retrofitted its facilities with low flow devices. We entered into a Sustainable Water Partnership with UH Manoa to retrofit their campus. We worked with the Rebuild Hawaii Consortium under the U.S. Department of Energy to retrofit hospitals, hotels, and other commercial buildings with both energy and water efficiency retrofits. We set up a toilet rebate program for homeowners wanting

to change out to Water Sense qualified low flow toilets. We also worked with the irrigation businesses on Oahu to put in smart water meter technology.

Lots of tools in the toolbox. It would be really nice if the CWRM would take the lead on State facilities. ESPCs or energy performance contracts are a third party financing approach that can assist with no upfront capital cost to taxpayers. The State Energy Office can assist as they keep a competitively bid list of Energy Service Companies. Lots of State facilities in Kona that could benefit including schools.

We don't need to study the problem and wait till we have hit 90% of sustainable yield in the Keauhou Aquifer to do wise water use. The National Park Service petition already laid out an excellent rationale why Water Management Designation should have been granted. Regardless of designation, it is always critical to protect groundwater resources and use all the tools in the toolbox available. We need a real plan and not another study. We need the State and Hawaii County to work together.

More broadly, the U.S. Supreme Court decision in Maui County v Hawaii Wildlife Fund will drive water recycling statewide. The Hawaii Department of Health has established a Functional Equivalent Working Group and tentatively identified 100,000 discharges statewide where no NPDES permit exists and coastal water quality is suffering as a result. CWRM needs to recognize that we have turned a corner and the old practice of discharging wastewater to groundwater must end. We now have a statewide mandate. Time for action.

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[redacted]
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U.S. Department of Energy National Energy Champion

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COMMISSION ON WATER RESOURCE MANAGEMENT

Relating to Agenda Item C1:
Deputy Director - Update Regarding the Development of a First-Generation Keauhou Aquifer System Area Groundwater Adaptive Management Plan,
Keauhou Aquifer System Area, Island of Hawai'i

August 19, 2025 9:00 a.m. DLNR Boardroom

Aloha e Chair Chang and Commissioners,

The Native Hawaiian Legal Corporation, on behalf of Hui Ola Ka Wai[1], provides the following comments related to the update on the development of a first-generation adaptive management plan ("AMP") for the Keauhou Aquifer System Area.

At the July 15, 2025 Commission on Water Resource Management meeting, Hui Ola Ka Wai requested deferral of the Commission's approval to proceed with the development of the AMP because of the many outstanding questions surrounding the proposed plan that were critical to understanding whether it will truly function to actively manage Kona's groundwater consistent with public trust principles rather than check a box to allow more drilling and groundwater withdrawals. These questions must be answered in order to ensure that the Commission meets its duties under the public trust[2] as well as to gain the public's trust in this process. An unclear plan cannot be a substitute for designation and a green light for future development.

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1 Hui Ola Ka Wai is a group of Native Hawaiian cultural practitioners and kia'i loko i'a from along the Kona coast.

2 *See Kaua'i Springs, Inc. v. Planning Comm'n of Kauai*, 133 Hawai'i 141, 172, 324 P.3d 951, 982 (2014) ("The public trust creates an 'affirmative duty' of the State and its political subdivisions 'to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.'"); *In re Water Use Permit Applications,* 94 Hawai'i 97, 143, 9 P.3d 409, 455 (2000) (*"Waiāhole I"*)("An agency must take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decision-making process.").

Previous testimony submitted to the Commission have documented existing adverse impacts to Native Hawaiian traditional and customary practices that have resulted in the deterioration and/or elimination of the practices.

> Herbert A. Kai, a Native Hawaiian familiar with cultural practices in the area, recounted the changes to water that he has observed over his lifetime at the southern end of the coastal portion of the Keauhou Aquifer System. He testified that he and his ʻohana have practiced fishing, gathering, drinking and bathing practices proximate to "where the flowing fresh water, fresh water springs, brackish water pools, and opae ula were...not to mention the wana, lobsters, and octopi." He specifically noted, "[t]hese flowing fresh water, fresh water springs, brackish water pools, and opae ula ARE GONE… or, at least not easy to find; they've been slowly diminishing since the Kahaluʻu well was drilled in 1975" (emphasis in the original).[1]

Today, continued groundwater withdrawal negatively impact fisheries on the northern end of the Keauhou Aquifer at Kaloko fishpond, which regularly experiences heightened salinity levels, dissolved oxygen, and increased temperatures, all of which impact the health, reproduction, and recruitment of ʻamaʻama (native mullet), a cultural keystone. These harmful conditions create a deteriorating ecosystem that is occurring while current pumping is at an estimated 14 mgd. Hui Ola Ka Wai is concerned that this first generation AMP only proposes additional monitoring and avoids implementing **meaningful action** that will mitigate further impact to groundwater dependent ecosystems ("GDEs"), groundwater dependent species ("GDSs"), and traditional and customary practices. [2]

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[1] Scheuer & Isaki, Response to the Commission on Water Resource Management Request for Information on Traditional and Customary Practices (May 29, 2015) at 3 (recounting testimony from CWRM's December 10, 2014 meeting).

[2] Hui Ola Ka Wai continues to emphasize that monitoring is not management. The AMP cannot postpone management actions until certain future triggers are met while the Commission continues to approve wells for non-public trust uses of water. Instead, this important project must directly acknowledge current and ongoing impacts from existing withdrawals to better inform a plan of action that will not only mitigate impacts of future pumping but also impacts of past pumping in this region. *See Kauaʻi Springs,* 133 Hawaiʻi at 173, 324 P.3d at 983 ("[I]n light of the cumulative impact of existing and proposed diversions on trust purposes the applicant must implement reasonable measures to mitigate this

At the July 15, 2025 Commission meeting, Commissioner Miike questioned the regulatory power of the Commission to enforce the AMP without a water management area designation. As Environment Hawai'i recounted:

> "I just think it's nuts," Miike said after listening to Kahahane explain the plan and acknowledge that at present, there is little the commission can do if the owner of a currently permitted well pumps so much that the water source is harmed. "Why don't we just designate the area already? … I know basically counties are against that, a state-versus-county kind of thing. But we're way beyond that."
>
> When Miike voiced his skepticism over the commission's ability to regulate withdrawals in the absence of designation, Kahahane replied: "So, compliance with the adaptive management plan we're proposing to attach as a condition for the approval of future pump installation permits in the aquifer. For the current wells, there's not much we can do besides ask nicely, because we're not in a designated water management area. But we've discussed with the folks who want to construct new wells in this aquifer that the adaptive management plan is essentially going to be a condition of their pump installation permit."[3]

The last time the Commission put conditions on a well permit was related to the Ota well. In anticipation of community concerns, former Deputy Director Kaleo Manuel held a series of meetings to address the Commission's kuleana to protect Native Hawaiian traditional and customary practices under *Ka Pa'akai,* which resulted in mitigation measures that would be attached to the Ota well construction permit. This was proposed as a "new approach" to groundwater development in Kona. However, when the permit went to the Commission for approval, well developer NELHA opposed the conditions and requested a contested case hearing on the decision to approve its own permit. This ongoing controversy over Ota well led to the AMP that is being developed.

Given this history, Hui Ola Ka Wai's faith in the success of the current plan for the AMP as a condition of future well permits is low.[4] Designating Keauhou Aquifer System as a

impact."). Monitoring alone while permitting future development will only increase the cumulative impact on these resources and constitutionally-protected Native Hawaiian cultural practices.

[3] Patricia Tummons, *Keauhou Adaptive Management Plan Has Commissioners Scratching their Heads*, ENVIRONMENT HAWAI'I (August 1, 2025)(attached).

[4] Hui Ola Ka Wai also finds it difficult to trust the purpose of the AMP given the additional findings by

groundwater management area would be a much better approach and provide the Commission more power to regulate the use of Kona's dwindling water resources.

OUTSTANDING QUESTIONS AND MISSING INFORMATION

As part of its testimony for the July 15, 2025 Commission meeting, the Hui sought answers to the following questions:

Related to Current Impacts to Groundwater Dependent Ecosystems

- What did groundwater discharge in the Keauhou Aquifer System look like before pumping?
    - This will require looking to other sources, including kūpuna testimony, and National Park Service reports that document existing harms.
- How will historical pumping data be integrated into the AMP?
- Based on the existing monitoring wells located within the Keauhou Aquifer, what are the current pumping trends in the Keauhou Aquifer System now (prior to the completion of the AMP)?
- Given current withdrawals, how much water needs to make its way to the coast to keep key species in the safe zone all year round, especially with climate change?
- How much water needs to remain in the aquifer in order to sustain GDEs?
- Given how much groundwater is disproportionately withdrawn from above Kaloko-Honokōhau, how can the Commission strategically diversify current water use to reduce those disparities?
- What are the water conservation measures being investigated to reduce groundwater withdrawal?
- How can Kona's water infrastructure be updated and/or management practices be improved to reduce water waste (in underground pipes, daytime irrigation, broken or poorly set up irrigation, etc.)?
- How does the AMP apply to existing well permits?
- How will the AMP take into account existing water credits for undeveloped wells?

Related to Monitoring Indicators and Monitoring Plans

- What criteria will the Commission use to select the locations of monitoring wells?

Environment Hawai'i: "By June 10, just 10 days following the official start of work according to Adler, GUILD submitted its first invoice, seeking payment of $20,000 for completing "Phase I, Project Planning and Preparation." Kahahane approved payment on June 17." Patricia Tummons, *Financing Links Keauhou*

Water Plan to Need For Housing, Development in West Hawai'i, ENVIRONMENT HAWAI'I (August 1, 2025)(attached).

    - Will the public have an opportunity to weigh in on the placement of the wells prior to decisionmaking?
- How will the AMP address the differences in monitoring protocols throughout the Keauhou Aquifer System?
- How will the AMP address any conflicts in the data selected for inclusion in the plan?

Related to Management Actions

- What are the recommended management actions to minimize further impact to GDE and GDS that are already pushed beyond threshold conditions?
- What are the recommended management actions for those GDE and GDS whose threshold conditions are currently being met?
- What are the management actions that will respond to the triggers identified by the expert groups?
    - How will these management actions impact current groundwater users (private and municipal)?
    - How will these management actions impact Department of Water Supply water agreements for undeveloped wells?
    - How will management actions secure water for county emergencies, including fire response?
- How will the Commission respond to different *levels* of water shortages? (Is the AMP going to provide that level of detail?)
- Who are the priority users that will have access to groundwater with groundwater shortages?

Related to the Commission's Ability to Regulate Withdrawals in the Absence of Designation ● How does this fit into the regulatory framework?

- How will the AMP apply to existing permits?
- Wouldn't it make more sense to designate the Keauhou Aquifer System as a groundwater management area?

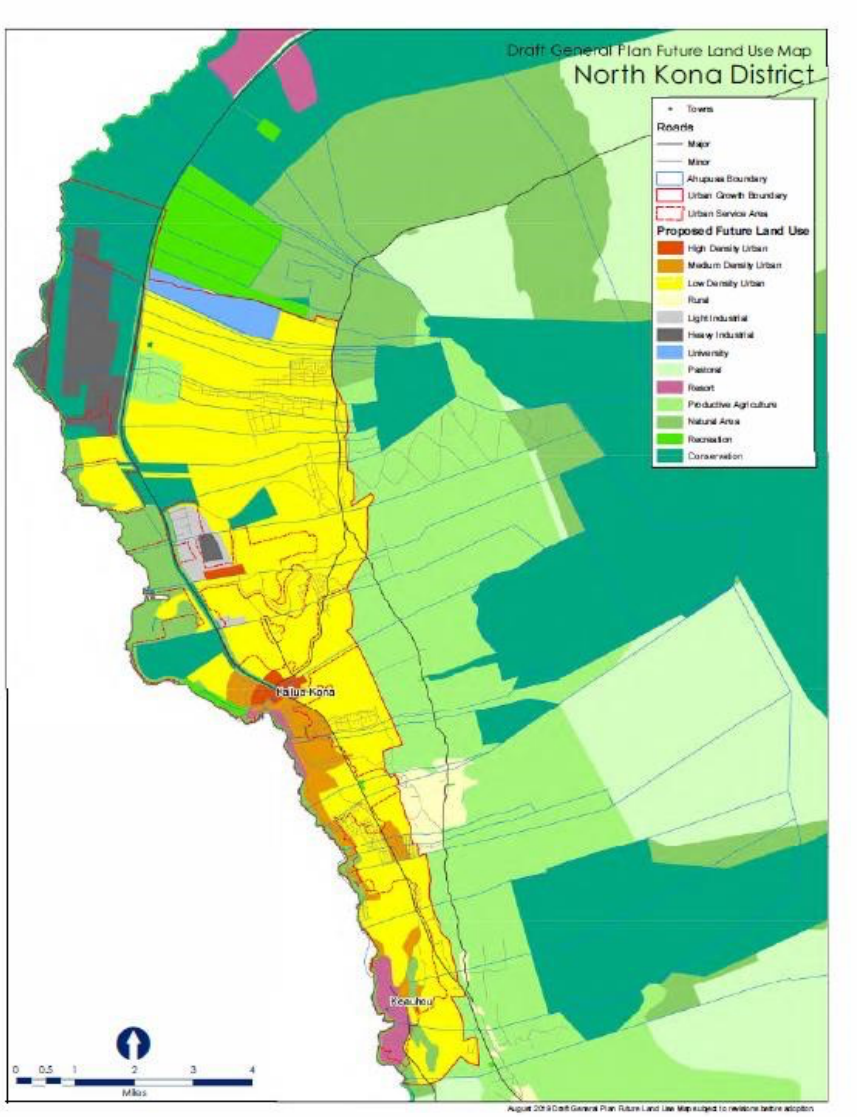
The final list of experts for the Native Hawaiian and 'Ohana Traditional and Customary Practices/Kilo expert group is also still outstanding.

ADDITIONAL INFORMATION FOR CONSIDERATION

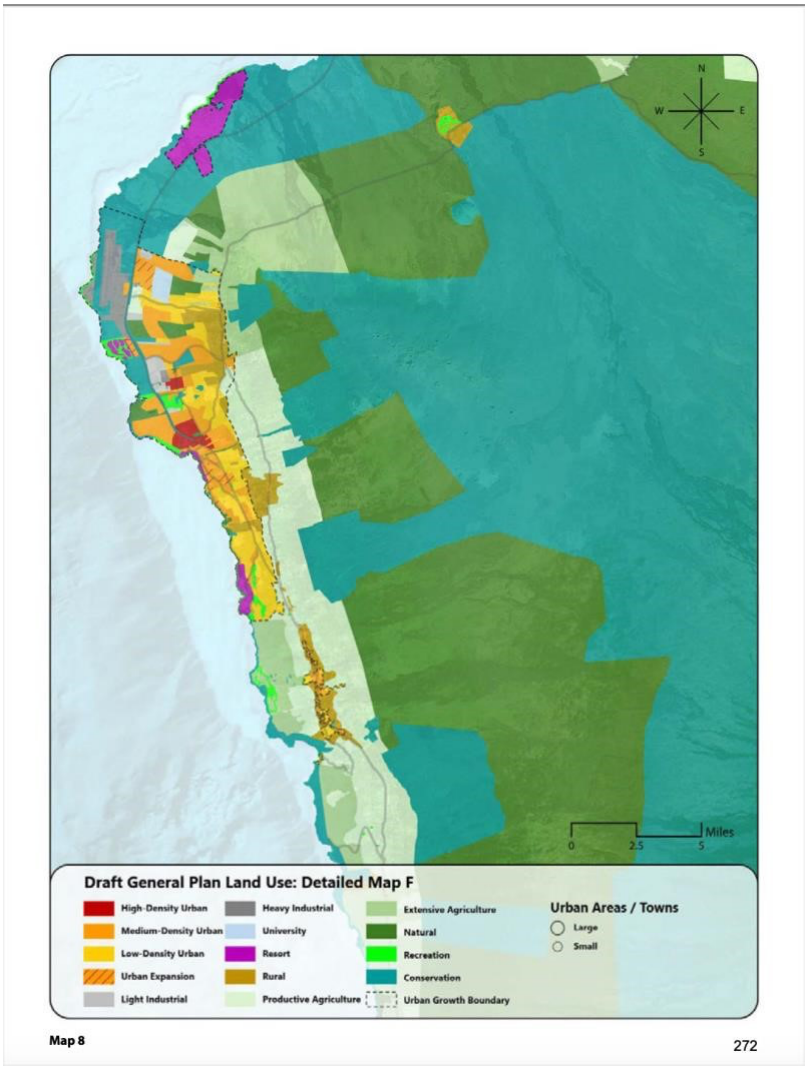
Hui Ola Ka Wai also wishes to bring the following information to the Commission's attention:

- **Land use maps from past and current drafts of Hawai‘i County land use plans.** Land use surrounding Kaloko and Honokōhau have changed from Low-Density Urban in 2019 to Medium-Density Urban in 2025. This change in land use will require more resources, including groundwater, for their developments. Assessing these new water demands and actual water availability is crucial to ensuring GDEs, GDSs, and traditional and customary practices are protected in perpetuity. The additional stressors further necessitate the need for the Commission to reassess sustainable yield projections that consider climate change reductions to the recharge rate.

    - **2019 Hawai‘i County Land Use Plan map**



- **2025 Current Draft General Plan land use map**[5]



- **Water use and development for the Keauhou Aquifer System surpasses current sustainable yield.** According to the 2010 Hawai'i County Water Use and Development Plan the Keauhou Aquifer System Area water demands were projected to be 170.8 mgd w/o Ag and 245.4 mgd w/Ag. Both of these water scenarios provide a minimum and maximum of actual demand both of which are beyond Keauhou Aquifer's 38 mgd sustainable yield. These forecasts were

[5] Available at https://www.planning.hawaiicounty.gov/general-plan-community-planning/gp.

generated in 2005 with much of the area being identified for urban expansion which has now become designated as either low, medium, or high-density urban.

