COMMISSION ON WATER RESOURCE MANAGEMENT
STATE OF HAWAI‘I

In Re: Chairperson Recommendation	)
to designate Lahaina Aquifer Sector	)
Area as Surface and Ground Water	)
Management Areas	)

UKUMEHAME, OLOWALU, LAUNIUPOKO, HONOKŌWAI, HONOLUA, and HONOKŌHAU
Ground Water Hydrologic Units
UKUMEHAME, OLOWALU, LAUNIUPOKO, KAUA‘ULA, KAHOMA, WAHIKULI, HONOKŌWAI, KAHANA, HONOKAHUA, HONOLUA, and HONOKŌHAU
Surface Water Hydrologic Units

SURFACE AND GROUND WATER MANAGEMENT AREA DESIGNATION

FINDINGS OF FACT REPORT

Commission on Water Resource Management
Department of Land and Natural Resources
June 8, 2022

PREFACE

These FINDINGS OF FACT has been prepared for the Commission on Water Resource Management (Commission) for its consideration in designating the entire Lahaina Aquifer Sector Area (Lahaina ASA), Maui as a surface and ground water management area under the authority of Chapter 174C, HRS.

These FINDINGS OF FACT summarize the Commission staff investigations and research, comments from consultation with the County of Maui, the public's written and oral comments received at Commission meetings, the public hearing, and other existing information on file with the Department of Land and Natural Resources.

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SUMMARY

The Chairperson initiated proceedings to designate the entire Lahaina ASA, Maui as both a Surface Water and Ground Water Management Area based on threats to water resources as identified from factual data and staff investigations and the Commission accepted the Chairperson's recommendation to designate (Hawaii Revised Statutes § 174C-41).

This document reviews the water resource situation in the Lahaina ASA and makes FINDINGS OF FACT based upon information on file in the Commission offices, the research and investigation of staff, the written and oral comments submitted at Commission meetings and the public hearing, and other planning and scientific literature.

From the analysis of public testimony, current, and future water resource conditions related to the Lahaina ASA, this report makes the following conclusions:

It can be reasonably determined that existing and proposed withdrawals threaten streams and aquifers.

Harm to Ground Water Quantity and Quality by Saltwater Intrusion

Current and authorized planned uses of the Honokōwai and Launiupoko aquifer systems either exceed or approach 90% of sustainable yields and threaten the aquifer due to saltwater intrusion of the freshwater lens. Maui County Department of Water Supply projects a 67% increase in potable water consumption in the Lahaina District by 2035, from 10.819 million gallons per day (mgd) in 2020 to 15.554 mgd, based on population growth and community planned development timelines.[1] This demand is currently being met with a mixture of surface water and ground water, which is likely to continue.

Serious Historic and Ongoing Disputes over Current and Planned Uses are Occurring

The use of water for non-public trust purposes is affecting the availability of water to meet public trust needs. Instream values, including water needed to support traditional and customary practices, domestic water uses, recreational uses, and native aquatic biota, have historically, currently, and will continue to be harmed if the Commission does not consider additional protective actions.

Climate Uncertainty – Drought and Decline in Rainfall

Rainfall has declined significantly across the Lahaina District, particularly during the dry season.[2] Anticipated declines in rainfall based on future projections will negatively affect ground water recharge and streamflow,[3] reducing the water availability.[4]

[1] Maui County Water Use and Development Plan ("WUDP") 2022.
[2] Frazier, A.G., and T.W. Giambelluca. 2017. Spatial trend analysis of Hawaiian rainfall from 1920 to 2012. International Journal of Climatology, 37(5): 2522-2531.
[3] Elison Timm, O., *et al*. 2015. Statistical downscaling of rainfall changes in Hawai'i based on the CMIP5 global model projections. Journal of Geophysical Research: Atmospheres, 120(1): 92-112.
[4] Mair, A. *et al*. 2019. Estimated groundwater recharge from a water-budget model incorporating selected climate projections, Island of Maui, Hawai'i. USGS SIR 2019-5064.

Enhanced Management and Protection Through Integration of Surface and Ground Water Uses

Water use in the Lahaina Aquifer Sector (see Figure 1) and its associated surface water hydrologic units (see Figure 2) (referred to hereafter as the Lahaina District) is reliant on a combination of surface water diversions and ground water wells. Throughout the Lahaina District, there is an inextricable relationship between surface water and ground water, both in their source and in their use, such that reductions in the availability of one, affects the use and availability of the other. As interim instream flow standards are implemented, the availability of surface water to meet the non-potable needs of the Lahaina District has declined, resulting in the construction of new wells to meet non-potable demand. However, such usage may threaten public trust uses including the domestic needs supplied by existing wells and the needs of the Department of Hawaiian Home Lands in these same aquifers. Water Management Area designation will ensure that the Commission can regulate and manage surface water and ground water in an integrated manner to protect water resources in the Lahaina District.

1. PURPOSE

This Findings of Fact Report (FOF) has been prepared for the Commission on Water Resource Management (Commission) in accordance with §§ 174C-43 to -46 of Hawai‘i Revised Statutes (HRS). This document presents the findings relative to the eight ground water designation criteria as specified in HRS § 174C-44, the three surface water designation criteria as specified in HRS § 174C-45, and other factors for the Commission to consider in its decision whether to establish administrative control over the ground and surface waters in the area to ensure protection and reasonable-beneficial use of these public trust resources. This report should facilitate the Commission’s decision of designating the Lahaina Aquifer System Area (ASA) as a Surface and Ground Water Management Area.

2. LEGAL AND HISTORIC CONTEXT OF DESIGNATION

2.1 Cultural Context for Water Use and Management in Hawai‘i

Before the documented arrival of westerners in about 1778, fresh water was a foundational source of life in Hawai‘i. Continuous ma uka to ma kai (from the mountains to the ocean) stream flow provided water for drinking, supported traditional agriculture and aquaculture, recharged ground water levels, fed punawai (fresh water springs) and wetlands, and sustained productive estuaries and fisheries by both bringing nutrients from the uplands to the sea and providing a travel corridor so that native stream animals could migrate between the streams and ocean and complete their life cycles. Water was also revered as a kinolau (physical manifestation) of Kāne, one of the Hawaiian pantheon’s four principal akua (gods, ancestors). Traditional mo‘olelo (stories or history) explain that Kāne brought forth fresh water from the earth and traveled throughout the archipelago with Kanaloa (another principal akua), creating springs and streams, many of which continue to flow today. Kānaka Maoli relied on streams and springs to satisfy many needs. One principal need was to ensure sufficient flow of fresh water to cultivate the staple crop kalo (*Colocasia esculenta* or taro). Other needs included sustaining natural systems and fisheries, as well as enabling cultural, religious, and other practices based upon free-flowing water resources.

Given these important purposes, much of traditional Kānaka Maoli law or kānāwai developed around the management and use of fresh water. Water was a public trust resource and could not be commodified or reduced to physical ownership, which means that no one – not even

aliʻi (leaders) – could own water. Instead, aliʻi managed fresh water for the benefit of present and future generations through engineering and management that ensured maximum benefits without compromising the long-term health of the resources. Under the aliʻi nui, konohiki (resource managers) stewarded ahupuaʻa (loosely defined as watersheds) or smaller land divisions including ʻili or kū. Konohiki appointed kahuwai (water stewards or superintendents) to manage water distribution within and between land divisions.

The management of fresh water resources changed dramatically with the establishment and expansion of plantation agriculture, including sugar and pineapple. Massive ditch systems were constructed on most of the major islands to transport water from wet, Windward communities to drier Central and Leeward plains, and ground water wells were developed to supplement surface water systems. Despite early written Kingdom laws that formalized and translated Hawaiian custom and tradition, including Kānaka Maoli concepts of the public trust, large agricultural plantations increased their influence and soon controlled a significant portion of Hawaiʻi's resources. The law itself was also subject to western influence over time, and cases during Hawaiʻi's Kingdom and territorial periods also began to reflect increasingly western approaches to water use and management. Conflict ensued between and among Kānaka Maoli and others, especially plantation interests.

After about a century of plantation agriculture's monopoly over Hawaiʻi's ground and surface water resources, a movement resurfaced in the 1960s and 1970s to return water use to public management and control. A series of cases in both the state and federal court systems ultimately reaffirmed that Hawaiʻi's water resources are held in trust and should be managed for the benefit of present and future generations.[5] These cases also highlighted the need for a more comprehensive and equitable management system. The 1978 Hawaiʻi State Constitution was instrumental in this regard and established a new legal regime for water resource management.

2.2 Hawaiʻi Constitution and Public Trust

The Hawaiʻi State Constitution mandates the state to "conserve and protect Hawaii's natural beauty and all natural resources [...] and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State." Article XI, Section 1. Additionally, the State "has an obligation to protect, control, and regulate the use of Hawaii's water resources for the benefit of its people." Article XI, Section 7.

Article XII, Section 7 proclaims: "The State reaffirms and shall 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 rights of the State to regulate such rights."

The Hawaiʻi Supreme Court examined applicable Constitutional provisions and the Water Code in a series of cases, which clarified the Commission's kuleana in upholding the public trust. The public trust imposes "a dual mandate of 1) protection and 2) maximum reasonable and

[5] *See McBryde Sugar Co. v. Robinson*, 54 Haw. 174, 504 P.2d 1330 (1973). (*McBryde*)

beneficial use."[6] This establishes an "affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible."[7] The Commission is the "primary guardian of public rights under the trust." Haw. Const. art. XI, Section 7. The Commission, therefore, must not relegate itself to the role of a mere "umpire passively calling balls and strikes for adversaries appearing before it," but instead must take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decision making process."[8]

The Court has identified a handful of public trust purposes: environmental protection (water in its natural state); traditional and customary Native Hawaiian rights; appurtenant rights; domestic water uses; and reservations for the Department of Hawaiian Home Lands.[9] Public trust purposes have priority over private commercial uses, which do not enjoy the same protection. The public trust dictates that "any balancing between public and private purposes must begin with a presumption in favor of public use, access, and enjoyment" and "establishes use consistent with trust purposes as the norm or 'default' condition."[10] After all, "[u]nder the public trust, the state has both the authority and duty to preserve the rights of present and future generations in the waters of the state."[11] The public trust also requires planning and decision making from a global, long-term perspective.[12]

The public trust also prescribes a higher level of scrutiny for private commercial uses.[13] The Commission, therefore, must closely examine requests to use public resources for private gain to ensure that the public's interest in the resource is fully protected.[14]

At bottom, the public trust provides independent authority to guide the Commission in fulfilling its mandates. The Hawai'i Supreme Court explained:

> The Code and its implementing agency, the Commission, do not override the public trust doctrine or render it superfluous. Even with the enactment and any future development of the Code, the doctrine continues to inform the Code's interpretation, define its permissible "outer limits," and justify its existence. To this end, although we regard the public trust and Code as sharing similar core principles, we hold that the Code does not supplant the protections of the public trust doctrine.[15]

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[6] *In re Water Use Permit Applications*, 94 Hawai'i, 97, 139, 9 Pd.3, 409, 451 (2000). (*Waiāhole I*)
[7] *Id.* at 141, 9 P.3d at 453.
[8] *Id.* at 143, 9 Pd.3 at 455.
[9] *Id.* at 137-39, 9 P.3d at 449-51; *In re Wai'ola o Moloka'i*, 103 Hawai'i 401, 431, 83 P.3d 664, 694 (2004). (*Wai'ola)*
[10] *Waiāhole I*, 94 Hawai'i at 142, 9 P.3d at 454.
[11] *Id.* at 141, 9 P.3d at 453.
[12] *Id.* at 143, 9 Pd.3 at 455.
[13] *Id.* at 142, 9 P.3d at 454.
[14] *See id.*
[15] *Id.* at 133, 9 P.3d at 445.

2.3 Precautionary Principle

The Commission's duties under the constitution and State Water Code embody the precautionary principle, which holds that scientific uncertainty "should not be a basis for postponing effective measures to prevent environmental degradation."[16] Rather, the Commission as a trustee has a duty to take anticipatory action to prevent harm to public resources. "[A]t minimum, the absence of firm scientific proof should not tie the Commission's hands in adopting reasonable measures designed to further the public interest."[17] In endorsing the precautionary principle, the Hawai'i Supreme Court rejected the requirement of scientific certainty before acting to protect public trust purposes, noting that to do so will often allow for only reactive, not preventive regulation.

2.4 State Water Code

The State Water Code (Code), HRS chapter 174C, part IV, Regulation of Water Use, provides that the Commission *shall* designate an area once a *reasonable determination* is made – based on scientific investigation and research – that water resources in an area are threatened by existing or proposed withdrawals or diversions of water. Once that determination is made, the Commission shall designate the area for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface waters in the area to ensure reasonable-beneficial use of the water resources in the public interest. HRS § 174C-41 (a). (Emphasis added)

The process to designate a ground and surface water management area is described in HRS §§ 174C-41 to -46 and Hawai'i Administrative Rules (HAR) § 13-171-3 to -9. The process follows these general steps:

(1) Recommendation to designate by the Chairperson or by written petition; HRS § 174C-41 (b).
(2) Consultation with County Council, County Mayor, and County Water Board concerning the recommendation or petition HRS § 174C-41 (b).
(3) Commission action to accept recommendation regarding designation of water management area and to hold a public hearing. HRS § 174C-42.
(4) Notice for and Conduct of Public Hearing. HRS § 174C-42.
(5) Commission action to approve findings of fact and accept, deny, or defer recommendation to designate a water management area HRS § 174C-46.

2.5 Case Law on Designation

The Hawai'i Supreme Court held in *Ko'olau Ag.* that the Commission's discretion to designate a water management area is broad.[18] The presence of just one criterion is sufficient to designate. "Regardless of how many or how few of the criteria are applicable, the Commission shall designate an area as a [water management area] when it can be reasonably determined that

[16] *Waiāhole I*, 94 Hawai'i at 154, 9 P.3d at 466.
[17] *Id.* at 155, 9 P.3d at 467.
[18] *Ko'olau Agricultural Co., Ltd. v. Comm'n on Water Res. Mgmt*, 83 Hawai'i 484, 490, 927 P.2d 1367, 1373 (1996) ("*Ko'olau Ag*.").

the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water."[19]

Additionally, the Court further noted that water management area designations do not affect the interests of any potential water users; the impact of such a designation is only that the user's water source is subject to the Commission's regulation, which does not, in and of itself, affect the user's water rights.[20] Hence, the Court held that there is no judicial review of the Commission's decision to designate aquifers as water management areas "because the rights of individual water users are fully protected in the permitting process."[21]

In *Waiāhole I*, the Court acknowledged the direct interrelationship between ground and surface waters and held that the designation of Windward Oʻahu as a ground water management area subjected both ground and surface water diversions from the designated area to the statutory permit requirement.[22]

The Court also held that the Commission could consolidate the regulation of a single ditch system because it comports with the Commission's function of comprehensive water planning and management.[23] The Court ruled that the areas covered by the ditch system are to be considered hydrologically controllable irrespective of hydrologic units under HRS § 174C-50 (h) which deems uses between existing users as competing when water is drawn from a hydrologically controllable area.[24]

3. CHRONOLOGY

In 2011, the Commission entered into a joint funding agreement with the U.S. Geological Survey to develop low-flow hydrological characteristics for streams from Ukumehame to Honolua for the purpose of developing interim instream flow standards (interim IFS).[25]

From 2016 to 2021, staff conducted investigation and research on the surface and groundwater conditions in the Lahaina ASA. (Appendix A)

On November 29, 2021, the Chairperson initiated designation proceedings and began consultation with the County Council, County Mayor, and County Water Board via formal letter. (Appendix B)

On December 7, 16, and 29, 2021, staff received responses from the County Council dated with clarifying questions requesting data and a request to present to the County Council in order to better understand the designation process and timeline. (Appendix B)

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[19] *Koʻolau Ag.*, 83 Hawaiʻi at 490-91, 927 P.2d at 1373-74
[20] *Koʻolau Ag.*, 83 Hawaiʻi at 493, 927 P.2d at 1376.
[21] *Koʻolau Ag.*, 83 Hawaiʻi at 494, 927 P.2d at 1377.
[22] *Waiāhole I*, 94 Hawaiʻi at 173, 9 Pd.3 at 485.
[23] *Id.* at 174, 9 P.3d. at 486.
[24] *Id.*
[25] This work resulted in the production of the USGS Scientific Investigations Report (SIR) 2014-5087. https://pubs.usgs.gov/sir/2014/5087/pdf/sir2014-5087.pdf

On December 17, 2021, staff responded with letter dated December 17, 2021. (Appendix B)

On December 28, 2021, staff received a response from Maui DWS providing preliminary comments. (Appendix C)

On January 18, 2022, staff presented an informational item to the Commission on Chairperson's initiation of designation proceedings for the Lahaina Aquifer Sector Area as both a Surface and Ground Water Management Area and responses received from Maui County Council and MDWS. Written and oral public testimony is received. (Appendix D)

On January 20, 2022, staff presented at the Maui Board of Water Supply monthly meeting. Subsequently, the Maui County Board of Water Supply unanimously voted to support designation of the Lahaina ASA as a surface and ground water management area.

On February 15, 2022, staff presented an action item to the Commission to accept the Chairperson's recommendation to designate the entire Lahaina ASA as a surface and ground water management area and to notice and hold a public hearing. Written and oral public testimony is received. (Appendix E)

On February 22, 2022, staff presented at the Maui County Council's Agriculture and Public Trust Committee meeting.

On March 4, 2022, the Maui County Council adopted Resolution 22-73 "Supporting the Designation of the Lahaina Aquifer Sector as a Surface Water and Ground Water Management Area" unanimously (8-0), with reservations by Chair Alice L. Lee. (Appendix F)

Public notices of the required public hearing were published in The Honolulu Star-Advertiser and The Maui News issues on March 30, April 6 and 13, 2022. (Appendix G)

On April 14, 2022 the Commission receives the Department of Health's (DOH) determination of actual or threatened water quality degradation in the Lahaina ASA. (Appendix H)

On April 21, 2022, Commission staff prepared a Draft Findings of Fact document and shared that via website - https://dlnr.hawaii.gov/cwrm/groundwater/gwma/lahaina/#info

On April 26, 2022, the Commission held a public hearing on the island of Maui at the Kēopūlani Hall at Waiola Church to receive public testimony related to designation of the Lahaina ASA as a surface and ground water management area. Seventy-six (76) people signed the attendance sheet. Sixty-two (62) people testified, and sixty (69) provided written testimony. (Appendix I)

4. PROPOSED LAHAINA AQUIFER SECTOR AREA SURFACE AND GROUND WATER MANAGEMENT AREAS

4.1 AREAL EXTENT

4.1.1 Surface Water Management Area

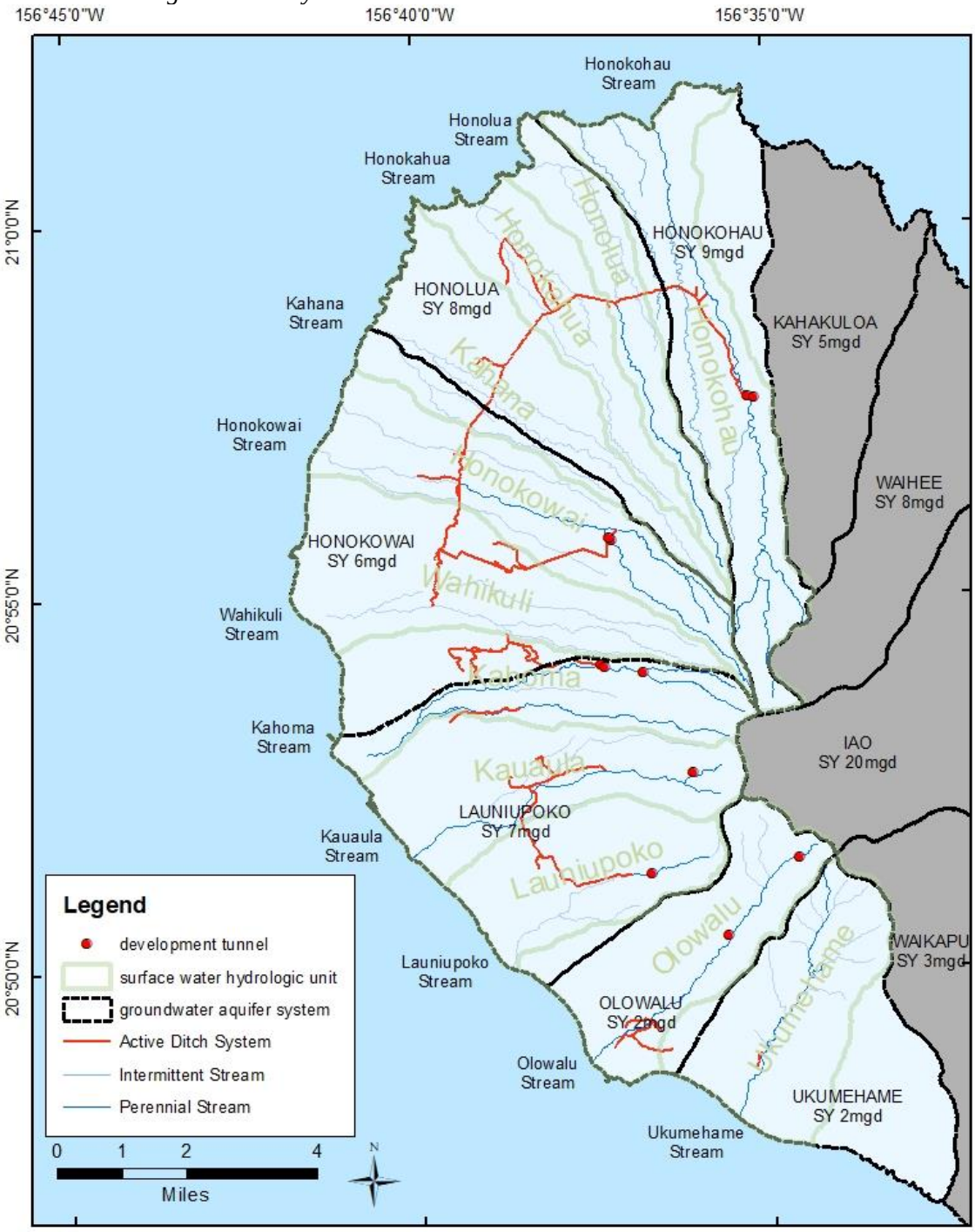
The proposed Lahaina ASA Surface Water Management Areas include the Honokōhau (6014), Honolua (6013), Honokahua (6012), Kahana (6011), Honokōwai (6010), Wahikuli (6009), Kahoma (6008), Kaua‘ula (6007), Launiupoko (6006), Olowalu (6005), and Ukumehame (6004) surface water hydrologic units (see Figure 1). The corresponding land areas proposed to be designated are located in the Lahaina District and include Tax Map Keys from (2) 4-1-001 to (2) 4-1-005; (2) 4-2-001 to (2) 4-2-010; (2) 4-3-001 to (2) 4-3-022; (2) 4-4-001 to (2) 4-4-021; (2) 4-5-001 to (2) 4-5-038; (2) 4-6-001 to (2) 4-6-034; (2) 4-7-001 to (2) 4-7-014; and from (2) 4-8-001 to (2) 4-8-004.

4.1.2 Ground Water Management Area

The proposed Lahaina ASA Ground Water Management Areas include the Honokōhau (60201), Honolua (60202), Honokōwai (60203), Launiupoko (60204), Olowalu (60205), Ukumehame (60206) ground water hydrologic units (see Figure 1). The corresponding land areas proposed to be designated are located in Lahaina District and include Tax Map Keys from (2) 4-1-001 to (2) 4-1-005; (2) 4-2-001 to (2) 4-2-010; (2) 4-3-001 to (2) 4-3-022; (2) 4-4-001 to (2) 4-4-021; (2) 4-5-001 to (2) 4-5-038; (2) 4-6-001 to (2) 4-6-034; (2) 4-7-001 to (2) 4-7-014; and from (2) 4-8-001 to (2) 4-8-004.

Figure 1. Lahaina Aquifer Sector Area

Ground Water Aquifer Systems Areas and their sustainable yields (SY) for the Lahaina Aquifer Sector with overlaying surface water hydrologic units and their perennial and intermittent streams with development tunnels and active irrigation ditch systems.



4.2 DITCH SYSTEMS

The Lahaina Aquifer Sector has eight water collection systems (see Figure 1) with the Honokōhau ditch being the largest. Honokōhau ditch diverts stream and development tunnel water at the 825-foot elevation in Honokōhau Valley and transports it across six surface water hydrologic units (Honokōhau, Honolua, Honokahua, Kahana, Honokōwai, and Wahikuli) and three aquifer systems (Honokōhau, Honolua, and Honokōwai) to meet potable and non-potable needs.

The Honokōwai Ditch diverts stream and development tunnel water at the 1560-foot elevation in Honokōwai Gulch for non-potable uses in the Honokōwai and Wahikuli hydrologic units. The Kahoma Ditch diverts surface and development tunnel water from Kahoma Stream at the 1920-foot elevation for non-potable use in the Kahoma hydrologic unit. Kanahā pipeline diverts water from Kanahā Stream at the 1120-foot elevation for potable and non-potable use also in the Kahoma hydrologic unit.

Kaua‘ula Ditch diverts surface and development tunnel water from Kaua‘ula Valley at the 1540-foot elevation for non-potable use in the Kaua‘ula and Launiupoko hydrologic units. Similarly, Launiupoko Ditch diverts water from Launiupoko Stream for non-potable use in Kaua‘ula and Launiupoko hydrologic units. Olowalu Stream is diverted at the lower Olowalu Ditch at the 200-foot elevation for non-potable uses. Ukumehame Stream is diverted at the 240-foot elevation for non-potable uses.

4.3 WATER PURVEYORS

There are six municipal water systems in the Lahaina ASA using either surface water, groundwater, or both. The Maui County Department of Water Supply (Maui DWS) and privately owned “public water systems” as defined by the DOH, which are systems serving more than 25 people or 15 service connections, are summarized in Table 1.

Table 1. Public Water Systems in Lahaina ASA

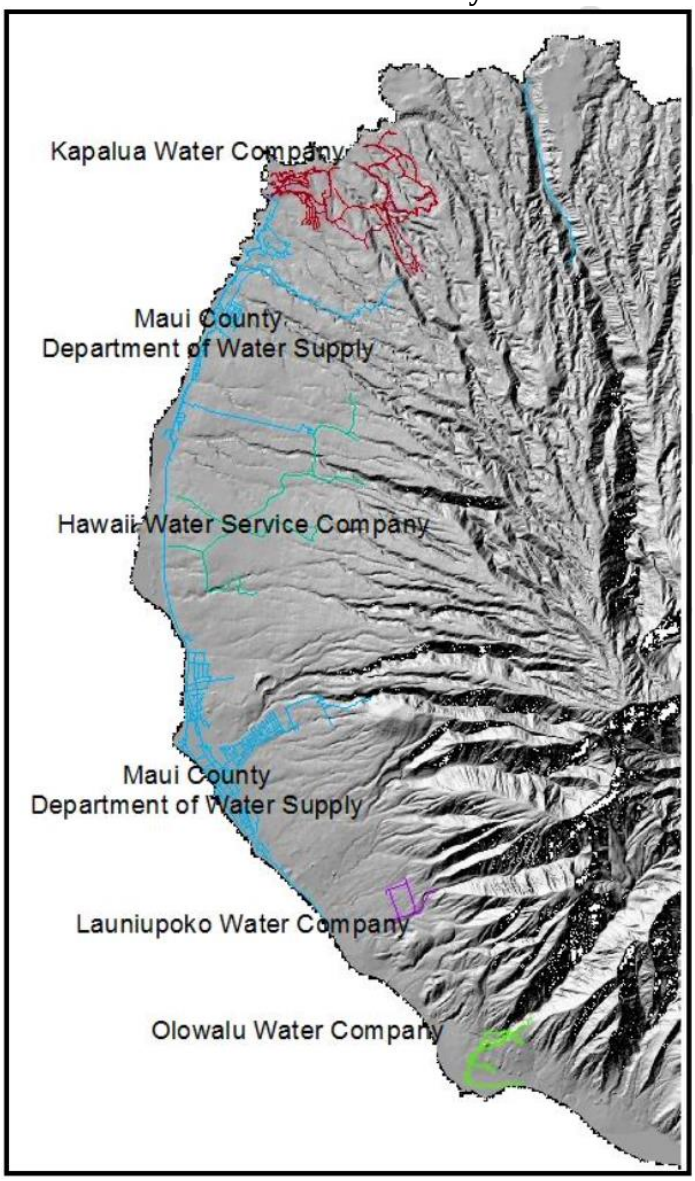
DOH No.	System Name	Operator
204	Kapalua	Hawaii Water Service Company
205	Kaanapali	Hawaii Water Service Company
209	Olowalu	Olowalu Elua Associates (Olowalu Water Company)
214	Lahaina	DWS Maui
218	Honokohau	DWS Maui
251	Mahanalua Nui Subdivision	Launiupoko Water Company, Inc.

Source: DOH, list of regulated Public Water Systems as of 02/08/2022.

Maui DWS serves most of the resident population with potable water, including the coastal areas of Launiupoko (beach park), Lahaina, Kā‘anapali, Honokōwai, Nāpili and Kapalua. The resort areas of Kā‘anapali and Kapalua are served by Hawai‘i Water Service. The Mahanalua Nui, Olowalu and Ukumehame Systems serve areas south of Lahaina town. There are no interconnections between systems, and each system is independently operated and maintained.

The map below shows the general service areas of the public water systems in the region. See Figure 2.

Figure 2. General Location of Public Water Systems in the Lahaina ASA



*Source: Maui WUDP, *Kapalua Water Company has been purchased by Hawaii Water Service Company from Maui Land & Pineapple Company in March 2021.*

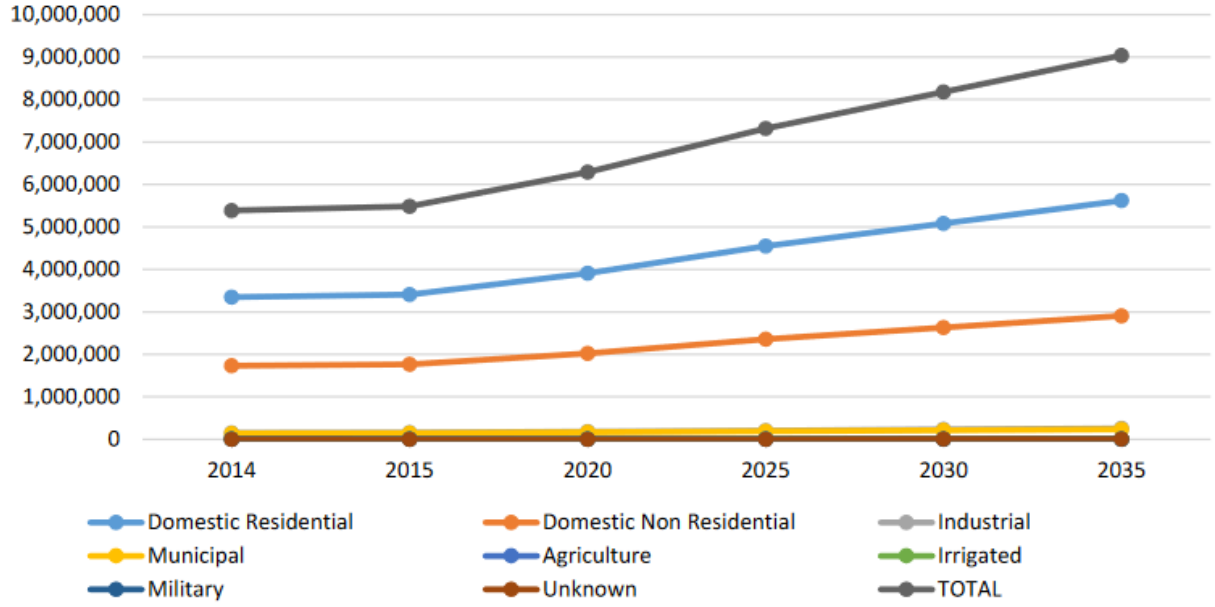
Maui DWS Lahaina-Napili Service Area: Honokōhau and Kahoma Hydrologic Units

Maui DWS serves a population of about 18,164 within the Lahaina-Napili water system. This system relies on a combination of two surface water treatment facilities (WTF) at Lahaina and Māhinahina and 12 production wells. A list of Maui DWS production wells can be found in Table 2. The total water production of Maui DWS is approximately 5.4 mgd, of which 5.08 mgd

is considered domestic use.[26] Non-potable water is transmitted to the Māhinahina WTF via the Honokōhau Ditch from Honokōhau Stream in the Honokōhau Aquifer System. From 2015 to 2019, Māhinahina WTF treated a mean (±standard deviation) of 1.70 (±0.28) mgd of water received from Honokōhau Stream via Honokōhau Ditch, with a maximum daily production of 2.5 mgd.

Kanahā Stream is one of two streams in the Kahoma Hydrologic Unit. Kanahā Stream is in the Launiupoko Aquifer System is diverted at the 1,050 ft elevation by Maui DWS using a large diversion structure. Diverted water is piped from the intake to an elevation of 790 feet where the Maui DWS distribution box distributes water to the Lahaina WTF, Lahainaluna High School, and to a pipeline that fed Pioneer Mill's industrial mill. Before the distribution box, water is conveyed to H. Michel via a 1.25 inch and a 2-inch pipeline connection. The Maui DWS Lahaina WTF produced a mean (±standard deviation) of 1.65 (±0.22) mgd from 2009 to 2018. This water is primarily (~95%) used for domestic water supply.[27] Projected domestic and total water demand for the Maui DWS Lahaina-Napili Water System is depicted in Figure 3. While approximately 50% of existing demand is met with surface water, future increases in demand are proposed to be met with new groundwater sources.

Figure 3. Projected Maui DWS Consumption by category for the Lahaina Aquifer Sector



Source: Maui County DWS Final Water Use and Development Plan, Figure 19-28

[26] Maui DWS Final Water Use and Development Plan (Ordinance 5335), https://waterresources.mauicounty.gov/DocumentCenter/View/608/Ord-5335
[27] *Id.*

Table 2. Maui DWS wells in the Lahaina-Napili Service Area

Source	Hydrologic Unit	12-month MAV (mgd)	Maximum Capacity (mgd)	Notes
Waipuka 1	Launiupoko	0.181	0.324	
Waipuka 2	Launiupoko	0.138	0.360	
Kanahā Well 1	Launiupoko	0.098	0.360	
Kanahā Well 2	Launiupoko	0.124	0.360	
DHHL Honokōwai	Honokōwai	0.000		Developed by DHHL for potable needs on DHHL homesteads
Māhinahina	Honokōwai	---	---	Well drilled in 2011 but deemed unsuccessful; not usable
Kahana	Honolua	---	---	Still in development; no pump, electricity, pipe lines or tanks
Nāpili A	Honolua	0.018	1.000	
Nāpili B	Honolua	0.499	1.008	
Nāpili C	Honolua	0.835	1.430	
Honokahua A	Honolua	0.000	0.710	
Honokahua B	Honolua	0.591	1.008	

Hawaii Water Service Area: Honokōhau, Honolua, Honokahua, Kahana Hydrologic Units

Honokōhau Stream is diverted by Maui Land & Pineapple (MLP) and distributed by Hawai‘i Water Service Company (HWSC) for resort landscaping, golf course irrigation, luxury home landscaping, common area landscaping, agriculture, and drinking water supply. Current and future non-potable water needs of the Kapalua area are identified in Table 3. Kuleana and riparian uses in Honokōhau Valley are in direct conflict with MLP's operation of this diversion as is Maui DWS, which relies on the delivery of water from Honokōhau to the Māhinahina WTF. With future developments increasing non-instream water demands, conflicts among surface water uses will continue.

Table 3. Current and Future Non-potable Water Needs of the Kapalua Area

Current actual and future estimated water use for various entities in the Kapalua-Napili region including golf course (GC) irrigation, resort landscape irrigation, luxury home landscape irrigation, Maui DWS, and DHHL. [mgd = million gallons per day; gallons per acre per day, gad]

Water Use	2017 actual use (mgd)	2018 actual use (mgd)	2019 estimated use (mgd)	future estimated need (mgd)
Irrigation for Kapalua Resorts, common areas, luxury home landscaping	0.909	0.782	0.988	0.892
Irrigation for Plantation GC, Bay GC, Golf Academy	0.912	0.515	0.817	0.748
Other: Diversified Agriculture, Napili Gardens, Mailepai Cemetery, other homes	0.248	0.110	0.056	0.138
Future Planned Uses: Pulelehua, Wailele Ridge, Mahana Estates, Kapalua Mauka				3.64
Maui DWS Domestic/Municipal	1.74	1.78	2.00	2.28
DHHL Diversified Agriculture	--	--	--	2.10
Total	3.81	3.19	3.72	9.80

Hawaii Water Service Area: Honolua Aquifer System

HWSC, a PUC-regulated company, operates three wells with a combined capacity of 3.456 mgd and a 2021 average pumpage of 0.574 mgd, although well Kapalua 3B is not currently in use due to a lack of demand. The system serves a population of 4,200 people with 555 connections. These wells are located in the Honolua aquifer system.

Kaanapali Land Management Service Area: Honokōwai and Wahikuli Hydrologic Units

Diversion 959 is located on Amalu stream at an elevation of 1,600 ft on land owned by the State of Hawai‘i and diversion 953 is located on Kapaloa Stream at an elevation of 1,560 ft on Kaanapali Land Management (KLM) owned land. Water diverted from the Honokōwai streams are used for coffee irrigation, diversified agriculture, and non-potable water needs of coffee estates. Neither total water diverted, nor total water used by KLM is currently metered, however there is approximately 267 acres of coffee in cultivation and 61 fee-simple agricultural estates with unknown landscape irrigation needs. Estimates of non-potable water needs for the KLM system are provided in Table 4. Kuleana and riparian uses in Honokōwai Valley are in direct conflict with KLM’s operation of these diversions.

Table 4. Estimates of Non-potable Water Needs for the KLM System

Estimated current water demand for the 1 in 5-year drought using drip irrigation for various agricultural crops identified in KLM's non-potable water service area. [mgd = million gallons per day; gallons per acre per day, gad]

Water Use	area (acres)	rate (gad)	water demand (mgd)
Coffee	566.51	4,797	1.359
Livestock (350 head)	701.92	200 gal/head	0.070
Banana	13.81	3,941	0.027
Diversified Agriculture	53.18	5,200	0.138
Sod/Turf landscape	7.9	5,939	0.047
Citrus	3.35	4,013	0.007
		Total =	1.648

Hawaii Water Service Kā'anapali Water System: Honokōwai Aquifer System

HWSC Kā'anapali, a PUC-regulated utility, operates nine wells with a combined capacity of 7.042 mgd and a 2021 average pumpage of 3.804 mgd.[28] The system serves 1,500 permanent residents and a large visitor population for a combined equivalent of 8,000 people through 700 service connections. Pumpage from some of HWSC's wells has been discontinued due to excessive chloride content (e.g. Honokowai Well B), further suggesting that the Honokōwai Aquifer System is vulnerable to saltwater intrusion.

Wells P-4, P-5 and P-6 have been found to produce water which contains levels of the chemical Dibromochloropropane (DBCP) ranging from 110 to 250 parts per trillion (ppt).[29] The State DOH limit, the Maximum Contaminant Level (MCL), for DBCP is 40 ppt at the point of entry into the distribution system. A water treatment facility near Well P-4 is being used to remove DBCP from these wells so they can be used to capacity. High levels of chloride ranging from 80 to 400 mg/l have been detected in most of the wells. See Section 4.8.7.1.

Kahoma Ranch and Kanahā Riparian Uses: Kahoma Hydrologic Units

Diversion 951 on Kahoma Stream is located on land owned by Kamehameha Schools (tax map key number 4-5-022:001). Water diverted from this stream is currently used for non-potable needs of Kahoma Ranch, a subsidiary of Kahoma Land Company, LLC which supports diversified agriculture and ecotourism. Kahoma Ranch offers outdoor recreation opportunities through ATV tours, zip lining and swimming in Kahoma Reservoir. The Kahoma Ranch Reforestation Plan uses

[28] Excluding discontinued 6-5638-003 Honokowai B well, which has a pump capacity of 1.29 mgd.

[29] A Study to Investigate the Operation of the Kā'anapali Water Corporation Domestic Water System, December 11, 1998. DOH's determination from 2010-2021 did not show exceedances of the MCL in HWSC wells.

approximately 113,000 gpd (0.113 mgd) to support the irrigation needs of fruit orchards, hardwood tree silviculture and reforestation efforts. Kuleana and riparian uses in Kahoma Valley downstream are in direct conflict with Kahoma Ranch's operation of this diversion.

Diversion 954 on Kahana Stream is maintained by Maui DWS. A pipeline transports non-potable water from the diversion to a concrete distribution box above Lahainaluna High School (LHS). Two registrations by H. Michel exist for water from the pipeline for diversified agricultural usage on a total of 6.14 acres in Kanahā Valley (approximately 20,000 gallons per day, 0.02 mgd). See Table 5. Kuleana and riparian uses in Kanahā Valley are in direct conflict with Maui DWS's operation of this diversion, as are LHS's uses.

Table 5. Estimated Water Demand from the Kahoma Hydrologic Unit

For non-potable water by stream. [mgd = million gallons per day; gallons per acre per day, gad]

Source Stream	Water Use	Method	Area (acres)	Water Demand (mgd)
Kahoma	Kahoma Ranch	Management plan		0.113
Kanahā	H. Michel diversified agriculture	IWREDSS	6.1	0.030
Kanahā	Lahainaluna High School	Estimate	29.0	0.100
Kanahā	Maui DWS	Gage	--	1.700
			Total =	1.943

Launiupoko Irrigation Company Service Area: Kaua‘ula and Launiupoko Hydrologic Units

The Launiupoko Irrigation Company (LIC) is a PUC-regulated company that provides non-potable water diverted from Launiupoko and Kaua‘ula streams for irrigation of small commercial agriculture, agriculturally-zoned parcels, and landscaping across the Launiupoko and Kaua‘ula hydrologic units. Additionally, diverted water from Kaua‘ula is provided to agricultural lessees on land owned by Kamehameha Schools. Water was used to generate electricity through the Kaua‘ula hydropower plant. A small amount of water is pumped up hill to TMK parcels with appurtenant rights originally fulfilled by the Pi‘ilani ‘auwai, which was subsequently replaced by the Kaua‘ula Ditch during the plantation era. Approximately ~1.5 cfs (~1.0 mgd) is released at the Kaua‘ula siphon back into Kaua‘ula Stream after the hydropower plant to support the interim IFS in Kaua‘ula Gulch. Non-potable water is also provided directly to these homes via a separate transmission pipe on the west side of the gulch. Table 6 provides a summary of the major noninstream water uses and average water diverted for each use. The interim IFS in Kaua‘ula Stream has created conflicts between cultural practitioners that rely upon a diversion managed by LIC, noninstream use of water for commercial agriculture, and the use of water for landscape irrigation of agriculturally-zoned parcels.

Table 6. Estimated Non-potable Water Demand in LIC Service Area

Estimated water demand for various agricultural crops identified in LIC non-potable water service area. [mgd = million gallons per day; gallons per acre per day, gad]

Water use	Method	Area (acres)	Water Demand (mgd)
Kamehameha Schools lessees	Reported		0.396
agriculturally-zoned parcels	Estimated	88.2	0.303
Landscaping	IWERDSS	193.8	0.969
		Total =	1.668

Launiupoko Water Company & Launiupoko Irrigation Company: Launiupoko Aquifer System

The Launiupoko Water Company (LWC) is a PUC-regulated utility that operates three wells with a combined capacity of 1.584 mgd and a 2021 average pumpage of 0.493 mgd. Following the implementation of Interim IFS for Kauaʻula Stream, LWC pumpage from the Launiupoko Aquifer System rose to 0.695 mgd, with a maximum pumpage of 1.133 mgd in September 2019. The service area of the LWC includes mostly gentlemen farm estates, with a small amount of commercial agriculture. As of April 2022, 2018 LWC had 400 potable service connections. Launiupoko Irrigation Company (LIC), another PUC-regulated utility company owned by the same parent company as LWC, has 400 non-potable service connections as of April 2022. In 2017, the average metered use of non-potable water was 1.512 mgd, exceeding the LIC PUC application of 1.331 mgd when fully developed. The estimated water needed to meet the non-potable demands in the LWC and LIC service area are identified in Table 7.

Table 7. Estimated Water Demand by Use Within the LWC and LIC Systems

(gallons per acre per day, gad)

Demand	Sub-Type	Area	Rate (gad)	Total
Potable		280 connections		0.800 mgd
Agriculture	Irrigated Pasture	10 acres	2,500	0.025 mgd
Agriculture	Diversified Agriculture	43 acres	3,419	0.147 mgd
Agriculture	Tree Crops	35 acres	2,914	0.102 mgd
Agriculture	KSBE Diversified Agriculture Lessee	13 acres	6,000	0.078 mgd
Agriculture	KSBE Cacao Farm Lessee	53 acres	6,000	0.318 mgd
Landscaping	Gentlemen Estates and common areas	194 acres	7,732	1.500 mgd
			Total	2.970 mgd

Olowalu Water Company Service Area: Olowalu Hydrologic Unit

Olowalu Water Company is a PUC-regulated water company that provides approximately 200,000 gallons per day of non-potable water to 50 connections for irrigation of pasture lots, agriculture and landscaping of agriculturally-zoned homes, small commercial agriculture, and lo‘i and agriculture for Maui Cultural Lands (a lessee). Current commercial agricultural demand in Olowalu is estimated at 196,000 gallons per day. The interim IFS in Olowalu has created conflicts between cultural practitioners that rely upon a diversion managed by Olowalu Water Company, non-instream use of water for commercial agriculture, and the use of water for landscape irrigation of agriculturally zoned parcels.

Table 8. Estimated Water Demand by Use Within the Olowalu Water Company System
Estimated water demand for various agricultural crops identified in Olowalu Water Company non-potable water service area. [mgd = million gallons per day; gallons per acre per day, gad]

Water Use	Method	Area (acres)	Water Demand (mgd)
Landscaping	IWREDSS	28.3	0.141
Agriculturally-zoned parcels	IWREDSS	49.41	0.196
Maui Cultural Lands lo‘i complex	estimated		0.150
		Total =	0.487

West Maui Investors Service Area: Ukumehame Hydrologic Unit

In the Ukumehame hydrologic unit, Uka LLC, (West Maui Investors) is the major developer that uses water from Ukumehame Stream for non-potable uses. Two wells are also available to provide potable water for the planned 45 lot subdivision of former Pioneer Mill agricultural lands. Non-potable water from the stream is distributed throughout the hydrologic unit for irrigation of commercial (two) and residential (two) properties. There are two commercial farms in the Ukumehame Hydrologic Unit that produce sod or nursery trees with an estimated demand of 45,400 gallons per day. The interim IFS in Ukumehame has created conflicts between cultural practitioners that rely upon a diversion managed by a mainland investment agency and the use of water for landscape irrigation of agriculturally-zoned parcels.

Table 9. Estimated Non-Potable Water Demand by Use Within the Ukumehame Service Area
Estimated water demand for various agricultural crops [mgd = million gallons per day; gallons per acre per day, gad]

Water Use	Method	Area (acres)	Water Demand (mgd)
Landscaping	Estimated	0.813	0.004
agriculturally-zoned parcels	IWREDSS	9.089	0.045
Loʻi x4, (consumption)	Reported		0.086
		Total =	0.092

4.4 PUBLIC TRUST PURPOSES

4.4.1 Environmental Protection

The Hawaiʻi Supreme Court has acknowledged resource protection, with its numerous derivative public uses, benefits, and values, as an important underlying purpose of the reserved water resources trust.[30] "The maintenance of waters in their natural state constitutes a distinct "use" under the water resources trust."[31] This disposes of any portrayal of retention of waters in their natural state as "waste."[32]

4.4.2 Domestic Uses

In *Waiāhole*, the Hawaiʻi Supreme Court "recognize[d] domestic water use as a purpose of the state water resources trust."[33] Under HRS § 174C-3 "Domestic use" means any use of water for individual personal needs and for household purposes such as drinking, bathing, heating, cooking, noncommercial gardening, and sanitation. The Code defines "domestic" and "municipal" uses separately and recognizes that municipal use encompasses not only aggregate domestic uses, but also "industrial" and "commercial" uses. HRS § 174C-3. Municipal uses are public purpose, but not a public trust purpose.

In the Lahaina ASA, for example, families in Kauaʻula, Kahoma, and Honokōhau are relying on stream water as their only source of domestic water supply.

[30] *See Robinson v. Ariyoshi*, 65 Haw. 641, 674-76, 658 P.2d 287, 310-11 (1982) (upholding the public interest in the "purity and flow," "continued existence," and "preservation" of the waters of the state)
[31] *Waiāhole I*, 94 Hawaiʻi at 136, 9 P.3d at 448.
[32] *See Reppun v. Board of Water Supply*, 65 Haw. 531, 560 n. 20, 656 P.2d 57, 76 n. 20 (1982) (*Reppun)* (citing article XI, section 1 as an acknowledgment of the public interest in "a free-flowing stream for its own sake").
[33] *See Waiāhole I*, 94 Hawaiʻi at 137, 9 P.3d at 449 (quoting Restatement (Second) of Torts § 850A cmt. c (1979) which states "The preference for domestic use does not extend to withdrawals by a municipality, water company or public district that supplies the domestic needs of inhabitants of a city or other service area. These large public and commercial users receive no preference and are subject to liability if the taking of their supplies unreasonably causes harm to other reasonable use of riparians."

4.4.3 Exercise of Traditional and Customary Native Hawaiian Rights and Practices

Traditional and customary Native Hawaiian rights (T&C rights) are protected at every level of the law, including the constitution, statutes, and common law. The Hawai‘i Supreme Court "has stressed that the rights of native Hawaiians are a matter of great public concern in Hawaii."[34] Article XII, section 7 confers upon the Commission "the power to protect [Native Hawaiian] rights and to prevent any interference with the exercise of these rights."[35] Article XII, § 7 correlatively "places an affirmative duty on the State and its agencies to preserve and protect traditional and customary native Hawaiian rights."[36]

The Hawai‘i Supreme Court held that the "exercise of Native Hawaiian and traditional and customary rights" is a protected public trust purpose under the constitutional public trust, which the Commission has an affirmative duty to protect to the extent feasible.[37] The Court reviewed the early law of the Hawaiian Kingdom and recognized the "specific objective of preserving the rights of native tenants during the transition to a western system of private property."[38] The Court made clear its intention to uphold this "original intent" of the public trust.[39]

The Code provides that protected T&C rights include, but are not limited to, "the cultivation or propagation of taro on one's own kuleana and the gathering of hihiwai, opae, o‘opu, limu, thatch, ti leaf, aho cord, and medicinal plants for subsistence, cultural, and religious purposes." HRS § 174C-101(c). Additionally, HRS § 7-1 establishes the rights of tenants to gather certain enumerated items and also the "right of drinking water, and running water, and the right of way." HRS § 1-1 more broadly codifies the doctrine of custom as it applies in Hawai‘i, protecting traditional and customary practices that were established by 1892.[40]

Staff has made extensive findings on the existence of T&C rights and practices for the surface water hydrologic units of Ukumehame, Olowalu, Launiupoko, Kaua‘ula, Kahoma, Honokōwai, Honolua, and Honokōhau. See, e.g., Appendix A, Section 12 of the respective IFSAR for each unit.

As a summary: The maintenance of instream flows is important for the protection of T&C rights, as they relate to the maintenance of stream (e.g., hīhīwai, ‘ōpae, ‘o‘opu) and riparian (vegetation) resources for gathering, recreation within streams, the cultivation of kalo, and other subsistence, cultural, and religious purposes.

There is tremendous variability of instream and non-instream uses across and within the surface water hydrologic units in the Lahaina ASA. For example, one stream may support extensive taro cultivation while another may primarily support domestic and recreational uses.

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[34] *Ka Pa‘akai o Ka ‘Aina v. Land Use Comm'n*, 94 Haw. 31, 42, 7 P.3d 1068, 1079 (2000) ("*Ka Pa‘akai*")
[35] *Ka Pa‘akai*, 94 Hawai‘i at 45, 7 P.3d at 1082.
[36] *Nā Wai ‘Ehā*, 128 Hawai‘i at 247, 287 P.3d at 148
[37] *Waiāhole I*, 94 Hawai‘i at 137, 9 P.3d at 449.
[38] *Id.* at 137, 9 P.3d at 449.
[39] *Id.*
[40] *See Public Access Shoreline Haw. v. Haw. Planning Comm'n*, 79 Hawai‘i 425, 437-442, 447-51, 903 P.2d 1246, 1258-63, 1268-72 (1995) ("*PASH*").

Further, water in its natural state supports the habitat of native aquatic biota, which is one of the identified public trust uses of water.

For example, Honokōhau Valley supported one of the largest concentrations of Hawaiian agriculture in the state, with taro cultivation in excess of 10 acres. Presently, while as much as 5.15 acres of kuleana lands exist, loʻi kalo is currently grown on less than 3.5 acres. Kalo was historically and is currently grown in Honolua, Honokōwai, Kahoma, Kanahā, Kauaʻula, Olowalu, and Ukumehame.

Historically, as stated in oral testimony by Ms. Kanoelani Steward, this abundance of loʻi kalo was made possible because of water. In 1880, in the Hawaiian Language Newspaper Ka ʻElele Pōʻakolu, when talking about Ka Malu Ulu o Lele, *"E kahe ana a hoʻokena ana i ka make wai o nā loʻi kalo lehulehu he tausani a ʻoi - Water flowed and quenched the thirst of more a 1,000 loʻi kalo and lele."*

Community members voiced grave concern over the lack of available stream water and streamflow to cultivate loʻi kalo and to exercise traditional and customary Native Hawaiian practices that rely on water in its natural state, mauka to makai flow, and healthy native stream fauna. The concerns raised are that established IIFS are not being met, water continues to be diverted and prioritized for off stream uses while protected instream uses and Kuleana families do not have sufficient amounts of water for T&C rights and practices.

The community members' testimonies echo what staff has experienced in the numerous informal and formal complaints in the past decades.

Additionally, West Maui Preservation Association's oral testimony highlighted Maui Komohana's (West Maui's) rich cultural history. E hoʻi ka nani i Mokuʻula (Return the beauty to Mokuʻula) is the first in the series of mele (song) first published in Hawaiian newspapers in the 1860s that describes sacred springs, fishponds and Hawaiian royalty at Mokuʻula in Lahaina. Mokuʻula has been covered up because the water resources were depleted. Designation can be a tool to return to this beauty and carve out a better future by "extolling the past through traditional and customary Native Hawaiian practices." [41] Kūpuna have managed surface and ground water comprehensively without drawing artificial lines and boundaries.

Oral testimony by Blossom Feiteira highlighted that designation of West Maui is also very important in terms of the maintenance and future restoration of significant historic sites in Lahaina. The Mokuhinia complex is a Nationally Registered Historic site with the Department of Interior in the middle of Lahaina Town. The diversion of water, since 1890 has significantly impacted this area to the point where in 1905, they buried the pond due to stagnated water. The County of Maui is currently in the process of finalizing their archaeological inventory survey and are preparing an RP for the restoration project known as the Mokuʻula project. Designation is so important in bringing back Mokuhinia pond. Without it, it can never happen. Stagnant water is not a good thing. The less water that comes off the streams and the underground aquifer system, would have a major impact on this very significant site.

[41] Oral testimony by Uʻilani Tanigawa Lum on behalf of the West Maui Preservation Association.

The other impact that happened along the shoreline is that the streams of Kauaʻula and Kahoma that fed into the Mokuhinia Pond, also provided for a muliwai that fed the Pōʻalima of Pakala, Makila, and Polanui, the shoreline across West Maui. At a time when the muliwai was fully functioning, there were very diverse and vibrant shoreline ecosystem that had different varieties of limu, varieties of fish species with the muliwai being considered the nursery by the kupuna of Lahaina. The tiger sharks would come in once a year to spawn in that area, and it was the baby sharks that fed through that ecosystem that fronted Mokuʻula and Mokuhinia. With the diversion of water, there was immediately a degradation of the ecosystem, less fish, less limu, warmer waters, and overall degradation of the environment that led the kupuna oftentimes to kapu that place for no fishing and gathering because resources simply were not there.

4.4.4 Appurtenant Rights

The Hawaiʻi Supreme Court noted that the public trust's protection of Native Hawaiian T&C rights "also extends to the appurtenant rights recognized in Peck."[42] "[A]ppurtenant water rights are rights to the use of water utilized by parcels of land at the time of their original conversion into fee simple land."[43] "As use of the word 'appurtenant' indicates, it is water rights which pertain to or annexed to that particular parcel of land conveyed by the original grant from the King or Hawaiian government."[44] "Appurtenant water rights are incidents of land ownership," that constitute "an easement in favor of the property with an appurtenant right as the dominant estate."[45] "[T]he right to the use of water acquired as appurtenant rights may only be used in connection with that particular parcel of land to which the right is appurtenant."[46]

"[T]he proper measure of [appurtenant] rights is . . . the quantum of water utilized at the time of the Mahele."[47] The Hawaiʻi Supreme Court, however, recognized that "requiring too great a degree of precision in proof would make it all but impossible to ever establish such rights."[48] The Commission is statutorily mandated to "determine appurtenant water rights, including quantification of the amount of water entitled to by that right, which determination shall be valid for purposes of" the Code." HRS § 174C-5(15).

Staff conducted a cursory assessment of tax map key parcels to identify their associated Land Commission Awards, in an attempt to identify the potential for future appurtenant rights claims within the hydrologic units of Ukumehame, Olowalu, Launiupoko, Kauaʻula, Kahoma, Honokōwai, Honolua, and Honokōhau. See Appendix A, Figure 12-1 of the respective IFSAR for each unit.

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[42] *Waiāhole I*, 94 Hawaiʻi. at 137 & n.34, 9 P.3d at 449 & n.34.
[43] *Reppun*, 65 Haw. at 551, 656 P.2d at 71.
[44] *McBryde*, 54 Haw. at 190-91, 504 P.2d at 1341.
[45] *Reppun*, 65 Haw. at 551, 656 P.2d at 70-71; *see also Peck v. Bailey*, 8 Haw. 658, 661-62 (1867).
[46] *McBryde*, 54 Haw. at 191, 504 P.2d at 1341.
[47] *Reppun*, 65 Haw. at 554, 656 P.2d at 72; *see also McBryde*, 54 Haw. at 188-89, 504 P.2d at 1340.
[48] *Reppun*, 65 Haw. at 554, 656 P.2d at 72. *See also Carter v. Territory*, 24 Haw. 47, 59 (1917) ("It is very difficult at this late day to show what quantity of water was used upon a particular parcel of land by ancient custom when it first became the subject of private ownership. Where the use of water upon land by ancient custom is shown by satisfactory evidence the right is not to be denied merely because the quantity has not been measured and cannot be proven.").

4.4.5 DHHL Reservations

In *Wai'ola* the Hawai'i Supreme Court held that reservations of water by the Department of Hawaiian Home Lands (DHHL) are a public trust purpose.[49] The Honokōwai unit of DHHL's West Maui Regional Plan incorporates 780 acres, of which approximately 270 acres are south of Honokōwai Gulch and 510 acres are north of Honokōwai Gulch. The 2017 State Water Projects Plan for DHHL identified 2.1 mgd of non-potable use for Honokōwai in the West Maui Regional Plan. To meet the non-potable water needs of DHHL for the Honokōwai unit, water sourced from Honokōhau Stream, Lahaina Wastewater Treatment Facility, groundwater, or a combination of the above is needed.

On September 18, 2018, the Commission approved DHHL's reservation of 0.770 mgd of groundwater to meet their foreseeable groundwater needs in the Honokōwai Aquifer.

In May 2021, the Commission approved DHHL's reservation of 2 mgd of surface water to meet their foreseeable future non-potable water needs in Honokōwai serviced by the Honokōhau Ditch from Honokōhau Stream.

DHHL provided testimony in support of designation. The availability of water is one of the key barriers DHHL faces in the development and delivery of homesteads across Hawai'i. There are two distinct ways in which WMA designation helps to fulfill the purposes of the Hawaiian Homes Commission Act (HHCA). In WMA, the Commission has issued reservations for DHHL by administrative rule, which adds protection and certainty for the reservation. The Code also provides that all water use permits "issued by the commission shall be subject to the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act, whether or not the condition is explicitly stated in the permit." HRS § 174C-49 (e). Currently, obligations to DHHL are not enumerated in any other permits, including the well construction permits issued across the State.

4.5 INTERIM INSTREAM FLOW STANDARDS

HRS § 174C-3 defines an instream flow standard (IFS) as the amount of water "required to be present at a specific location in a stream system at certain specified times of the year to protect fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses" and an interim IFS as a "temporary instream flow standard of immediate applicability" that "terminate[s] upon the establishment of an IFS."

The Code identifies beneficial instream uses including, but not limited to: "maintenance of fish and wildlife habitats"; "outdoor recreational activities"; "maintenance of ecosystems such as estuaries, wetlands, and stream vegetation"; "aesthetic values such as waterfalls and scenic waterways"; "maintenance of water quality; "the conveyance of irrigation and domestic water supplies to downstream points of irrigation"; and "the protection of traditional and customary Hawaiian rights." HRS § 174C-3.

[49] *Wai'ola*, 103 Hawai'i at 429, 431, 83 P.3d at 692, 694.

The Hawai‘i Supreme Court also held that the Commission "has an affirmative duty under the public trust to protect and promote instream trust uses."[50]

There are ten perennial streams in West Maui with varying quantities of flow (Table 10). Of these streams, three (e.g., Honolua, Honokōwai, Launiupoko) do not naturally support mauka to makai flow year-round. Interim IFS on nine streams were established to protect the various instream uses of water, including habitat for native aquatic biota, recreational value, and traditional and customary practices of Native Hawaiians. Baseline hydrologic information and existing interim IFS for surface water hydrologic units in the Lahaina Aquifer Sector are listed in Table 10. Location of the interim IFS are shown in Figure 4.

On March 20, 2018, the Commission established numeric interim instream flow standards (interim IFS) for streams in the surface water hydrologic units of Ukumehame, Olowalu, Launiupoko, and Kaua‘ula.

On November 20, 2018, the Commission established interim IFS for Kahoma Stream and Kanahā Stream in the Kahoma hydrologic unit.

On May 18, 2021, the Commission established interim IFS for Honolua, Kaluanui, and Honokōhau Stream.

The hydrologic units of Wahikuli (6009), Kahana (6011), and Honokahua (6012) encompass intermittent streams only and the interim IFS, which were established pursuant to amendments to HAR §13-169-48 remain unchanged. HAR §13-169-48, effective on December 10, 1988, defined the interim IFS for all streams in West Maui as the "amount of water flowing in each stream on the effective date of this standard, and as that flow may naturally vary throughout the year and from year to year without further amounts of water being diverted offstream through new or expanded diversions."

An interim IFS on the remaining perennial stream, Honokōwai, has not been established yet. Despite the establishment of interim IFS to protect instream uses, complaints regarding the mismanagement, allocation, or use of surface water continue.

Extensive investigations and research on the surface water hydrologic units of Ukumehame[51], Olowalu[52], Launiupoko[53], Kaua‘ula[54], Kahoma[55], Honolua[56], and Honokōhau[57] are available in the respective Instream Flow Assessment Reports (IFSAR) and the Draft IFSAR for surface water hydrologic unit of Honokōwai[58]. See Appendix A.