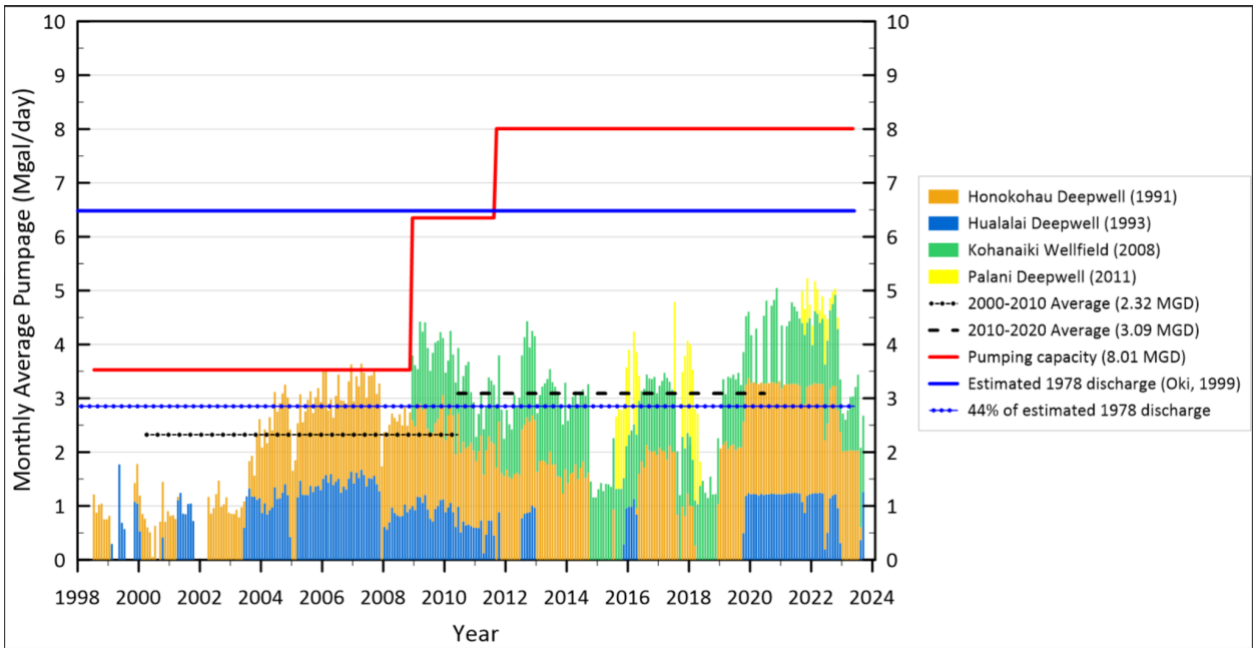
Table 809-13a: Hawaii County General Plan Full Build-Out Water Demand Projection – Keauhou Aquifer System Area [80901]

LUPAG Class	CWRM Category	Water Demand (mgd)
Urban	Domestic/Irrigation/Municipal	71.5
Urban Expansion	Domestic/Irrigation/Municipal	69.7
Resort	Irrigation/Municipal	10.2
Industrial	Industrial	15.6
Agriculture	Agriculture	74.6
University	Irrigation/Municipal	1.8
Rural	Irrigation/Municipal	0.4
DHHL	Irrigation/Municipal	1.5
TOTAL w/o Ag*		170.8
TOTAL w/ Ag*		245.4

* Demand scenarios without and with agricultural demands represent the potential minimum and maximum agricultural demand, respectively, with the expectation that the actual demand will fall somewhere in between.

- **Current allowable pumping for the Kaloko ahupua‘a exceeds the sustainable yield.** According to Oki, et al. (1999), the “estimated rate of fresh ground-water dicharge to the ocean within the [Kaloko-Honokōhau National Historic] Park is about 6.48 million gallons per day, or about 3 million gallons per day per mile of coastline.”[6] Current pumping capacity exceeds this with allowed pumping at 8 million gallons per day with withdrawals reaching 5 million gallons per day, amounting to more than 90% of the groundwater available within the ahupua‘a. Without designation, the Commission lacks regulatory authority to reduce groundwater withdrawal within the ahupua‘a where adverse impacts are already occurring.

[6] Available at https://pubs.usgs.gov/publication/wri994070#:~:text=Although%20the%20coastal%20discharge%20within,reduced%20by%20about%2047%20percent.



- **Information related to future North Kona wells.**
  - Department of Water Supply North Kona Mid-Level Exploratory Well, potential to become production well. *See* July 21, 2025 Ka Paʻakai Letter re DWS' Proposed North Kona Mid-Level Exploratory Well Project attached.

  ○ Wheelock Well, pumping undefined, production well (FEIS not submitted). *See* Water Supply Study, Planned Expansion of University of the Nations, Kona, Hawaiʻi, Tom Nance Water Resource Engineering (February 2020).[9] ○ Bolton Well, pumping undefined, production well (FEIS not submitted).

  See Water Supply Study, Planned Expansion of University of the Nations, Kona, Hawaiʻi, Tom Nance Water Resource Engineering (February 2020).[10]
  - Department of Water Supply Waiʻaha Well B (FONSI issued). *See* July 21, 2025 Ka Paʻakai Letter re Proposed Waiʻaha Well B Project attached.[11]

9 Available at https://luc.hawaii.gov/wp-content/uploads/2020/03/09-A02-737-Exhibit-3-AppendixD.pdf .

10 Available at https://luc.hawaii.gov/wp-content/uploads/2020/03/09-A02-737-Exhibit-3-AppendixD.pdf.

11 Available at https://files.hawaii.gov/dbedt/erp/Doc_Library/2020-01-23-HA-FEA-Waiaha-WellB.pdf.

- Liliuokalani Trust Mid-Level Well, September 13, 2023 Ka Paʻakai Letter re Proposed Mid-level Well Project Located on Liliʻuokalani Trust Lands attached.

Hui Ola Ka Wai appreciates the Commission's scrutiny of the AMP as it is further developed. To the extent that the Commission agrees that the AMP, at any point, falls short, Hui Ola Ka Wai urges the Commission to pursue designation, which is the best course of action to protect the public trust water resources of North Kona.[12]

Mahalo,

Ashley K. Obrey
Attorney for Hui Ola Ka Wai

12 *See* Hawaiʻi Administrative Rules ("HAR") § 13-167-3(2) (CWRM "[s]hall designate water management areas for regulation under chapter 13-171, where the commission, after the research and investigations mentioned in paragraph (1), has consulted with the appropriate county council and county water agency, and after public hearing and published notice, finds that the water resources of the areas are being threatened by existing or proposed withdrawals of water), HAR § 13-167-3(3) (CWRM "[m]ay designate water management areas without the need to conduct scientific investigation or research in any area in which serious disputes respecting the use of ground or surface water resources are occurring"); HAR § 13-167-22(b)("The commission may on its own motion or on petition or application of any interested person or persons or an agency of the state or county government hold proceedings as necessary from time to time for the purpose of . . . carrying out its duties and responsibilities including the designation of water management areas[.]"); HAR § 13-171-1 ("It shall be the duty of the commission to designate areas for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface water in threatened areas to ensure the most beneficial use, development, or management of the water resources in the interest of the people of the state."); HAR § 13-171-3 ("The designation of a water management area by the commission may be initiated upon recommendation by the chairperson. In addition to this prerogative, it shall be the duty of the chairperson to make the recommendations from time to time when it is desirable or necessary to designate a water management area for the purposes stated in this chapter and there is data for a decision by the commission.")

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What a Mess

The launch of the Adaptive Management Plan for the Keauhou Aquifer Sector Area is nothing if not sloppy. If the director and staff and members of the state Commission on Water Resource Management actually wanted to undermine public confidence in the evolution of this plan, they could hardly have done worse.

Our cover story reveals the confusion of the commissioners themselves over just what they were being asked to approve at the July meeting on learning that their approval would come six weeks after the consultants were already on the job, and a month after the first invoice had been submitted. Inside, we take a close look at the process CWRM used to engage the services of GUILD Consulting and Peter Adler. Were they really the only consultants qualified to do this work? We'll never know. Neither will the commissioners.

All this comes on the heels of a fictional quote from the Water Code in a staff submittal for CWRM's April 28 meeting and the debacle of the Nominating Committee's meetings (actual and proposed) in June. Finally, the failure of CWRM to respond to questions is just one more sign of a troubled agency foundering to fulfill its critical mission of protecting Hawai'i's precious water sources.

Hawai'i deserves better.

IN THIS ISSUE

Keauhou Adaptive Management Plan Has Commissioners Scratching their Heads

At the July 15 meeting of the Commission on Water Resource Management, commissioner Aurora Kagawa-Viviani was puzzled by a staff proposal to have the commission give its approval to proceed with development of a "first-generation" adaptive management plan for the Keauhou aquifer area in West Hawai'i.

"It's not clear how this fits into our regulatory framework," Kagawa-Viviani said after hearing the presentation of CWRM deputy director Ciara Kahahane and more than an hour of public testimony.

Jonathan Likeke Scheuer, who has worked closely on water issues in the Keauhou area, including as a consultant to the National Park Service, was harsher in his description of the proposal: "It's drill, baby, drill. You're going to allow a whole bunch of wells to go in and monitor stuff and see what happens. This flies in the face of your statutory duties."

Commissioner Lawrence Miike, whose total time serving on the commission to date comes to 14 years, seemed skeptical as to the value of the effort. "As long as we don't have a water management permit requirement" – available only in designated water management areas – "we're sort of stuck," he said. "We can have really great information but we're still limited by the fact that if we continue to allow well construction and pump installation permits, we really don't have control over sustainable yield." Sustainable yield is the amount of water that can be withdrawn from an aquifer without impairing its long-term quantity or quality.

Sustainable yields, or, more precisely, the degree to which current and proposed development will draw from them, have until now been the most important metric used by the commission in determining whether to designate an aquifer as a groundwater management area, where more rigorous criteria attach to permits for existing and new water users.

But, according to a summary of the

continued on page 5

View of fishpond at Kaloko-Honokohau National Historical Park. CREDIT: NATIONAL PARK SERVICE.

Environment Hawai'i
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NEW AND NOTEWORTHY

Mala Wharf Remand: On July 28, the Intermediate Court of Appeals issued an order remanding to the 2nd Circuit Court a case involving the Board of Land and Natural Resources' denial of a contested case hearing to groups and individuals that had sought to challenge the award of permits to commercial companies using Mala Wharf, on the west side of Maui. In October 2021, the BLNR denied their request for a contested case. Judge Peter Cahill of the 2nd Circuit Court upheld the BLNR's actions.

The permit renewals expired on October 31, 2022, but the ICA still took up the case under exceptions to the mootness doctrine, determining that the matter at issue was "capable of repetition, yet evading review" and involved the public interest.

The appellants – Ka Malu o Kahālāwai, Nā Papa'i Waiwae 'Ula'ula, Kekai Keahi, and Kai Nishiki – had asked the ICA to void the companies' permits and require the BLNR to hold a contested-case hearing on any reissuance of the permits.

But the ICA denied this, stating that first, the only matter before it was whether the Circuit Court erred in its decision. "Additionally," the ICA wrote, "it appears that the permit renewals … expired on or about October 31, 2022. Although we have decided this appeal based on exceptions to the mootness doctrine, Appellants' request that we remand to BLNR for a contested case hearing on the expired renewals still appears to be moot."

In reviewing the lower court's order, the ICA determined that Judge Cahill had erred in agreeing, with the BLNR, that the "attempt to secure a contested-case hearing is in fact an attempt to raise a policy-based challenge" to administrative rules and not subject to a contested case. But, the ICA noted, "Whether a contested case proceeding is the 'appropriate procedural mechanism' … is not the applicable test for determining whether a party has a constitutional due process right to a contested case hearing."

With that, the ICA remanded the case to the Circuit Court "to determine what, if any, relief is available to Appellants in these circumstances."

For background, see "Petitioners Allege Rights Infringement by Commercial Users at Mala Wharf," *Environment Hawai'i,* April 2022.

Quote of the Month

"If we don't have that sweet water – that onaona – that alluring water that's going to draw in the fish, then the fish pond is going to cease to be a fish pond. It's just going to be one saltwater pond."

— Loke Aloua, Hui of Ka Wai

Marconi Hearing: On August 29 at 9 a.m., U.S. District Judge Jill A. Otake will hold a hearing on a motion by the City & County of Honolulu and its Department of Planning and Permitting for summary judgment in a case brought two years ago by companies owned by the developer of the Marconi Point Condominiums on O'ahu's North Shore.

Early on, Judge Otake dismissed the companies' claims surrounding building permits and a roadway subdivision that they argued should have been granted without having to secure or apply for a Special Management Area permit. The 96-acre project lies entirely within the SMA.

Then in May, Judge Otake supported a magistrate judge's order denying the companies' request to amend their complaint for a third time to re-allege their building permit claims. (In their second amended complaint, they re-alleged their roadway subdivision application claims.)

The companies argue that their February 14, 2020, agricultural subdivision application was automatically approved. The city, however, argues that they failed to meet tentative approval requirements before the application expired.

A trial date has been set for December 1, but the city argued in a July 21 filing that the companies' "theory of the case" has proved to be baseless.

"They alleged a convoluted theory that DPP only required that plaintiffs apply for a Special Management Area permit due to influence exerted by plaintiffs' former consultant William Wong. Their theory that Wong sabotaged plaintiffs' subdivision applications disappeared in plaintiffs' Opposition and Counter-Concise Statement of Facts.

"Plaintiffs are left with the reality that DPP simply exercised its discretion to require an SMA permit in light of potential cumulative impacts to the natural and cultural resources on plaintiffs' unique property. Their opposition fails to create any genuine dispute that plaintiffs do not have a legal injury, do not have ripe claims, nor establish a prima facie case for their claims," the city wrote.

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Financing Links Keauhou Water Plan to Need For Housing, Development in West Hawai'i

At the July 15 meeting of the Commission on Water Resource Management, director Ciara Kahahane provided a description of the funds available to support development of an Adaptive Management Plan for the Keauhou Aquifer Sector Area.

There was an unspecified amount of federal funding, which, she said, had to be spent down by the end of August.

In addition, the 2025 Legislature passed two measures providing additional support. Senate Bill 1602 (Act 189), signed into law by Governor Green on June 6, provides $200,000 over the 2025-2026 and 2026-2027 fiscal years for a project that sounds very much like the "First Generation" AMP proposed by CWRM staff. House Bill 300 (Act 250), the state budget bill, provides $4 million in the 2025-2026 fiscal year for "plans, land acquisition, and construction" of two deep monitor wells in the Keauhou Aquifer System. These wells are also part of CWRM's plans to fill in a few of the blanks in plans for management of the Keauhou aquifer sector.

The contracts that will need to be issued to spend the recently appropriated funds are months off.

But the (mostly) federally funded agreement that was issued to GUILD Consulting and Peter Adler to develop the Adaptive Management Plan is a done deal.

And details of the financing do little to quell suspicions that the AMP is intended to facilitate housing – suspicions that may have been fueled by the fact that much of the testimony in favor of SB 1602 came from business groups whose representatives stressed the need to develop housing in the Kona area.

For example, the Chamber of Commerce of Hawai'i urged the Legislature to pass the measure, stating: "To expand affordable housing and address Hawai'i's housing crisis, the state is launching a multi-year pilot program to improve access to reliable water in the Keauhou Aquifer System."

No Contract

The agreement between CWRM and GUILD is not a contract. Instead, CWRM issued a purchase order for the work, with GUILD as the vendor. Kahahane signed the agreement on May 20, authorizing $148,240 in federal funds and $2,940 in general funds to be paid out for "facilitation services to organize, run, and produce report(s)and a draft adaptive management plan for groundwater resources in the Keauhou Aquifer System Area." Documents provided to *Environment Hawai'i* do not include any record signed by a representative of GUILD agreeing to the terms of the purchase order – but, according to an unnamed CWRM staffer, "By performing and submitting invoices under the [purchase order], GUILD Consulting is deemed to have accepted the terms outlined in the scope of work."

Peter Adler and Ciara Kahahane, at the July 15 CWRM meeting. CREDIT: CWRM YOUTUBE RECORDING.

The starting date of the services was June 1, according to a statement by Adler at the July 15 meeting.

The proposed scope of work, which appears to have been prepared by GUILD, describes a timetable, four phases, and five milestones for fees totaling $151,180.

Notes attached to the proposal recommend "CWRM have further funds available for additional tasks that CWRM may arise [sic] or want completed. … GUILD originally estimated the whole project to be around $200,000, inclusive of contingency and honoraria, travel expenses, etc."

Well before any agreement was signed, it was clear that CWRM was anticipating awarding the work to GUILD.

At the April 1 CWRM meeting, as Kahahane described the outline of the project to commissioners, she introduced Adler as a consultant to help facilitate the work of the working groups and advisors contributing to the development of the AMP. At that meeting, Adler told the commission that he wasn't officially on board yet, "constrained by budget and time frame." But, he added, he and his assistant, Stephanie Sang, were "going to work pretty fast and pretty hard to get it all done."

Fast indeed. By June 10, just 10 days following the official start of work according to Adler, GUILD submitted its first invoice, seeking payment of $20,000 for completing "Phase I, Project Planning and Preparation." Kahahane approved payment on June 17.

An Emergency Exemption

As a general rule, state procurement laws require agencies to bid out contract work. There are, however, several exceptions for sole-source purchases, two of which were invoked in awarding this work to GUILD.