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[50] *Waiāhole I*, 94 Hawai‘i at 153, 9 P.3d at 465.
[51] https://files.hawaii.gov/dlnr/cwrm/ifsar/PR201801-6004-Ukumehame.pdf
[52] https://files.hawaii.gov/dlnr/cwrm/ifsar/PR201802-6005-Olowalu.pdf
[53] http://files.hawaii.gov/dlnr/cwrm/ifsar/PR201803-6006-Launiupoko.pdf
[54] http://files.hawaii.gov/dlnr/cwrm/ifsar/PR201804-6007-Kauaula.pdf
[55] https://files.hawaii.gov/dlnr/cwrm/ifsar/PR201808-6008-Kahoma.pdf
[56] http://files.hawaii.gov/dlnr/cwrm/ifsar/PR201902-6013-Honolua.pdf
[57] http://files.hawaii.gov/dlnr/cwrm/ifsar/PR201903-6014-Honokohau.pdf
[58] https://files.hawaii.gov/dlnr/cwrm/ifsar/PR201901-6010-HonokowaiDraft.pdf

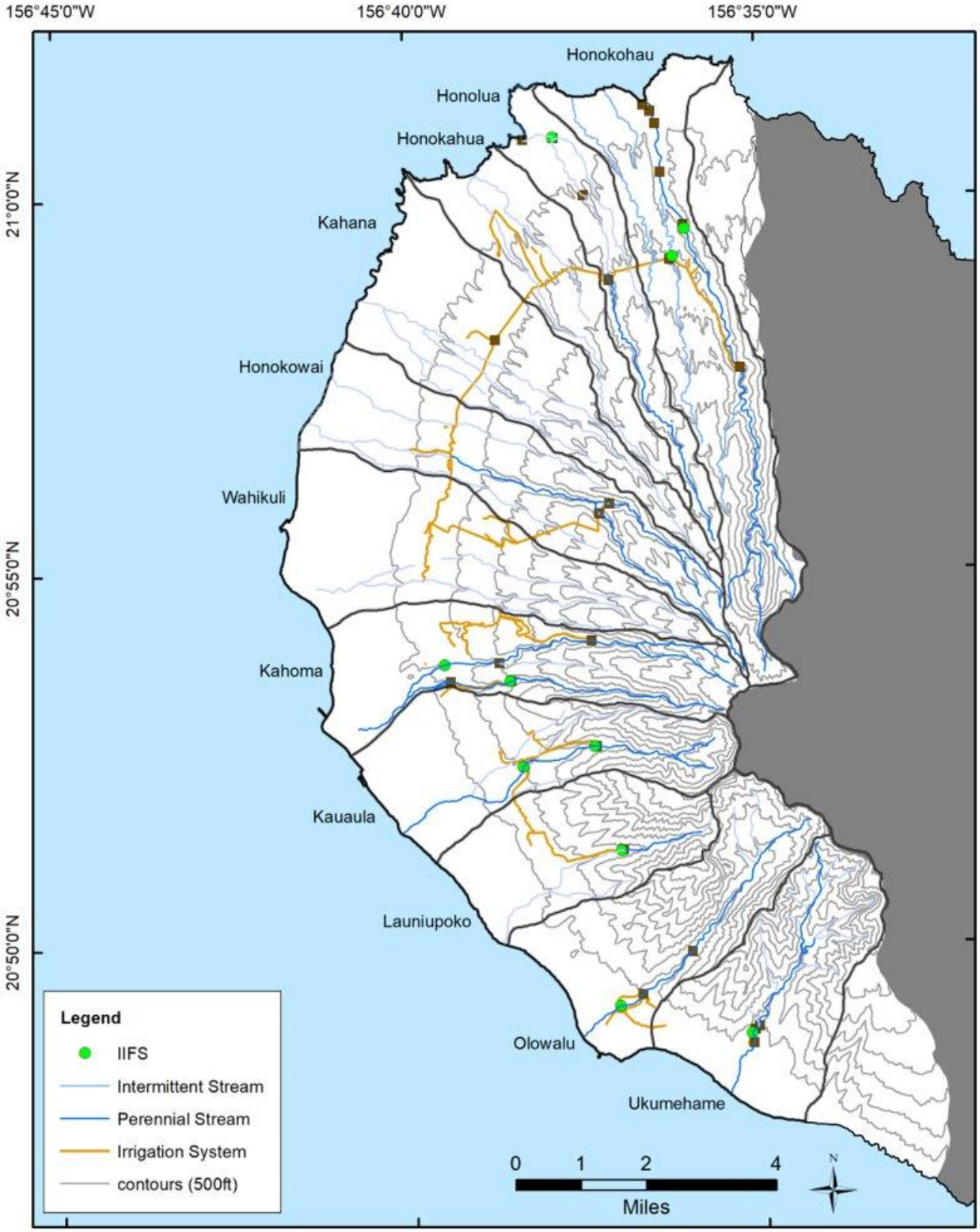
Table 10. Existing Numeric Interim IFS in the Lahaina Aquifer Sector

[n/a = not applicable]

Surface water hydrologic unit	Stream name	Q_{50} (mgd)	Q_{90} (mgd)	Interim IFS (mgd)	Interim IFS elevation (ft)	Estimated flow available for non-instream use at Q_{50} (mgd)
Honokōhau	Honokōhau	19.4	11.0	8.6	340	12.2[1]
Honolua	Honolua	2.46	0.00	natural flow	750	0.0
Honokōwai	Amalu[2]	--		n/a	1600	0.0
Honokōwai	Kapaloa	--		n/a	1560	n/a
Honokōwai	Honokōwai	3.49	2.32	n/a	1480	n/a
Kahoma	Kahoma	3.75	1.87	3.49	2100	0.26
Kahoma	Kanahā	3.17	2.65	0.50	1100	2.67
Kaua‘ula	Kaua‘ula	6.14	3.36	3.36	1540	2.78
Launiupoko	Launiupoko	0.30	0.23	0.00	1340	0.30
Olowalu	Olowalu	3.23	2.20	2.65	130	0.58
Ukumehame	Ukumehame	3.23	2.07	2.90	220	0.33

[1]*amount reflects downstream location of interim IFS and groundwater gains between intake and interim IFS*
[2]*intake sealed by rockfall during 2018 storm and is no longer functional*

Figure 4. Location of Interim IFS



Staff has data that indicate that LIC has not been compliant with the IIFS for Kaua‘ula stream, Olowalu Water Company has not been compliant with the IIFS for Olowalu stream, and that Maui DWS has not been compliant with the IIFS for Kanahā stream. Notices of alleged violation of the IIFS have been sent to LIC, Olowalu Water Company, and Maui DWS. See Appendix J.

4.6 CLIMATE UNCERTAINTY – WATER SUPPLY

The Commission entered into an agreement with the U.S. Geological Survey (USGS) to study the estimated groundwater recharge for mid-century and end-of-century climate projections for the islands of Kaua‘i, O‘ahu, Moloka‘i, Lāna‘i, Maui, and Hawai‘i in March 2019.[59] At the Commission’s January 18, 2022 meeting, USGS presented its preliminary findings. See Appendix D.

Rainfall has declined significantly across the Lahaina District, particularly during the dry season.[60] Anticipated declines in rainfall based on future projections will negatively affect ground water recharge and streamflow,[61] reducing the water availability.[62] Natural stream flow is declining in perennial streams throughout the Lahaina District due to declines in rainfall, ground water recharge, and subsequently, the baseflow contribution to streams.[63,64] Current estimates of median and low-flow conditions are based on limited data for the 1984-2013 climate period.[65] Additional declines in rainfall since then have reduced the availability of streamflow. Projected declines in seasonal and annual rainfall throughout West Maui will continue to negatively affect surface water resources and the instream values they support.[66]

In terms of projections of future rainfall conditions, there are two methods in the published literature which provide a basis for our conclusion that there is a high likelihood of decreased rainfall in the Lahaina ASA: statistical downscaled modeling and dynamical downscaled modeling. These two approaches utilize very different methods, different base periods, and different end-of-century time frames, so their results are inherently different. The results of both methods for both the RCP 4.5 and RCP 8.5 climate pathways for seasonal and annual rainfall are provided by aquifer system. What is clear is that there is general agreement among methods and climate pathways that there will be a decline in annual rainfall in Ukumehame, Olowalu, and Launiupoko watersheds. Three out of four model-pathway combinations also predict a decline in annual rainfall in Kaua‘ula, Kahoma, and Honokōwai watersheds. While the dynamical downscaling RCP 4.5 model result has small (e.g., <5%) increases in annual rainfall in these watersheds, the other models resulted in between 3% and 56% decreases in annual rainfall. While

[59] https://files.hawaii.gov/dlnr/cwrm/submittal/2019/sb20190319B1.pdf
[60] Frazier, A.G., and T.W. Giambelluca. 2017. Spatial trend analysis of Hawaiian rainfall from 1920 to 2012. International Journal of Climatology, 37(5): 2522-2531.
[61] Elison Timm, O., *et al*. 2015. Statistical downscaling of rainfall changes in Hawai‘i based on the CMIP5 global model projections. Journal of Geophysical Research: Atmospheres, 120(1): 92-112.
[62] Mair, A. *et al*. 2019. Estimated groundwater recharge from a water-budget model incorporating selected climate projections, Island of Maui, Hawai‘i. USGS SIR 2019-5064.
[63] Frazier, A.G., and T.W. Giambelluca 2017. *Id.*
[64] Gingerich, S.B., and Engott, J.A. 2012. *Id.*
[65] Cheng, C.L. 2014. Low-flow characteristics of streams in the Lahaina District, West Maui, Hawai‘i. U.S. Geological Survey Scientific Investigations Report, 2014-5087.
[66] Elison Timm, O., *et al*. 2015. *Id.*

such results may appear alarming, they don't even consider that the historical distribution of rainfall has already shifted in recent years to fewer, more intense storm events and declining summer rainfall.[67] Recent data suggest that projected trends in tradewind inversion properties, mean surface temperature, relative humidity, and wind are likely to contribute to a reduction in tradewind inversion base height contributing to reduced dry season rainfall.[68] that is likely to negatively affect groundwater recharge.

4.7 GEOLOGY

The West Maui Volcano is composed of a central caldera and two main rift zones trending northwest and southeast from the caldera. Thousands of dikes exist within the rift zone with the number increasing toward the caldera and with depth. Dikes also exist in a radial pattern around the caldera.[69] Most rocks in West Maui originated as shield building Wailuku Basalt overlain with post-shield Honolua Volcanics. In some locations, a late rejuvenation phase of Lahaina Volcanics is present. Wedges of sedimentary deposits are found in stream valleys and along the coasts. Sedimentary deposits have relatively low permeability compared to volcanic rocks and their subsurface extent influences the hydraulic gradient of dike-free volcanic rocks. The permeability of the subaerial, shield-building, and dike-free lava flows in West Maui is high and influenced by 1) clinker zones associated with ʻaʻā flows; 2) voids along the contacts between lava flows; 3) cooling joints normal to flow surfaces; and 4) lava tubes associated with pāhoehoe flows. The regional horizontal hydraulic conductivity of the dike-free volcanic rocks ranges from hundreds to thousands of feet per day.[70] Because of the high permeability of these rocks, the horizontal water-table gradients are small (around one foot per mile), with the horizontal permeability as much as 10-100 times the vertical permeability. For large areas of the Lahaina Aquifer Sector, the dike-free basal aquifer is not interrupted by geologic anomalies, resulting in a homogenous region across the Launiupoko, Olowalu, and Ukumehame aquifer systems (Figure 5). Similarly, the dike-free regions of the Honokōwai, Honolua, and Honokōhau aquifer systems are also relatively homogenous, with similar hydraulic conductivities.

There is lower hydraulic conductivity in the coastal alluvium and weathered basalt relative to the north-south conductivity of the basalt aquifer system that connects the Honokōwai Aquifer System to the neighboring Honolua and Honokōhau Aquifer System Areas[71]. Therefore,

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[67] Frazier, A.G., and T.W. Giambelluca. 2017. Spatial trend analysis of Hawaiian rainfall from 1920 to 2012. International Journal of Climatology, 37(5): 2522-2531.
Luo, X., Wang, B., Frazier, A. G.,& Giambelluca, T. W. (2020). Distinguishing variability regimes of Hawaiian summer rainfall: Quasi-Biennial and interdecadal oscillations. Geophysical Research Letters, 47, e2020GL091260

[68] Xue, L., Wang, Y., Newman, A.J. *et al.* How will rainfall change over Hawai'i in the future? High-resolution regional climate simulation of the Hawaiian Islands. *Bull. of Atmos. Sci.& Technol.* **1,** 459–490 (2020). https://doi.org/10.1007/s42865-020-00022-5

[69] Gingerich, S.B., and Engott, J.A. 2012. Groundwater availability in the Lahaina District, West Maui, Hawai'i. U.S. Geological Survey Scientific Investigations Report 2012-5010.

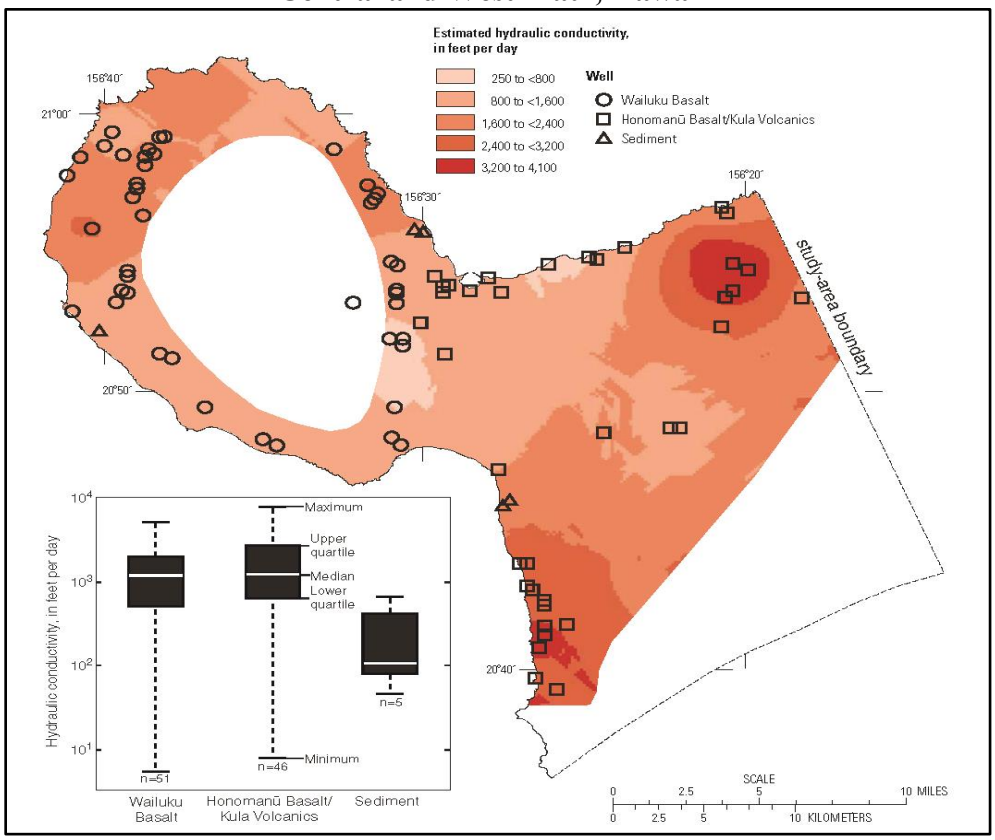
[70] Rotzoll, K., El-Kadi, A.I., and Gingerich, S.B. 2007. Estimating hydraulic properties of volcanic aquifers using constant-rate and variable-rate aquifer tests. Journal of the American Water Resources Association, 43(2): 334-345.

[71] Glenn, Craig R., Robert B. Whittier, Meghan L. Dailer, Henrieta Dulaiova, Aly I. El-Kadi, Joseph Fackrell, Jacque L. Kelly, Christine A. Waters, Jeff Sevadjian. 2013. "Lahaina Groundwater Tracer Study – Lahaina, Maui, Hawaii." *Final Report prepared from the State of Hawaii Department of Health, the U.S. Environmental Protection Agency, and the U.S. Army Engineer Research and Development Center*.

withdrawals from Honokōwai in the dike-free basal aquifer will most likely affect the neighboring aquifers.

Similar to the Honokōwai system, there is lower hydraulic conductivity in the coastal alluvium and weathered basalt relative to the north-south conductivity of the basalt aquifer system that connects the Launiupoko Aquifer System to the neighboring Honokōwai and Olowalu Aquifer System Areas. Depending on well location and withdrawal rate, withdrawals from Launiupoko in the dike-free basal aquifer may affect the neighboring aquifers.

Figure 5. Distribution of Regional Aquifer Hydraulic Conductivity Central and West Maui, Hawai'i



Source: Gingerich, S.B., and Engott, J.A., 2012, Groundwater availability in the Lahaina District, west Maui, Hawai'i: U.S. Geological Survey Scientific Investigations Report 2012–5010. http://pubs.usgs.gov/sir/2012/5010/.

4.8 HYDROLOGY

4.8.1 Rainfall

Long-term (1920-2012) and recent (1983-2012) historical trends indicate there have been significant declines in rainfall across areas of West Maui, particularly during the dry season (Figure 6). Future trends in rainfall are difficult to predict in this region as there is some disagreement between dynamical and statistical downscaling models used to predict rainfall for the RCP 4.5 and

RCP 8.5 climate scenarios[72]. In the Honokōhau and Honolua watersheds, for example, dynamical models suggest rainfall will marginally increase (i.e., less than 3%) and statistical models suggest rainfall will decline 6% to 8.2%. A summary of the projected rainfall trends for each scenario and method are provided in Table 11. Long-term declines in rainfall are generally coupled with a long-term decline in surface water availability and groundwater recharge, with consequences for base flow (Figure 7).

Table 11. Mean annual rainfall (inches, in) and Percent Change in Mean Annual Rainfall
The RCP 4.5 and RCP 8.5 scenarios using the dynamical downscaling model (for 2080-2099 relative to 1990-2009 mean) or the statistical downscaling model (for 2070-2099 relative to the 1978-2007 mean).

			Dynamical Downscaling		Statistical Downscaling	
Watershed	**MAR (in) 1978-2007**	**MAR (in) 1990-2009**	**RCP 4.5**	**RCP 8.5**	**RCP 4.5**	**RCP 8.5**
Honokōhau	120.0	108.6	110.4 (+1.64%)	111.4 (+2.56%)	111.4 (-7.15%)	110.1 (-8.20%)
Honolua	89.0	81.7	82.7 (+1.27%)	873.2 (+1.83%)	83.7 (-5.98%)	82.9 (-6.86%)
Honokōwai	85.2	74.1	75.2 (+1.56%)	72.1 (-2.63%)	73.2 (-14.05%)	67.9 (-20.30%)
Kahoma	85.6	70.4	73.9 (+5.06%)	68.1 (-3.19%)	70.3 (-17.86%)	64.3 (-24.92%)
Kaua‘ula	57.4	47.5	49.1 (+3.46%)	47.4 (-0.07%)	46.6 (-18.81%)	42.3 (-26.33%)
Launiupoko	41.3	35.5	34.2 (-3.62%)	34.4 (-3.02%)	31.6 (-23.65%)	27.3 (-33.97%)
Olowalu	60.4	53.1	51.4 (-3.20%)	52.3 (-1.52%)	44.7 (-26.02%)	37.3 (-38.27%)
Ukumehame	44.6	40.0	38.8 (-2.97%)	40.2 (+0.57%)	28.1 (-36.87%)	19.7 (-55.86%)

Source: Frazier et al. Unpublished; based on Ellison-Timm et al., 2015 (statistical downscaling) and Zhang et al., 2016 (dynamical downscaling)

[72] Representative Concentration Pathway (RCP) are a set of greenhouse gas concentration trajectories adopted by the IPCC for its fifth Assessment Report in 2014

Figure 6. Annual Wet Season (Nov-Apr) and Dry Season (May-Oct) Rainfall Trends

For the 1920-2012 (A) and 1983-2012 (B) periods, Maui. Hashed line areas represent significant trend over the period. (with permission from Frazier and Giambelluca, 2017)

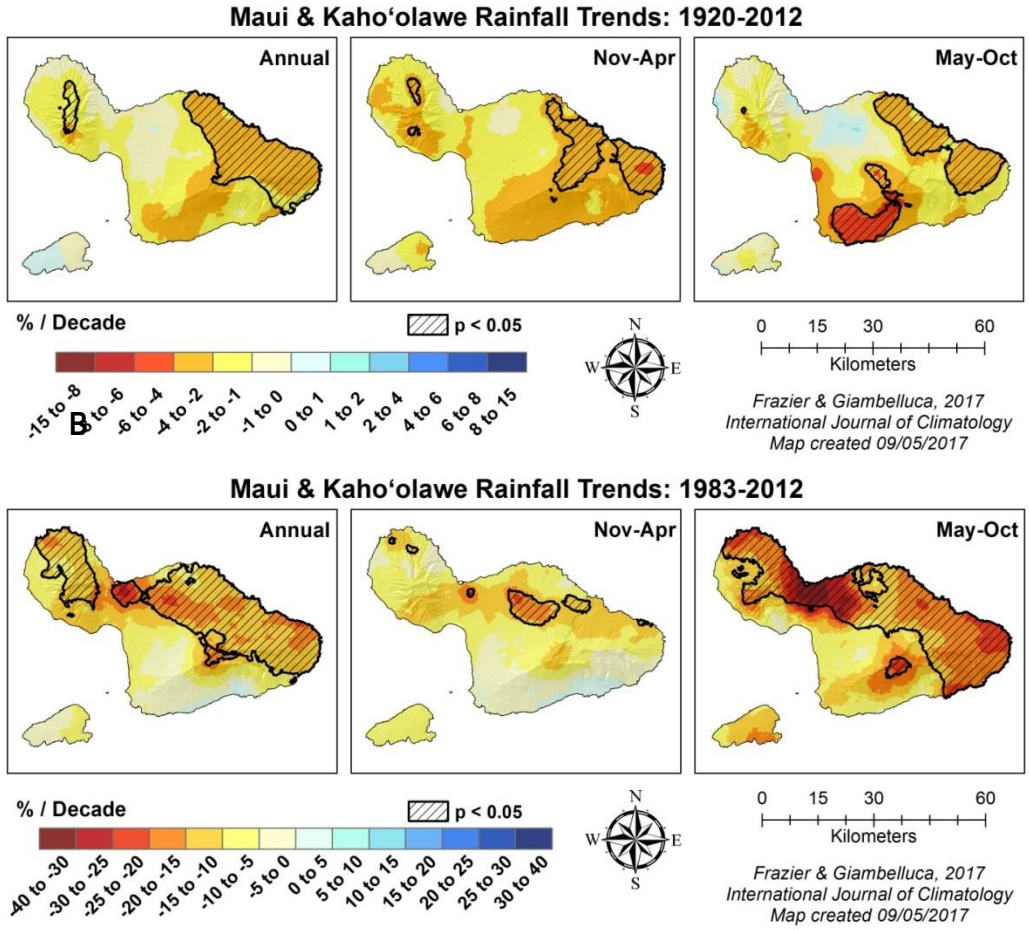


Figure 7. Mean Annual Total Flow and Baseflow at USGS Station 16620000

Honokōhau Stream, West Maui (million gallons per day, mgd)

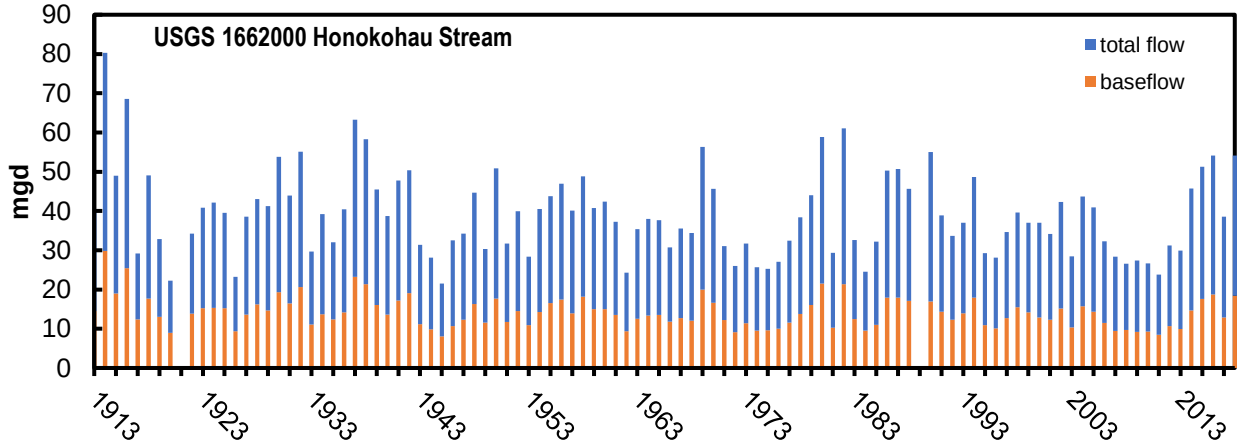


Figure 8. 1990-2009 Change in Mean Annual Rainfall

Statistical downscaled projections in mean annual rainfall (labels) for RCP4.5 and RCP8.5 scenarios by surface water hydrologic unit.

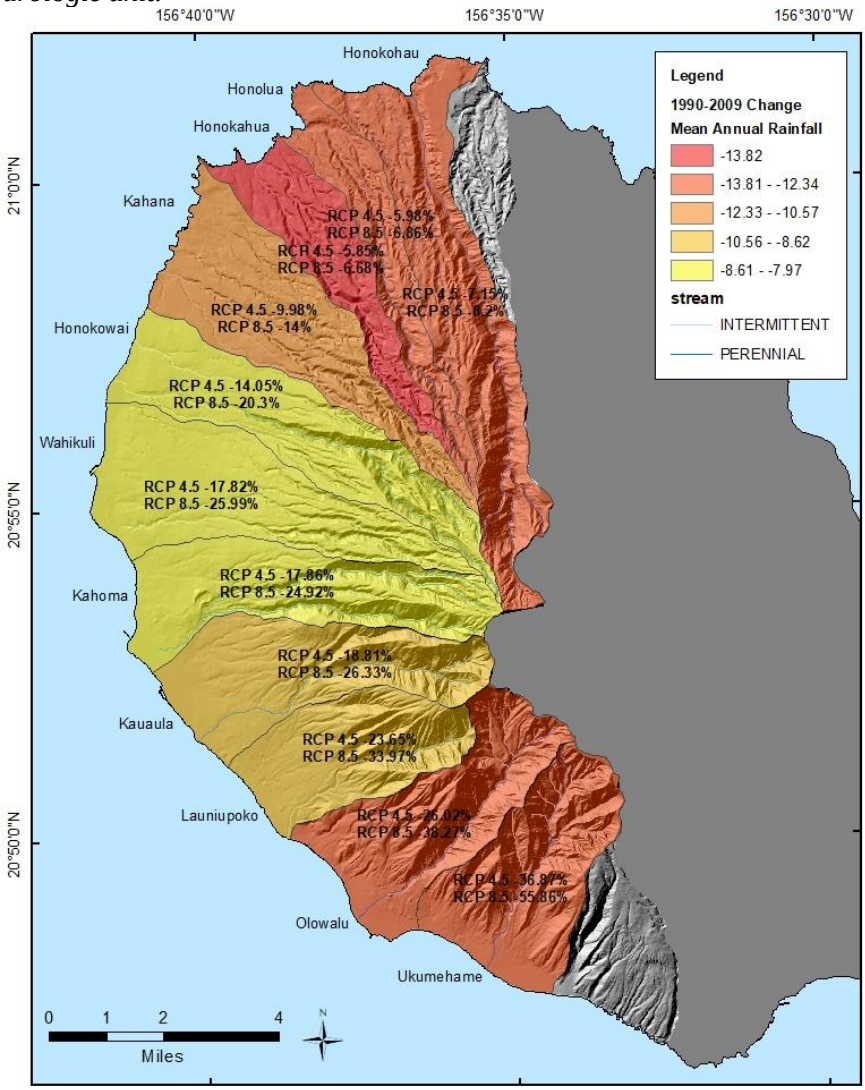


Figure 9. Recent Trends in Rainfall on Pu‘u Kukui

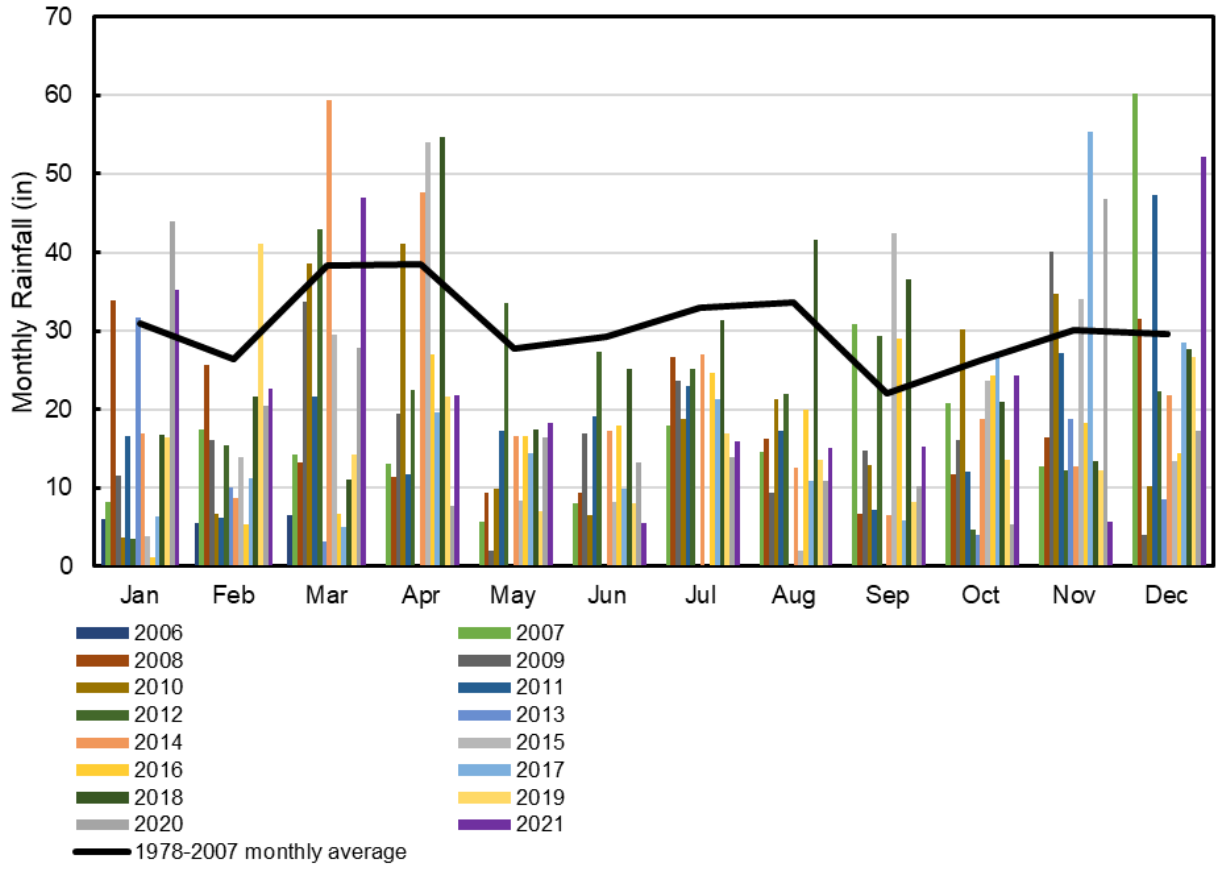
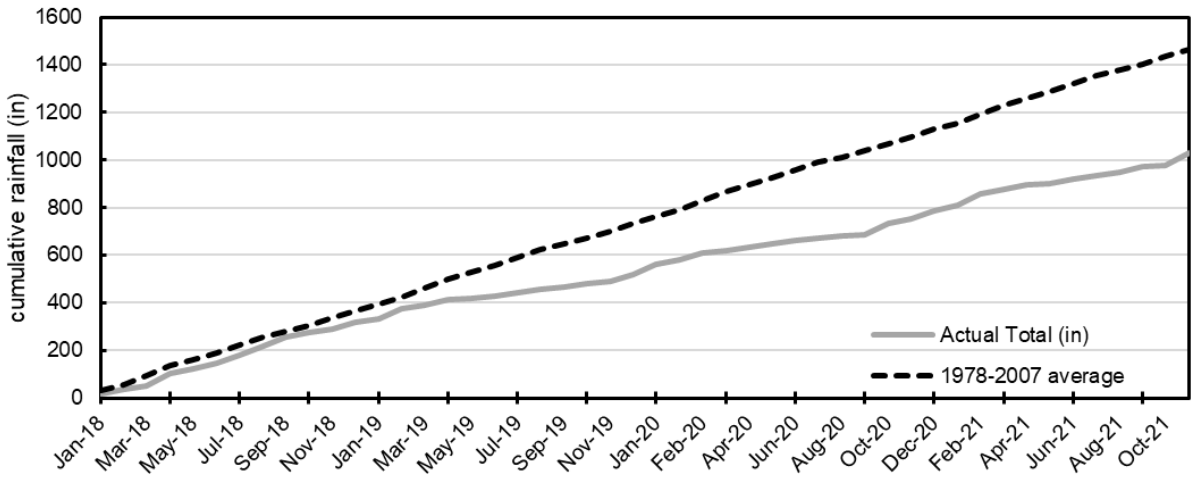


Figure 10. Rainfall Deficit in West Maui 2018-Present



4.8.2 Ground-Water Recharge

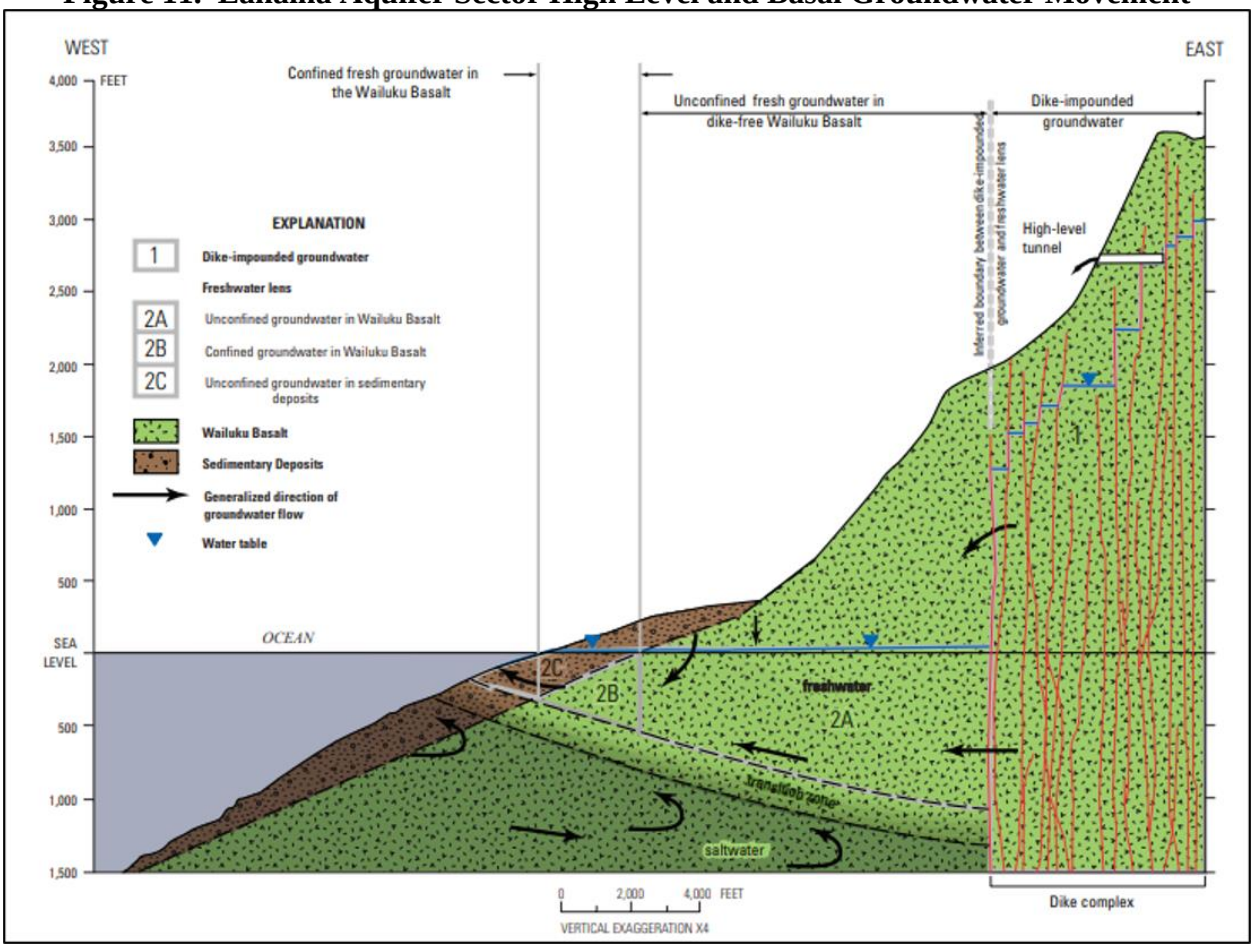
Availability of Groundwater

High-level water

High-level groundwater occurs where water is impounded by dikes or perched on buried low-permeability horizons[73]. Dikes form vertical barriers of low-permeability rock behind which groundwater is stored in the intervening permeable lava. Dike compartments can increase the storage of an aquifer by impounding groundwater to hundreds or thousands of feet above sea level. Although conceptualized as "compartments," regions of high permeability are not closed on all sides and dikes are generally leaky. Inflow into dikes starts as recharge from infiltration of high-rainfall areas. Groundwater flows from higher compartments to lower compartments and eventually out of the dike-impounded region area to adjacent groundwater bodies (e.g., basal lens), or in areas where the stream channel has incised into the water-bearing compartment, into streams as spring flow, or both. (Figure 11) Where the stream channel has incised into dike-impounded groundwater, streams gain substantial flow as base flow. The area of dike-impounded groundwater in West Maui was first delineated in 1942[74] but has since been updated[5] as depicted in Figure 12 as the dike zone, with individual identified dikes mapped as red lines.

[73] USGS Scientific Investigations Report, 2015-5164. https://pubs.er.usgs.gov/publication/sir20155164
[74] USGS Hawaii Division of Hydrography Bulletin. 1942. Bulletin 7. https://pubs.usgs.gov/misc/stearns/Maui.pdf

Figure 11. Lahaina Aquifer Sector High Level and Basal Groundwater Movement



Development tunnels are wells that were built to access high-level dike-impounded groundwater. They cut horizontally through dike compartments to augment surface flows. The success of development tunnels is mixed, as many tapped "fossil" water that lacked substantial recharge and either went dry or the flows declined substantially after construction. In most cases, development tunnel discharge created a new equilibration point affecting basal recharge by limiting the storage capacity of high-level groundwater. Some tunnels have generated sustained flows over the decades as evidence from plantation gaging, USGS publications, and recent fieldwork. A summary of the development tunnels built by MLP and Pioneer Mill in West Maui are listed in Table 12. Fieldwork by Commission staff have verified the discharge from these tunnels and their contributions to surface flow.

Table 12. Summary of Development Tunnels

Well number, USGS development tunnel number, aquifer system, receiving stream, elevation (ft), length (ft), and yield for development tunnels in West Maui; measurements from recent (2010-2022) USGS or CWRM site visits provided. [million gallons per day, mgd]

Well Number	Common Name	Aquifer System	Receiving Stream	Elevation (ft)	Length (ft)	Estimated Yield[a] (mgd)	Recent Measurements (mgd)
6-5134-001	Tunnel-14	Olowalu	Olowalu	1,710	3,000	0.00	--
6-5136-001	Tunnel-15	Launiupoko	Launiupoko	1,425	1,320	0.10	0.00
6-5236-001	Tunnel-16	Launiupoko	Kaua‘ula	2,920	656	2.00	--
6-5437-001	Tunnel-17	Launiupoko	Kahoma	1,923	2,500	dry	0.00
6-5437-002	Tunnel-18	Launiupoko	Kahoma	1,984	2,500	1.90	1.92
6-5436-001	Tunnel-19	Launiupoko	Kahoma	2,350	739	0.01	<0.01
6-5537-001	Tunnel-20a	Honokōwai	Honokōwai	1,700	1,250	2.00	1.93
6-5537-002	Tunnel-20b	Honokōwai	Honokōwai	1,600	1,050	0.50	0.50
6-5537-003	Tunnel-20c	Honokōwai	Honokōwai	1,650	--	dry	0.00
6-5735-001	Tunnel-21	Honokōhau	Honokōhau	880	720	1.35	0.65
6-5735-002	Tunnel-22	Honokōhau	Honokōhau	900	1,015	2.40	2.52

[a]*from Stearns and MacDonald (1942)*

The West Maui hydrogeologic unit encompasses all of the shield and post shield-stage rocks of West Maui Volcano, with an overwhelming majority of the volume composed of Wailuku Basalt and only a small volume of rock composed of Honolua Volcanics, the latter which holds little groundwater. Stearns and MacDonald (1942) first delineated a zone of dike-impounded groundwater in the West Maui Volcano[75], with recent USGS studies[76] further refining the spatial extent as depicted in Figure 12. The effect of this zone of dike-impounded groundwater on hydraulic properties in West Maui is unmistakable: the low-permeability dikes intrude and reduce the overall permeability of the aquifer, resulting in the water table rising steeply toward the center of the volcano. The hydraulic conductivity of dike-free zones of Wailuku Basalt ranges from 200 to 7,778 ft/day compared to 60 to 180 ft/day[77]. Using aquifer-test data[78]estimated hydraulic conductivity as low as 20 ft./day.

[75] Stearns, H.T., MacDonald, G.A. 1942. Geology and Ground-water Resources of the Island of Maui, Hawaii. Bulletin of the Division of Hydrography, 7.

[76] Gingerich, S.B., 2008, Ground-water availability in the Wailuku area, Maui, Hawai'i: U.S. Geological Survey Scientific Investigations Report 2008-5236, 95 p. [http://pubs.usgs.gov/sir/2008/5236/].
Gingerich, S.B., and Engott, J.A., 2012, Groundwater availability in the Lahaina District, west Maui, Hawai'i: U.S. Geological Survey Scientific Investigations Report 2012–5010, 90 p., available at http://pubs.usgs.gov/sir/2012/5010/.

[77] Ibid.

[78] Kolja Rotzoll,Aly I. El-Kadi,Stephen B. Gingerich 2007 Estimating Hydraulic Properties of Volcanic Aquifers Using Constant-Rate and Variable-Rate Aquifer Tests, Volume43, Issue2, April 2007, Pages 334-345

Where stream channels have eroded deep into the landscape, the water table contours descend into the valleys.[79] Groundwater naturally discharges from these dikes as spring flow into streams. As streams descend through the region of dike-impounded groundwater, additional spring flow contributes to gaining streams.[80] As Stearns and MacDonald (1942) put it, "...all deep canyons cut into this great zone of saturation serve as open drains to lower the high-level water table. All perennial streams on West Maui, except Makamakaole, depend on groundwater confined by dikes for their supply."[81] Dike-impounded groundwater flows not just to streams, but to nearby dikes, and eventually to the basal aquifer.

In the State of Hawai'i, development tunnel discharge is counted against sustainable yield. In the Lahaina ASA, development tunnel construction in dike-zones often included numerous laterals and pierced dozens, if not hundreds of dikes, as depicted by Stearns and MacDonald.[82] The construction of these tunnels increased the number of dike compartments hydrologically connected to the stream channel, thus increasing the discharge of groundwater into streams. While a portion of the water discharged from high-elevation groundwater sources via development tunnels would have naturally contributed to streamflow, some of it is likely to have naturally recharged the basal aquifer as well. If the stream was permitted to flow past the existing diversion and beyond the zone of high-elevation groundwater, it would naturally recharge the basal aquifer. Therefore, the diversion of the combined surface and groundwater flows off-stream via irrigation systems also reduces basal groundwater recharge. The challenge is that most owners of development tunnels fail to report their monthly flows to the Commission as required by statute.

[79] Izuka, S.K., Engott, J.A., Rotzoll, Kolja, Bassiouni, Maoya, Johnson, A.G., Miller, L.D., and Mair, Alan, 2018, Volcanic aquifers of Hawai'i—Hydrogeology, water budgets, and conceptual models (ver. 2.0, March 2018): U.S. Geological Survey Scientific Investigations Report 2015-5164, 158 p., https://doi.org/10.3133/sir20155164.

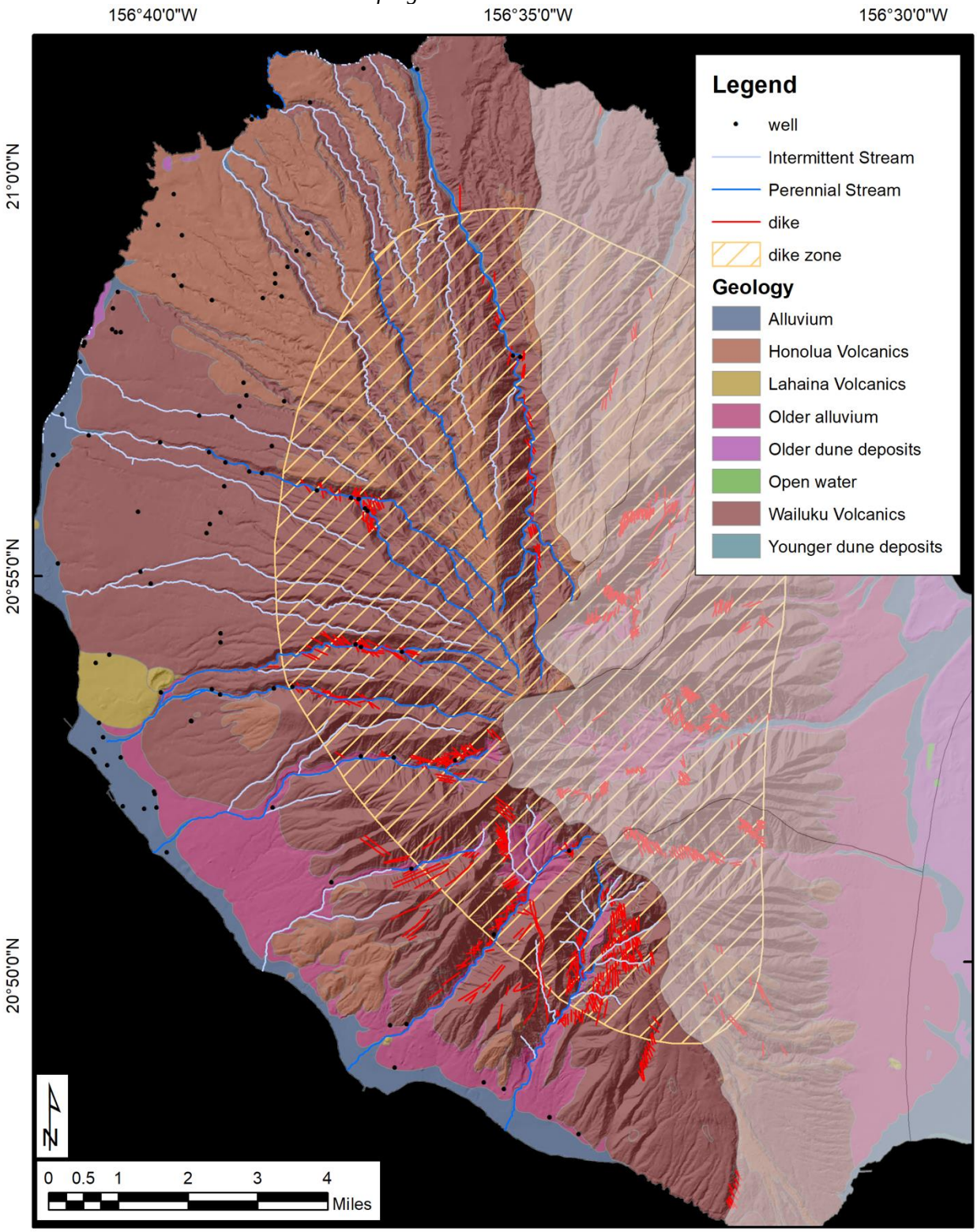
[80] Cheng, C.L., 2014, Low-flow characteristics of streams in the Lahaina District, West Maui, Hawai'i: U.S. Geological Survey Scientific Investigations Report 2014–5087, 58 p., *http://dx.doi.org/10.3133/sir20145087*.
Gingerich, S.B., and Engott, J.A., 2012, Groundwater availability in the Lahaina District, west Maui, Hawai'i: U.S. Geological Survey Scientific Investigations Report 2012–5010, 90 p., available at http://pubs.usgs.gov/sir/2012/5010/.

[81] Stearns, H.T., MacDonald, G.A. 1942. Geology and Ground-water Resources of the Island of Maui, Hawaii. Bulletin of the Division of Hydrography, 7. p. 195.

[82]Stearns, H.T., MacDonald, G.A. 1942. Geology and Ground-water Resources of the Island of Maui, Hawaii. Bulletin of the Division of Hydrography, 7. Figure 34, p. 197

Figure 12. Generalized Geology for the Lahaina Aquifer Sector, Maui

Includes zone of high elevation dike intrusion and wells



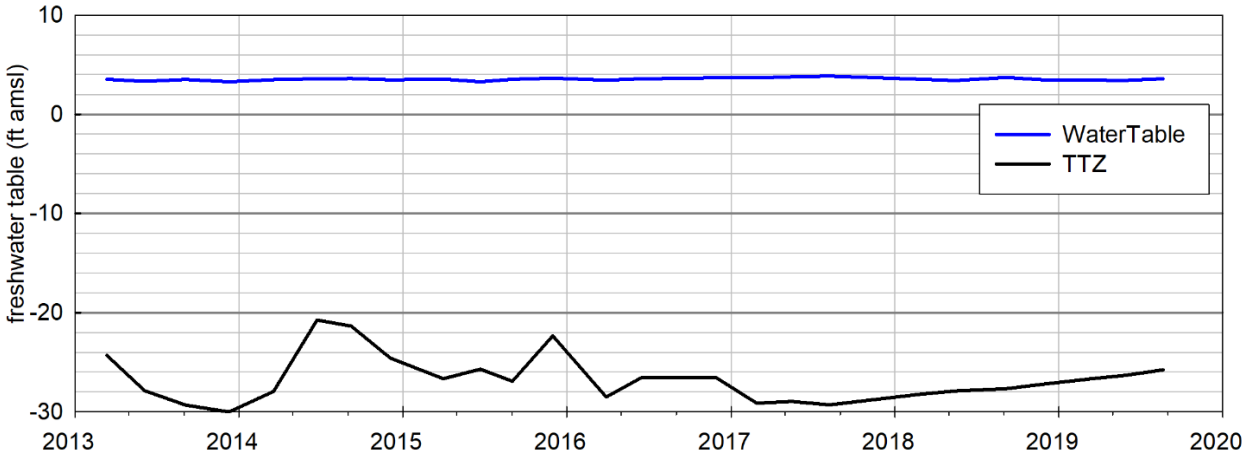
Basal Aquifer

Much groundwater is stored in the basal aquifer found in the dike-free lava flows of the shield building phase of the volcano. This basal aquifer lens sits on the brackish transition zone, which then overlies saltwater. In the Honokōwai Aquifer System, CWRM staff have maintained a deep monitoring well (State Well No. 6-5739-003) to determine the elevations of the freshwater table, the top of the transition zone (TTZ) and the midpoint of the transition zone (MPTZ) of the aquifer over time. Since 2001, the water table has risen 0.49 ft and since 2013, the TTZ has declined 1.27 ft, (Figure 23). The rise in the water level and the decline of the TTZ indicate a thickening of the freshwater lens at this location.

The MPTZ has shown a rise of 19.15 feet from 2001 to 2021, and currently is about 8 feet above the calculated Ghyben-Herzberg equilibrium MPTZ based upon the measured water level of 3.20 feet above sea level. Although recent CTD profiles indicate stability in this DMW, the basal lens remains relatively thin, and potentially vulnerable to increasing chloride concentrations from over pumping.

Aquifer recharge is dependent on rainfall patterns at daily, seasonal, and annual scales. As previously discussed, rainfall patterns have declined, often significantly, across West Maui (Figure 6). Projections of end-of-century climate patterns have been used to understand future trends in rainfall in West Maui[83], and thus the potential for declines in aquifer recharge[84]. There is some disagreement between dynamical and statistical downscaling models used to predict rainfall for the RCP 4.5 and RCP 8.5 climate scenarios, with dynamical models suggesting rainfall in the Honokōhau and Honolua aquifer systems marginally increasing (i.e., less than 3%) and statistical models suggesting rainfall declining 7.3% to 9.5%. Overall, dynamical modelling produced more conservative estimates of end-of-century changes in rainfall and recharge (e.g., ±5%) while statistical modelling produced more extreme results (e.g., -30- to 56%)

Figure 13. Elevation of Water Table and Top of Transition Zone (TTZ)
Māhinahina Deep Monitor Well from 2012 to present day, West Maui



[83] Elison Timm et al. 2015. *Journal of Geophysical Research: Atmospheres*, 120(1): 91-112.
[84] Mair, A., et al. 2019. Estimated groundwater recharge from a water-budget model incorporating selected climate projections, Island of Maui, Hawai'i. U.S. Geological Survey Scientific Investigations Report 2019-5064.

4.8.3 Ground-Water Withdrawals

Current 12-month moving average ground water withdrawals, development tunnel discharge, entitled/authorized planned use, other permitted well capacity and their totals are provided in Table 13 for the Aquifer System Areas in the Lahaina Aquifer Sector. Honokōwai and Launiupoko are exceeding SY.

Table 13. Current (December 2021) 12-month Moving Average (MAV)

Includes reported pumpage and for aquifer systems in the Lahaina Aquifer Sector. development tunnel discharge and existing entitled/authorized planned use (APU) [million gallons per day, mgd]

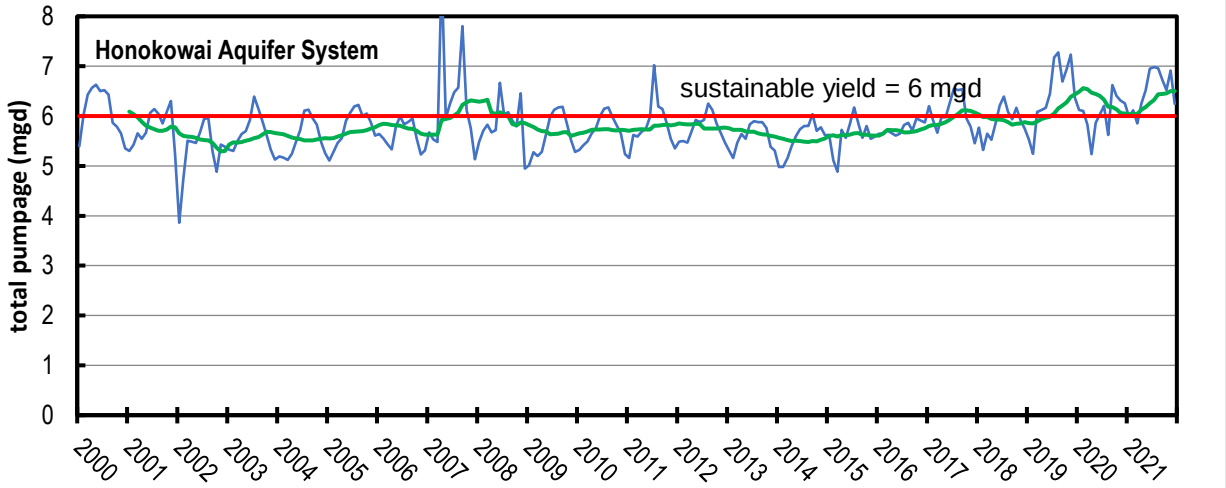
Aquifer System	SY	2020 12-MAV	2021 12-MAV	Develop. tunnel discharge	APU*	total existing + APU	% SY	other perm. well capacity	total incl. other perm. well capacity	% SY
Ukumehame	2	0.042	0.065	0	1.08	1.145	57%	0	1.145	57%
Olowalu	2	0.082	0.069	0.1	0.003	0.167	8%	0.065	0.167	8%
Launiupoko	**7**	**1.637**	**1.303**	**3.91**	**1.036**	**6.249**	**89%**	**1.433**	**7.682**	**110%**
Honokōwai	**6**	**3.48**	**4.008**	**2.5**	**2.533**	**9.041**	**151%**	**0**	**9.041**	**151%**
Honolua	8	2.131	2.534	0	1.969	4.503	56%	0	4.503	56%
Honokōhau	9	0	0	3.75	0.001	3.751	42%	0	3.751	42%

*Based on email and excel table from County of Maui DWS September 3, 2020. *See also* Section 4.9 Authorized Planned Use.

The sustainable yield of the Honokōwai Aquifer is 6.0 mgd. As of December 2021, the average withdrawals of ground water from the Honokōwai Aquifer are 4.008 mgd. These values do not consider the withdrawal of approximately 2.5 mgd of ground water from development tunnels. In addition, DHHL has an approved water reservation of 770,000 gpd from the Honokōwai Aquifer that is included in the authorized planned use total of 2.533 mgd that counts against sustainable yield. Reported total ground water withdrawals and 12-month moving average (12-MAV) for the Honokōwai Aquifer are provided in Figure 14.

Figure 14. Current Monthly Pumpage from Honokōwai Aquifer System

Current pumpage (blue line) and 12-month moving average (green line) including ground water development tunnel discharge, (mgd).

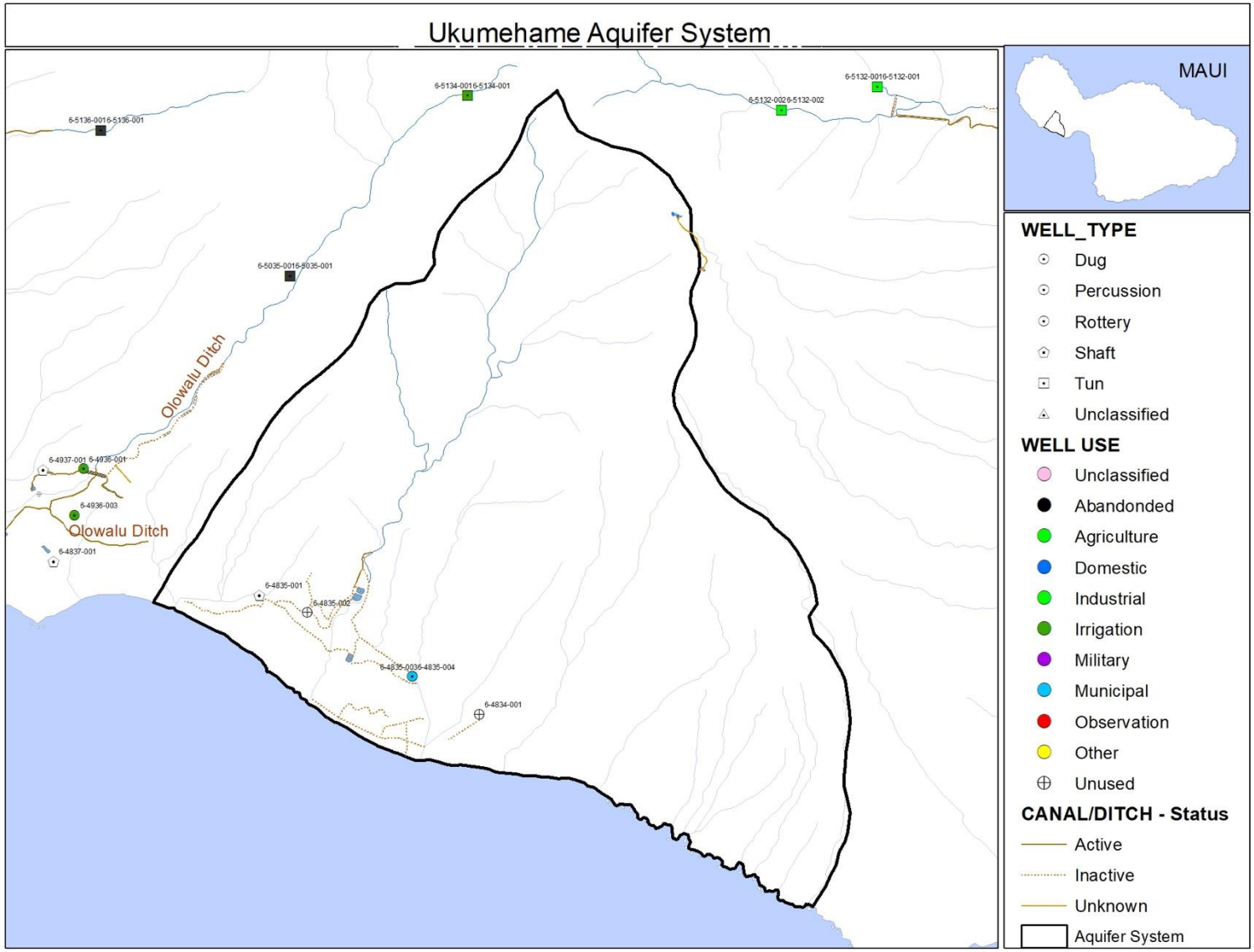


4.8.3.1 Ukumehame Aquifer

Table 14. Ukumehame Aquifer Well List

60206 Ukumehame													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-4834-001	Environmental		State of Hawaii, DOD, Hawaii Army National Guard, HIARNG	ROT	2003	35	27	2.07			0.101	0.000	UNU
6-4835-001	Ukumehame-Pump P		State of Hawaii	SHF	1934	143	79			467	4.694	0.000	UNU
6-4835-002	Sugar Way 1		Uka LLC	ROT	2003	152	141	4.86		380	0.036	0.000	UNU
6-4835-003	Ukumehame-Sugar Way 2		Uka LLC	ROT	2004	90	63.51	2.98	78.6	20	0.065	0.033	MUNPR
6-4835-004	Ukumehame 3		Uka LLC	ROT	2005	73	61.97	2.73	79.5		0.065	0.033	MUNPR

Figure 15. Ukumehame Aquifer Well Locations



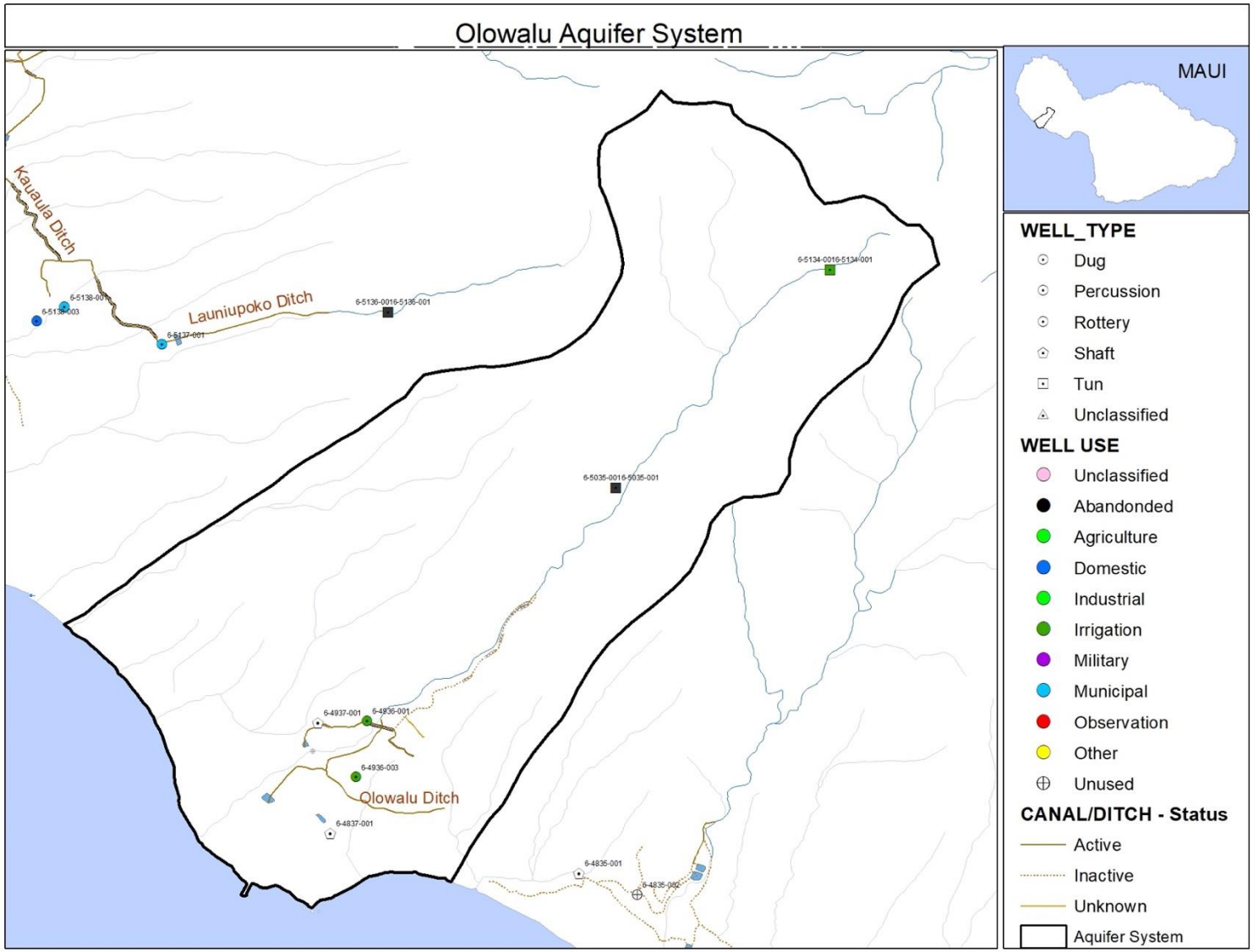
4.8.3.2 Olowalu Aquifer

Table 15. Olowalu Aquifer Well List

60205 Olowalu													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-4837-001	Olowalu Pump O	11-SH	Olowalu Elua Associates, LLC	SHF	1905	20	20	2		187	2.995	0.000	UNU
6-4936-001	Olowalu Elua		Olowalu Mauka Condo - Condo Master	ROT	1999	230	205	4.79		20	0.36	0.067	IRRLA
6-4936-003	McGee		James B. & Nancy E. McGee	ROT	2021	240	219	9	76.4		0.065	0.004*	IRRLA
6-4937-001	Olowalu Pump N	10-SH	Olowalu Elua Associates, LLC	SHF	1933	300	165	3.5			5.198	0.000	UNU
6-5035-001	Olowalu Tunnel	14-TU	Pioneer Mill Company, LLC	TUN	1912		775					0.000	ABNSLD
6-5134-001	Olowalu Tun	13-TU	Vincent H. Rodrigues	TUN			1710	1710				0.000	IRR

*No 12-MAV available as this is a new well, average pumpage listed.