The first exemption claimed on the purchase order form signed by Kahahane allows for "services of lecturers, speakers, trainers, facilitators, and scriptwriters, when the provider possess [sic] specialized training methods, techniques, or expertise in the subject matter." This is provided for in Hawai'i Administrative Rules 3-120-4, Appendix A, exception No. 3.

The second exemption invoked is "Governor Josh Green, M.D.'s Eleventh Proclamation Relating to Affordable Housing." That emergency proclamation expired on April 5, nearly two months before the GUILD agreement was reported to have been signed.

Since April 5, the governor has signed two more emergency proclamations relating to housing, so it may be argued that even though the eleventh proclamation expired, there's still legal cover for CWRM referring to the proclamation, which has not changed in the two more recent versions. But the fact that the records relating to this agreement refer to the eleventh proclamation suggests that well before it expired, CWRM was anticipating the award of funds to GUILD.

Records reviewed by *Environment Hawai'i* suggest that months before the May 20 purchase order was signed, CWRM was working out the intricacies of financing this project.

In an email exchange of May 15 between Kahahane and CWRM staffer Kathy Yoda,

Kahahane asks for "more PO-related assistance. I'm sure you recall this one – we wanted to use federal funds and had to create a special fund account, cancel the old PO and cut a new one." Kahahane listed three items that needed to be changed on the "new PO:" the amount of the contract, the period of performance, a new breakdown of the distribution of funds.

In response to a question about the earlier purchase order, CWRM stated: "An initial purchase order was issued but subsequently cancelled to allow for the establishment of a special funding account for the federal funds."

In the May 15 email, Kahahane says: "Last, I know Fiscal wanted a justification for using the Housing EP [emergency proclamation] to cut this PO." This was followed by a two-paragraph narrative that describes circumstances and conditions that justify the housing exemption.

Among other things, Kahahane states: "The project directly supports the construction of affordable housing by addressing the longstanding conflicts over groundwater resources that have impeded well development in the Keauhou aquifer. These efforts will improve water allocation decisions, promote the protection of traditional and customary rights, and enable housing development to proceed with greater clarity and community confidence."

The need for speed, combined with the need for housing, are factors that, she concluded, make it "in the public's best interest to move forward without delay via this direct contracting mechanism."

As far as the selection of GUILD to do the work, Kahahane again referred to the time constraints. "[I]t is not practicable or advantageous to procure the services required via traditional procurement methods under the current time constraints," she wrote. Funds had to be spent by September 30, she wrote – the deadline has since moved up a month – "and traditional procurement would likely introduce delays that jeopardize both expenditure deadlines and project objectives."

The Scope of Work

The purchase order calls for the state to pay GUILD a total of $151,180 for the services of Peter Adler to "provide facilitation services to organize, run, and produce report(s) and a draft adaptive management plan for groundwater resources in the Keauhou Aquifer System Area," with a period of performance starting June 1 and running through November 30, 2025.

By July 15, when the Water Commission was asked to approve this project, GUILD had already been paid $20,000 for having completed the first phase of its scope of work

A second deliverable was due July 18, for which GUILD was to receive another $20,000 payment. This payment was to be for "community engagement, scoping, and commission approval." Among other things, the work was to include holding "at least one outreach meeting for community stakeholders to comment on the expert group members, project description, and preliminary outline of elements to be included in the AMP."

The third billable deliverable, due August 31, is to pay for "expert group meetings," for which GUILD would "take accurate notes from each expert group discussion and prepare a report." For this, GUILD is to be paid $37,060. The cost of travel expenses for GUILD employees or experts, plus honoraria (if any), is to be paid by CWRM and is not included in the GUILD contract.

The fourth payment is for the "first draft AMP, briefings for CWRM and the Public." This phase includes "travel for Hawai'i island meetings with Native Hawaiian traditional & customary practitioners, Hawai'i [Department of Water Supply], Kaloko-Honokohau National Historical Park, and other stakeholders, as necessary." Also, GUILD is to "submit a reasonable set of literature references to be attached to the draft AMP. This is due by September 30, with GUILD to be paid $37,060.

The fifth deliverable, with a deadline of November 30, is a revised plan to be presented to the commission "and others as may be needed," with "a pre-publication draft" given to CWRM, incorporating feedback from commissioners and the public. Again, payment is $37,060.

The funds themselves were to come from a Department of Defense grant to the state Department of Business, Economic Development, and Tourism, through the DOD's Office of Local Defense Community Cooperation. To facilitate the delivery of funds to the DLNR, the DLNR's deputy director Ryan Kanakaole signed a Memorandum of Understanding with Laurel McAllister-Moore, director of DBED's Military and Community Relations Office (MACRO) on April 21.

At the July meeting of CWRM, Kahahane stated that after August 31, CWRM might be able to get another tranche of federal funds, but at that time it was not certain. In late July, CWRM informed *Environment Hawai'i* that "We have confirmed that another tranche of federal funding will be available and will seek to cover the remaining balance of the PO with GUILD Consulting after August 31, 2025."

State procurement procedures require contracts and purchase orders over a certain amount to be posted on the Department of Accounting and General Services' HANDS website (Hawai'i Awards and Notices Data System). When *Environment Hawai'i* began to look into the details of this award, it did not appear on HANDS. Within a day or two of our inquiring with DAGS about possible exemptions to public posting of the award, it suddenly appeared on Friday, July 25.

"Thank you for bringing this to our attention," CWRM stated in an email to *Environment Hawai'i.* The award has now been posted."

— Patricia Tummons

CWRM Missing a Member; Staff Missing More than a Dozen

Terms for two members of the Commission on Water Resource Management expired on June 30.

Aurora Kagawa-Viviani completed her first term on the commission. Governor Josh Green did not nominate her to serve a second term, although she did submit her name to the CWRM Nominating Committee as it interviewed potential new commissioners.

Paul Meyer completed his second term and was prevented by law from applying for a third.

In June, the CWRM Nominating Committee met once to interview candidates for the two open seats. The meeting, on June 9, was not properly noticed to the public. The second meeting, while publicly noticed, did not comply with the state's Sunshine Law, Chapter 92F HRS. As a result, both the scheduled June 27 and June 30 interviews were cancelled.

Kagawa-Viviani continues to serve on the commission as a holdover appointee. But the commission still lacks a fifth appointed member.

No announcement has been made as to any future meetings of the Nominating Committee. Until the committee meets, makes its selections, and forwards them to the governor, the Water Commission will continue to make its decisions absent one member.

It's not just the commission that's operating with less than a full complement of members. Staff also is limping along. Of the 33 authorized staff positions, as of September 30, 2024 (the last date for which figures are publicly available), just 19 were filled.

Environment Hawai'i asked CWRM for a more recent staffing figure, but no response was received by press time.

Management Plan *continued from page 1*

plan drawn up by CWRM staff, the commission "is reconsidering its approach to groundwater management in the Keauhou Aquifer System Area (KASA). Housing and economic growth require groundwater and the Keauhou region is part of the expanding Kona population center. However, CWRM has an affirmative duty to balance maximum beneficial use of water with the protection of the public trust, including maintenance of waters in their natural state, traditional and customary rights of Native Hawaiians, provision of adequate reserves of water for the Department of Hawaiian Home Lands, and domestic use."

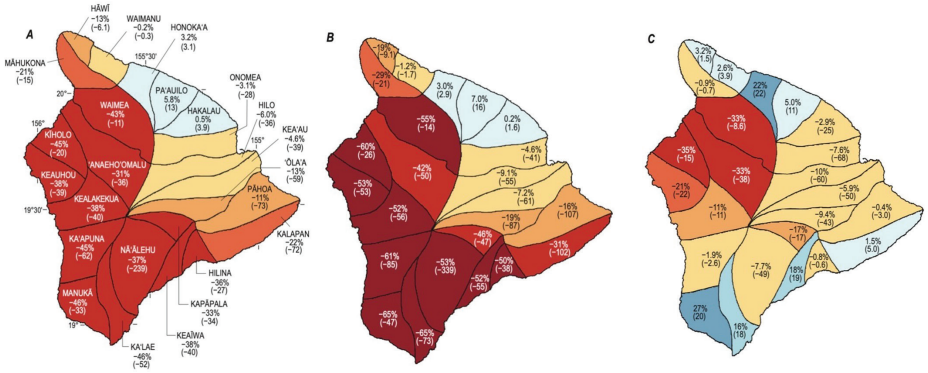
"I just think it's nuts," Miike said after listening to Kahahane explain the plan and acknowledge that at present, there is little the commission can do if the owner of a currently permitted well pumps so much that the water source is harmed. "Why don't we just designate the area already? … I know basically counties are against that, a state-versus-county kind of thing. But we're way beyond that."

When Miike voiced his skepticism over the commission's ability to regulate withdrawals in the absence of designation, Kahahane replied: "So, compliance with the adaptive management plan we're proposing to attach as a condition for the approval of future pump installation permits in the aquifer. For the current wells, there's not much we can do besides ask nicely, because we're not in a designated water management area. But we've discussed with the folks who want to construct new wells in this aquifer that the adaptive management plan is essentially going to be a condition of their pump installation permit."

The Plan

The idea for an adaptive management plan grew out of a symposium held in Kona in 2018, which in turn grew out of the petition by the National Park Service for designation of the Keauhou aquifer as a water management area, filed in 2013. That, in turn, traces back to concerns of the NPS, first expressed formally as early as 2007, that developments existing and planned upslope of the Kaloko-Honokohau National Historical Park were jeopardizing the park's natural resources, especially the fisponds and many anchialine pools in the shoreline area.

The NPS petition was denied, but as a kind of consolation prize, the commission set up a working group that was to address the issues raised in the petition. The November 2018 symposium was the culmination of that effort.



Maps showing estimated change in mean annual groundwater recharge by aquifer system for three future-climate scenarios for the Island of Hawai'i. (A) Statistical Downscaling (SD) Representative Concentration Pathway (RCP) 8.5 2041–71 scenario from Elison Timm and others (2015), (B) SD RCP8.5 2071–99 scenario from Elison Timm and others (2015), and (C) Hawai'i Regional Climate Model version 2 (HRCM2) RCP4.5 2080–99 scenario from Zhang and others (2017). Estimated changes are relative to mean annual recharge for the 1978– 2007 scenario. Values in parentheses represent change in millions of gallons per day. Aquifer system boundaries from State of Hawai'i (2014). CREDIT: USGS.

At the same time, the commission agreed to eight conditions, dealing with, among other things, well approvals, monitoring wells, review by the Aha Moku council, siting of future wells,

Condition six triggers public information meetings if authorized planned uses reaches 80 percent of the sustainable yield, which amounts to 30.4 million gallons a day. As of February 2025, the staff report states, withdrawals reported to CWRM come to 14.82 mllion gallons a day, or around 37percent of sustainable yield.

"There's a little complication here," Kahahane said. The state Water Code defines authorized planned use as "the use or projected use of water by a development that has received the proper state land use designation and county development plan/community approvals."

But, Kahahane added, "There's no consensus right now among the various counties about what methodology should be used to determine authorized planned use and how it should be tracked for the purposes of anticipating future water demands." This means, she continued, "as of today, there isn't a coordinated effort between the commission and the county to compile a record of authorized planned uses in Keauhou. There's also no adopted Keauhou Water Use and Development Plan, which would include recent development information to calculate water demands. So as a result, we, frankly, don't know if authorized planned use has reached the trigger."

To address this, Kahahane said, she was discussing the matter with the counties and "considering changes to both the Water Code and planning documents." Or, as described in the staff submittal, staff are "engaged in discussions about APU and are considering changes to the Water Code and planning documents … to better define APU and reconceptualize its utility in the planning and designation process."

As described in the staff proposal, "The core idea behind an AMP is to treat groundwater management as an evolving process. Instead of following a rigid planning approach, an AMP recognizes that uncertainties exist – such as how groundwater withdrawals may impact coastal and nearshore groundwater discharge, or how changes in climate may impact groundwater recharge. It proposes monitoring, data collection, and regular reassessment of management strategies based on any changing conditions."

Last year, the U.S. Geological Survey published a report on predicted future groundwater recharge statewide under various climate scenarios. Even under the most favorable scenario, the Keauhou aquifer and surrounding aquifers were predicted to see decreases in annual groundwater recharge by at least 21 percent compared to a reference climate of 1978-2007.

Kahahane took some time to go over the plan in her presentation to the commission on July 15. The AMP, she said, would build on input from four working groups of three or four people, each of whom is an expert in their respective areas of knowledge: hydrology, biology ("indicator species"), contamination and pollution, and native Hawaiian traditional and cultural practices. A CWRM "point person" is to be assigned to each group.

Peter Adler of GUILD Consulting, LLC, and his assistant, Stephanie Sang, will write up their suggestions into a plan, which

is then to be reviewed by an advisory committee of four people, Kahahane said – all by the end of November. In addition, an outside consultant, Scott McCreary of Concur, will provide his opinion on the final product. According to the staff submittal, "McCreary has substantial experience with adaptive management plans and joint fact-finding on natural resource matters."

Kahahane went on to describe a proposal to recharacterize the sustainable yield for the area, using updated techniques and leaving in the dust RAM, the robust analytical model used for years to determine sustainable yield.

Overall, she said, "We're all very excited about this pilot project. I believe, and my staff believe, that this approach, what we do in Keauhou, can inform and shape strategies for other critical areas, including … Lahaina."

The Public Weighs In

Kahahane's presentation, which largely followed the written submittal, took more than an hour and a half. After a break of 20 minutes, commission chair Dawn Chang invited the public to weigh in.

First to testify was Scheuer. He began by agreeing with comments from Miike to the effect that this might more accurately be regarded as an update to the state Water Resource Protection Plan's section on Keauhou. If that were done, and then using that as a basis to permit wells, "most of what is in the proposal before you I would fully endorse."

But what was actually being proposed, he continued, "flies in the face of your statutory duties."

Scheuer launched into a history of the controversy over the Keauhou aquifer system, noting that it goes back at least 17 years, well beyond the "highly selective" shorter history that appears in the literature cited in the AMP.

When Scheuer stated that he was going to go into that history, he was interrupted by Chang, who asked him to summarize, "because your time is up."

Scheuer objected, noting that the commission had Kahahane's written submittal but that the commission and public "heard it all in person" as well.

"I've been involved in this for well over a decade and I'm going to ask for your discretion or ask one of the commissioners to allow me to finish my testimony…"

Chang asked how long his testimony would take.

"How about five minutes?" Scheuer replied.

"That's going to be a little too long," Chang said. "I've got other people."

"I find it very disrespectful in deliberative processes to keep the public to two minutes on such an important issue," he said.

Then he continued with his history, noting that it formally began 18 years ago, when the superintendent of the Kaloko-Honokohau park, Gerry Bell, and her staff met with CWRM staff, expressing concerns about the impacts to the park's natural resources that depended on groundwater flows — "groundwater dependent ecosystems," or GDEs.

At the time, CWRM staff suggested instead that the Park Service begin a dialogue with other parties interested in issues relating to groundwater. This groundwater working group met four times.

"At the fourth meeting," Scheuer said, "consultants, including [former CWRM director] Peter Young, showed up and said we don't need the groundwater working group that you guys are arranging anymore because we're setting up the Kona Water Roundtable."

The groundwater working group, he added, "had an open agenda, an open process for getting information," with a focus on "trying to determine the best scientific information."

On the other hand, the agenda of the Kona Water Roundtable was controlled by developers, he said, meeting from about 2008 to 2015, and "focused on showing that there's no harm whatsoever to the aquifer."

In 2013, a number of events led the National Park Service to file a petition for designation. By law, the commission is to consider the petition within 60 days, but "this body dragged that process out for three and a half years."

The commission did issue a preliminary order in December 2014, which asked for three things: an updated Hawai'i County Water Use and Development Plan; a report from the National Park Service on the quantity of water needed to sustain its ecosystems; and a report on traditional and customary practices. Scheuer noted that he was one of two authors of that last report. Paula Cutillo of NPS prepared the second. The county Department of Water Supply was to prepare the first, and while it has developed a draft, that plan has never been approved by the County Council.

The last two reports were delivered in May 2015, Scheuer said, yet, "they've never been referenced by any of your subsequent reports."

"Now why is the fact that we did these reports, presented them to you, and they're never referenced again relevant?

"Because I believe what you guys are proposing, to allow drilling to go forward and study it, depends on the assumption that there's been no reasonable allegation of harm to this system under the current pumping regime.

"But there has. Repeatedly. And you possess this in your own records, which gives you a duty under *Kaua'i Springs* and other parts of the public trust doctrine … to not defer action and figure out what's going on but to take action, to protect groundwater dependent ecosystems and traditional and customary practices associated with them."

Scheuer then reminded them of other rulings by the Hawai'i Supreme Court that bear on the Keauhou dispute. In its *Waiahole* opinion, the court quoted the Water Commission itself: "Where scientific evidence is preliminary and not yet conclusive regarding the management of freshwater resources, which are part of the public trust, it is prudent to adopt 'precautionary principles' in protecting the resources. That is, where there are present or potential threats of serious damage, lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation. In addition, where uncertainty exists, a trustee's duty is to protect the resource, mitigate in favor of choosing presumptions that also protect the resource' — "

Chang again interrupted Scheuer. "Jonathan, I've given you five minutes."

" — the opposite of what you're doing."

Commissioner Kagawa-Viviani asked that Scheuer be allowed to continue. "I would like to hear more. I think it's important to hear some of the history that precedes."

Scheuer then began to name names. When the Water Commission adopted conditions that were to be alternative to designation, those conditions, he said, "were actually written by the developers' consultant, Peter Young. … The National Park Service wrote then-chair Suzanne Case asking why the commission was deferring its decision on how to protect public trust resources to a private consultant." It never got an answer.

Scheuer then went on to raise concerns about the participation of some of the people involved in developing the Adaptive Management Plan, mentioning specifically the inclusion of Don Thomas as one of the hydrology experts.

In 2021, Thomas was a guest at a meeting of Sustainable Energy Hawai'i, Scheuer said. Former state Representative Jerry Chang, a participant, addresed Thomas, "You know, the lack of water in Kona is hindering a lot of developments that would

otherwise be going forward," going on to ask him if his own research supported that.

Thomas replied, "I think the National Park's claims are a fairy story. And I think they know it. I've told them that. … I'll be brutally honest. The Park Service just wants to take control of access to groundwater, access to the aquifer in Kona so they can control any further development there."

Scheuer added: "So, the inclusion of experts who are known to be hostile to all the issues that are supposed to be considered here I find deeply problematic."

Continuing Impacts

Ashley Obrey of the Native Hawaiian Legal Corporation, representing Hui o Ka Wai, testified in person and also with lengthy written testimony, much of it concerning numerous omissions from the plan.

Hui o Ka Wai "acknowledges that there is value in the preparation of an AMP," the written testimony states, but it will be useful "only if it acknowledges and addresses the harm that has already occurred to public trust uses of water as the result of previously approved pumping in the Keauhou Aquifer – and does not simply serve as a tool to fast-track future water development in Kona."

"There are existing impacts from existing withdrawals," Obrey said. "That's an important baseline that needs to be considered when we're thinking about cumulative impacts. The need for mitigation and not just monitoring. This shouldn't just be forward-looking … but we're also talking about where we are at, what our status quo is based on, and why we're doing what we're doing in the first place. There's a bunch of questions about monitoring needs and triggers, which are critical to making the AMP function. We need these management actions. Otherwise, what's the point of this document?"

Obrey suggested the commission defer approval of moving forward with the plan, as outlined by staff, inasmuch as it lacks sufficient detail to serve as a basis for managing the resource.

"If you don't give good direction today, it could give you a false sense of security that we have this plan in place, but in reality, all we're doing is checking a box and greenlighting more development, and there's this plan here that isn't addressing all the things we think it needs to," she said.

"As Chair Chang mentioned, there is this mounting pressure to develop. So if we have this plan in place that really isn't going to satisfy the needs of what I think the whole point of this is, that's a concern."

She also suggested the plan should address proposals to drill into the deep confined aquifer, which lies below sea level. The presumed existence of this is what's "spurred a lot of this discussion in the first place," she said.

"The ask, I guess, is to defer it until all these questions are answered and you feel this plan will be the best version of the AMP that we can have in light of the fact that we have not been designated and this will serve as a substitute until such time as this commission deems it is time to designate."

Loke Aloua, a member of Hui o Ka Wai, po'o for Kaloko-Honokahau and a former archaeologist for the National Park Service, described in detail the kinds of impacts she has observed at the fishponds and anchialine pools of the national park and listed numerous development proposals in Kona that were planning to drill wells in the Keauhou aquifer area, including in the deep basal aquifer.

Among others, she identified a well proposed by the Liliu'okalani Trust, to pump from the deep basal aquifer, two wells proposed by the University of the Nations, and a second Department of Water Supply well at Wai'aha, also intended to pump from the deep basal aquifer. "Most times," Aloua said, "when they put in a production well, they put in a reserve well as backup. We may be looking at 3-4 mgd coming out of Wai'aha."

"Who is going to address this? How will that use be assessed for its connectivity to the entire three layers of the aquifer? What are the impacts to traditional and customary practices, including the ground-dependent ecosystems and these species," she asked.

"The deep confined aquifer is misunderstood," she continued. "There are multiple hypotheses surrounding connectivity and discharge. All these things are still in the investigative stage. Nothing has been finalized, but there are already plans in motion for Kona to tap into the deep confined aquifer."

She went on to mention existing impacts of lack of freshwater flows into the ecosystems at Kaloko-Honokohau. "Currently, at least at Kaloko we already have an adversely impaired ecosystem. Pond conditions – the fishpond is sometimes saltier than the ocean. That is how salty we're talking about the ponds getting. … The pond is currently at its breaking point.

"Seasonal algae blooms that result in heightened oxygen levels and this mass of algae that grows," resulting in the death of fish, she said. With curtailed groundwater flows, water temperature rises, "which also contributes to sick and weak fish in the loka i'a. … We're talking about mature fish, … struggling in the fish pond. Right now."

Blooms of native limu have fallen off as well for the last three years, with the last bloom she could see being two years ago. Limu, she said, is essential for the fish.

"These have really big impacts for us," she said.

Also, the lack of freshwater is harming native birds. If they don't have freshwater for the chicks, they won't make it, she continued.

Fish can't be recruited into the fishpond, she added, because there isn't enough water. "If we don't have that sweet water – that ona-ona – that alluring water that's going to draw in the fish, then the fish pond is going to cease to be a fish pond. It's just going to be one saltwater pond."

"How can CWRM help us on the ground with these impacts we're already seeing, every single year, consistently, at least for the last four years? … It's very heartbreaking, because we're doing everything we can on the ground," she said.

A Motion

The submittal brought to the commission asked the commissioners for "approval to proceed" with the development of a first-generation AMP.

But as became clear during the course of the meeting, there was little the commissioners could do other than rubber-stamp what was an already done deal.

"Peter Adler's already working on this, right? … A deferral might not necessarily stop work on this effort. Is that correct?" asked Kagawa-Viviani.

Kahahane seemed puzzled. "Well, I suppose I have to better understand the nature of the deferral."

"I'm just saying a hypothetical deferral would not prevent him from continuing to further improve and work for meetings to happen," Kagawa-Viviani said.

Kahahane wanted further clarification: "I'm hearing that we should continue working on expert groups … and we can continue to do that in the event of a deferral."

Kagawa-Viviani noted that the request before the commission was for approval to proceed, "but you're already working on it." Then, she added, "how this AMP fits within our regulatory framework is not clear. … How do we translate this into action?"

Chang added her gloss: "This is just to permit staff to continue to move forward."

In the end, despite the evident puzzlement about what, exactly, the commission was being asked to do, all six members voted to approve going forward with development of the AMP.

— Patricia Tummons

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July 21, 2025

Ms. Kimberley Salinas
Representative, Hui Kaloko-Honokohau/Hui Ola Ka Wai
huikalokohonokohau@gmail.com

Subject: Ka Paʻakai Analysis for the Department of Water Supply's Proposed North Kona Mid-Level Exploratory Well Project, Honuaʻula Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-5-003:001 (por.)]

Aloha Ms. Salinas,

Pacific Legacy, Inc. is conducting a Ka Paʻakai Analysis for the Hawaiʻi County Department of Water Supply's (DWS) proposed North Kona Mid-Level Exploratory Well Project located in Honuaʻula Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-5-003:001 (por.)] (Figure 1 and Figure 2, attached).

Project Background
DWS is responsible for the development, operation, and maintenance of the municipal water systems throughout the island of Hawaiʻi. The purpose of the proposed project is to identify a potential source of reliable, high-quality potable water for use by DWS' North Kona Water System. The proposed well is exploratory and designed to see if the fresh water at depth below the brackish basal lens can be developed as a source of drinking water supply. If the deep-confined freshwater lens can be developed as a source of supply, DWS anticipates that it would have far less operating cost and greater reliability than the high-level wells arrayed along the mauka side of Māmalahoa Highway.

The deep-confined freshwater source that the proposed North Kona Mid-Level Exploratory Well Project seeks to tap is spatially separated from the groundwater source tapped by existing high-level wells in the region. The evidence to date indicates that the deep-confined freshwater source the proposed project seeks to tap discharges farther offshore and in much deeper waters than the basal lens. It is therefore unlikely that the proposed exploratory well would impact the basal aquifer, nearshore tidal zones, or groundwater-dependent ecosystem, which will allow DWS to transition some usage of the basal lens to the deep confined freshwater source.

The proposed project will consist of: (*i*) site preparation, (*ii*) drilling and casing an exploratory well, (*iii*) pumping and water quality testing in order to evaluate it as a potential source of potable water, and (iv) if suitable develop a production well, storage reservoir and waterline to connect to the North Kona Water System.

The project area consists of 2.9 acres within a portion of TMK: (3) 7-5-003:001 in Honuaʻula Ahupuaʻa. The project area includes a drill pad site and unpaved access road, which would be improved by laying gravel over the existing road surface. The proposed project includes grubbing, grading, and well drilling. Steel plates would be laid across an existing wooden bridge within the access road corridor along Hienaloli Road. One banyan tree, 355 feet of rock wall, and 81 feet of barbed wire fence would be removed.

The site prepared for well drilling would be approximately 140 by 110 ft, or roughly 0.38 acres, and

would primarily consist of embankment using 3,356 cubic yards of fill. A 12-inch diameter pilot borehole would be drilled from ground level, roughly 760 ft above mean sea level (+MSL). Drilling would proceed to roughly 1,160 ft below ground to reach approximately 400 ft below mean sea level (-MSL), where fresh water is expected to be encountered. Drilling would then continue to around 475-500 ft -MSL to approach a sufficient depth to provide satisfactory yield. If the open hole pump test results indicate a production well could be developed, then the pilot borehole would be reamed to a 27-inch diameter, with installation of a 20-inch solid casing to isolate the draft from the freshwater zone at depth. Constant rate pump tests would be run to establish the well's hydraulic capacity and long-term yield. A storage reservoir, pump control building and waterline and electric connections to the site would be constructed in the vicinity should the well be developed. If fresh water at depth is not encountered, or if the pilot borehole pump tests demonstrate insufficient supply, the borehole would be sealed according to requirements put forth by the State Commission on Water Resource Management (CWRM), and the project would end. Additional information on the well project can also be found in the project's Final Environmental Assessment (FEA) (Planning Solutions 2020).

Previous Studies

In 2020, ASM Affiliates completed an Archaeological Inventory Survey (AIS) for the project area (Glennon and Barna 2020). The survey identified three historic properties. SIHP 50-10-28-07124 is a portion of the former railroad bed for West Hawaii Railroad, and was assessed as significant under criteria a, c, and d, due to its association with the development of the sugar industry and as an excellent example of 20th-century dry stone masonry construction. Preservation was recommended for SIHP -07124, and the proposed project has been designed to avoid impacts to SIHP -07124. SIHP 50-10-28-31161 is a complex of post-Contact ranching walls with eight wall features located within the project area, and SIHP 50-10-28-31162 consists of two remnant agricultural clearing mounds, likely associated with 20th-century ranching. Both of these historic properties were assessed as significant under criterion d and recommended for no further work, as they were adequately documented during the AIS. An "old trail" is also depicted within the project area on some historic maps, but could not be relocated during AIS fieldwork (Figure 3).

ASM Affiliates also prepared a Cultural Impact Assessment (CIA) for the project (Glennon and Brandt 2020). The CIA traced the land tenure and use history of the project area: Honuaʻula Ahupuaʻa was claimed by Chiefess Keahikuhi Kekauʻōnohi during the Māhele, but subsequently relinquished her interest and the ahupuaʻa became part of the Government lands. A portion of Honuaʻula, which includes the project area, was later divided into a 585-acre land grant (Grant 1758), and sold to George L. Kapeau. The project area and surroundings were later sold to Henry N. Greenwell in 1875, and to Kakuro Komo in the 1940s. The project area has been used for ranching throughout most of its post-Māhele history. Participants interviewed for the CIA were not aware of any past or ongoing traditional cultural practices aside from ranching. Participants also noted the significance of the former West Hawaii Railroad, and the CIA recommended that a temporary protective buffer be placed around the portion of the railroad bed (SIHP -07124) that lies within the project area prior to project-related construction activities. Although participants were unaware of known burial sites in the project area and no iwi kūpuna were identified during the AIS, one participant expressed concern about the possibility of encountering burials, and the CIA recommended archaeological monitoring for all ground-disturbing activities.

Ka Paʻakai Analysis

This Ka Paʻakai Analysis is being conducted exclusively for the well's exploratory phase. If the exploratory well is later developed into a production well, this work would be evaluated under a separate EA in the future.

The purpose of a Ka Paʻakai Analysis is to assist the State of Hawaiʻi in fulfilling its obligation to protect "all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights" (Article XI, Section 7 of the Constitution of the State of Hawaiʻi). It requires that the following specific findings and conclusions be addressed:

(1) The identity and scope of valued cultural, historical, or natural resources within the project area, including the extent to which traditional and customary native Hawaiian rights are exercised;
(2) The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and
(3) The feasible action, if any, to be taken by the Land Use Commission to reasonably protect native Hawaiian rights if they are found to exist.

We are reaching out to you for this analysis because you have been identified as a source of knowledge in Honuaʻula Ahupuaʻa or the broader Keauhou Aquifer System Area (KASA), and we are seeking your kōkua regarding the above three queries. We are seeking any information related to the following components of our study:

- Cultural associations of Honuaʻula Ahupuaʻa such as moʻolelo or connections to legendary accounts.
- Knowledge of past and present land use within and near the project area.
- Knowledge of past and present traditional gathering practices in Honuaʻula, and within the areas covered by the KASA.
- Knowledge of cultural resources which may be impacted by the proposed project, including traditional plant and animal gathering sites, traditional access trails, archaeological sites, historic sites, wahi pana, and burials.
- Any other cultural concerns that community members may have in relation to traditional Hawaiian or other cultural practices within or near the proposed project area.
- Referrals to other knowledgeable individuals who may be willing to share their cultural knowledge of the proposed project area, Honuaʻula Ahupuaʻa, and the areas covered by the KASA.

Please contact me via telephone at 808-263-4800 or via email at mulrooney@pacificlegacy.com if you have any questions, or if you would like to share your ʻike and manaʻo to assist with this assessment. If you have suggestions for other knowledgeable individuals or organizations, we would appreciate you sharing contact information with us. We kindly request that you express your interest in participating by August 4, 2025. We look forward to hearing from you soon.

Mahalo piha,

Mara A. Mulrooney, Ph.D.
Principal, Senior Archaeologist

Attachments: References, Project Figures

References

Glennon, G. and B. Barna
2020 *Archaeological Inventory Survey for the Exploratory Phase of the Department of Water Supply Honua'ula Mid-Level Well*. ASM Affiliates, Honolulu.

Glennon, G. and L. Brandt
2020 *A Cultural Impact Assessment for the Exploratory Phase of the Department of Water Supply Honua'ula Mid-Level Well*. ASM Affiliates, Honolulu.

Planning Solutions
2020 *Final Environmental Assessment North Kona Mid-Level Exploratory Well, Hawai'i Island, North Kona, Hawai'i*. Planning Solutions, Honolulu.

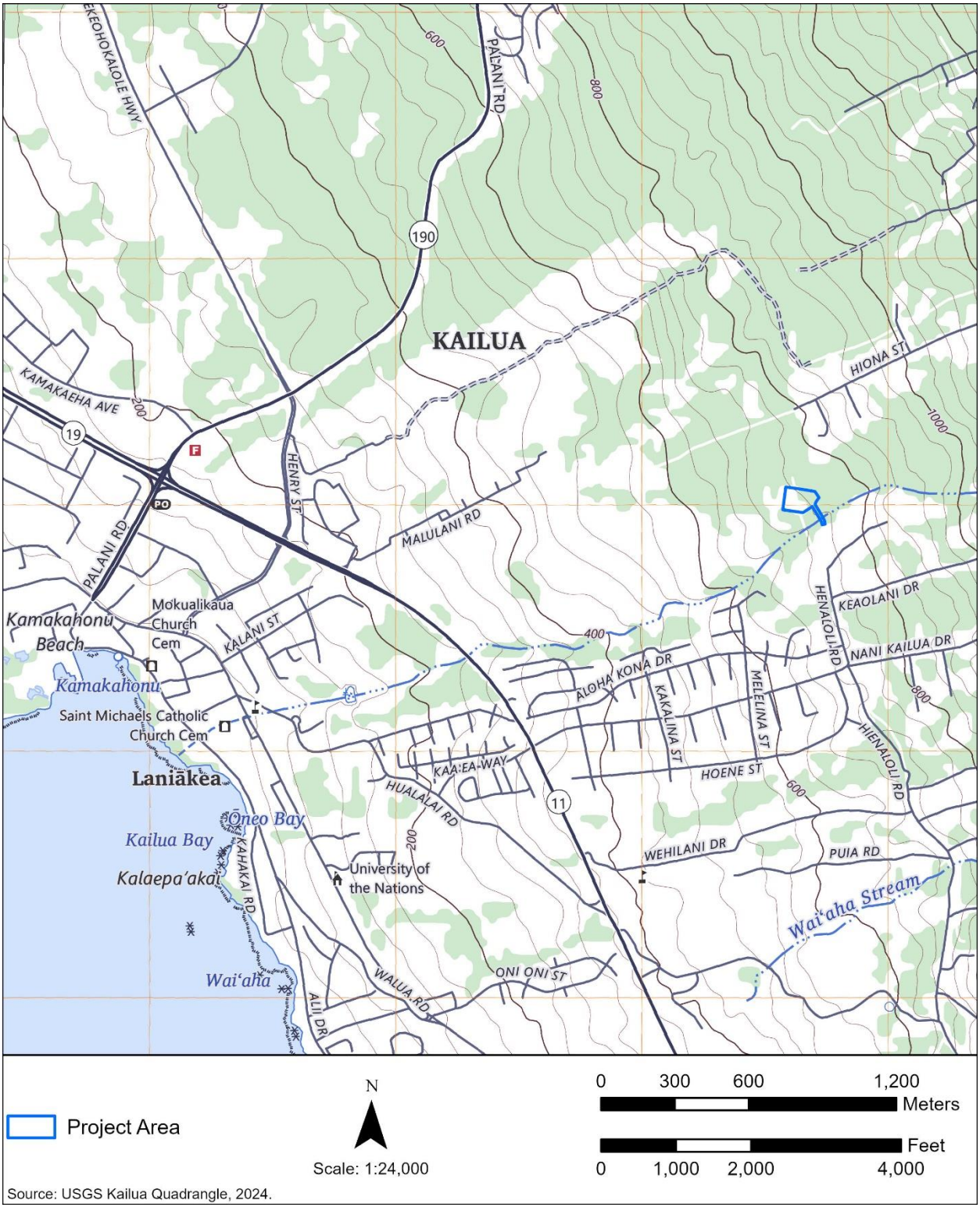

Figure 1. Location of the proposed North Kona Mid-Level Exploratory Well Project Area.