Figure 16. Olowalu Aquifer Well Locations



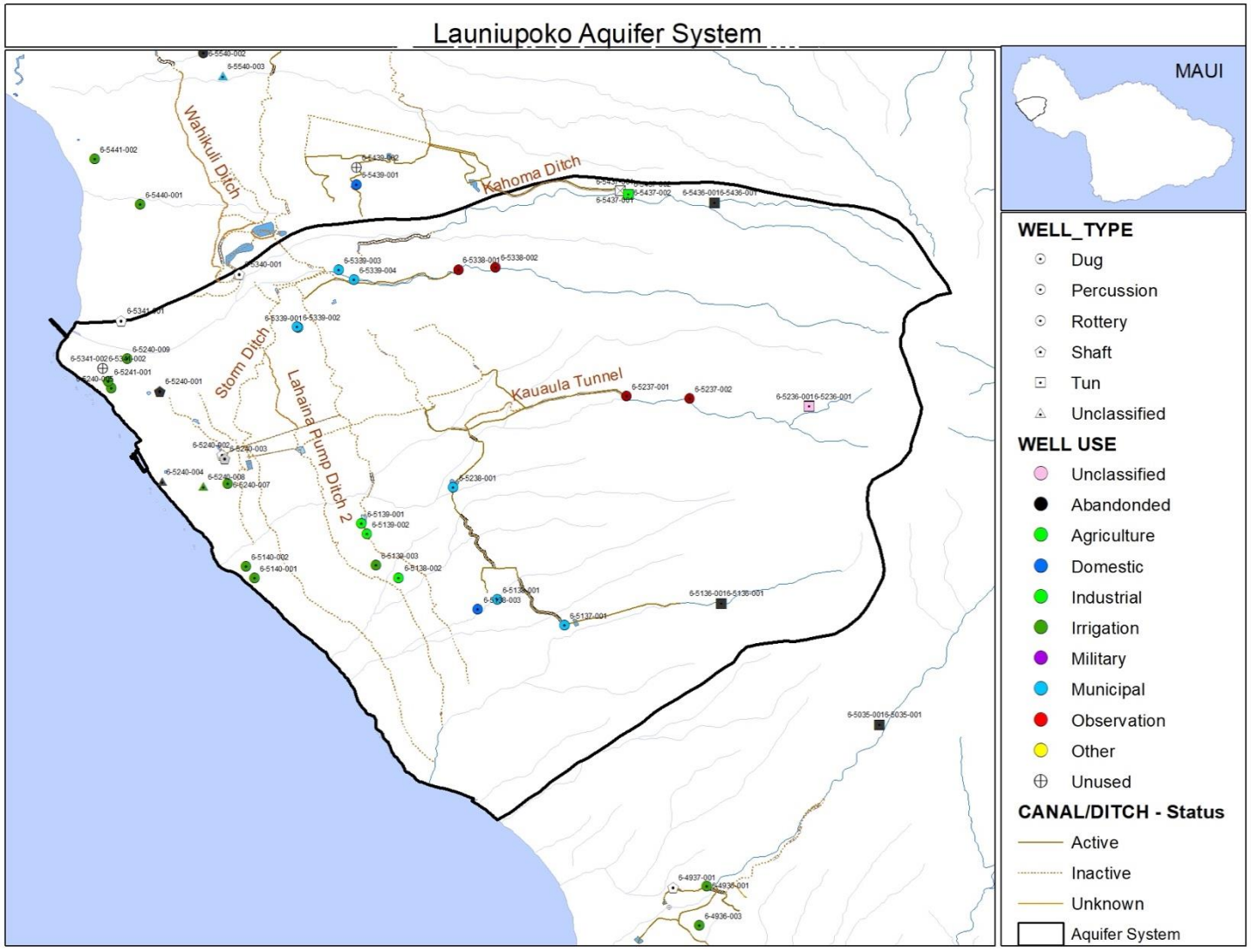
4.8.3.3 Launiupoko Aquifer Well List

Table 16. Launiupoko Aquifer Well List

60204 Launiupoko													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-5136-001	Launiupoko Tun	15-TU	Pioneer Mill Company, LLC	TUN			1425	1425				0.000	ABN
6-5137-001	Launiupoko 2		Launiupoko Water Company, Inc.	ROT	2000	865	827	5.49		50	0.144	0.001	MUNPR
6-5138-001	Launiupoko 1		Launiupoko Water Company, Inc.	PER	1979	677	633	4.61		170	0.72	0.372	MUNPR
6-5138-002	Makila Kai		Sea Grace LLC	ROT	2020	344	288	6.51	73	120	0.554	0.000	AGRCP
6-5138-003	Duvall		Craig A. Duvall Trust	ROT	2019	552.1	517.1	4.33	73		0.036	0.012	DOM
6-5139-001	LIC 1		Launiupoko Irrigation Co., Inc.	ROT	2017	416	376	5.67	77	35	0.72	0.046	AGR
6-5139-002	McDonald 1		Mark McDonald	ROT	2019	420	380.19	4.94	73	76	0.122	0.024	AGRCP
6-5139-003	Strombeck		Fetsch Trust	ROT	2019	340	316.85	4.29	74		0.065	0.017	IRRLA
6-5140-001	Puamana 1		Puamana Community Association	ROT	1987	28.1	8.57	3.84	69	283	0.138	0.046	IRRLA
6-5140-002	Puamana 2		Puamana Community Association	ROT	1987	56	11				0.138	0.025	IRRLA
6-5236-001	Kauaula Tunnel	16-TU	Makila Land Company, LLC	TUN			2920	2920				0.000	UNU
6-5237-001	Kauaula TH 1		State of Hawaii, DLNR Land Division Oahu, DLNR-LD	ROT	1970	356	1530					0.000	OBS
6-5237-002	Kauaula TH 2		State of Hawaii, DLNR Land Division Oahu, DLNR-LD	ROT	1970	317	1800					0.000	OBS
6-5238-001	Launiupoko 3		Launiupoko Water Company, Inc.	ROT	2003	799	751	6.17		18	0.72	0.120	MUNPR
6-5240-001	Mill Shaft Pump C	7-SH	Pioneer Mill Company, LLC	SHF	1897	39	34			680	10	0.000	ABN
6-5240-002	Lahaina Shaft-Pump B	8-SH	Wainee Land and Homes, LLC	SHF	1897	31	30				2	0.000	UNU
6-5240-003	Lahaina Shaft-Pump A	9-SH	Wainee Land and Homes, LLC	SHF	1897	31	30				10	0.002	INDMI

6-5240-004	Lahaina	290-	State of Hawaii		1956	55	10	4		3140	0.22	0.000	ABNLOS
6-5240-005	Lahaina UMC		Lahaina United Methodist Church	ROT	1989	78	8			1200	0.04	0.002	IRRLA
6-5240-007	Lahaina Recreation Center #1		County of Maui Dept. of Parks and Recreation, Central Maui	ROT	2002	48	40.61	6.76		340	0.158	0.035	IRRPA
6-5240-008	Lahaina Recreation Center #2		County of Maui Dept. of Parks and Recreation, Central Maui		1986	45					0.144	0.046	IRRPA
6-5240-009	Kahoma Irr		Opukea at Lahaina	ROT	2006	58	29	3.5		820	0.216	0.010	IRRLA
6-5241-001	Lahaina Surf		Hale Mahaolu Lahaina Surf Inc.	ROT	1985	28					0.05	0.004	IRRLA
6-5338-001	Kanaha TH 1		State of Hawaii, DLNR Land Division Oahu, DLNR-LD	ROT	1970	750	1070	431				0.000	OBS
6-5338-002	Kanaha TH 2		State of Hawaii, DLNR Land Division Oahu, DLNR-LD	ROT	1970	597	1257	820				0.000	OBS
6-5339-001	Waipuka 1	291-	Maui DWS	PER	1962	482	440	2.6		180	0.324	0.181	MUNCO
6-5339-002	Waipuka 2	292-	Maui DWS	PER	1963	498	441	1.8		240	0.36	0.138	MUNCO
6-5339-003	Kanaha 1		Maui DWS	ROT	1971	642	590	2.5		265	0.36	0.098	MUNCO
6-5339-004	Kanaha 2		Maui DWS	PER	1974	749	654	3.2		60	0.36	0.124	MUNCO
6-5340-001	Kahoma Pump M	5-SH	Kahoma Land LLC	SHF	1933	323	322				10.08	0.000	UNU
6-5341-001	Wahikuli Pump L	6-SH	DOF IV Lahaina LLC	SHF	1897	27	26				5.04	0.000	UNU
6-5341-002	Front St. House		William Dorbush (Front Street Affordable Partners)	DUG		35	13	0.52		2360	0.147	0.000	UNU
6-5436-001	Kahoma Tun 3	19-TU	Kahoma Ranch	TUN			2350	2350				0.000	ABN
6-5437-001	Kahoma Tun 1	17-TU	Kahoma Ranch	TUN			1923					0.000	UNU
6-5437-002	Kahoma Tun 2	18-TU	Kahoma Ranch	TUN			1984	1984				0.000	AGRCP

Figure 17. Launiupoko Aquifer Well Locations



4.8.3.4 Honokōwai Aquifer Well List

Table 17. Honokōwai Aquifer Well List

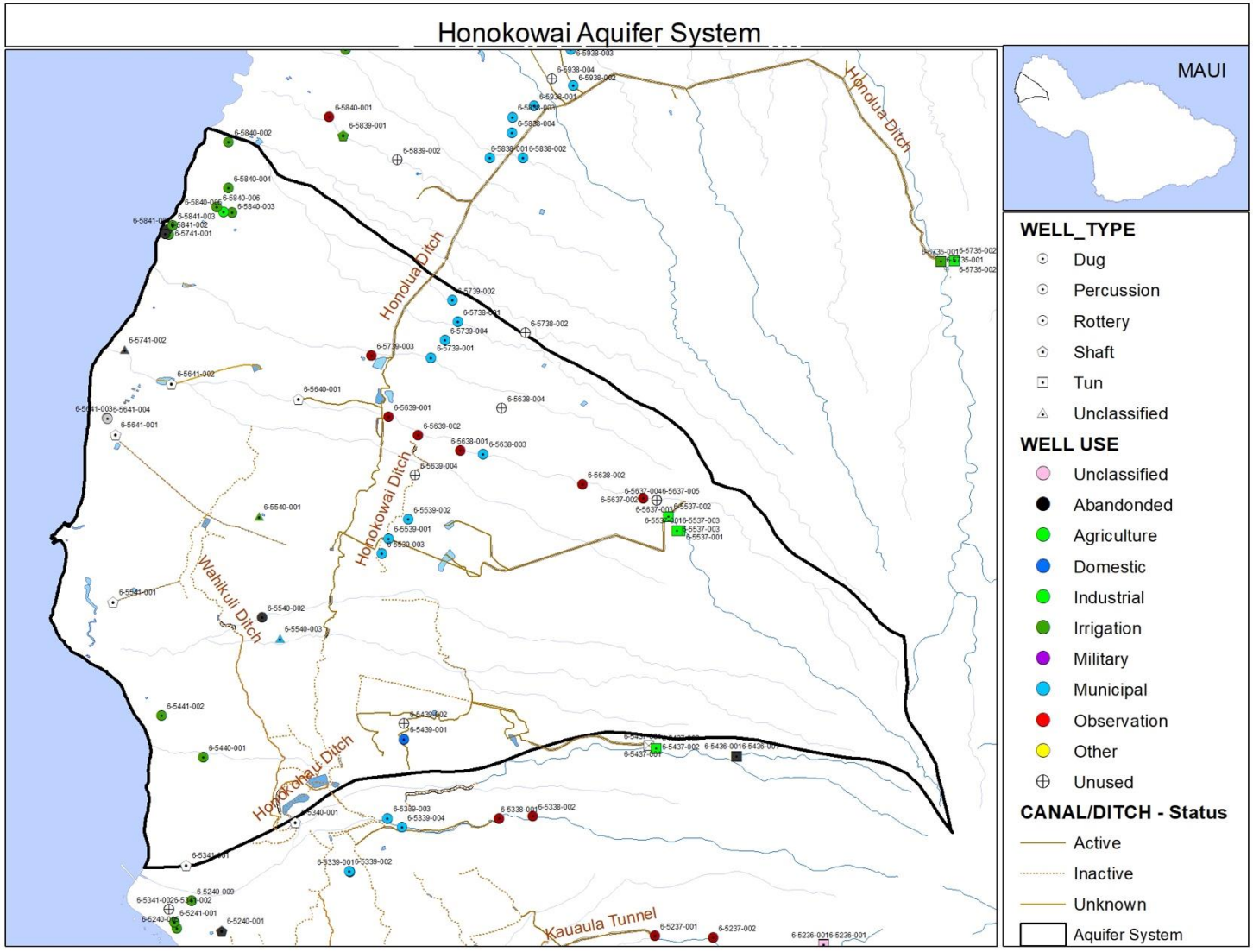
60203 Honokōwai													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-5439-001	Wahikuli 1		Kahoma Land LLC	ROT	1992	1115	1055			12		0.000	DOM
6-5439-002	Wahikuli 2		Hawaii Housing Finance & Development Corporation, HHFDC	ROT	1993	1120	1055			30		0.000	UNU
6-5440-001	Wahikuli Irr		Hawaii Housing Finance & Development Corporation, HHFDC	PER	1993	162	148					0.010	IRRLA
6-5441-002	Lahaina Civic Center		County of Maui Dept. of Parks and Recreation, Central Maui	PER	1993	97				540		0.062*	IRRLA
6-5537-001	Honokowai Tun 1	20-A TU	Kaanapali Land Management Corp.	TUN			1700					0.000	AGRCP
6-5537-002	Honokowai Tun 2	20-B TU	Kaanapali Land Management Corp.	TUN			1600					0.000	AGRCP
6-5537-003	Honokowai Tun 3	20-C TU	Kaanapali Land Management Corp.	TUN			1600					0.000	AGRCP
6-5539-001	Kaanapali P-1		HWSC, Kaanapali	PER	1990	985	924				0.576	0.438	MUNPR
6-5539-002	Kaanapali P-2		HWSC, Kaanapali	PER	1991	990	927			70	0.72	0.027	MUNPR
6-5539-003	Kaanapali P-3		HWSC, Kaanapali	ROT	2008	988	943	6		65	0.72	0.701	MUNPR
6-5540-001	Puukolii		Kaanapali Land Management Corp.		1968	472	444			250	1.5	0.093	IRRGC
6-5540-002	Hahakea 1		Kaanapali Land Management Corp.	ROT	1971		450					0.000	ABNLOS

6-5540-003	Hahakea 2		HWSC, Kaanapali		1971	524	504		73.76		0.576	0.292	MUNPR
6-5541-001	Hahakea Pump G	4-SH	Kaanapali Land Management Corp.	SHF	1923	12	14					0.000	UNU
6-5637-001	Honokowai TH 1		AMFAC	ROT	1964	170	1450					0.000	OBS
6-5637-002	Honokowai TH 2		AMFAC	ROT	1964	301	1350					0.000	OBS
6-5637-003	Honokowai TH 3		AMFAC	ROT	1964	175	1450					0.000	OBS
6-5637-004	Honokowai		AMFAC	ROT	1964	90	1450					0.000	OBS
6-5637-005	Honokowai A	307-	Pioneer Mill Company, LLC	ROT	1965	165	1450				1.728	0.000	UNU
6-5638-001	Honokowai TH 6		AMFAC	ROT	1966	252	776					0.000	OBS
6-5638-002	Honokowai TH 7		AMFAC	ROT	1966	314	1169					0.000	OBS
6-5638-003	Honokowai B		HWSC, Kaanapali	PER	1976	895	852	5.43		55	1.29	0.000	MUNPR
	Mahinahina		Maui DWS	ROT	2014	1595	1313.57	44.2	68			0.000	UNU
6-5639-001	Honokowai TH 5		AMFAC	ROT		580	560					0.000	OBS
6-5639-002	Honokowai TH 8		AMFAC	ROT		671	652					0.000	OBS
6-5639-004	DHHL Honokowai 1		Maui DWS	ROT	2010	993	926			13		0.000	UNU
6-5640-001	Honokowai Pump R	36-SH	Pioneer Mill Company, LLC	SHF	1952		300				5.04	0.000	UNU
6-5641-001	Kaanapali-Pump D	3-SH	Pioneer Mill Company, LLC	SHF	1897	28	27				14.4	0.000	UNU
6-5641-002	Honokowai Pump F	2-SH	Pioneer Mill Company, LLC	SHF	1921	65	65				5	0.000	UNU
6-5641-003	KOR Lot 3 Saltwater		Vistana Signature Experiences, VSE Pacific, Inc.	ROT	2015	300	11.87	1.87	74		3.456	0.000	INDEL
6-5641-004	KOR Lot 3 Saltwater Backup		Vistana Signature Experiences, VSE Pacific, Inc.	ROT	2015	300	11.87	1.87	74		3.456	0.000	INDEL
6-5738-001	Kaanapali P-5		HWSC, Kaanapali	PER	1982	985	934			16	1.296	1.180	MUNPR
6-5739-001	Kaanapali P-4		HWSC, Kaanapali	PER	1982	922	868			107	1.008	0.396	MUNPR
6-5739-002	Kaanapali P-6		HWSC, Kaanapali	PER	1982	992	945			33	1.498	0.207	MUNPR
6-5739-003	Mahinahina Deep Monitor		CWRM	ROT	2001	1268	664					0.000	OBSDM
6-5739-004	Kaanapali P-5A		HWSC, Kaanapali	ROT	2009	952	912			101	0.648	0.563	MUNPR
6-5741-001	McDonald		Levy Family Trust	ROT	2000	60	33.67		72	800	0.057	0.003	IRRLA

6-5741-002	Honokowai-Kosaka		Aston at Papakea Resort			25						0.000	ABNSLD
6-5840-002	Kahana Ridge		Kahana Ridge Association, Inc	ROT	1998	60	32			201	0.288	0.026	IRRLA
6-5840-003	Kahana Ranch		Lars Wernars	ROT	2000	186	161			900	0.055	0.007	IRRLA
6-5840-004	Kahana Betsill		Villas at Kahana Ridge	ROT	2003	135	118			740	0.432	0.008	IRRLA
6-5840-005	Kahana-Kurose		James Kurose	ROT	2003	126	118			580	0.057	0.000	AGRON
6-5840-006	Kahana-Delaney		William Delaney	ROT	2003	98	81			600	0.086		IRRLA
6-5841-001	Tmk 4-3-09-2	310-	Noelani - Condo Master	ROT	1956	53	15					0.000	ABNLOS
6-5841-002	Tmk 4-3-09-3		Lloyd J. White Jr. ETAL	ROT	1963	27	6					0.000	ABNLOS
6-5841-003	Shoemaker		Lloyd J. White Jr. ETAL	ROT	1999	50	34			1400	0.058	0.005	IRRLA

*No 12-MAV available as this is a new well, average pumpage listed.

Figure 18. Honokōwai Aquifer Well Locations



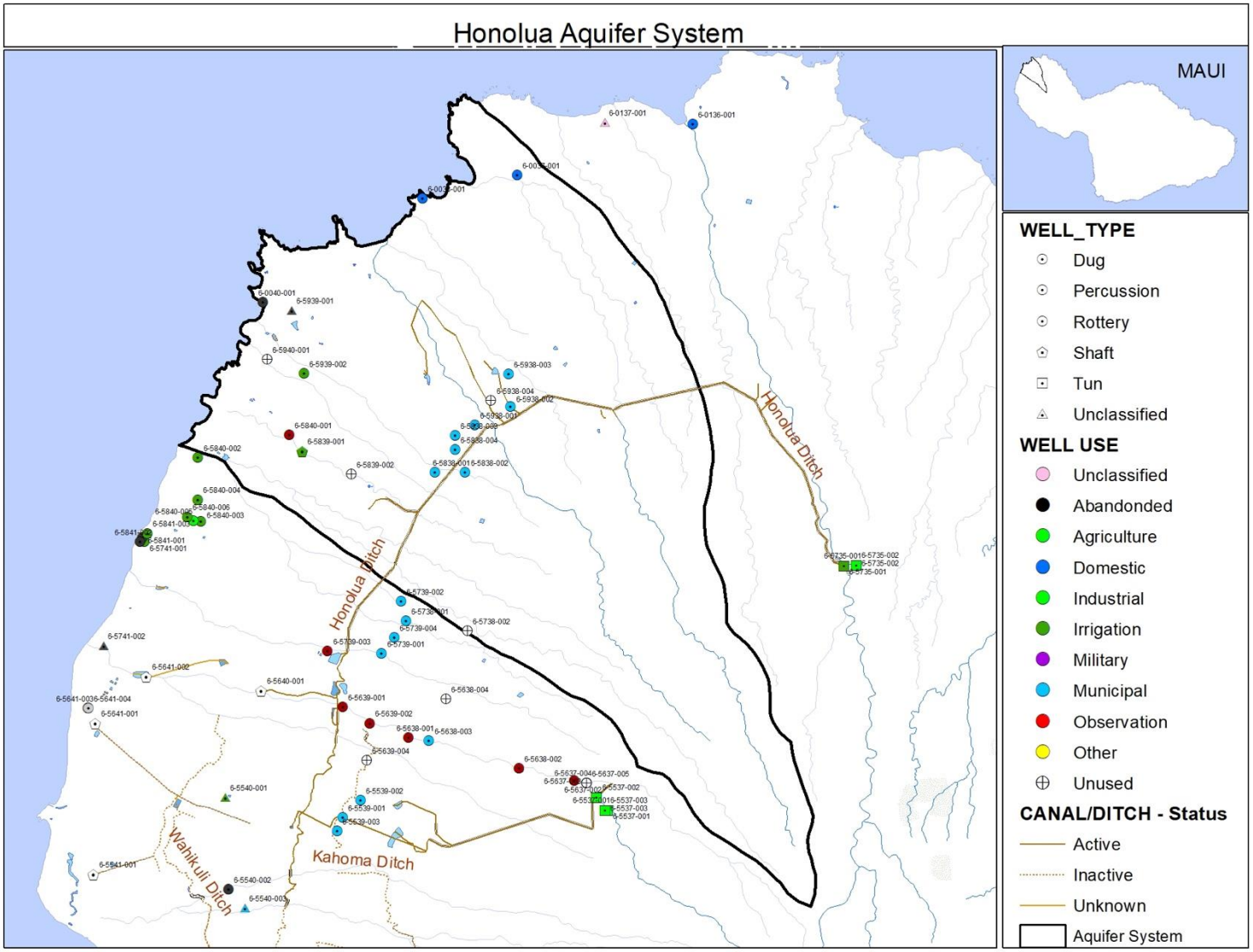
4.8.3.5 Honolua Aquifer Well List

Table 18. Honolua Aquifer Well List

60202 Honolua													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-0037-001	Stoops		David Stoops	ROT	2007	150					0.046	0.000	DOM
6-0038-001	Kapalua Brennan J		Chu Young Lee	ROT	2005	54				520	0.072	0.006	DOM
6-0040-001	Napili Bay	320-	Napili Lani - Condo Master	ROT	1956	60	15				0.07	0.000	ABNLOS
6-5738-002	Kahana		Maui DWS	ROT	2017	1378	1317	7.37	70	60		0.000	UNU
6-5838-001	Napili A		Maui DWS	ROT	1971	893	860	4.65		140	1	0.018	MUNCO
6-5838-002	Napili B		Maui DWS	ROT	1972	915	883	6.3		36	1.008	0.499	MUNCO
6-5838-003	Honokahua A		Maui DWS	ROT	1978	942	911	6.83		78	0.71	0.000	MUNCO
6-5838-004	Napili C		Maui DWS	ROT	1979	919		5.8		34	1.43	0.835	MUNCO
6-5839-001	Alaeloa Shaft	1-SH	Baldwin Packer	SHF	1934	245	244				0.01	0.000	IRR
6-5839-002	Alaeloa	318-1	State of Hawaii, DLNR Land Division Oahu, DLNR-LD	PER	1967	525	491	1.5		180		0.000	UNU
6-5840-001	Alaeloa	318-	State of Hawaii, DLNR Land Division Oahu, DLNR-LD	ROT	1964	274	257	2.69		352		0.000	OBS
6-5938-001	Honokahua B		Maui DWS	ROT	1987	966	946	8.3		24	1.008	0.591	MUNCO
6-5938-002	Kapalua 1		Maui Land & Pineapple Company, Inc, MLPC	PER	1989	822	764	6.8		17	1.152	0.297	MUNPR
6-5938-003	Kapalua 2		Maui Land & Pineapple Company, Inc, MLPC	PER	1991	813	771	5.4		20	1.152	0.277	MUNPR

6-5938-004	Kapalua 3B		Maui Land & Pineapple Company, Inc, MLPC	PER	1998	859	788	4.76		59		0.000	UNU
6-5939-001	Medeiros		Herb Nishijima (Kent I. Nishijima Trust)		1980							0.000	ABNLOS
6-5939-002	Napili Park		County of Maui Dept. of Parks and Recreation, Central Maui	ROT	2000	195	156	0.79		580	0.094	0.012	IRRPA
6-5940-001	Napilihau		Napilihau Community Association	PER	1971	50	38					0.000	UNU

Figure 19. Honolua Aquifer Well Locations

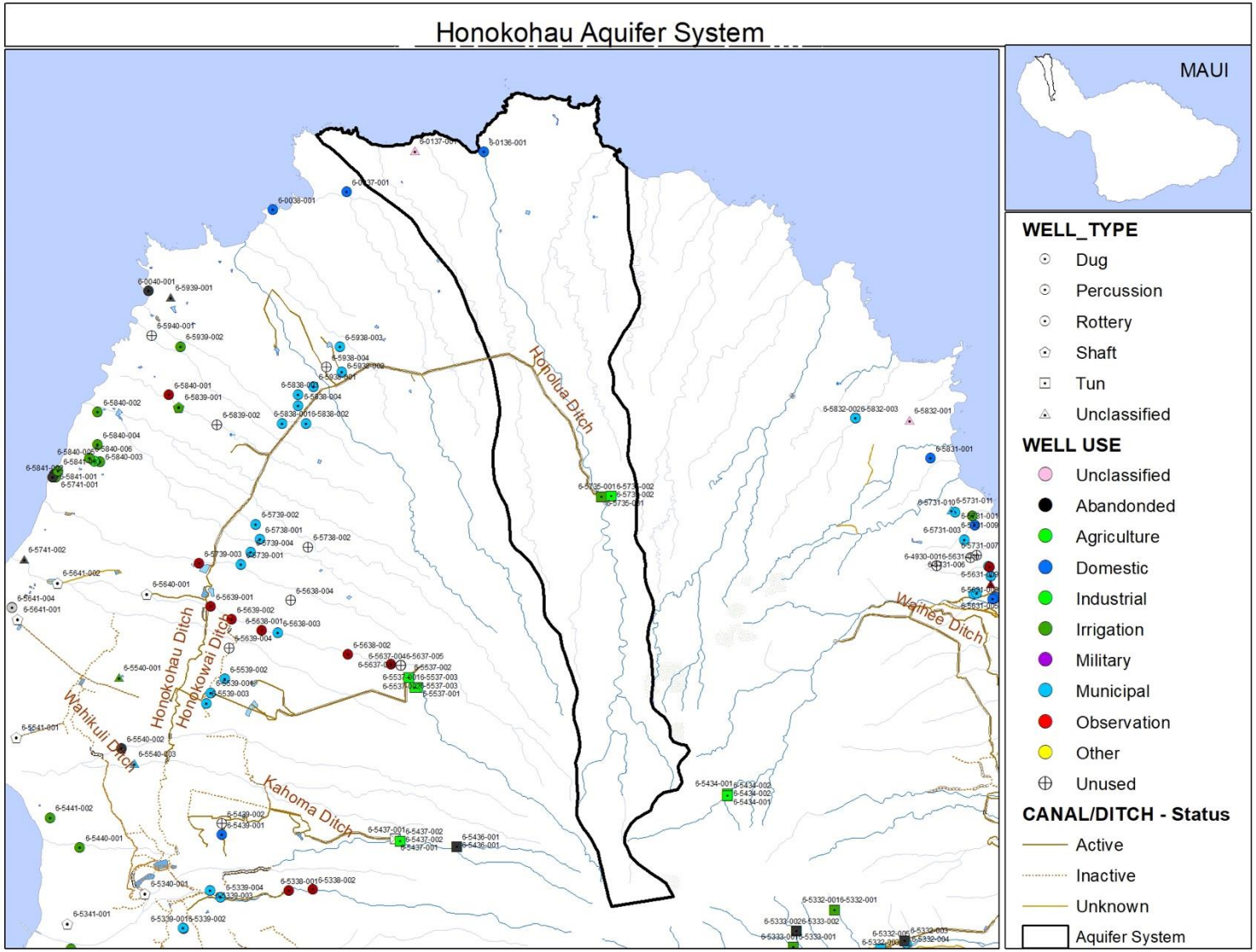


4.8.3.6 Honokōhau Aquifer

Table 19. Honokōhau Aquifer Well List

60201 Honokōhau													
State Well No.	**Well Name**	**Old Well No.**	**Well Owner/Operator**	**Well Type**	**Year Drilled**	**Well depth (ft)**	**Ground Elevation**	**Initial Head (ft)**	**Initial Temp (F)**	**Test Chloride (mg/L)**	**Installed Pump Capacity (mgd)**	**12 MAV (mgd)**	**Type of Use**
6-0136-001	McCarty		WB 8607 Honapiilani LLC	ROT	2009	40					0.012	0.000	DOM
6-0137-001	Honokohau		Rennie K Deprue		1970	140	100			300		0.000	
6-5735-001	Honokohau Tunnel	21-TU	Baldwin Packer	TUN			880	880				0.000	IRR
6-5735-002	Honokohau Tunnel	22-TU	Baldwin Packer	TUN			900	900				0.000	AGRCP

Figure 20. Honokōhau Aquifer Well Locations



4.8.3.7 Pending Well Applications

Fourteen wells are pending completion in the Lahaina ASA. Seven of these wells are not accounted for in the authorized planned use. See Table 20.

Table 20. Current Well Applications Pending Completion

Aquifer System/Well Number	Well Name	Well Owner/Operator	Proposed capacity (mgd)	Proposed daily pumpage (gpd)	Well Use
Ukumehame					
6-4834-002	UKA-4	Ukumehame Water Association, Inc./Uka LLC	0.058	30,000	MUNPR
6-4834-003	UKA-5	Ukumehame Water Association, Inc./Uka LLC	0.504	250,000	MUNPR
Total			**3.058**	**280,000**	
Olowalu					
6-4936-004	Olowalu 2	Olowalu Water Company LLC	0.36	360,000	MUN
6-4936-005	Kahili*	Francis Cornelis & Nadja Cornelis Koole	0.065	9,000	DOM
Total			**0.425**	**369,000**	
Total *			**0.065**	**9,000**	
Launiupoko**					
6-5037-001	Jackson Rancheria*	Larry White (Jackson Rancheria Development Corp)	0.108	75,000	AGRCP
6-5038-001	Rock N Horse*	Ian Hollingsworth	0.115	100,000	DOM
6-5137-002	Maria Lynn Moyer Memorial*	Timothy & Harline Moyer Trust	0.058	5,000	DOM
6-5138-004	Mitchell*	Mitchell Family Trust	0.072	24,000	IRR
6-5138-005	LIC-2*	LIC	0.72	700,000	AGR
6-5139-004	Rogers*	Matthew Rogers (Kahalawai Holdings LLC)	--***	--***	--***
6-5239-001	Ku‘ia Estate*	Gunars Valkirs (Maui Kuia Estate Chocolate Inc.)	0.36	270,000	AGRCP
Total			**1.433**	**1174,000**	
Total *			**1.433**	**1174,000**	
Honokōwai					
6-5639-004	DHHL Honokowai	Maui DWS/DHHL	1.008	680,000	MUN
Total			**1.008**	**680,000**	
Honolua					
6-5839-005	Pulelehua 1	Maui Oceanview, LP	0.864	280,000	MUN
6-5839-006	Pulelehua 2	Maui Oceanview, LP	0.864	280,000	MUN
Total			**1.728**	**560,000**	

*Other permitted well capacity (individual or irrigation wells) not accounted for in authorized planned use
**Not including requested pump installation permit for State Well No. 6-5240-003 Lahaina Shaft B.
***Not provided in well application

4.8.4 Water Use Reporting

The owner or operator of a well is required to report their monthly water use to the Commission whether it is used or not. However not all owners are compliant, particularly in the Honokōwai Aquifer System Area, which already exceeds its SY. This makes it difficult for the Commission to monitor and account for how much water there is. The compliance rate of water use reporting is shown in Table 21.