Figure 2. The proposed North Kona Mid-Level Exploratory Well Project Area with surrounding TMKs labeled.

Appendix D

Water Supply Study
Planned Expansion of University of the Nations
Kona, Hawai‘i
Tom Nance Water Resource Engineering
February 2020

Tom Nance Water
Resource Engineering

No. of pages: 13
Email: jeff@g70.design
paulm@g70.design
greg@tnwre.com
todd@tnwre.com

Original will not be mailed to you.

February 28, 2020
20-028.r1 | 20-03

MEMORANDUM

To: Jeff Overton and Paul Matsuda – Group 70 International, Inc.

From: Tom Nance

Subject: Water Supply for the Planned Expansion of University of Nations – Kona in the Land Use Commission (LUC) Petition Area

Introduction

As I understand it, the Hawaii County Department of Water Supply (HDWS) has indicated that a new source of supply will need to be developed in order to supply the LUC petition area for the planned expansion of the University of Nations-Kona (UNK). The portion of the planned expansion in the LUC petition area is on two adjacent parcels identified as TMKs 7-5-010:085 and 7-5-017:006. These two parcels are shown on Figure 1 and the concept plan for the proposed expansion on these parcels is illustrated on Figure 2.

Required Supply for the Expansion

Table 1 prepared by G70 provides an estimate of the UNK's required water supply for the planned expansion in the petition area. The projected ultimate supply required is 256,400 gallons per day (GPD), expressed as an average day demand. If the new source is dedicated to HDWS, it must be able to deliver the maximum day supply (defined as 1.5 times average) in a 24-hour pumping day. Further, one third of the source capacity would be reserved to HDWS with the remaining two thirds for UNK. These criteria mean that the new source needs to have a capacity of not less than 400 gallons per minute (GPM). Since most HDWS well pumping capacities are in the range of 700 to 1400 GPM, this suggests that a partner for UNK in the development of a new source of supply would be appropriate to consider.

Identified Alternatives for New Source Development

Three potential new source alternatives have been identified. In order from the most to the least promising, they are: a new well and related infrastructure on TMK 7-5-003:023, a property owned by Mr. Richard Wheelock who is actively seeking a partner for well development on his property; a new well TMK 8-1-002:058 in South Kona, a 5-acre property owned by UNK under the name Ahualani, Inc.; and an entirely onsite system. The first two of these systems would be as additions to the HDWS system. The third alternative would be a private, stand alone system. Each is described in the sections following.

Well Development on TMK 7-5-003:023, the Wheelock Property

In 2001, the Keopu Deep Monitor Well (State No. 3858-001) was completed. In a completely unexpected result, extremely fresh artesian water was encountered about 400 feet below sea level, lying beneath the basal lens and saline water below the basal lens. In 2017, a second monitor well was developed about 60 feet away from the first and completed to isolate the artesian water from the overlying brackish and saline water. Once isolated in this manner, the static water level stood at 28 feet above sea level and, somewhat surprisingly, varied significantly with the ocean tide (Figure 3). Pump tests were run, including a 48-hour constant rate test at an average of 820 GPM. The drawdown was essentially constant and recovery was very rapid (Figure 4). It is important to note that there was no evidence in the drawdown or recovery of a boundary effect. Such an effect might have occurred if the water body tapped by the well was of modest areal extent. The pumped water salinity was constant and comparable to the HDWS wells which draw high-level groundwater from locations above Mamalahoa Highway (Figure 5 and Table 2). Specific conductance was about 140 µS/cm and chlorides were less than five (5) MG/L. Further, isotope analysis confirmed that the artesian water at depth below sea level was the same as the high-level groundwater pumped by the inland HDWS wells (Dr. Donald Thomas, UH Hilo, personal communication). The pump test demonstrated that a variable source of drinking water from the artesian water at depth could be developed at this location.

On Figure 6, the location of the two Keopu monitor wells and the location of a potential well on the Wheelock property are shown. Although the areal extent of the developable artesian water at depth is not known, the distance to a well on the Wheelock property is modest enough (about 1200 feet) to warrant drilling an exploratory well and, if successful, completing it as a production well of 700 GPM capacity. The advantages of this location in comparison on to the two other alternatives subsequently discussed are significant: with modest infrastructure improvements, the well water could be delivered directly downslope into HDWS' 20-inch transmission main in Queen Kaahumanu Highway; and the pumping lift (i.e. required electrical power) would be about half the requirement of HDWS' high-level wells above Mamalahoa Highway.

Well Development TMK 8-1-002:058 Along Mamalahoa Highway Near Konawaena High School

TMK 8-1-002:058 is owned by UNK through its subsidiary company, Ahualani, Inc. Its location is shown on Figure 7 in relationship to three wells which surround the property and draw extremely fresh high-level groundwater (existing Well Nos. 3054-001, 3155-002, and 3155-003 on Figure 7). Results of these wells and the Time Domain Electromagnetic geophysical survey results done directly downslope suggest that it is almost certain that a well on the subject property would also encounter the very fresh high-level groundwater. However, there are a number of factors for the development of a well at this location that make it a far more expensive proposition than a well on the Wheelock property:

- The well would need to be drilled to greater depth than a well on the Wheelock property;
- The pumping lift required to deliver water to the nearest HDWS storage tank would be more than twice as great than the pumping lift of a well on the Wheelock property;
- To provide adequate contact time for chlorine injected at the well head, a separate transmission pipeline to the HDWS tank would be required; and

- Substantial upgrades of transmission capacity within the HDWS system would be required in Mamalahoa Highway and elsewhere to enable water from the new well to be effectively used in the portion of the HDWS system serving the UNK project site.

Development of a Private Stand-Alone Water System on the University of Nations - Kona Site

Groundwater everywhere beneath the UNK project site occurs as a thin brackish basal lens underlain by saline groundwater of seawater salinity. This groundwater would have to be treated by reverse osmosis (RO) filtration for drinking water use. At this location and in order to have essentially no impact on the basal groundwater and its discharge into the marine environment, such a system would need to consist of the following:

- Two supply wells, each configured to draw saline groundwater from beneath the basal lens and with each providing 100 percent of the required capacity so that 100 percent back up capacity would be available in the event of a pump failure.
- The RO filtration plant must be capable of producing the maximum day supply of up to 384,600 GPD in a 24-hour operating day. Based on results a prototype RO plant the Honolulu Board of Water Supply (HBWS) ran at the makai end of Campbell Industrial Park in Ewa, Oahu, only about 40 percent of the saline groundwater fed into the plant will be the product water of potable quality. The remaining 60 percent will be a hypersaline concentrate for disposal.
- The RO recovery rate means each of the two supply wells will need to be of 670 GPM capacity. Also based on the HBWS prototype results, a pressure on the order of 900 PSI to the RO filters will be necessary.
- Two disposal wells for the RO concentrate will be necessary, each of at least 400 GPM capacity to provide 100 percent back up capacity. These wells will need to be substantially deeper than the supply wells to prevent recirculation of the RO concentrate back to the supply wells.
- The RO product water would be delivered to an onsite storage tank. Delivery to customers from the onsite storage tank would be by an on-demand booster pump station.
- Based on the number of customers served, the system would be regulated by the State Department of Health (DOH) and would need to be operated and maintained by a technically competent staff acceptable to DOH, very likely by contract to a qualified private company.

All elements of the system described above are actually possible to construct. However, initial costs would be substantially greater than the alternative of a well and related infrastructure on the Wheelock property and the operating cost would be far greater than the price of water from the HDWS system.

Concluding Comments

By far the best alternative is to jointly develop a well on the Wheelock property. This well would be in the Keauhou Aquifer System, for which there has been considerable scrutiny regarding the possibility that pumpage of potable wells may adversely impact the flowrate and salinity of the brackish basal lens in the nearshore area. Such an impact would not be the case for a well on the Wheelock for the following two reasons:

- The well would draw fresh water from 400 to 600 feet below sea level. This body of water is hydrologically isolated from the overlying saline groundwater and brackish basal groundwater. Based on the piezometric head level and measured tidal response, water drawn by the well would otherwise discharge at great depth and distance offshore without ever coming in contact with the basal groundwater.
- I have in the past and continue to monitor the potential impact the pumpage of HDWS' inland potable wells is having on the nominally downgradient basal lens. The monitoring is at two fortuitously located basal wells directly downgradient of the HDWS wells. Monitoring consists of water level recording and salinity profiling. The HDWS pumpage began in 1994 (26 years ago) and has varied between four (4) and six (6) MGD for the last 15 years. To date, no impact on the basal groundwater has been identified by the monitoring that I have undertaken.

Attachments

ec: Greg Fukumitsu and Todd Yonamine – TNWRE Inc.

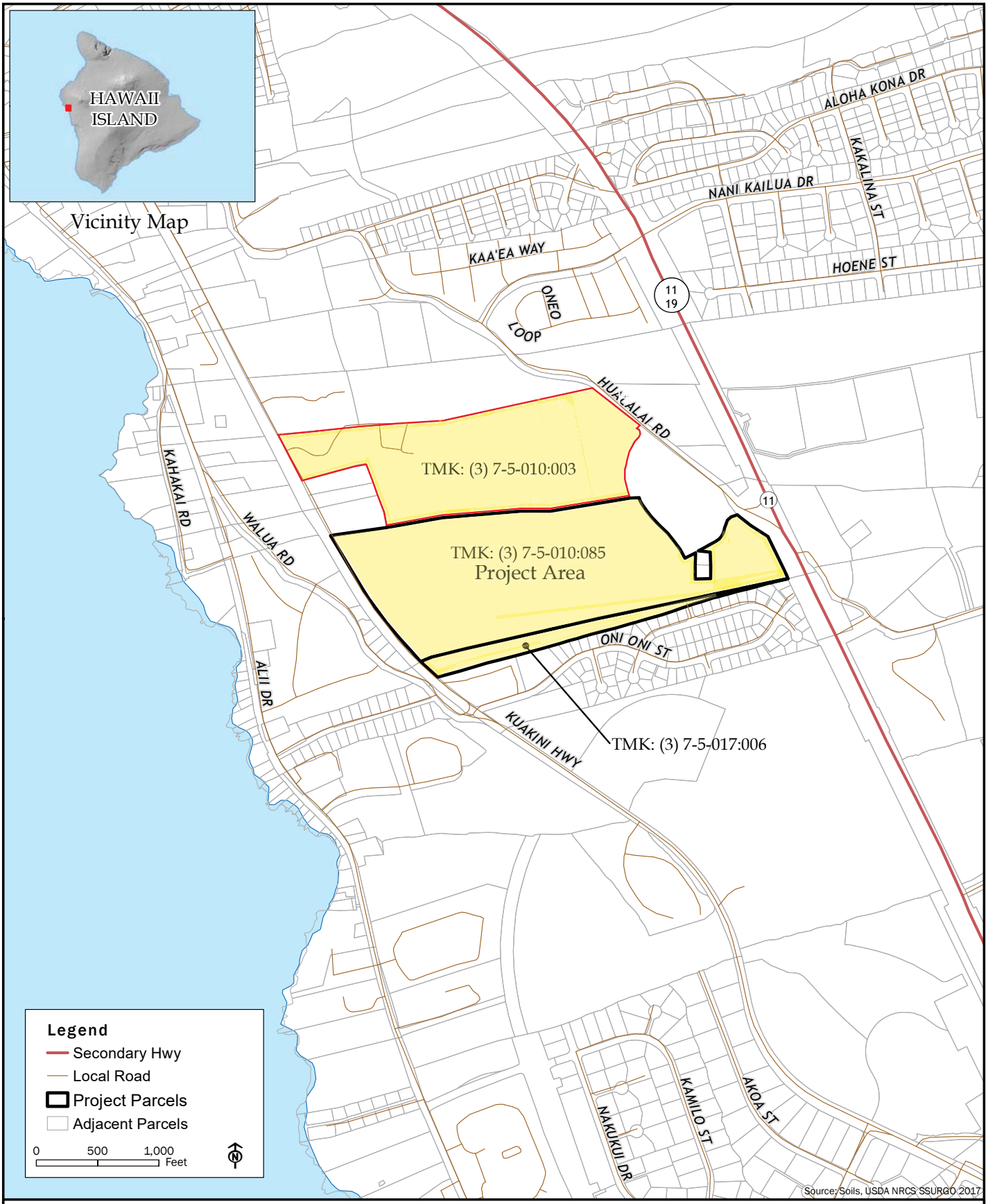

Figure 1: Location Map

219061-01

University of the Nations Campus Expansion

G70

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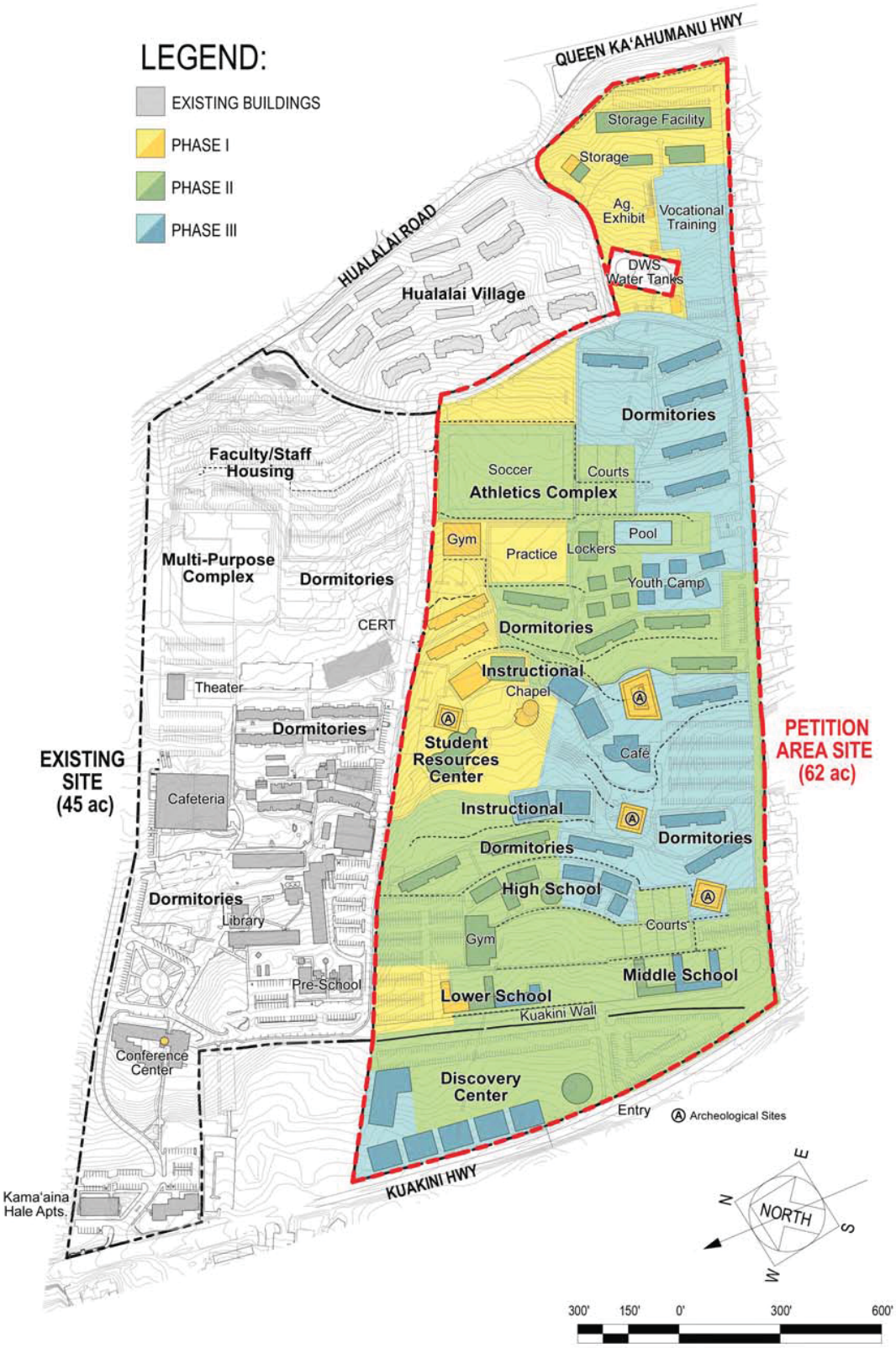
LEGEND:
EXISTING BUILDINGS
PHASE I
PHASE II
PHASE III
QUEEN KA'AHUMANU HWY
HUALALAI ROAD
Hualalai Village
Storage Facility
Storage
Ag. Exhibit
Vocational Training
DWS Water Tanks
Dormitories
Faculty/Staff Housing
Soccer
Courts
Athletics Complex
Gym
Practice
Lockers
Pool
Youth Camp
Multi-Purpose Complex
Dormitories
CERT
Dormitories
Instructional
Chapel
Theater
Dormitories
Student Resources Center
Café
EXISTING SITE (45 ac)
Cafeteria
Instructional
Dormitories
Dormitories
Dormitories
High School
Library
Courts
Gym
Middle School
Pre-School
Lower School
Kuakini Wall
Conference Center
Discovery Center
Entry
Archeological Sites
PETITION AREA SITE (62 ac)
KUAKINI HWY
Kama'aina Hale Apts.
E
N
NORTH
S
W
300'
150'
0'
300'
600'