Table 21. Current (2022) Well Statistics for Lahaina ASA

Total number of wells, number of wells reporting, total number of production wells, number of production wells reporting, percent of wells reporting, and percent of production wells reporting for the Lahaina Aquifer Sector.

Aquifer system	# of wells (incl. OBS and UNU)	# of wells reporting	# of production wells	# of production wells reporting	% of wells reporting	% of production wells reporting
Honokōhau	4	0	3	0	0%	0%
Honolua	16	9	11	8	53%	72.7%
Honokōwai	42	28	25	19	67%	76%
Launiupoko	31	22	21	19	71%	90.5%
Olowalu	5	4	3	3	80%	100%
Ukumehame	5	4	2	2	80%	100%

Table 22. Overview of Total Wells in Lahaina ASA by Usage Code

Usage Code*	Honokōhau	Honolua	Honokōwai	Launiupoko	Olowalu	Ukumehame	TOTAL
ABNSLD			1		1		2
ABN				3			3
ABNLOS		2	3	1			6
AGR	1		4	4			9
DOM	1	2	1	1			5
IND	1		2	1			4
IRR		2	9	8	3		22
MIL							0
MUN		7	9	7		2	25
OBS		1	9	4			14
OTH							0
UNU		4	8	6	2	3	23
NONE	1						1

TOTAL	**4**	**18**	**46**	**35**	**6**	**5**	**114**
Total (w/o ABNs)	**4**	**16**	**42**	**31**	**5**	**5**	**103**
Non-Production	**1**	**5**	**17**	**10**	**2**	**3**	**38**
Production	**3**	**11**	**25**	**21**	**3**	**2**	**65**

*Usage Codes: ABNSLD abandoned and sealed, ABN abandoned, ABNLOS abandoned and lost, AGR agricultural, DOM domestic, IND industrial, IRR irrigation, MIL military, MUN municipal, OBS observation, OTH other, UNU unused

4.8.5 Maximum Permitted Well Capacity

The maximum permitted well capacity describes the amount of water that the well is capable of pumping in a day. Most domestic well users only pump water for a limited amount of time per day until their need is met. Municipal wells are pumping for many hours a day and are closer to reaching their maximum pump capacity, especially in times of drought and higher water demand. Maximum permitted pump capacity is an important data set to estimate potential water uses when wells are not reporting.

Table 23. Maximum Permitted Pump Capacity by Aquifer System Area

Aquifer System Area	Maximum Pump Capacity (mgd)	SY (mgd)	Installed Pump Capacity as % of SY
Ukumehame	4.961	2	248%
Olowalu	8.618	2	430%
Launiupoko	42.856	7	612%
Honokōwai	43.945	6	732%
Honolua	7.752	8	97%
Honokōhau	0.012	9	0.001%

Some of the large capacities identified include all of the former sugar skimming wells, most of which are now unused (Table 24). Skimming wells are mine-like shafts to the basal water table with one of more infiltration tunnels skimming the fresh water off the underlying saltwater. The wells that yielded excessively large volumes of water and also the had highest salt content.[85] Most of the skimming wells in the Lahaina ASA are unused with non-functioning pump equipment and pose a safety and contamination hazard.

[85] Stearns, H.T., 1942, General geology and ground-water resources of the island of Maui, Hawaii: Hawaii (Terr.) Division of Hydrography Bulletin 7, p. 127 https://pubs.usgs.gov/misc/stearns/Maui.pdf

Table 24. Skimming Wells/Shafts by Aquifer System Area

Aquifer System/Well Number	Well Name	Well Owner/Operator	Year Drilled	Installed Capacity (mgd)	Type of Use
Honolua					
6-5839-001	Alaeloa Shaft	Baldwin Packer	1934	0.010	IRR
Total	**1**			**0.010**	
Honokōwai					
6-5541-001	Hahakea Pump G	Kaanapali Land Management Corp.	1923		UNU
6-5640-001	Honokowai Pump R	Pioneer Mill Co., LLC	1952	5.040	UNU
6-5641-001	Kaanapali Pump D	Pioneer Mill Co., LLC	1897	14.010	UNU
6-5641-002	Honokowai Pump F	Pioneer Mill Co., LLC	1921	5.000	UNU
Total	**4**			**24.440**	
Launiupoko					
6-5240-001	Mill Shaft C	Pioneer Mill Co., LLC	1897	10.000	ABN*
6-5240-002	Lahaina Shaft-Pump B	Wainee Land and Homes, LLC	1897	2.000	UNU
6-5240-003	Lahaina Shaft-Pump A	Wainee Land and Homes, LLC	1897	10.000	INDMI
6-5340-001	Kahoma Pump M	Kahoma Land LLC	1933	10.080	UNU
6-5341-001	Wahikuli Pump L	Kaanapali Land Management Corp.	1897	5.040	UNU
Total	**4**			**37.120**	
Olowalu					
6-4837-001	Olowalu Pump O	Olowalu Elua Assoc., LLC	1905	2.995	UNU
6-4937-001	Olowalu Pump N	Olowalu Elua Assoc., LLC	1933	5.198	UNU
Total	**2**			**8.193**	
Ukumehame					
6-4835-001	Ukumehame-Pump P	State of Hawai‘i	1934	4.694	UNU
Total	**1**			**4.694**	
Total Lahaina ASA	**13**			**74.457**	

*Potential unsealed parts remaining

Recently, the owner of Lahaina Shaft-Pump A (State Well No. 6-5240-003), Wainee Land and Homes, demolished the well houses of Lahaina Shaft-Pump A and B (State Well No. 6-5240-002). See photos in Figure 21. A new 700 gpm pump was installed in Pump A, which would have a maximum daily production of 1 mgd. Previously since 1942, Pump A has had a 7,000 gpm pump installed with a maximum capacity of 10 mgd and Pump B had a 1,400 gpm pump installed with maximum capacity of 2 mgd. Commission staff notified the well owner in September 2021 that a pump installation permit would be required as well as a pump test to show that there are no adverse impacts to the environment and other existing water users. On April 21, 2022, well owner was

required to develop a plan to enclose well heads, run a pump which needs to adhere to added conditions, and report chlorides and quantities pumped. See Appendix K. The well owner was also reminded that prior to approval of the pump installation permit, no water for consumptive uses must be pumped. It is staff's understanding that a replacement would be also requested for Pump B, but it is not known at this time how much quantity will be requested to be withdrawn in total for the Lahaina Shaft Pumps A & B, and whether or not they would be run at the same time. This construction and proposed water use are part of the PUC Docket 2020-0083 as Wainee Land and Homes has an easement agreement with LIC.

Figure 21. Lahaina Shaft-Pump A and B Site Visit Photos November 18, 2021

6-5240-003 Lahaina Shaft-Pump A

Shaft pump house looking directly SE (May 2018)

Opened shaft pump house looking directly SW

Operating motor and pump looking N

Opened shaft pump house, note piping looking directly S

Tunnel at East side of shaft pump house.

Shaft located between the two pump houses, opened to surface exposure looking NW

6-5240-002 Lahaina Shaft- Pump B

Within pump house, note piping and old motors

Within pump house trash in tunnel at West end looking directly SW

4.8.6 Water Levels

Mahinahina Deep Monitoring Well ("DMW") (6-5739-003)

Beginning in 2001, Commission staff has monitored on quarterly basis, the Mahinahina DMW (6-5739-003) located approximately two miles inland and 1.4 miles southeast of the Ka'ānapali Airport, in the Honokōwai Aquifer. Figure 22 illustrates the most recent Conductivity, Temperature, and Depth ("CTD") profile measured in this well on November 18, 2021. The profile

shows a typical basal aquifer lens, with fresh water overlying a brackish water transition zone, which in turn, overlies the brackish/sea water interface.

Figure 23 presents a time series chart illustrating the trends of the measured Top of Transition Zone ("TTZ" at 1,000 µS/cm), mid-point of Transition Zone ("MPTZ" at 25,000 µS/cm), and brackish/sea water interface (50,000 µS/cm) during the period of monitoring. The time series shows the measured fresh water/ brackish water interface (TTZ) has been stable since 2013. The time series shows a slow rise in the MPTZ, near the calculated Ghyben Herzberg elevation of 128 feet below mean sea level (msl). Additionally, the sea water interface has remained relatively stable at ± 170 feet below msl.

The trends illustrated show that the water level in this DMW has risen nearly 0.5 feet, while the TTZ has declined 1.27 feet, indicating a thickening of the freshwater lens. The gentle rise of the Mid-Point (MPTZ) to near the calculated Mid-Point, based upon the water level, and the stability of the brackish/sea water interface, also indicates this area of the Honokōwai Aquifer has been stable over the period of monitoring.

Note: the TTZ measured prior to 2006 may be considered suspect and is included on this figure for comparative purposes (stability over the period of monitoring, 2001-2006). The CTD instrument used to collect profile data prior to 2007 had a suspected calibration issue in the 1,000 µS/cm range and was replaced in 2008 by the instrument currently used to collect CTD data (calibrated annually).

Figure 22. Conductivity, Temperature, and Depth (CTD) profile November 18, 2021

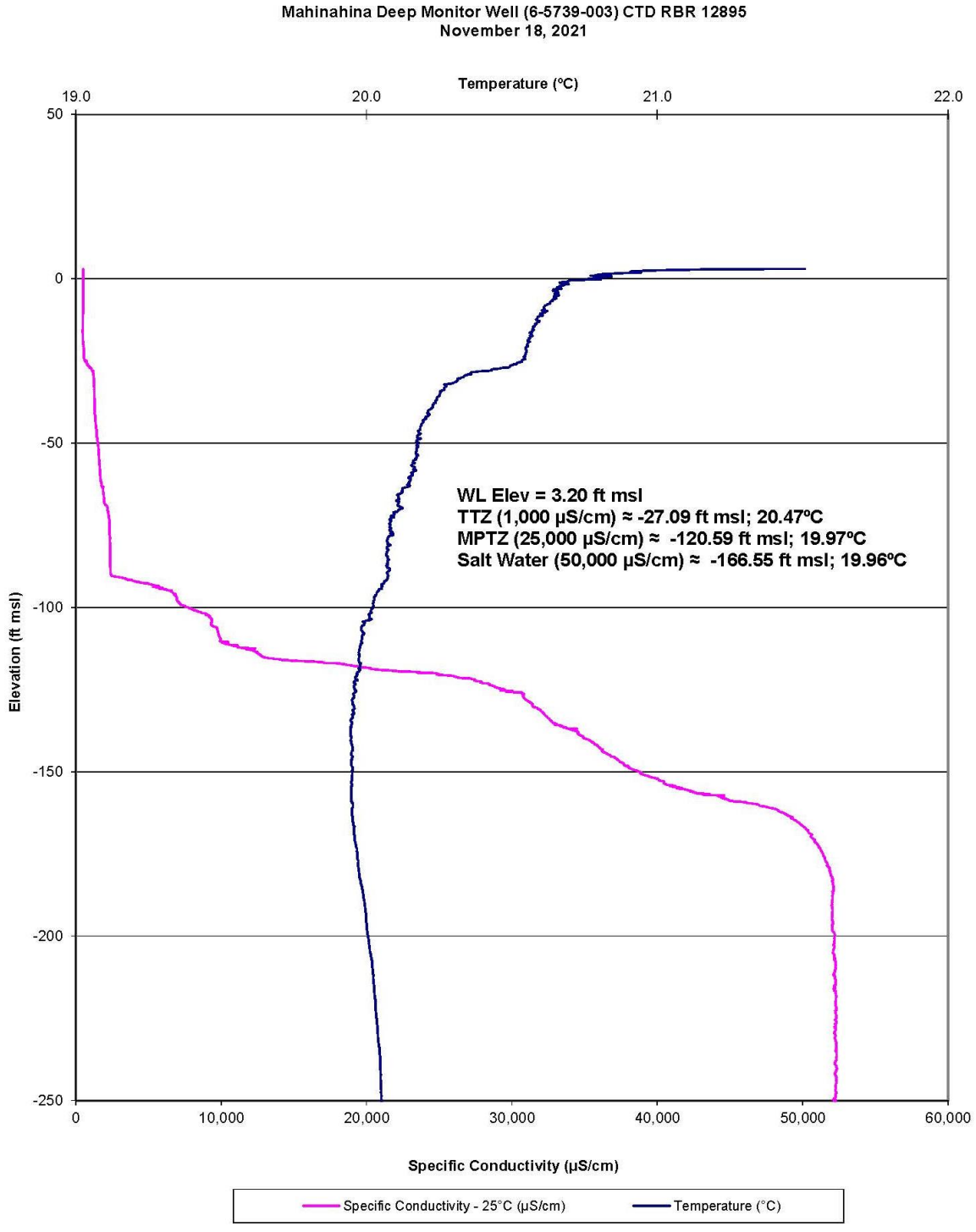
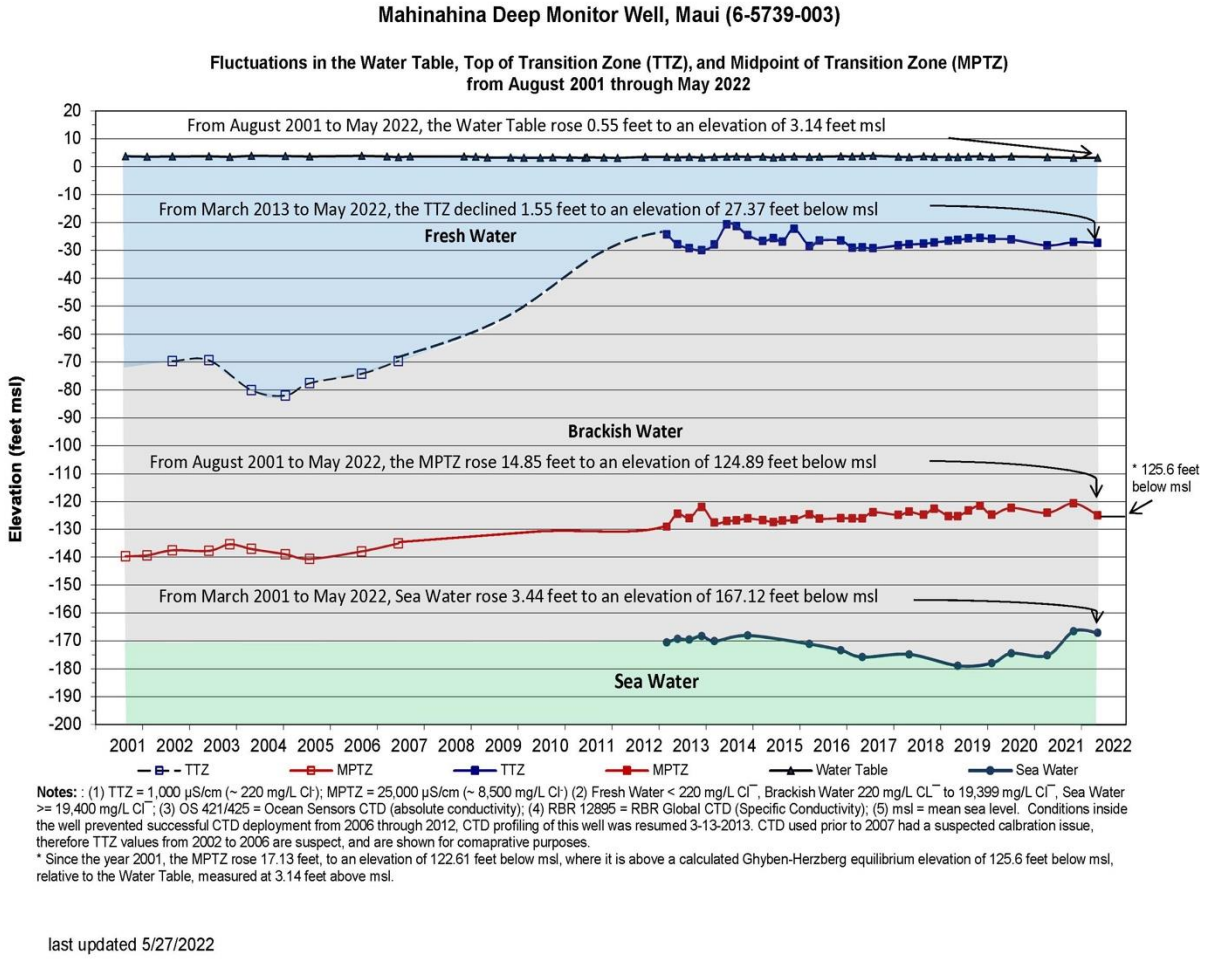


Figure 23. Time Series Chart of Water Trends from 2001-Present



Notes: : (1) TTZ = 1,000 µS/cm (~ 220 mg/L Cl^-); MPTZ = 25,000 µS/cm (~ 8,500 mg/L Cl^-) (2) Fresh Water < 220 mg/L Cl^-, Brackish Water 220 mg/L CL^- to 19,399 mg/L Cl^-, Sea Water >= 19,400 mg/L Cl^-; (3) OS 421/425 = Ocean Sensors CTD (absolute conductivity); (4) RBR 12895 = RBR Global CTD (Specific Conductivity); (5) msl = mean sea level. Conditions inside the well prevented successful CTD deployment from 2006 through 2012, CTD profiling of this well was resumed 3-13-2013. CTD used prior to 2007 had a suspected calbration issue, therefore TTZ values from 2002 to 2006 are suspect, and are shown for comaprative purposes.
* Since the year 2001, the MPTZ rose 17.13 feet, to an elevation of 122.61 feet below msl, where it is above a calculated Ghyben-Herzberg equilibrium elevation of 125.6 feet below msl, relative to the Water Table, measured at 3.14 feet above msl.

last updated 5/27/2022

4.8.7 Water Quality

4.8.7.1 Chlorides

Saltwater Intrusion and Chloride Levels

Hawai‘i’s public trust describes the “authority and duty to maintain the purity and flow of Hawai‘i’s waters for future generations.”[86] A degradation of ground water resources that may compromise existing or future beneficial uses shall not be allowed or permitted.[87] Many wells in the Lahaina ASA have become brackish and are already exceeding the chloride concentration of greater than 250 milligrams per liter (mg/L or part per million – ppm) that is considered unacceptable for drinking purposes under the EPA Secondary Drinking Water Standards.[88] County water

[86] *Waiāhole I*, 94 Hawai‘i at 138, 9 P.3d at 450.
[87] The Department of Health assesses degradation of ground water quality only pertaining to organic and inorganic contaminants pursuant to HAR Chapter 11-20 and HRS § 174C-44 (2), the Commission assesses saltwater intrusion and chloride levels pursuant to HRS § 174C-44 (4) and (5).
[88] *See https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals*

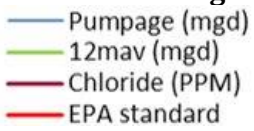
departments generally limit chloride levels of water within their municipal system to less than 160 mg/L.

In addition to monthly reports of water use, the Commission may require salinity and water level reporting as may deemed appropriate. Currently, only seven Maui DWS wells in Honolua, seven Hawai‘i Water Service wells in Honokōwai, and five Maui DWS wells in Launiupoko report chlorides monthly to the Commission.

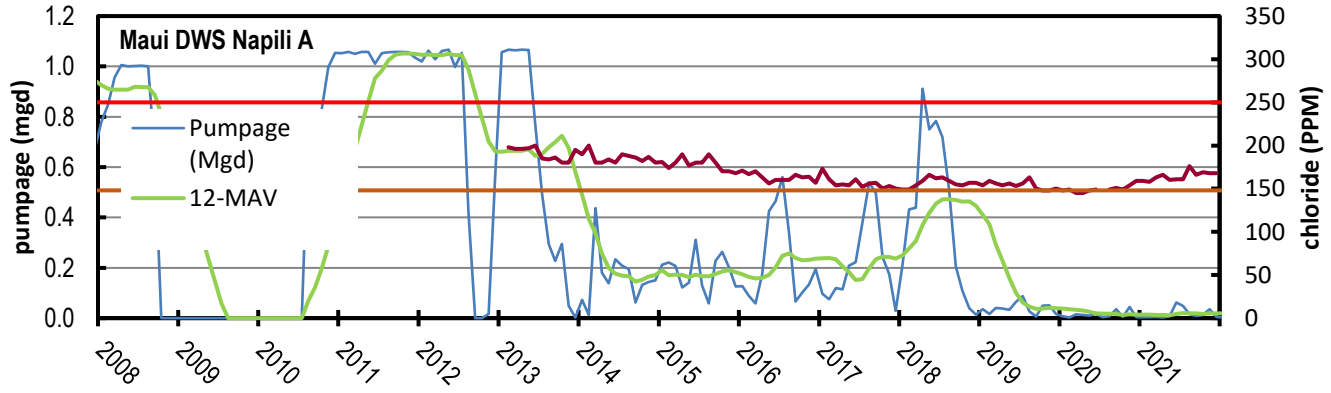
Honolua Aquifer

The Maui DWS Napili A well was heavily utilized from 2010 to 2013 and monthly pumpage consistently exceeded 1.0 mgd. Since 2014, monthly pumpage has remained under 1.0 mgd, with pumpage ramped down to less than 0.2 mgd since 2019. Chloride content has remained relatively steady, hovering between 150 and 200 ppm, despite the reduced pumpage. By contrast, Maui DWS Napili B and Napili C wells are used erratically, with monthly pumpage frequently bouncing back and forth between exceeding 0.8 mgd and dropping to 0.2 mgd or less. Chloride content has similarly varied, with chloride content in Napili B varying between 50 ppm and 125 ppm, and Napili C varying between 50 ppm and 200 ppm, tied to recent pumpage activity. It appears as though the recently sustained pumpage in Napili C has led to a sustained increase in chlorides in Napili A, Napili B and Napili C wells, despite the lack of pumpage from Napili A and Napili B wells.

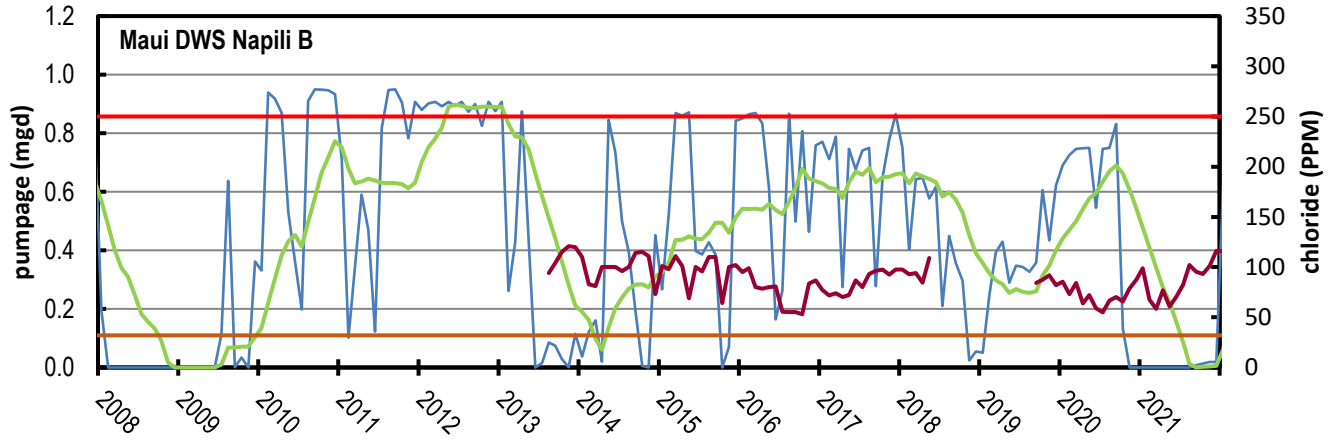
Figure 24. Overview of Maui DWS Wells in the Honolua Aquifer



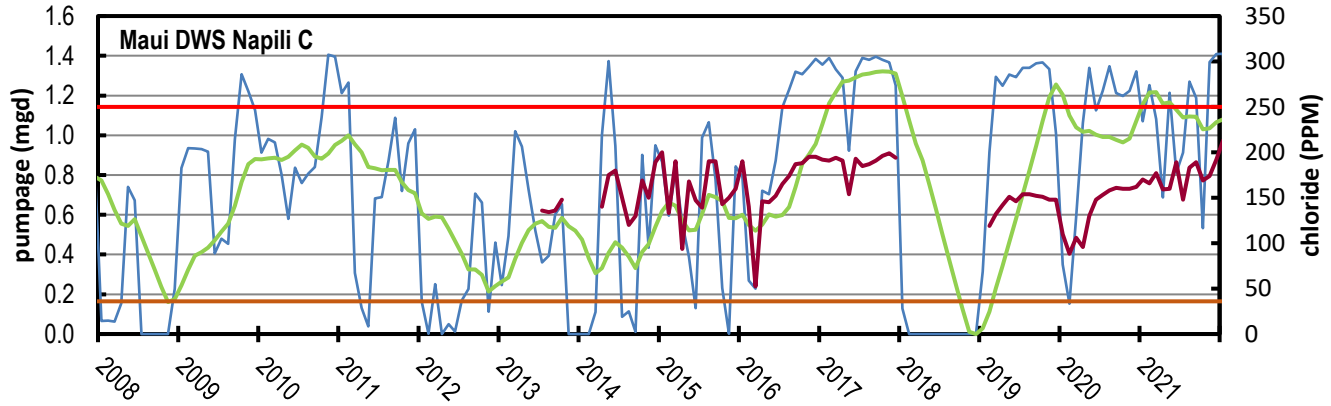
Maui Department of Water Supply
Napili A Well drilled 1971
Initial Chloride = 148 ppm 2021 average chloride = 171 ppm



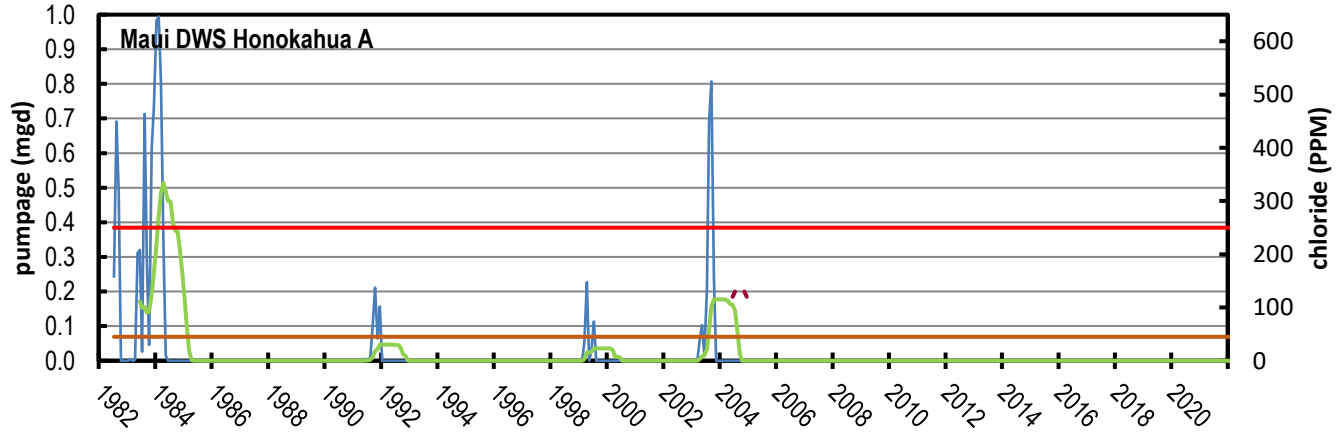
Maui Department of Water Supply
Napili B Well drilled 1972
Initial Chloride = 32 ppm 2021 average chloride = 90 ppm



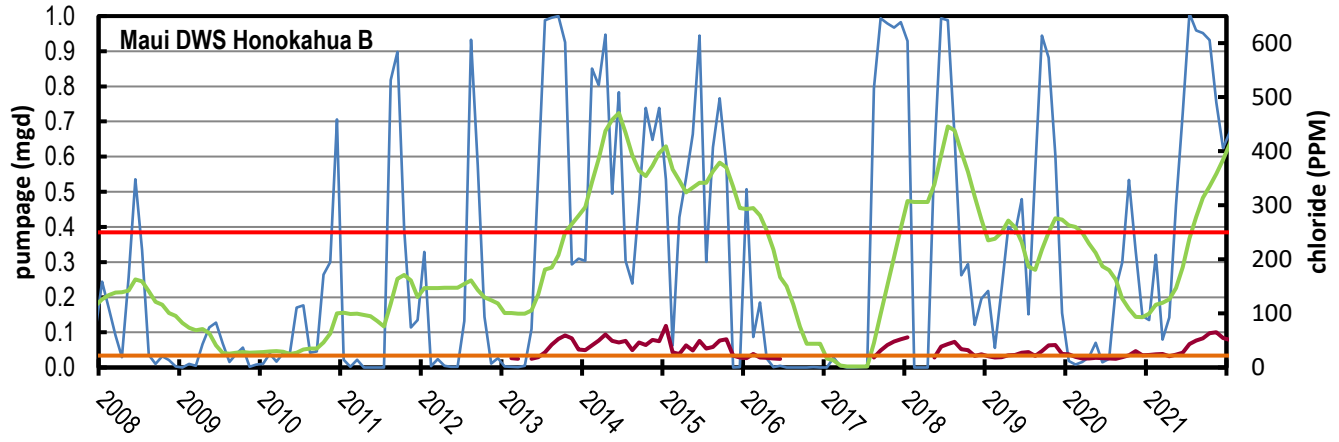
Maui Department of Water Supply
Napili C Well drilled 1979
Initial Chloride = 36 ppm 2021 average chloride = 168 ppm



Maui Department of Water Supply
Honokahua A Well drilled 1978
Initial Chloride = 45 ppm 2021 average chloride = n/a ppm

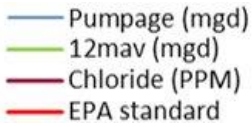


Maui Department of Water Supply
Honokahua B Well drilled 1987
Initial Chloride = 22 ppm 2021 average chloride = 40 ppm

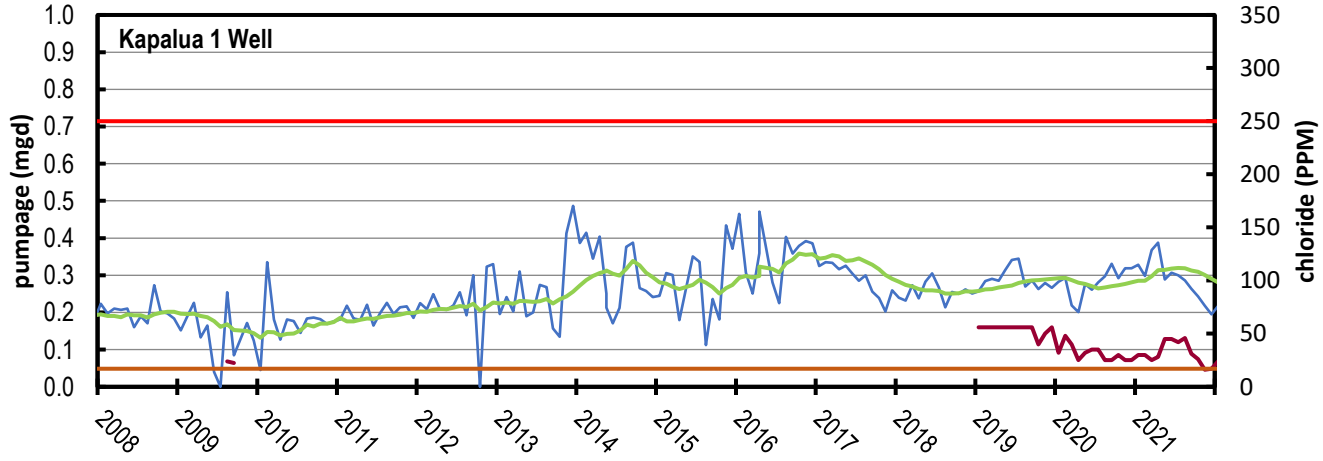


Hawaii Water Service operates two wells in the Honolua AS: Kapalua 1 and Kapalua 2. Each well has sustained regular monthly pumpage from 0.1 mgd to over 0.4 mgd, without any long-term consequences for their chloride content. The chloride content of both wells has remained at or below 50 ppm for the length of record.

Figure 25. Overview of Hawaii Water Service wells in the Honolua Aquifer



Kapalua Water/Hawaii Water Service
Kapalua 1 Well drilled 1989
Initial Chloride = 17 ppm 2021 average chloride = 32 ppm



Kapalua Water/Hawaii Water Service
Kapalua 2 Well drilled 1989
Initial Chloride = 20 ppm 2021 average chloride = 21 ppm

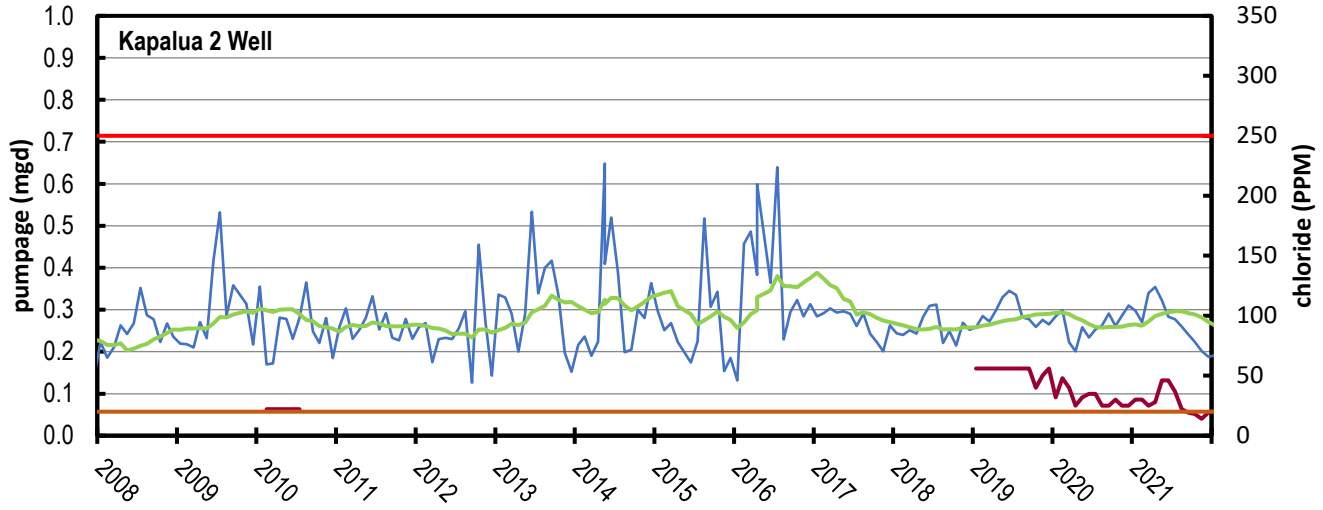
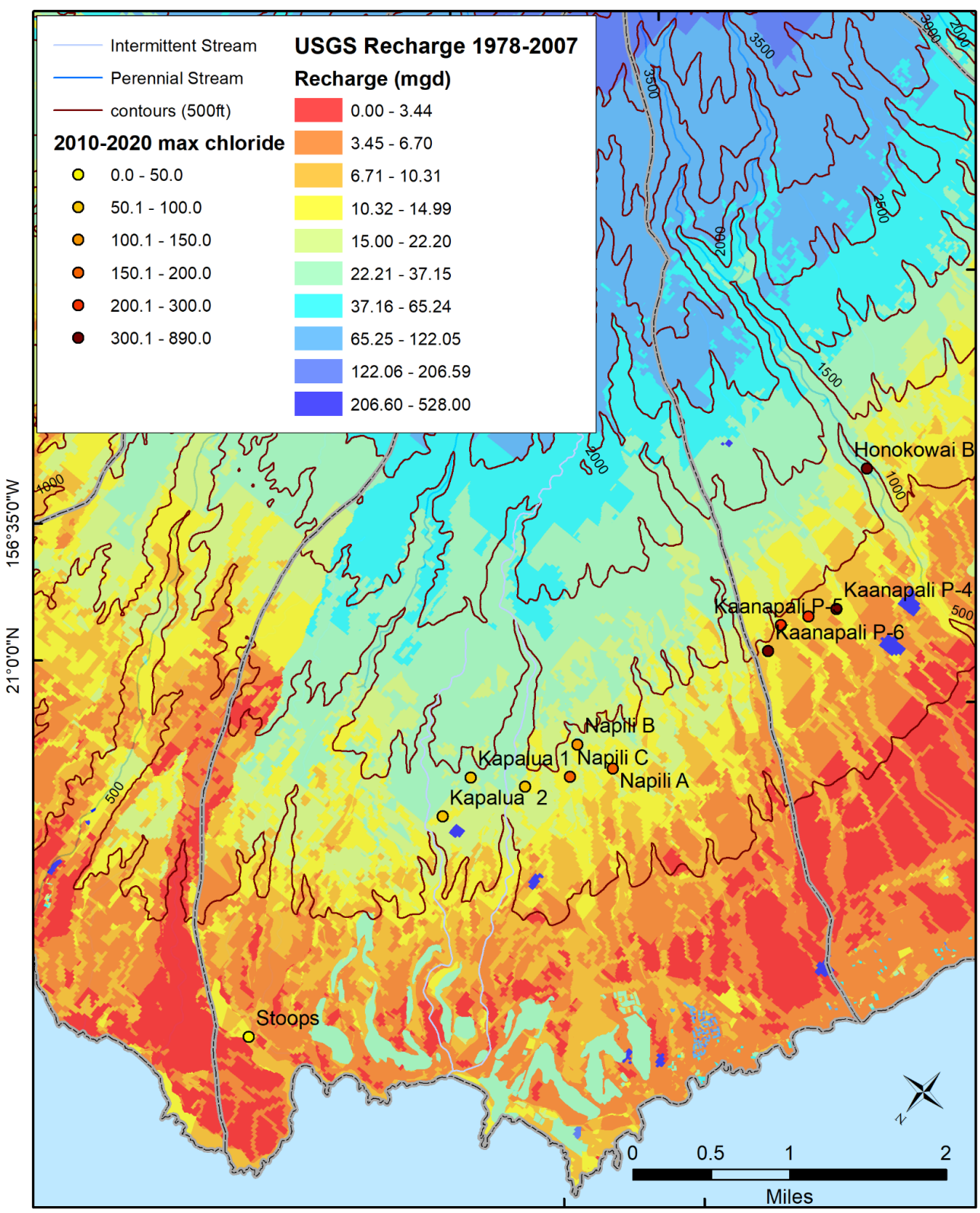


Figure 26. Distribution of Maximum Reported Chloride in Honolua Aquifer System

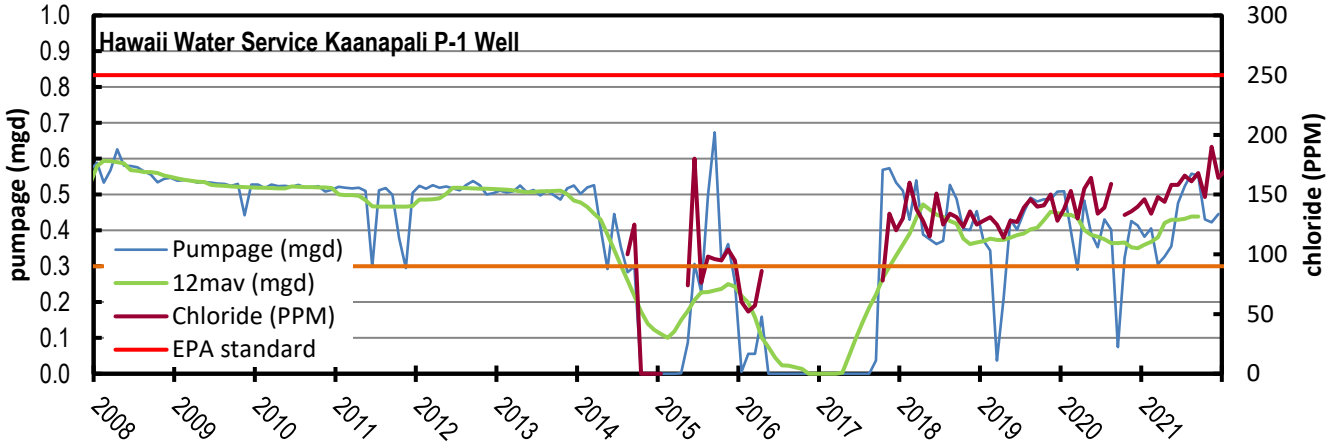
From 2010 to 2020 relative to mean 1978-2007 groundwater recharge (USGS SIR 2014-5168)



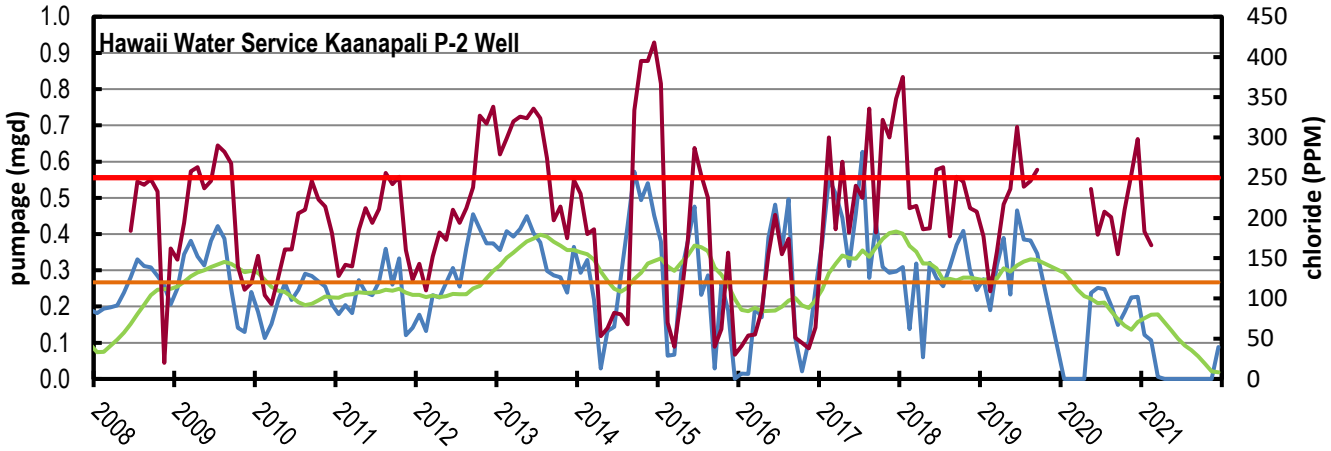
Honokōwai Aquifer

Figure 27. Overview of Hawaii Water Service wells in the Honokōwai Aquifer

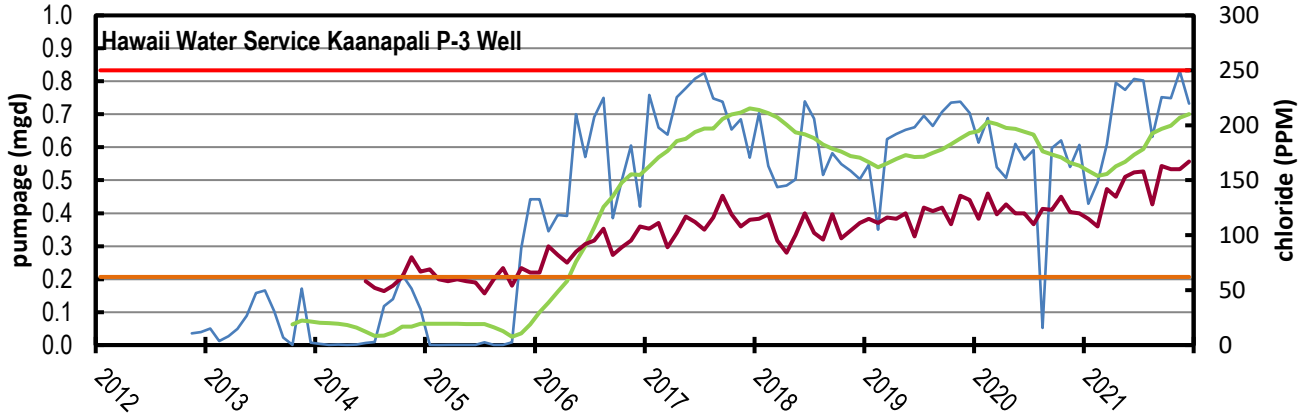
Hawaii Water Service
Kaanapali P-1 Well drilled 1990
Initial Chloride = 90 ppm 2021 average chloride = 145 ppm



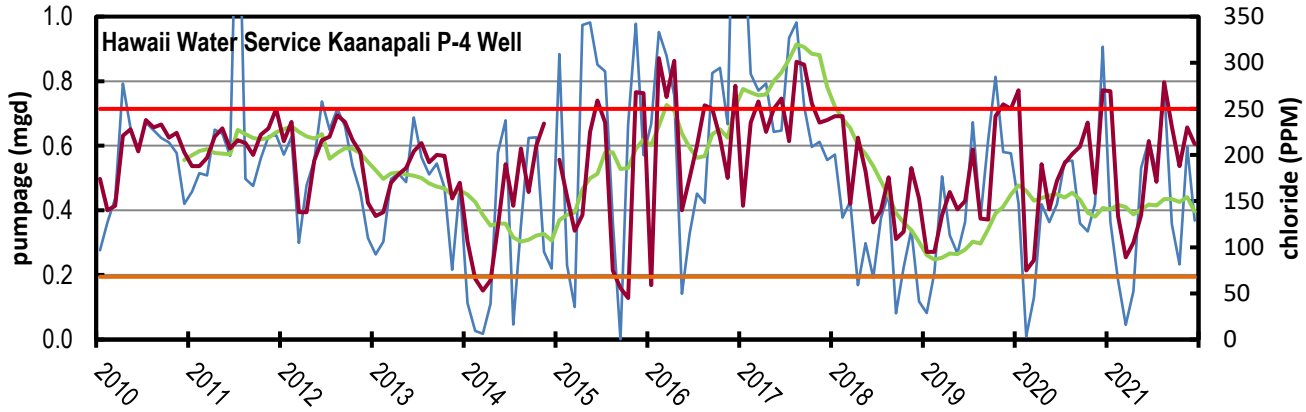
Hawaii Water Service
Kaanapali P-2 Well drilled 1990
Initial Chloride = 120 ppm 2020 average chloride = 218 ppm



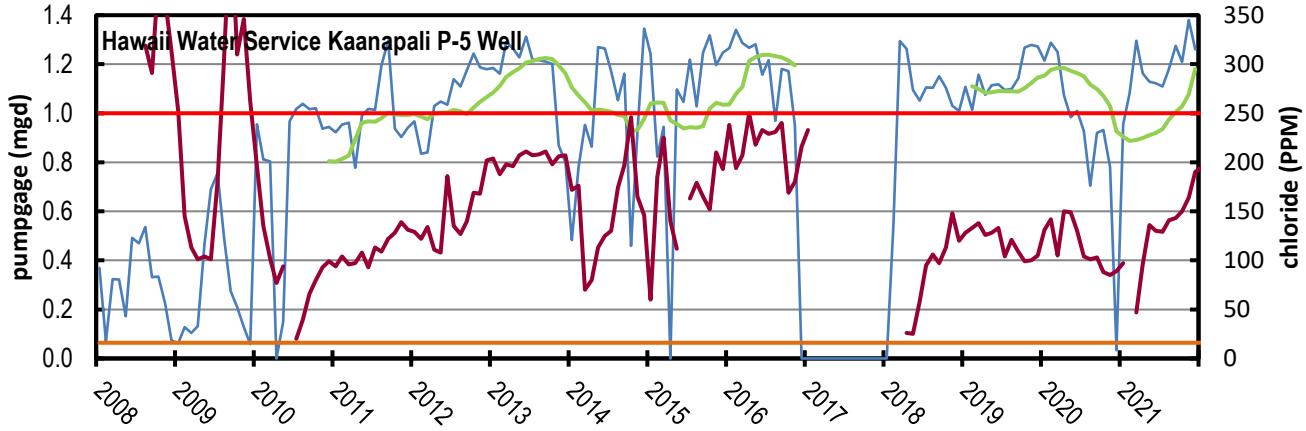
Hawaii Water Service
Kaanapali P-3 Well drilled 2008
Initial Chloride = 62 ppm 2021 average chloride = 145 ppm



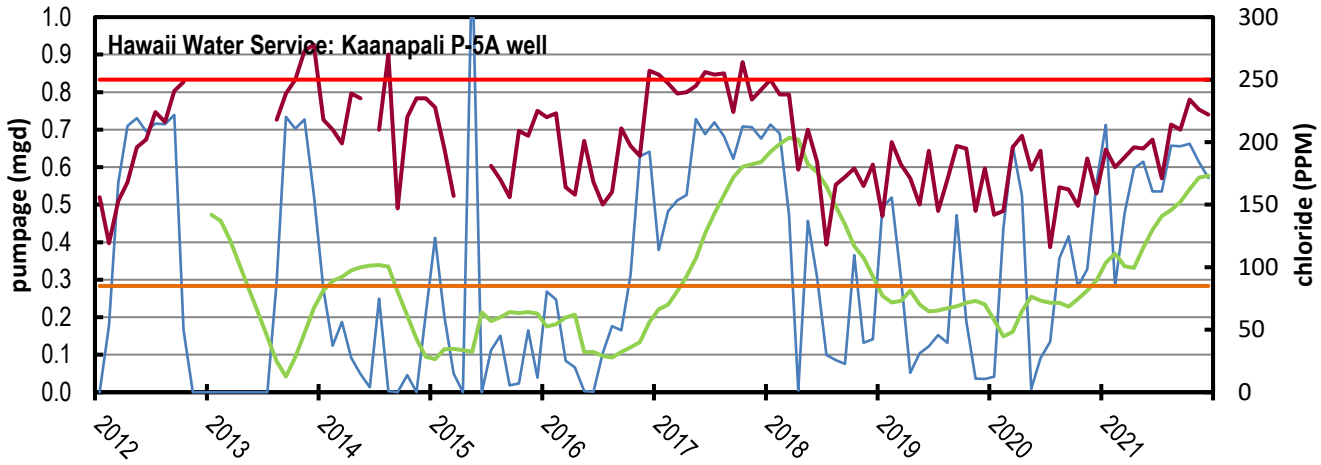
Hawaii Water Service
Kaanapali P-4 Well drilled 1982
Initial Chloride = 68 ppm 2021 average chloride = 186 ppm



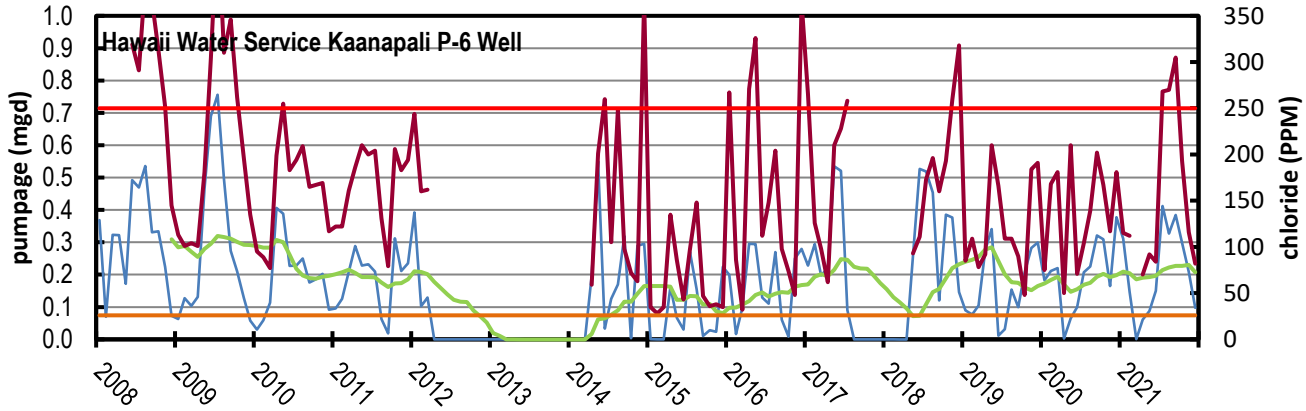
Hawaii Water Service
Kaanapali P-5 Well drilled 1982
Initial Chloride = 16 ppm 2021 average chloride = 143 ppm



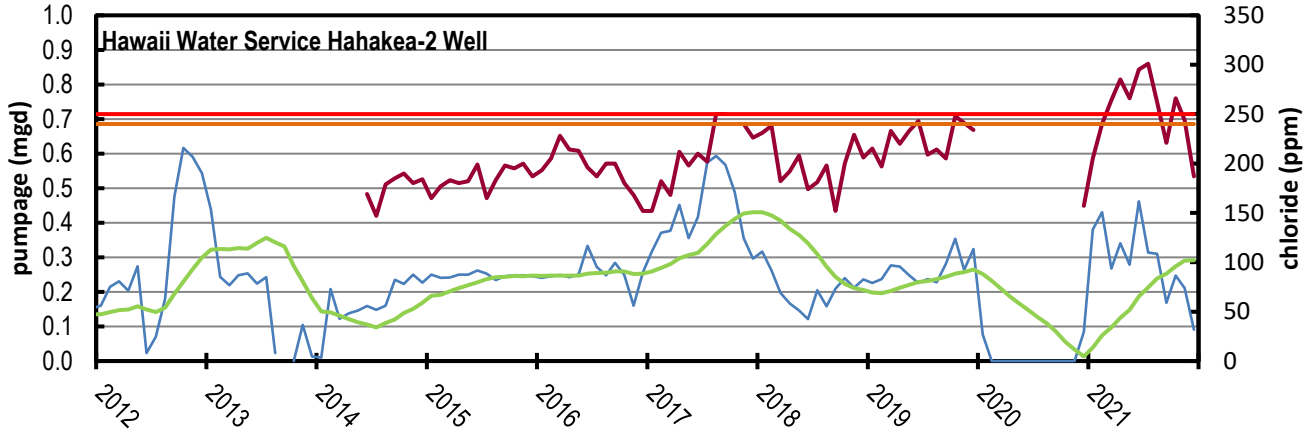
Hawaii Water Service
Kaanapali P-5A Well drilled 2009
Initial Chloride = 85 ppm 2021 average chloride = 206 ppm



Hawaii Water Service
Kaanapali P-6 Well drilled 1982
Initial Chloride = 26 ppm 2021 average chloride = 155 ppm



Hawaii Water Service
Hahakea 2 Well drilled 1971
Initial Chloride = 240 ppm 2021 average chloride = 253 ppm



Hawaii Water Service
Honokowai B Well drilled 1976
Initial Chloride = 25 ppm 2015 average chloride = 182 ppm (well shut down in 2015)

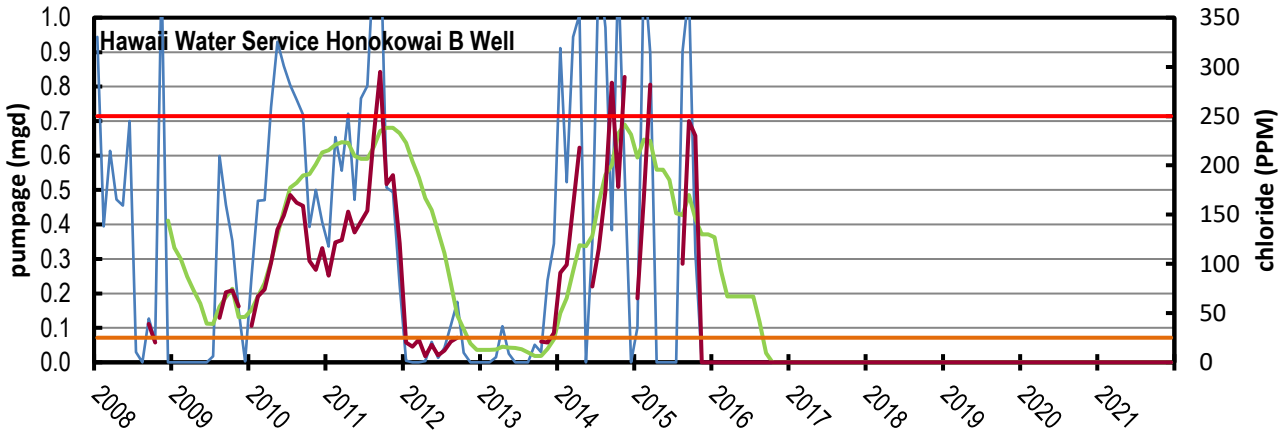
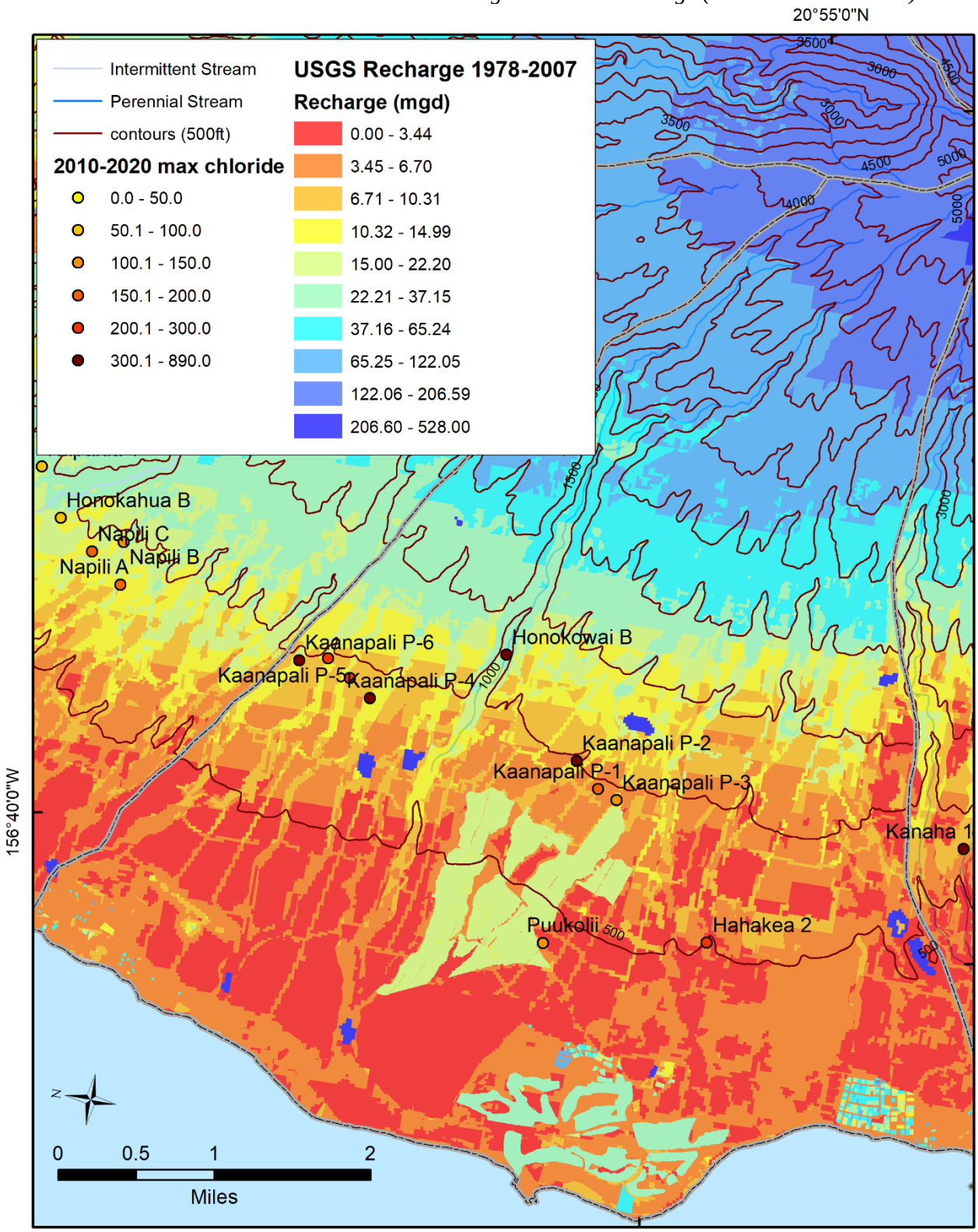


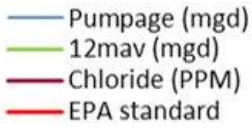
Figure 28. Distribution of Maximum Reported Chloride in Honokowai Aquifer System

From 2010 to 2020 relative to mean 1978-2007 groundwater recharge (USGS SIR 2014-5168)

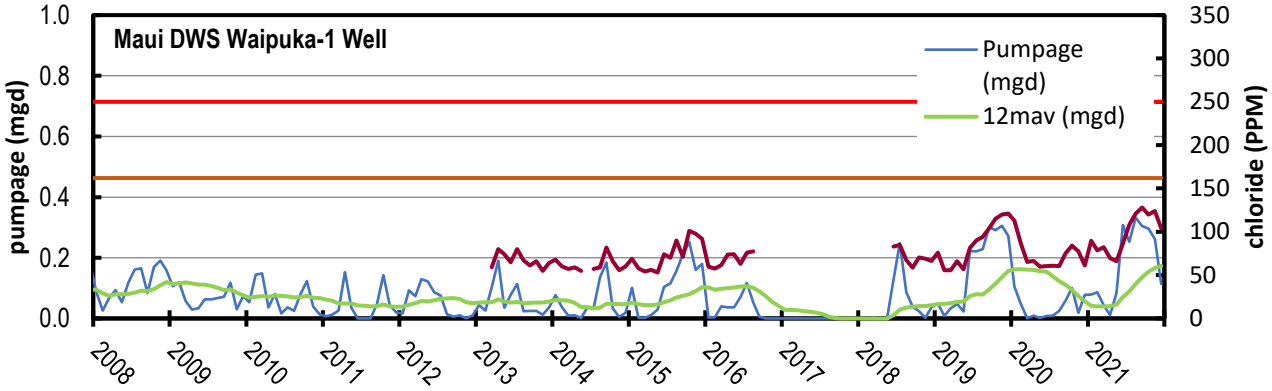


Launiupoko Aquifer

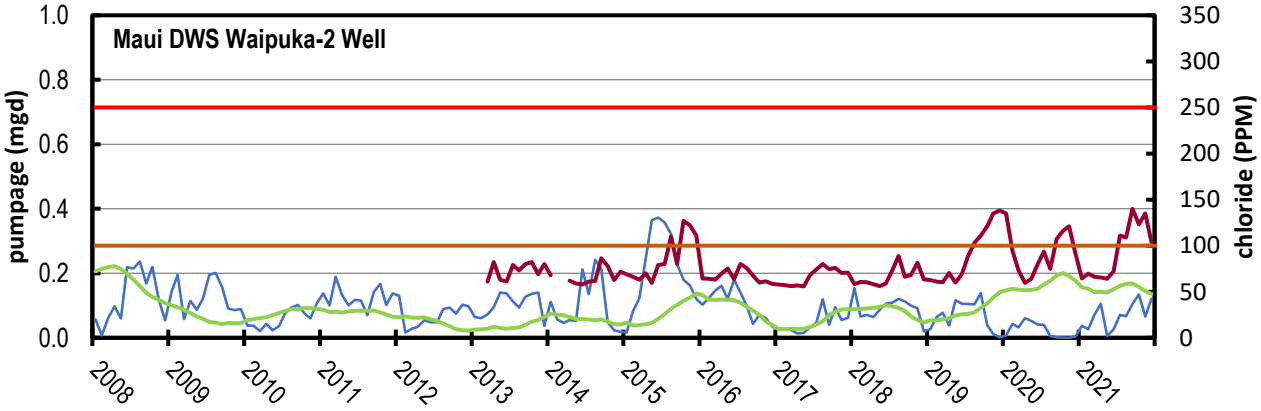
Figure 29. Overview of Maui DWS Wells in the Launiupoko Aquifer