Figure 2

Table 1: Projected Water Demand **2/25/2020**

	Phase 1 Population (persons)	Phase 2 Population (persons)	Phase 3 Population (persons)	Average Daily Demand [1] (gal/person/day)	Phase 1 Water Demand (GPD)	Phase 2 Water Demand (GPD)	Phase 3 Water Demand (GPD)
P-12 Students (FTE)	500	750	1,000	60	30,000	45,000	60,000
University Students (FTE)	130	345	940	60	7,800	20,700	56,400
TOTAL	630	1,095	1,940	SUBTOTAL	37,800	65,700	116,400
P-12 and University Students (Dorming)	200	1,100	1,400	100	20,000	110,000	140,000
				TOTAL	57,800	175,700	256,400
				WATER UNITS	145	439	641

[1] Average Daily Demand value taken from DWS Water System Standards

Table 1

Figure 3. Tidal Response in the Keopu 2 Monitor Well from March 9 to 12, 2018

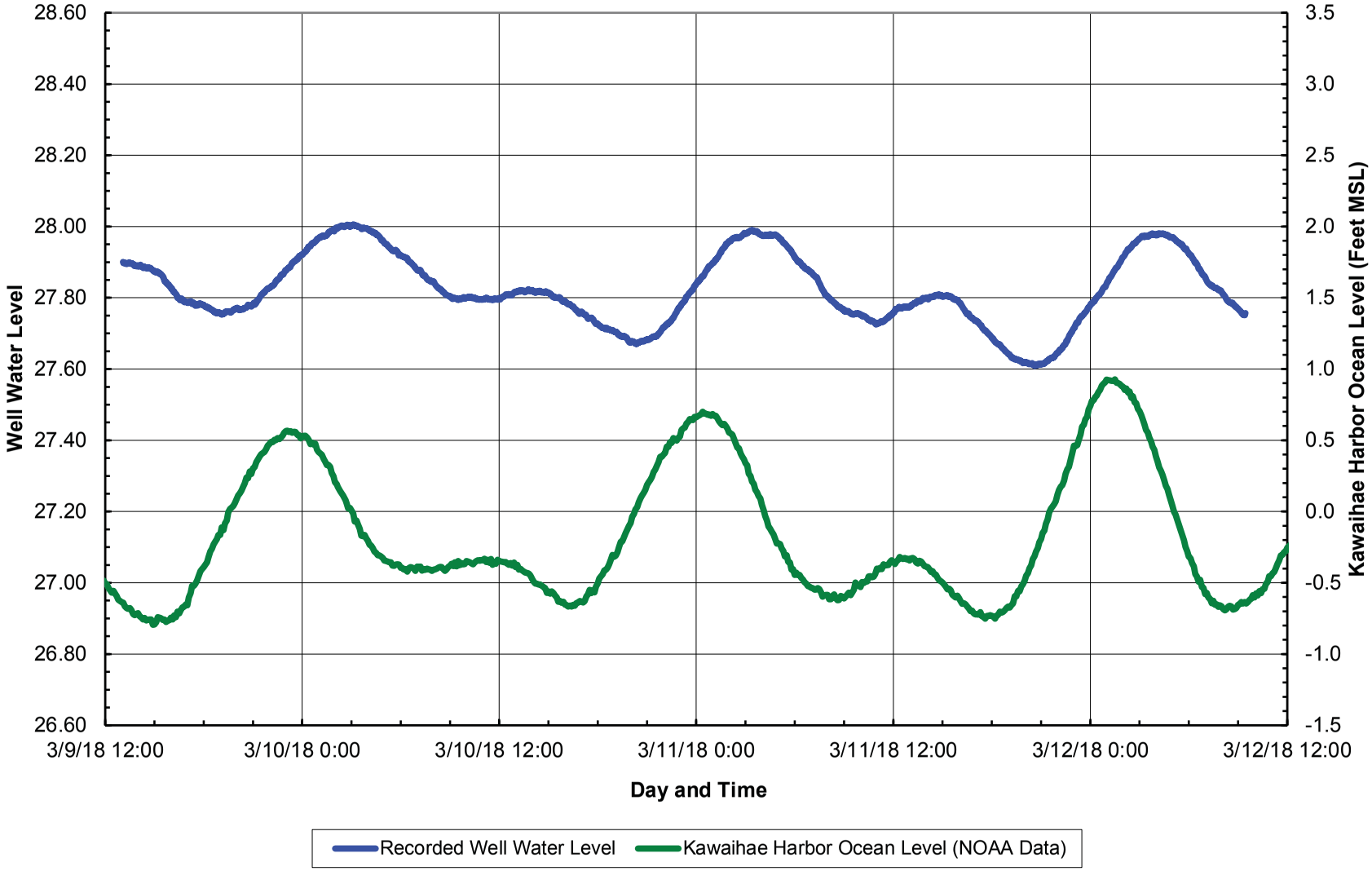

Figure 4. Pumping Rate and Recorded Water Level Response During the 48 Hour Constant Rate Test on March 12 to 14, 2018

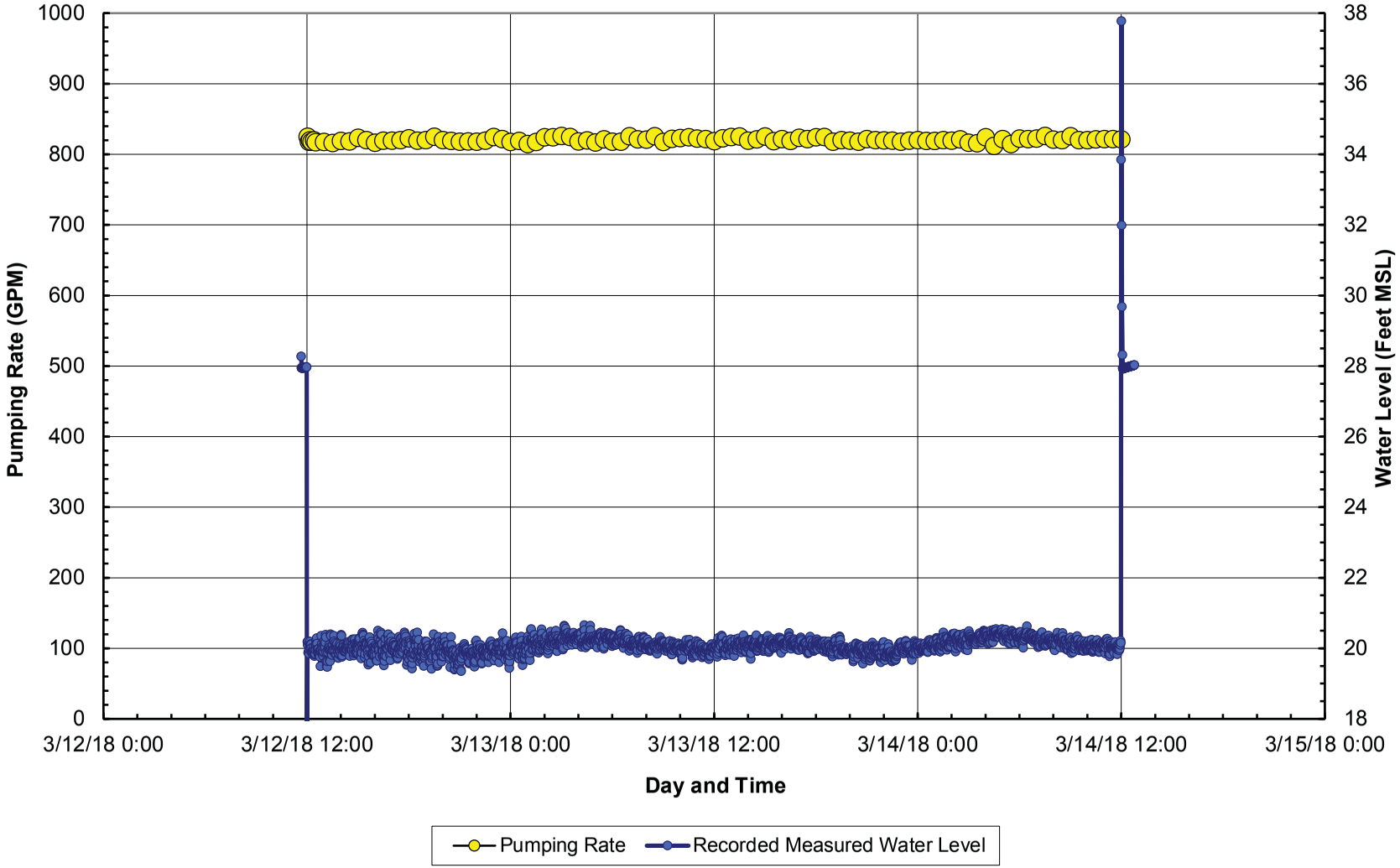

Figure 5. Pumped Water Specific Conductance During the Step Drawdown and Constant Rate Pump Tests on March 12 to 14, 2018

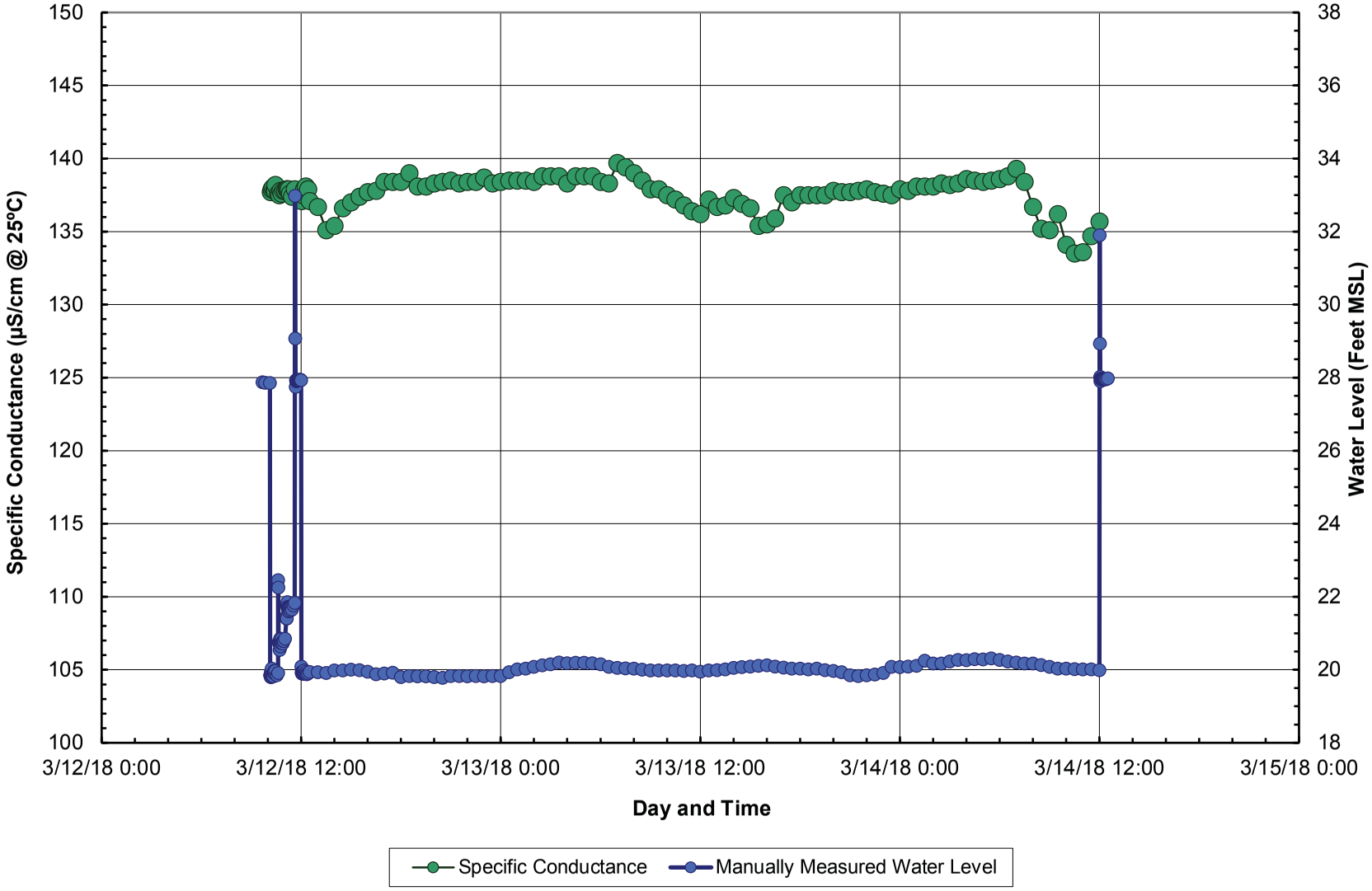

Table 2

Specific Conductance and Chlorides of Samples Collected
During the Step-Drawdown and Constant Rate Pump Tests
of the Keopu 2 Monitor Well

Pump Test	Sample		Specific Conductance (µS/cm @ 25° C.)	Chlorides (MG/L)
	Day	Time		
Step Drawdown	03/12/18	10:12	143.2	4.5
		10:37	140.6	4.5
		11:07	139.9	4.0
		11:37	139.9	4.0
Constant Rate	03/12/18	12:05	140.0	4.1
		18:00	138.8	3.2
	03/13/18	00:00	139.3	3.5
		06:00	139.1	3.4
		12:00	140.0	4.1
		18:00	139.0	3.3
	03/14/18	00:00	139.0	3.3
		06:00	139.1	3.4
		12:00	139.2	3.5

Notes: 1. Specific conductance was measured in the TNWRE office using a HACH Sension 5 meter calibrated with a 447 µS/cm standard.

2. Chlorides determined by mercuric nitrate titration in the TNWRE office.

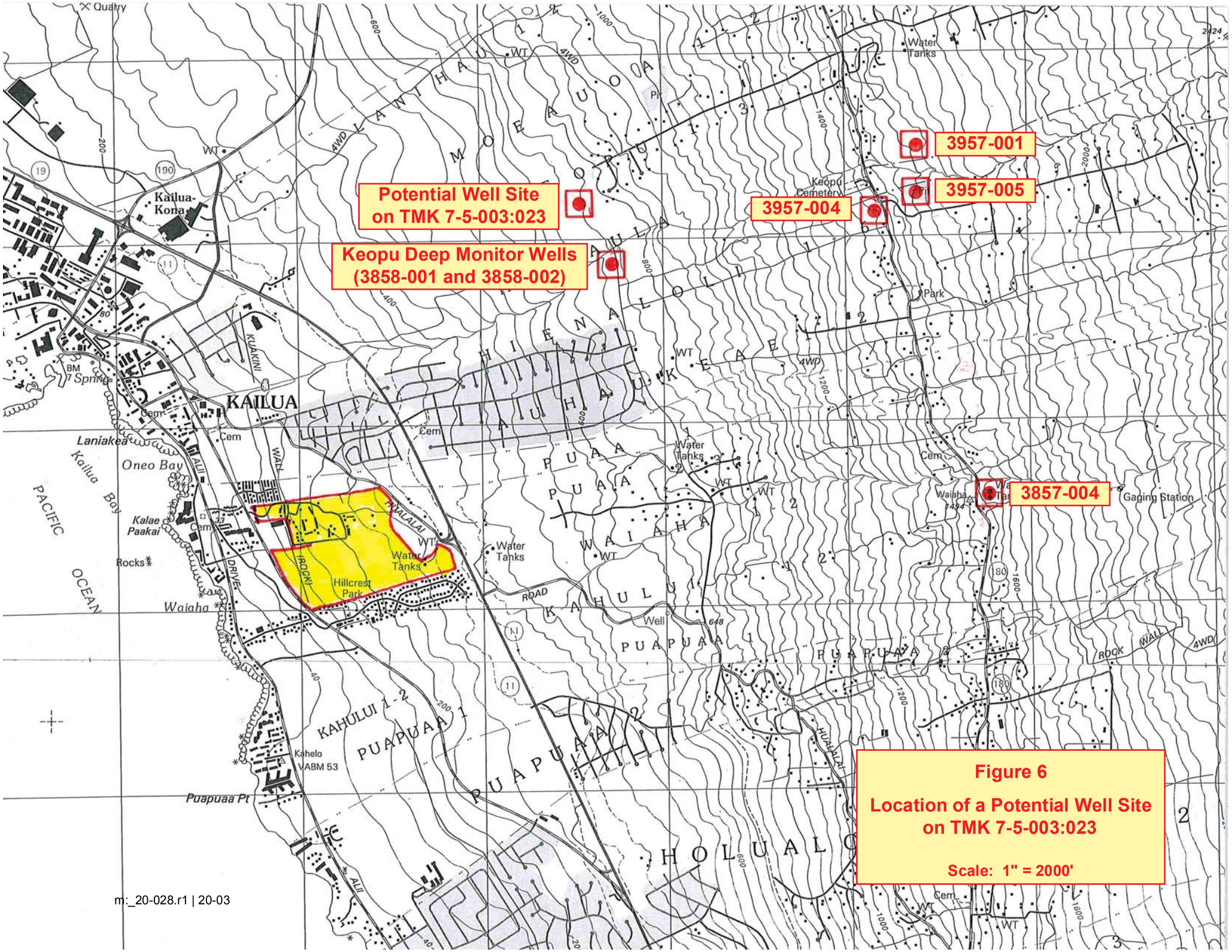

Figure 6

Location of a Potential Well Site on TMK 7-5-003:023

Scale: 1" = 2000'

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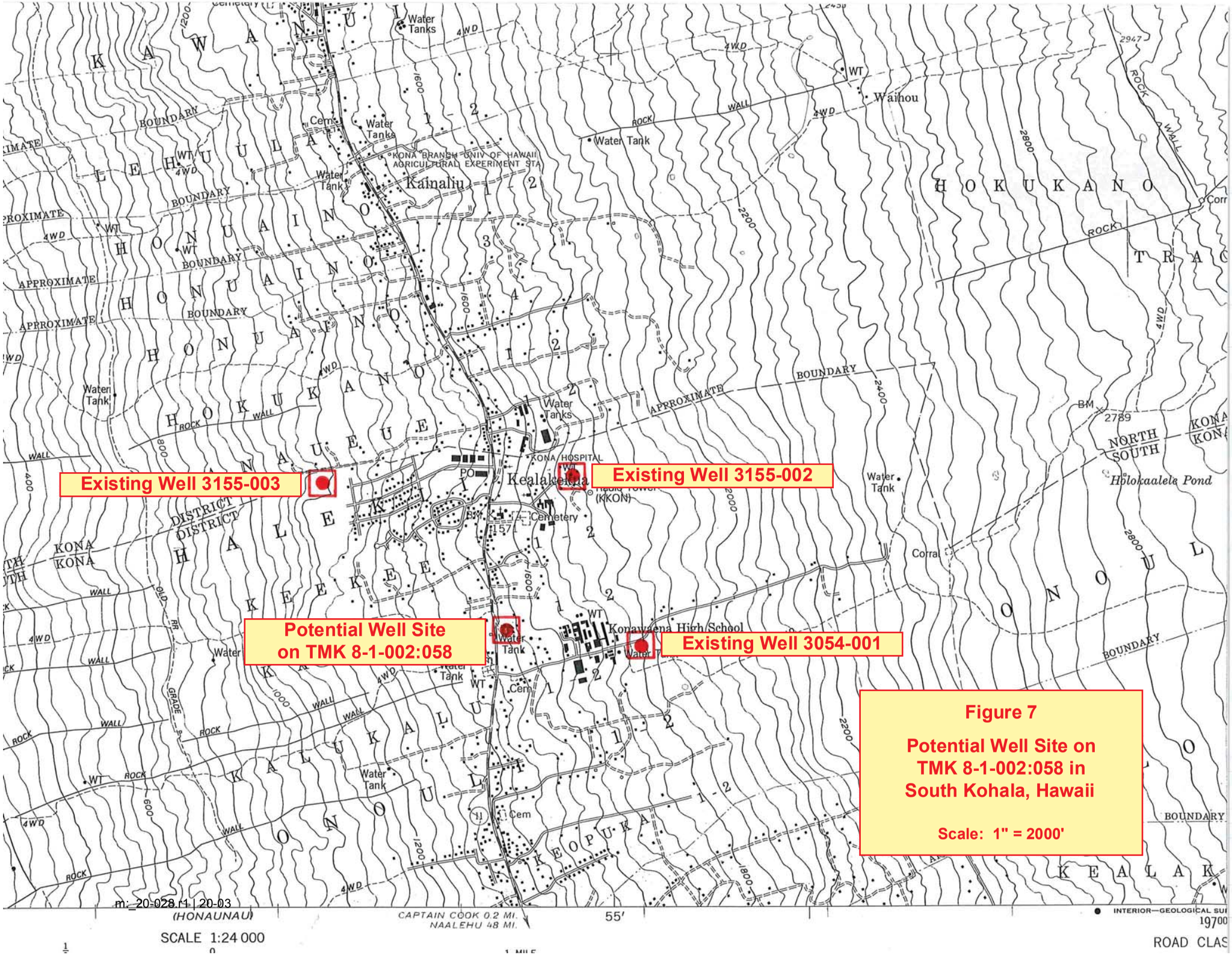

Figure 7

Potential Well Site on TMK 8-1-002:058 in South Kohala, Hawaii

Scale: 1" = 2000'

Pacific Legacy Historic Preservation
Pacific Basin Division
146 Hekili Street, Suite 205
Kailua, HI 96734
Phone: 808.263.4800
Fax: 808.263.4300
www.pacificlegacy.com

July 21, 2025

Ms. Kimberley Salinas
Representative, Hui Kaloko-Honokohau/Hui Ola Ka Wai
huikalokohonokohau@gmail.com

Subject: Ka Paʻakai Analysis for the Department of Water Supply's Proposed Waiʻaha Well B Project, Waiʻaha Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-5-015:015 (por.) and (3) 7-5-014:016 (por.)]

Aloha Ms. Salinas,

Pacific Legacy, Inc. is conducting a Ka Paʻakai Analysis for the Hawaiʻi County Department of Water Supply's (DWS) proposed Waiʻaha Well B Project located in Waiʻaha Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-5-015:015 (por.) and (3) 7-5-014:016 (por.)] (Figure 1 and Figure 2, attached).

Project Background
DWS is responsible for the development, operation, and maintenance of the municipal water systems throughout the Island of Hawaiʻi. In order to satisfy rising demand, DWS needs additional sources of potable water so that it can reduce the load placed on the existing sources within the system. The proposed Waiʻaha Well B Project would add a second production well to the Waiʻaha Well site, which lies within the fenced area of the Waiʻaha Well and Reservoir facility that is owned and operated by DWS (Figure 1 and Figure **2**, attached).

To supply potable water for the North Kona Water System, DWS currently relies on four drilled wells and one inclined shaft at Kahaluʻu, as well as one well each at the following sites: Hōlualoa, Keahuolū, Honokōhau, Keōpū, Palani, Hualālai, Makalei Estates, North Kalaoa, and Waiʻaha. The Waiʻaha Well was constructed by DWS at the current project site in 2004. The sources of supply in this system are groundwater wells and a groundwater shaft. The purpose of the original Waiʻaha Well Project was to develop a production well, reservoir, and related facilities to supply the North Kona District with high-quality potable water. The location of the Waiʻaha Well site is particularly advantageous, as it is close to the center of service and its elevation allows high-level groundwater to be distributed by gravity to most of its end users.

Rapid growth in the area served by the North Kona Water System has required continuous planning and development to ensure that water demands, water quality, operational requirements, and ongoing maintenance needs are met. The Hawaiʻi County General Plan predicted in 2005 that the resident population of North Kona would increase to 42,275 by 2020 and called for the development of additional capacity in North Kona through exploring and developing an additional well in Waiʻaha. The source for the current and proposed Waiʻaha wells is high-level groundwater.

The proposed Waiʻaha Well B Project would include:

1. Adding a second production well (Waiʻaha Well B) and related facilities on a portion of TMK: (3) 7-5-015:015 within the existing DWS Waiʻaha Well and Reservoir Facility.
2. Installing a 700 gallon per minute (GPM) pump driven by a 400 horsepower (HP) submersible motor in the new Waiʻaha Well B.

3. Constructing and operating a new pump control and chlorination building with a 6-ft high chain link security fence around these new components at the existing facility. The footprint of the new building will be approximately 700 square feet.

The total project area is approximately 1.7 acres. The proposed project will also involve clearing, grading, and grubbing of approximately 0.25 acres of land within the project area. Grading is estimated to require excavation of approximately 2,180 cubic yards of soil. In addition, some new electrical conduits and equipment will be included. Hawai'i Electric Light Company Co. (HELCO) already delivers adequate high voltage power to the site to power both the existing and proposed well pumps.

More detailed project information can be found in the Final Environmental Assessment (FEA) for the project (Planning Solutions 2020).

Previous Studies

A Cultural Impact Assessment (CIA) was prepared for the original Wai'aha Well project by Paul H. Rosendahl, Ph.D., Inc. in 2002 (Rosendahl 2002). The CIA included a one-day archaeological reconnaissance survey of the roughly 2.8-acre project area. The reconnaissance survey did not identify any potential historic properties within the project area. The CIA did not identify any valued cultural, historical, or natural resources within the project area and did not find any indication that the project area was in use by cultural practitioners exercising traditional and customary access and use rights. The report concluded that the original Wai'aha Production Well Project would have no significant effects or adverse impacts on cultural resources, and no mitigation measures were necessary.

A Ka Pa'akai Analysis was previously conducted for the currently proposed project (Wai'aha Well B) by ASM Affiliates in 2023 (Barna 2023). The Ka Pa'akai Analysis noted that the project area lies in the Kula zone along the makai edge of the Kona Field System, and was traditionally known as a habitation and agricultural area associated with the cultivation of sweet potatoes, paper mulberry, and gourds. It also acknowledged Kona's abundant fisheries, which include myriad pelagic fish and a fringing reef that is home to a variety of nearshore species. Wai'aha was also known as a favored retreat for Queen Emma and King Kamehameha IV. The report observed that only introduced vegetation was present in the project area, including artillery plant (*Pilea microphylla*) and hairy horseweed (*Conyza canadensis*). The report also recognized the significance of water as a valued cultural and natural resource for its importance in nourishing crops and sustaining life, as well as its spiritual importance and its purifying properties. Although the great significance of water was recognized, the report ultimately determined that the project had a limited potential to affect valued cultural, historical, and natural resources or traditional customary rights. This determination was made primarily because planned rehabilitation of the Wai'aha Well would reduce the pump capacity from 1,400 GPM to 700 GPM. The addition of Wai'aha Well B, also with a pump capacity of 700 GPM, would restore the total pump capacity of the facility to 1,400 GPM, with the primary difference being that this capacity would be spread across two wells instead of concentrated into a single well. The analysis noted that no adverse impacts to high-level groundwater from the Wai'aha Well operating at 1,400 GPM have been observed. In addition, because the source for the proposed Wai'aha Well B Project is high-level groundwater rather than basal groundwater, the analysis anticipated no impacts to the shoreline environment. The analysis recommended that the existing network of monitoring wells already in use in the Keauhou Aquifer System Area (KASA) be used to identify and reassess potential impacts to the high-level source, or unexpected changes in groundwater levels or quality.

Ka Paʻakai Analysis
The purpose of a Ka Paʻakai Analysis is to assist the State of Hawaiʻi in fulfilling its obligation to protect "all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights" (Article XI, Section 7 of the Constitution of the State of Hawaiʻi). It requires that the following specific findings and conclusions be addressed:

(1) The identity and scope of valued cultural, historical, or natural resources within the project area, including the extent to which traditional and customary native Hawaiian rights are exercised;
(2) The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and
(3) The feasible action, if any, to be taken by the Land Use Commission to reasonably protect native Hawaiian rights if they are found to exist.

We are reaching out to you for this analysis because you have been identified as a source of knowledge in Waiʻaha Ahupuaʻa or the broader Keauhou Aquifer System Area (KASA), and we are seeking your kōkua regarding the above three queries. We are seeking any information related to the following components of our study:

- Cultural associations of Waiʻaha Ahupuaʻa such as moʻolelo or connections to legendary accounts.
- Knowledge of past and present land use within and near the project area.
- Knowledge of past and present traditional gathering practices in Waiʻaha Ahupuaʻa, and within the areas covered by the KASA.
- Knowledge of cultural resources which may be impacted by the proposed project, including traditional plant and animal gathering sites, traditional access trails, archaeological sites, historic sites, wahi pana, and iwi kūpuna.
- Any other cultural concerns that community members may have in relation to traditional Hawaiian or other cultural practices within or near the proposed project area.
- Referrals to other knowledgeable individuals who may be willing to share their cultural knowledge of the proposed project area, Waiʻaha Ahupuaʻa, and the areas covered by the KASA.

Please contact me via telephone at 808-263-4800 or via email at mulrooney@pacificlegacy.com if you have any questions, or if you would like to share your ʻike and manaʻo to assist with this assessment. If you have suggestions for other knowledgeable individuals or organizations, we would appreciate you sharing contact information with us. We kindly request that you express your interest in participating by August 4, 2025. We look forward to hearing from you soon.

Mahalo piha,

Mara A. Mulrooney, Ph.D.
Principal, Senior Archaeologist

Attachments: References, Project Figures

References

Barna, B.
2023 *Waiʻaha Well B Project TMK: (3) 7-5-014:016 and 7-5-015:015 Ka Paʻakai O Ka ʻĀina Analysis*. ASM Affiliates, Honolulu.

Planning Solutions
2020 *Final Environmental Assessment & Finding of No Significant Impact, Waiʻaha Well B Project*. Planning Solutions, Honolulu.

Rosendahl, P.H.
2002 *Cultural Impact Assessment for Draft Environmental Assessment, Waiʻaha Production Well and Storage Tank Project.* Pau l H. Rosendahl, Ph.D., Inc., Hilo.

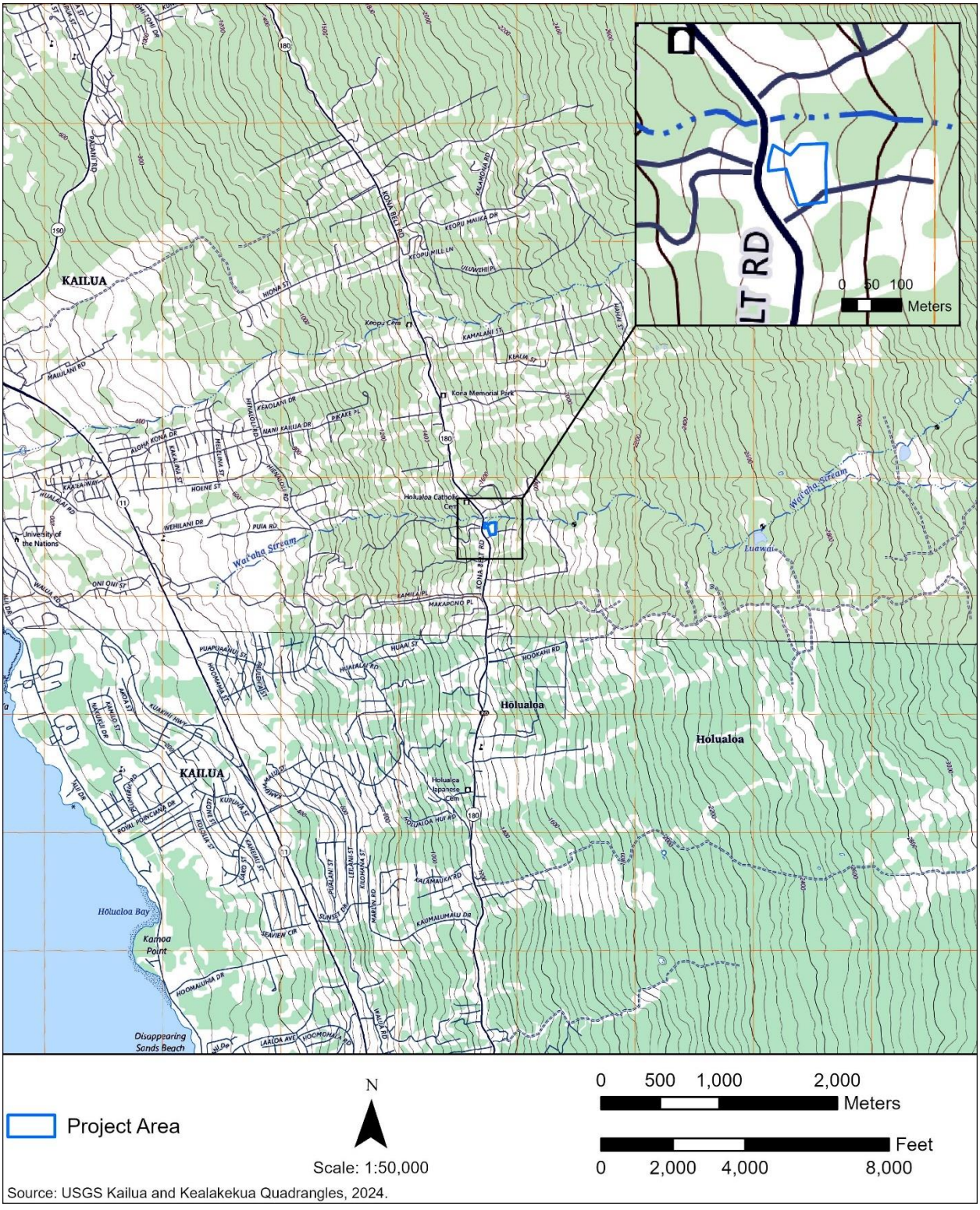

Figure 1. Location of the proposed Wai‘aha Well B Project Area.

Figure 2. The proposed Wai‘aha Well B Project Area with surrounding TMKs labeled.

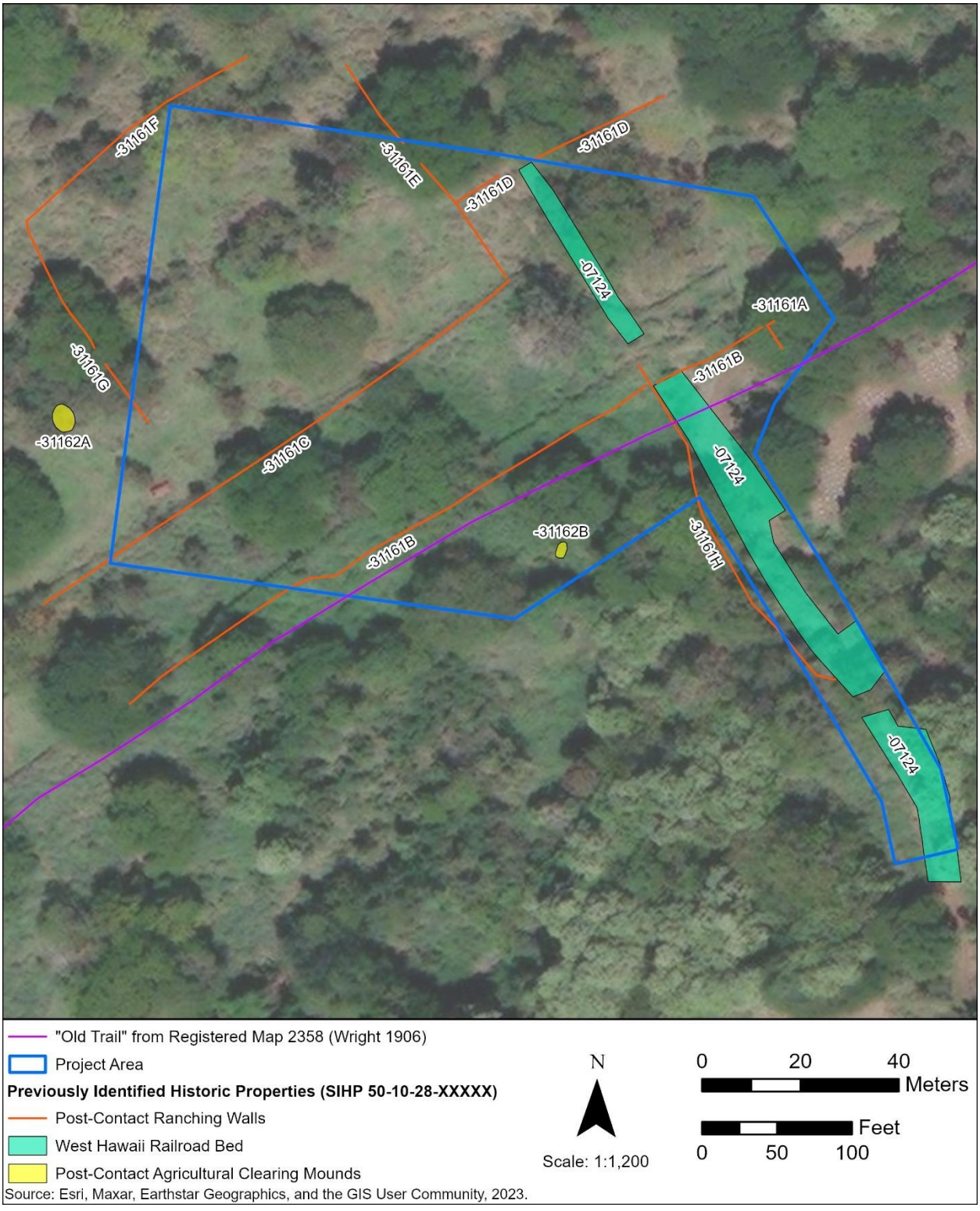

Figure 3. Historic properties identified within the proposed North Kona Mid-Level Exploratory Well Project Area. The "old trail" was identified on a 1906 survey map by Wright (RM 2358), but was not re-located during the AIS fieldwork for the project.

Pacific Basin — Oʻahu
146 Hekili Street, Suite 205
Kailua, HI 96734

Phone: 808.263.4800
Fax: 808.263.4300
www.pacificlegacy.com

September 13, 2023

Hui Ola Ka Wai
c/o Kimberly Salinas and Loke Aloua
huikalokohonokohau@gmail.com

Subject: Ka Paʻakai Analysis for the Proposed Mid-level Well Project Located on Liliʻuokalani Trust Lands, Keahuolū Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-4-008:001 (por.)]

To Whom It May Concern:

Pacific Legacy, Inc. is conducting a Ka Paʻakai Analysis for the proposed Mid-level Well Project located on Liliʻuokalani Trust lands in Keahuolū Ahupuaʻa, District of North Kona, Island of Hawaiʻi [TMK: (3) 7-4-008:001 (por.)].

The potential well site would utilize approximately 1.15 acres within a portion of TMK: (3) 7-4-008:001 on the south side of Palani Road adjacent to the existing County of Hawaii Department of Water Supply (DWS) tanks (Enclosure Figure 1).The project consists of a potential water well site adjacent to the existing DWS tanks at 595 ft. in elevation (Enclosure Figure 2). The well site will be cleared, grubbed, and graded. The potential well will be excavated until the water table is reached.

An archaeological field inspection with 100% surface survey coverage of the proposed project area was completed by two Pacific Legacy archaeologists on two separate occasions (January 2021 and October 2021). The inspection did not identify any potential historic properties within the project area. Based on the results of this 100% pedestrian survey, it is unlikely that any historic properties are located within the project area, much of which was graded when the DWS water tanks were installed.

The purpose of a Ka Paʻakai analysis is to assist the State of Hawaiʻi in fulfilling its obligation to protect "all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights" (Article XI, Section 7 of the Constitution of the State of Hawaiʻi). It requires that the following specific findings and conclusions be addressed:

(1) The identity and scope of valued cultural, historical, or natural resources within the project area, including the extent to which traditional and customary native Hawaiian rights are exercised;
(2) The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and
(3) The feasible action, if any, to be taken by the Land Use Commission to reasonably protect native Hawaiian rights if they are found to exist.

We are reaching out to you for this assessment because you have been identified as a source of knowledge in Keahuolū, and we are seeking your *kōkua* regarding the above three queries. We are seeking any information related to the following components of our study:

- Cultural associations of Keahuolū Ahupua‘a such as *mo‘olelo* or connections to legendary accounts.
- Knowledge of past and present land use within and near the project area.
- Knowledge of past and present traditional gathering practices in Keahuolū.
- Knowledge of cultural resources which may be impacted by the proposed project, including traditional plant and animal gathering sites, traditional access trails, archaeological sites, historic sites, and burials.
- Any other cultural concerns that community members may have in relation to traditional Hawaiian or other cultural practices within or near the proposed project area.
- Referrals to other knowledgeable individuals who may be willing to share their cultural knowledge of the proposed project area and wider Keahuolū Ahupua‘a.

Please contact me via telephone at 808-263-4800 or via email at swift@pacificlegacy.com if you have any questions. If you would like to share your ‘*ike* and *mana‘o* to assist with this assessment, please call the above number or respond via email to swift@pacificlegacy.com indicating that you would like to participate. If you have suggestions for other knowledgeable individuals or organizations, we would appreciate you sharing contact information with us. We look forward to hearing from you soon.

Mahalo piha,

Jillian A. Swift, Ph.D.
Project Manager, Archaeologist
Enclosures

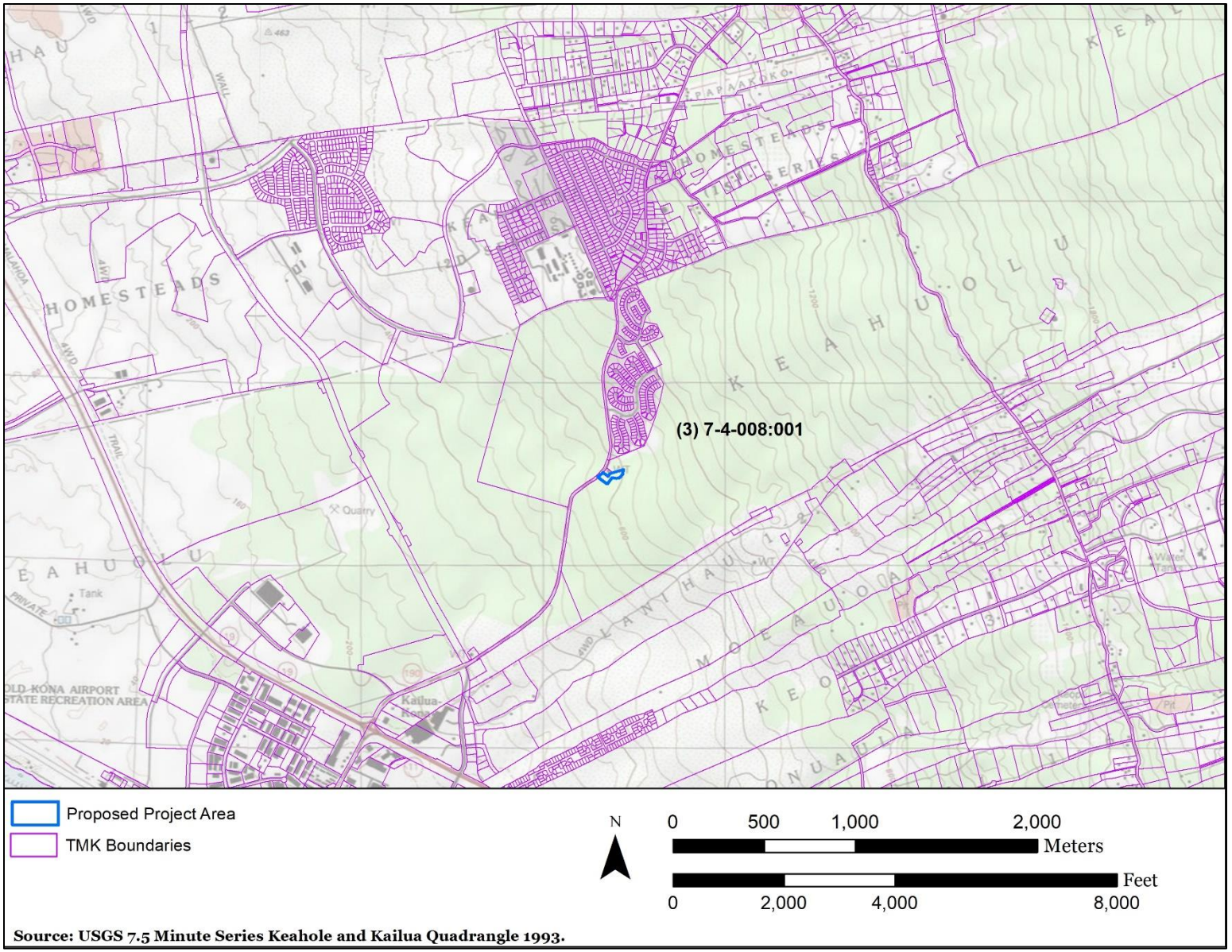

Figure 1. Location of the Proposed Well Project with TMK parcels.

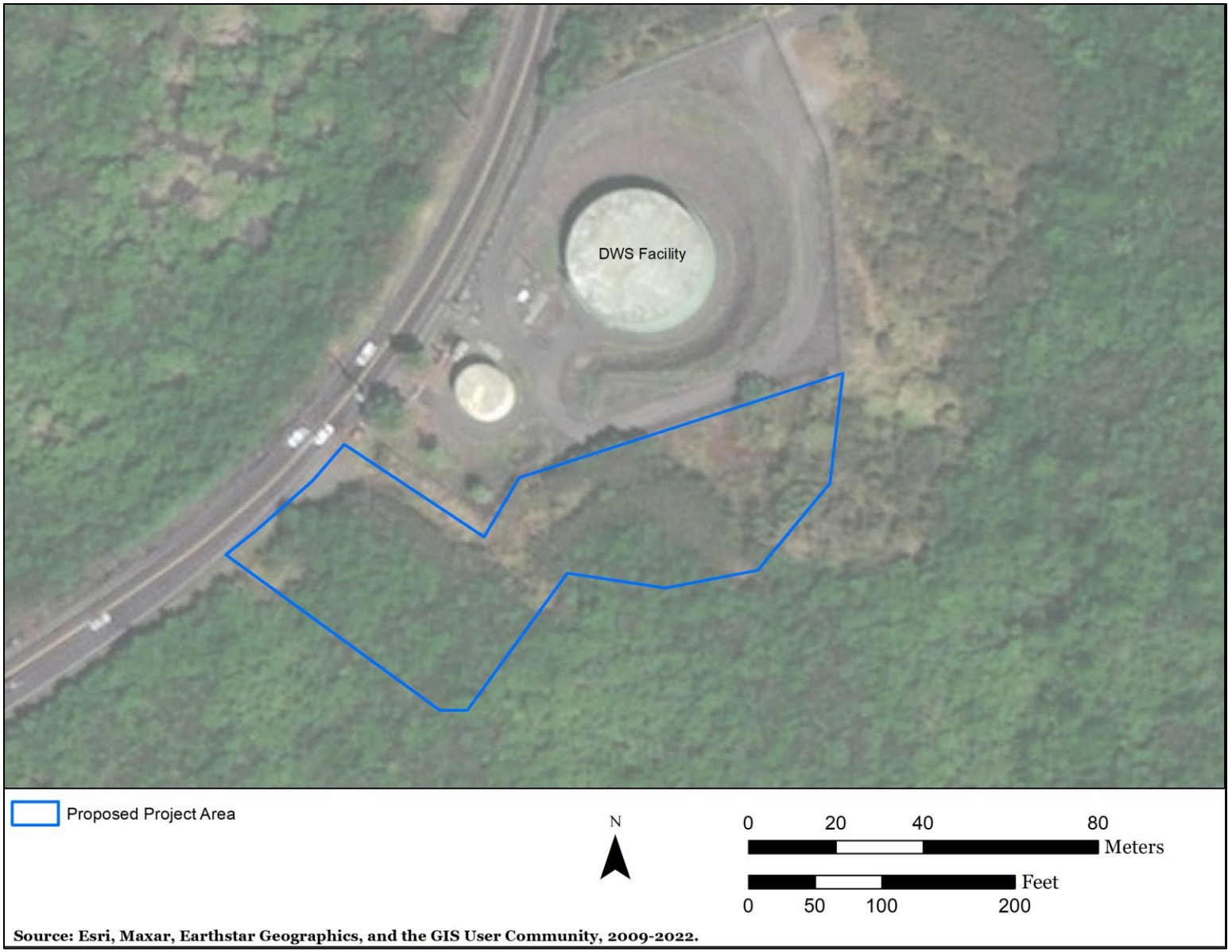

Figure 2. Proposed Well Project Area on aerial photograph (Google Earth).

From: Starlani Manila
To: DLNR.CW.DLNRCWRM
Subject: [EXTERNAL] Kona Water
Date: Monday, August 18, 2025 8:14:51 PM

I am new to all of this so my letter is strictly based on my emotions. I grew up in Kona. Raised my ohana in Kona and in my lifetime alone there are so many developments: shopping centers, townhomes, hotels, industrial parks. And yet they still want to build. And then they will sell. And then they will leave. They took away our shoreline with homes and hotels that are leaching into our ocean. And now they want to go higher up our mauna and blemish her with more buildings. When do we say enough is enough...It is my hope that no laws or regulations are changed that will make it easier for development to happen. No loopholes or approvals due to technicalities. I worry about Ooma and Kaloko, Kahaluu and Kailua bay, Keahole and Mahaiula. It saddens me that i need to make a reservation to camp with my children, or get up before sunrise to find a parking stall to take my keiki swimming. I cant even take my kupuna mom to many spots because its too difficult for me to get her there. Please stop trading our water for dollar bills. We need to protect our coastline, our ponds and our future.

Thank you.

United States Department of the Interior
NATIONAL PARK SERVICE
Kaloko-Honokōhau National Historical Park
73-4786 Kanalani Street, # 14
Kailua-Kona, Hawai‘i 96740

IN REPLY REFER TO:

Resource Management, Water Matters 1.A.1

August 19, 2025

Dawn N. S. Chang, Chairperson
Ciara W. K. Kahahane, Deputy Director
State of Hawai‘i Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawai‘i 96809

Dear Chair Chang and Deputy Director Kahahane,

Kaloko-Honokōhau National Historical Park (Kaloko-Honokōhau, or the Park) is pleased to inform you that we are very supportive of the Commission’s current initiative to develop an adaptive management plan for the Keauhou Aquifer System Area (KASA).

As the Commission and Staff are aware, Kaloko-Honokōhau has been working actively for several decades to better understand the relationships between aquifer systems, how effects of groundwater withdrawal extend between aquifer systems, and the quantity of freshwater flow needed through the near-shore area to maintain groundwater dependent ecosystems that support traditional and customary practices of Native Hawaiians.

We appreciate that the July 15, 2025 Staff Submittal to the Commission requesting approval to proceed with an adaptive management plan recognizes the 1974 *Spirit of Kaloko-Honokōhau* report and the Park’s 2013 petition to designate the Keauhou Aquifer System as a groundwater management area. We suggest it would be advantageous to the community at large to also reference the two reports submitted to the Commission in 2015 (*Information on Traditional Cultural and Customary Practices*, and *Report to the Commission regarding the Quantity of Water Needed to Support Natural and Cultural Resources in the Park*). We also believe that previous efforts by the Park to develop an adaptive management plan in cooperation with Commission staff will be of value in formulating this plan for the KASA, particularly with

regard to proposing monitoring protocols, assessment methods, and management actions to be implemented based on agreed triggers.

In addition, the Park strongly supports updating the Hawai‘i Water Plan with respect to sustainable yields for the entire KASA, followed by updating and finalizing the Keauhou Water Use and Development Plan in 2026, as recommended by Commission staff.

In recent years, much interest has been expressed in withdrawing groundwater from the deep confined freshwater system. In multiple discussions with Commission Staff during the past two years, the Park has advocated for the Commission and scientific community to follow the precautionary principle and be judicious in systematic exploration and evaluation of this deep system. There is much to learn regarding the extent and hydrologic characteristics of the deep confined freshwater system before the Commission and County are able to understand the short- and long-term effects of groundwater withdrawal. The Park recommends that (1) before development occurs the Commission lead a scientific effort to further understand the deep confined freshwater system, and (2) groundwater monitoring implemented as part of the adaptive management plan include methods to evaluate hydrologic connections between the basal, high level, and deep confined systems.

We very much appreciate the opportunity to inform you of our position and reiterate that the Park will be pleased to be of assistance to the Commission and partners for this proposed adaptive management plan. If you have questions or desire further information you may reach me by phone at 808-329-6881 ext. 1201 or by email at Paul_Scolari@nps.gov.

Sincerely,

PAUL SCOLARI

Digitally signed by PAUL SCOLARI
Date: 2025.08.19 11:16:55 -10'00'

Paul Scolari, Ph.D., Superintendent
Kaloko-Honokōhau National Historical Park