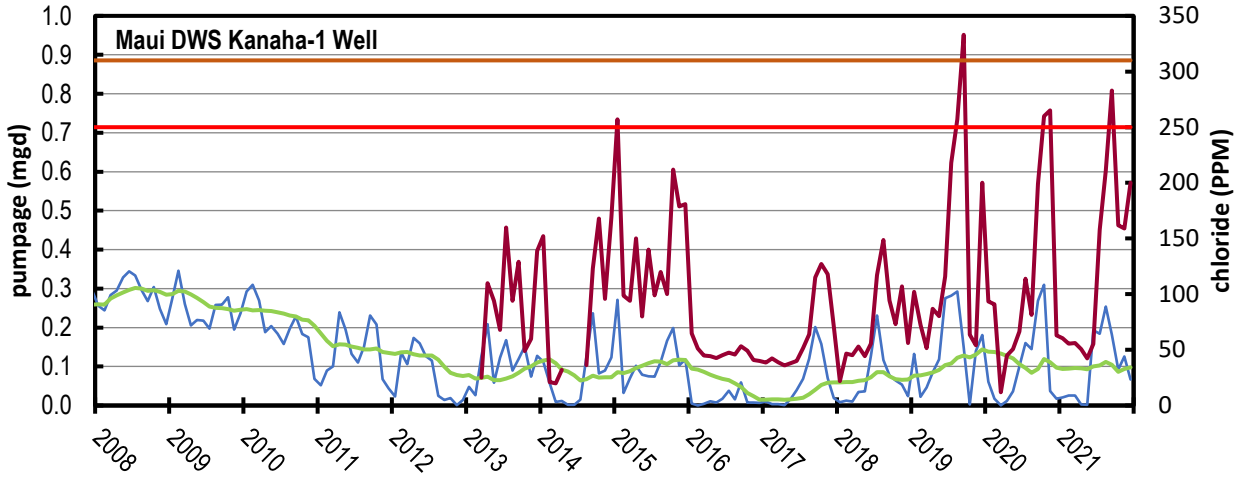
Maui Department of Water Supply
Waipuka 1 Well drilled 1962
Initial Chloride = 162 ppm 2021 average chloride = 94 ppm



Maui Department of Water Supply
Waipuka 2 Well drilled 1963
Initial Chloride = 100 ppm 2021 average chloride = 98 ppm



Maui Department of Water Supply
Kanaha 1 Well drilled 1971
Initial Chloride = 310 ppm 2021 average chloride = 124 ppm



Maui Department of Water Supply
Kanaha 2 Well drilled 1974
Initial Chloride = 10 ppm 2021 average chloride = 211 ppm

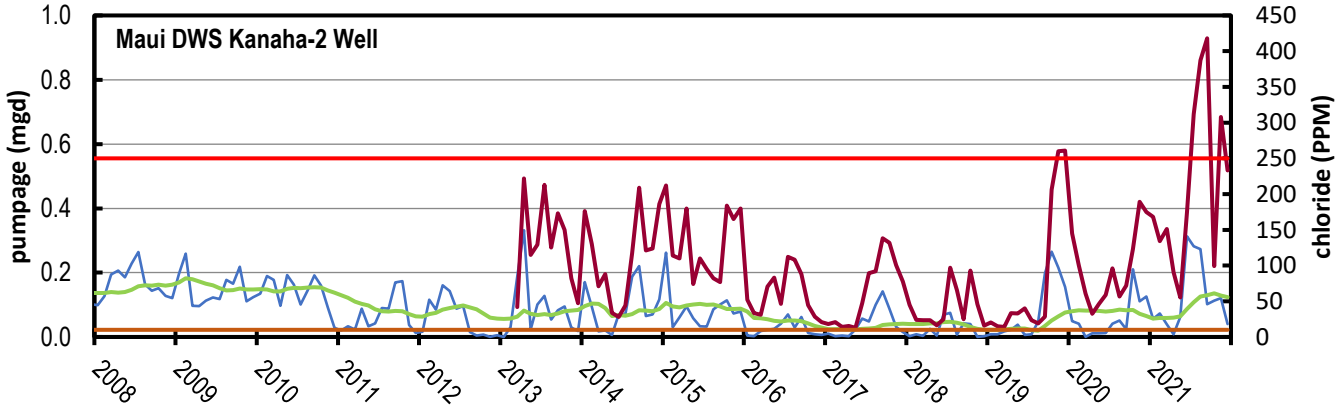
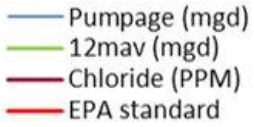
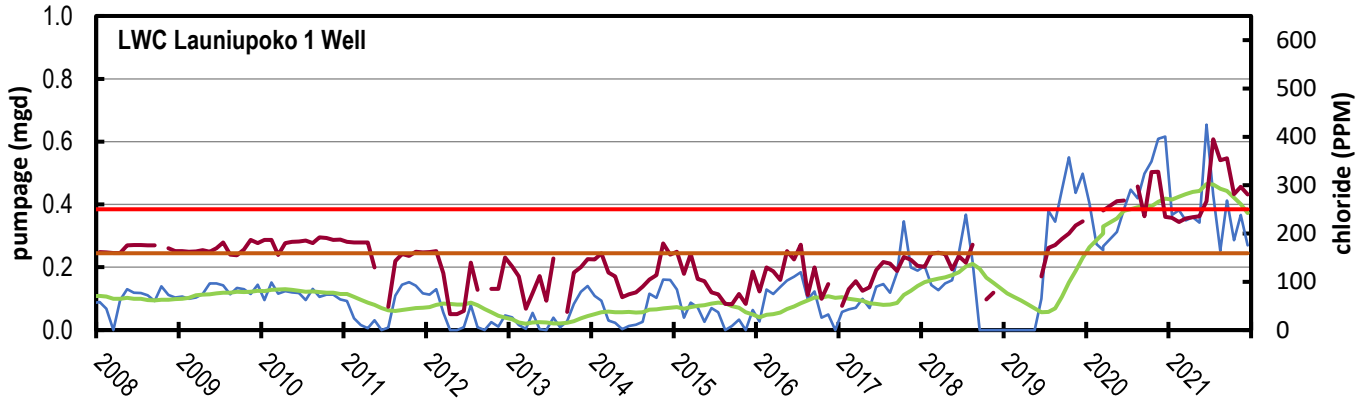


Figure 30. Overview of LWC and LIC Wells in Launiupoko Aquifer

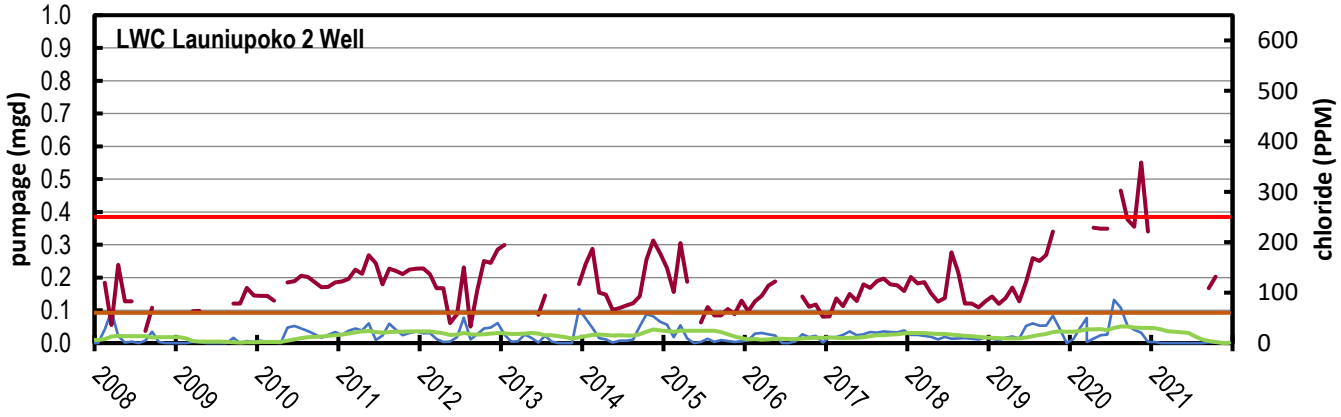


Launiupoko Water Company
Launiupoko 1 Well drilled 1979
Initial Chloride = 159 ppm 2021 average chloride = 282 ppm

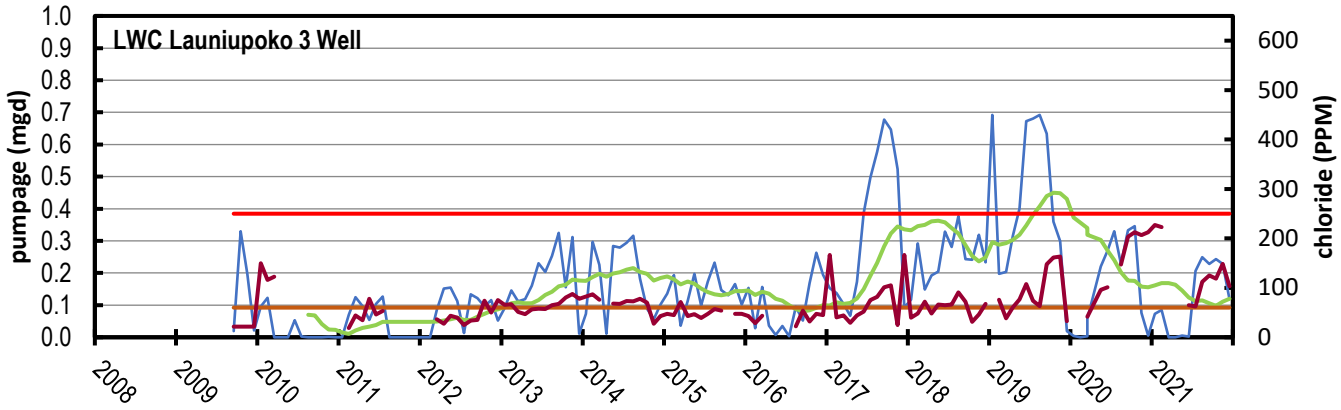


*chloride value converted from specific conductivity

Launiupoko Water Company
Launiupoko 2 Well drilled 2000
Initial Chloride = 60 ppm 2021 average chloride = 109 ppm



Launiupoko Water Company
Launiupoko 3 Well drilled 2003
Initial Chloride = 60 ppm 2021 average chloride = 303 ppm



*chloride value converted from specific conductivity using 500 scale

Launiupoko Irrigation Company
LIC 1 Well drilled 2017
Initial Chloride = 12 ppm 2021 average chloride = 81 ppm

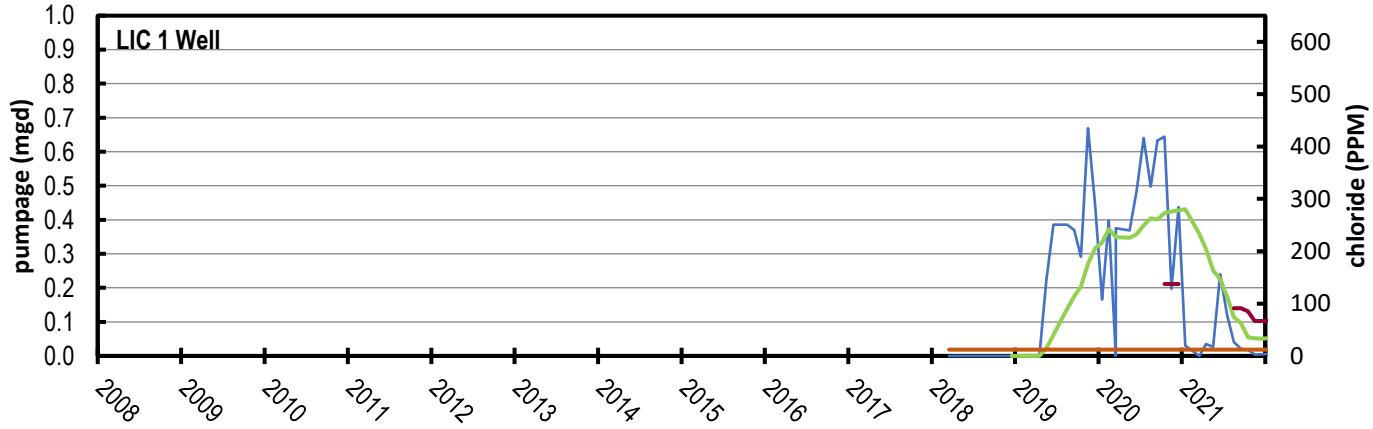
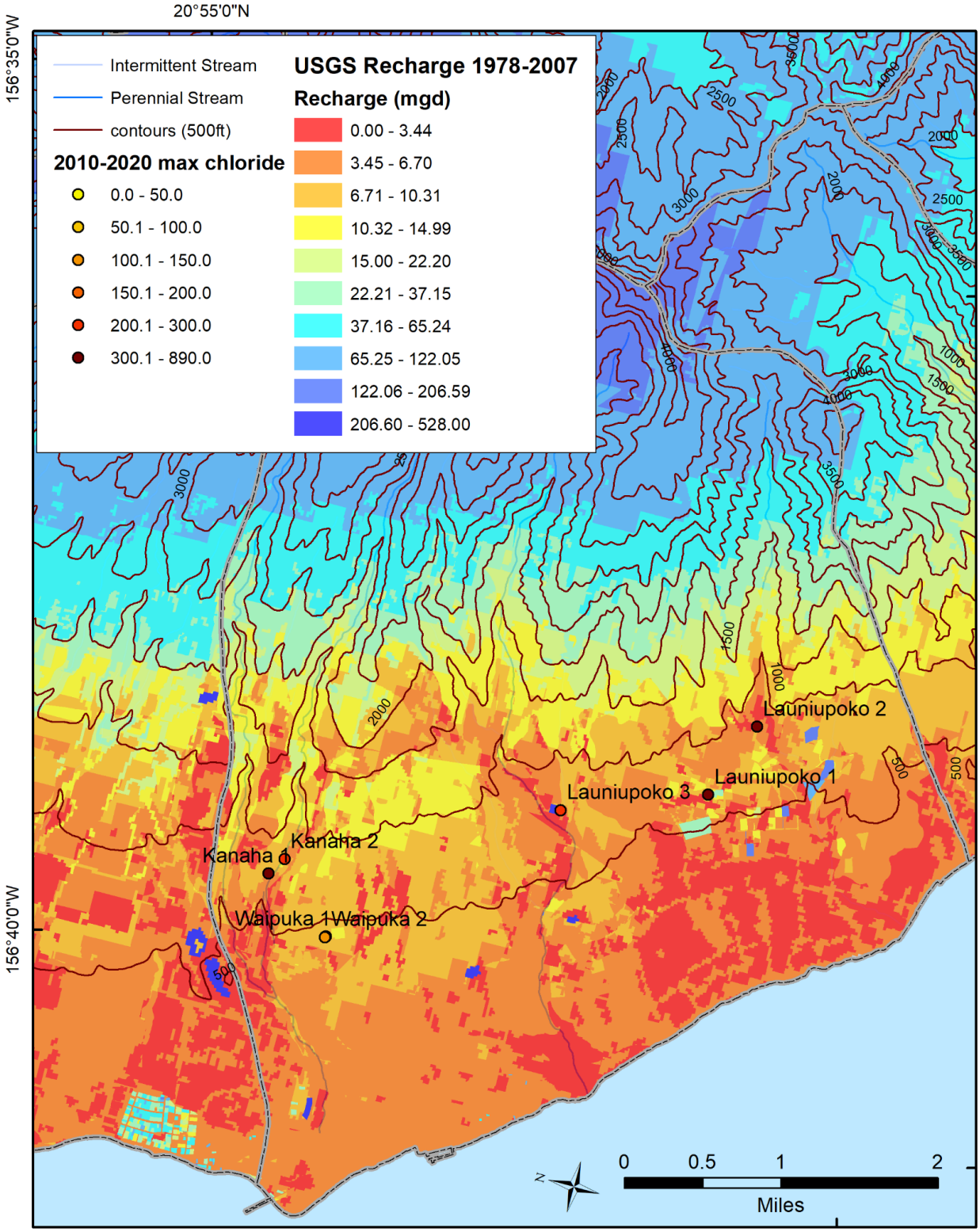


Figure 31. Distribution of Maximum Reported Chloride in Launiupoko Aquifer System

From 2010 to 2020 relative to mean 1978-2007 groundwater recharge (USGS SIR 2014-5168)



As ground water resources reach or exceed maximum withdrawal rates in the Honokōwai and Launiupoko Aquifer System Areas, ground water development will need to shift to other adjacent aquifers to avoid harm in over pumping and upconing. In addition, existing wells in the Lahaina Aquifer Sector have been discontinued or cannot be continuously pumped because of increasing chlorides as evident in HWSC's Honokōwai B well.

4.8.7.2 Temperature

Per consultation with the DOH, they did not opine or provide data related to water temperature and the impact that may have on aquifer health and water resources.

4.8.7.3 Contaminants

Per consultation with the DOH, there are water quality issues within the Lahaina Aquifer Sector, but overwhelmingly these are problems from isolated legacy contaminants, including:

- 1-2-Dibromo-3-Chloropropane (DBCP)
- Ethylene Dibromide (EDB)
- 1-2-3-Trichloropropane (TCP)
- Hexachlorocyclopentadiene
- Carbon Tetrachloride
- Tetrachloroethylene (PCE)

Per DOH, these contaminants will not be made worse by increased groundwater withdrawals or water diversions. On the other hand, further development of West Maui may cause an increase in groundwater concentration of Nitrate and chlorides. DOH's assessment is that this criterion is only met for Honokōwai Aquifer System. Department of Health's specific data and analysis can be found in Appendix H.

4.8.7.4 Sustainable Yield

Under the State Water Code, sustainable yield is defined as follows:

> HRS § 174C-3 *"Sustainable yield means the maximum rate at which water may be withdrawn from a water source without impairing the utility and quality of the water source as determined by the commission."*

Ground water is replenished by rainfall recharge. However, the amount of ground water that can be developed in any Hawai‘i aquifer is limited by the amount of natural recharge. Additionally, not all natural recharge an aquifer receives can be developed. Some aquifer outflow or leakage must be maintained to prevent seawater intrusion or to maintain some perennial streamflow. Therefore, the sustainable yield of an aquifer normally represents a percentage of the natural recharge. Ideally, this percentage is determined by considering all relevant aquifer hydrogeologic properties and their effects on temporal and spatial variation in flow, hydraulic head, and storage.

In Hawai‘i, the most commonly used analytical ground water model is the robust analytical model (RAM)[89] derived by Mink. Sustainable yield values of Hawai‘i basal aquifers were estimated by RAM and included in the 1990 WRPP. For an extensive explanation see Appendix F of the 2019 Water Resource Protection Plan section F-4.4 Establishment of the 1990 Sustainable Yield Estimates and Subsequent Updates.[90]

[89] Mink, 1980; Mink, J.F., 1981, Determination of Sustainable Yields in Basal Aquifer, in: *Groundwater in Hawaii-A Century of Progress,* Book published by the Water Resources Research Center, University of Hawaii at Mānoa, pp.101-116.

[90] https://files.hawaii.gov/dlnr/cwrm/planning/wrpp2019update/WRPP_AppF_201907.pdf

Table 25. WRPP 2019 Updated SY

Aquifer System with Recharge which sets the Sustainable Yield

Aquifer System Area	SY (mgd)	Recharge (mgd)	D/I	System Area excluding caprock (sq. miles)	Geology
Ukumehame	2	4.00	0.44	10.79	High level groundwater starts about two miles inland and is found chiefly in dike aquifers. The escape of basal groundwater at the coast is somewhat impeded by a sedimentary caprock wedge about half a mile wide. All of the exploitable groundwater saturates Wailuku basalt.
Olowalu	2	4.00	0.44	7.12	In the seaward two miles of the System is a basal lens in Wailuku basalt. The remaining 2.5 miles is part of a rift zone containing high level groundwater, also in Wailuku basalt. A coastal plain of sediments having a maximum width of one mile behaves as a weak caprock. The hydrogeology of the high-level water is complicated by intrusions of the Honolua series
Launiupoko	7	16.00	0.44	18.73	About two miles of basal groundwater in Wailuku basalt extends inland from the coast, beyond which is high level dike water, also in Wailuku basalt. The basal groundwater occurs in flank lavas which are covered at the coast by a narrow shelf of sediments. These sediments are ineffective as caprock.
Honokōwai	6	13.00	0.44	22.71	That part of the System within three miles of the coast has a basal lens; the remaining mountainous portion contains high level dike water. The Wailuku basalt is the only important water formation, but local hydrogeology is complicated by the Lahaina series in the southern part of the System. Perennial flow of streams consists of high-level groundwater seepage, all of which is either diverted or infiltrates to the basal lens before reaching the coast.

					Basal groundwater saturates flank lavas. At the coast a narrow zone of sediments is ineffective as caprock.
Honolua	8	19.00	0.44	16.94	A free basal lens in Wailuku basalt occurs for at least two miles inland of the coast, followed by high level dike water which extends to the boundary of the System. Honolua lavas cover a part of the System but are not hydrologically important. All high-level water is impounded in dike compartments. The basal lens saturates flank lava flows, but widely spaced dikes may reach to the coast. Outflow of the basal lens is not impeded by caprock.
Honokōhau	9	17.00	0.51	13.79	A rift zone extends all the way to the sea, but within a mile or so of the coast basal groundwater occurs in Wailuku basalt dike compartments. The perennial flow of Honokōhau Stream is sustained chiefly by high level dike water; perched water seeping from the Honolua series also contributes to the stream's low flow. Basal groundwater has not been developed in the lower reaches of the valley; alluvial fill behaves as a weak caprock.

4.9 Authorized Planned Use

Under the State Water Code, authorized planned use is defined as follows:

HRS § 174C-3 *"Authorized planned use" means the use or projected use of water by a development that has received the proper state land use designation and county development plan/community plan approvals.*

Commission staff requested Maui DWS to provide an overview of authorized planned use for the Lahaina ASA in August 2020. Maui DWS' response is provided in Table 26.

Table 26. Authorized Planned Use as provided by Maui DWS September 2020

AQUIFER (SY)	Ukumehame (2)	Olowalu (2)	Launiupoko (7)	Honokowai (6)	Honolua (8)	Honokōhau (9)
Groundwater pumpage DOM/IRR/MUN	32,253	6,041	1,344,360	4,043,730	2,159,303	0
Committed DWS						
MDWS meter reservations*			230,409		4,599	
MDWS meter installed no consumption*			94,727		102,789	
DHHL-MDWS agreement/credits**			200,000			
Open Building Permits***	1,800	3,400	99,720	123,000	121,800	600
DHHL Aquifer Reservation				770,000		
Total, excl. *Pending Developments*	**34,053**	**9,441**	**1,969,216**	**4,936,730**	**2,388,491**	**600**
% of SY	1.70%	0.47%	28.13%	82.28%	29.86%	0.01%
*Pending Developments****	*1,080,000*	*0*	*411,350*	*1,640,200*	*1,740,000*	

*Indicated by ASYA to service meter, not underlying ASYA. MDWS meters are served by a mix of surface and groundwater, approx. 85% surface water for Lahaina subsystem and approx. 48% surface water for Napili subsystem.

**Assumed fully utilized by Leali‘i Villages

***Active BP for new construction and additions. Excludes ATF permits for existing structures and BP with existing meter reservations or meters installed.

****Projects with county land use entitlements known to MDWS. Projects may have partial building permits issued (overlapping with Open Building Permits). Project may or may not be served by underlying ASYA, may be served by surface water or recycled water. Until meter reservation or meter request is received it is not known which water purveyor may serve the project.

Maui County’s Water Use and Development Plan provides a comparison of its projected water demand in 2035 per aquifer system and the 2016 Development Projects List in Table 19-32. See Table 27. The WUDP breaks down of the selected demand scenarios in Table 19-39. See Figure 32.

Table 27. Comparison Population Based Demand to 2016 Development Projects List

Lahaina Aquifer System Area		2016 Development Project List		
	2035 Demand	Entitled	Not Entitled	Total
Honokōhau	0.000			
Honolua	2.748	0.526		0.526
Honokowai	8.474	2.317	1.780	4.097
Launiupoko	4.378	0.158	0.538	0.696
Olowalu	0.115		0.900	0.900
Ukumehame	0.011			
Total	**15.726**	**3.002**	**3.218**	**6.219**

Source: Maui WUDP Table 19-32 (citing to Maui DWS, Maui County Planning Department, Long Range Planning Division)

Figure 32. Maui WUDP Selected Demand Scenario

Projected Water Demand and Supply Options in the Lahaina ASA

Table 19-39 Selected Demand Scenario: Projected Water Demand and Supply Options, Lahaina ASEA

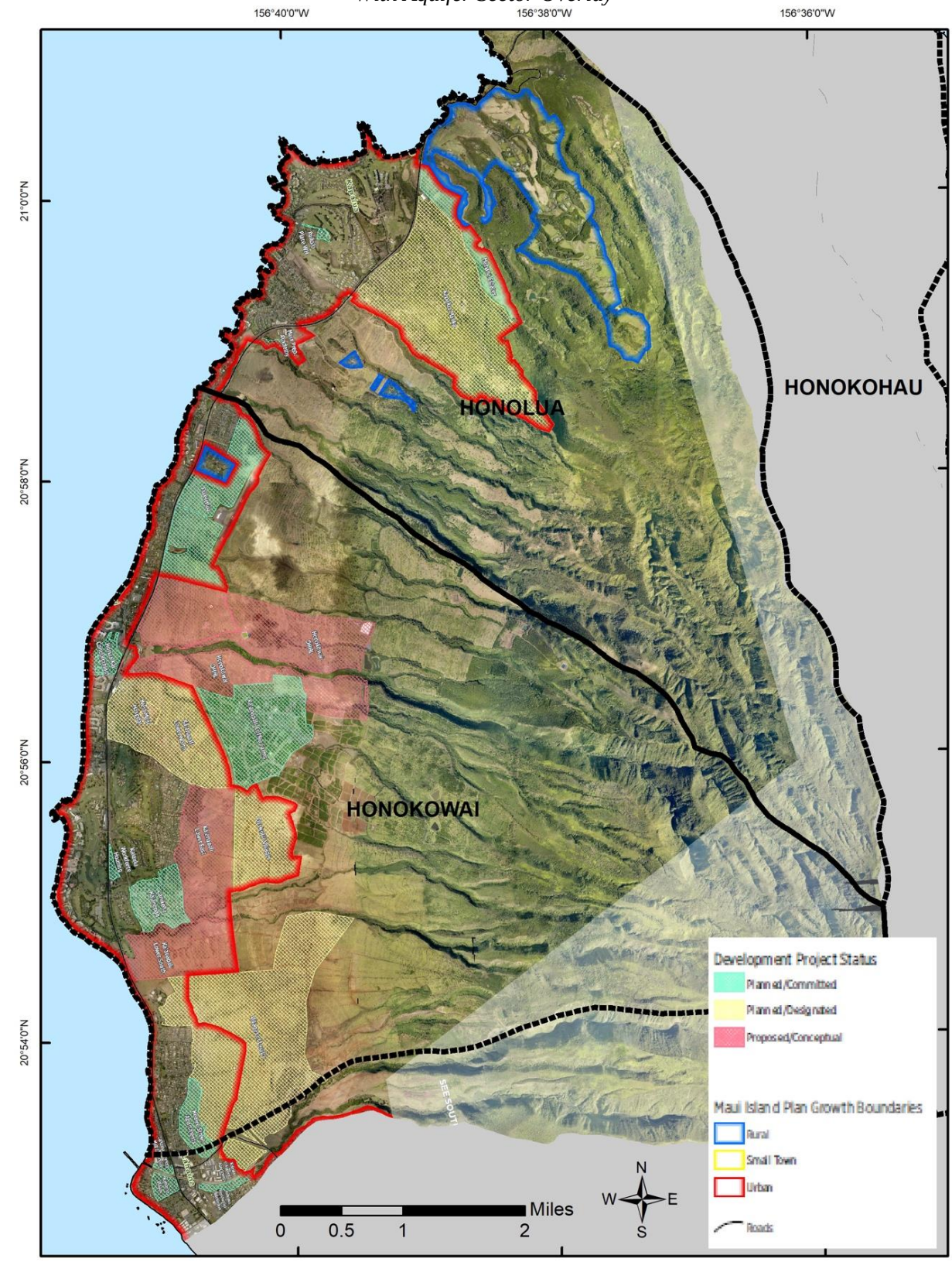
DEMAND	2014	2015	2020	2025	2030	2035
Domestic Potable	0.036	0.037	0.042	0.049	0.055	0.060
MDWS Potable	5.478	5.574	6.393	7.442	8.315	9.191
Municipal Private Potable	3.757	3.823	4.384	5.104	5.703	6.303
Total Potable Demand	**9.271**	**9.434**	**10.819**	**12.595**	**14.073**	**15.554**
Irrigation Non-Potable	7.682	7.682	4.941	5.132	5.265	5.402
Agriculture Non-Potable	6.508	6.508	5.393	5.531	7.611	7.611
DHHL Agriculture Non-Potable*	0.000	0.000	0.000	0.000	2.080	2.080
Taro met by IIFS	2.349	2.349	2.349	2.349	2.349	2.349
Honokōhau Ditch water loss,	3.939	3.939	0.842	0.865	1.020	1.030
Total Non-Potable Demand	**18.129**	**18.129**	**11.177**	**11.528**	**13.896**	**14.044**
TOTAL DEMAND	**27.400**	**27.56**	**21.996**	**24.123**	**27.969**	**29.598**
Potable Surface Water Supply	**3.299**	**3.299**	**3.500**	**2.460**	**2.460**	**2.460**
Honokōhau Ditch	1.536	1.536	1.700	1.700	1.700	1.700
Kanaha Stream	1.763	1.763	1.800	0.760	0.760	0.760
Potable Groundwater Supply	**5.972**	**6.153**	**7.319**	**10.135**	**11.613**	**13.094**
Honokōhau Aquifer	0.000	0.000	0.000	0.000	0.000	0.000
Honolua Aquifer	2.566	2.747	3.440	4.100	4.300	4.300
Honokowai Aquifer***	3.003	3.003	3.696	3.700	3.800	4.000
Launiupoko Aquifer	0.360	0.360	0.360	2.040	3.240	4.540
Olowalu Aquifer	0.036	0.036	0.036	0.370	0.370	0.370
Ukumehame Aquifer	0.007	0.007	0.007	0.110	0.110	0.110
Total Potable Supply	**9.271**	**9.452**	**10.819**	**12.595**	**14.073**	**15.554**
Non-potable Surface Water	**16.839**	**16.83**	**7.181**	**2.642**	**4.787**	**4.854**
Honokōhau Ditch	6.247	6.247	2.097	2.298	4.443	4.510
Honokowai Stream	5.450	5.450	4.740	0 - 4.74	0 - 4.74	0 - 4.74
Kahoma Stream	0.416	0.416	0 - 0.257	0 - 0.257	0 - 0.257	0 - 0.257
Kanaha Stream	0.040	0.040	0.040	0.040	0.040	0.040
Launiupoko Stream	0.405	0.405	0.304	0.304	0.304	0.304
Kaua`ula Stream	2.610	2.610	0 -0.277	0 -0.277	0 -0.277	0 -0.277
Olowalu Stream	1.622	1.622	0 - 0.337	0 - 0.337	0 - 0.337	0 - 0.337
Ukumehame Stream	0.049	0.049	0 - 0.33	0 - 0.33	0 - 0.33	0 - 0.33
Non-Potable Groundwater Supply	**0.000**	**0.000**	**1.863**	**5.067**	**2.650**	**2.320**
Honolua Aquifer	0.000	0.000	0.000	0.000	0.000	0.000
Honokowai Aquifer	0.000	0.000	0.000	3.101	1.090	0.867
Launiupoko Aquifer	0.000	0.000	1.477	1.511	1.097	0.982
Olowalu Aquifer	0.000	0.000	0.337	0.342	0.347	0.352
Ukumehame Aquifer	0.000	0.000	0.049	0.114	0.116	0.119
Recycled R-1****	1.330	1.330	1.330	3.000	5.230	5.230
Conservation 8% per capita	0.000	0.000	0.820	0.820	1.229	1.639
Total Non-Potable Supply	**18.169**	**18.16**	**11.194**	**11.528**	**13.896**	**14.044**
TOTAL SUPPLY	**27.440**	**27.62**	**22.013**	**24.123**	**27.969**	**29.598**

Maui County's latest update on development projects in North and South Lahaina can be found in Appendix L.[91] The Maui County Planning Department identifies three project categories, "Planned/Committed," "Planned/Designated," and "Proposed/Conceptual." Projects identified as "Planned/Committed" have the appropriate conforming Community Plan and zoning entitlements, are approved agricultural subdivisions, or are approved 201H projects and may currently be in the build-out phase. Projects identified as "Planned/Designated" may only have partial entitlements or the project may be fully entitled but the viability or scope of the project may be in flux. Projects identified as "Proposed/Conceptual" may be refining the project scope, petitioning for entitlement consideration, or performing necessary land use compliance studies. Tables of the development project with their units are in Table 28 and Table 29. Figure 33 and Figure 34 provide an overlay of the Commission's Aquifer boundaries on the North and South Lahaina Development Projects maps.

[91] https://www.mauicounty.gov/DocumentCenter/View/8334/Development-Projects-Kapalua---North-Lahaina?bidId=
https://www.mauicounty.gov/DocumentCenter/View/8335/Development-Projects-Ukumehame---South-Lahaina?bidId=

Figure 33. Kapalua – North Lahaina Development Projects Map

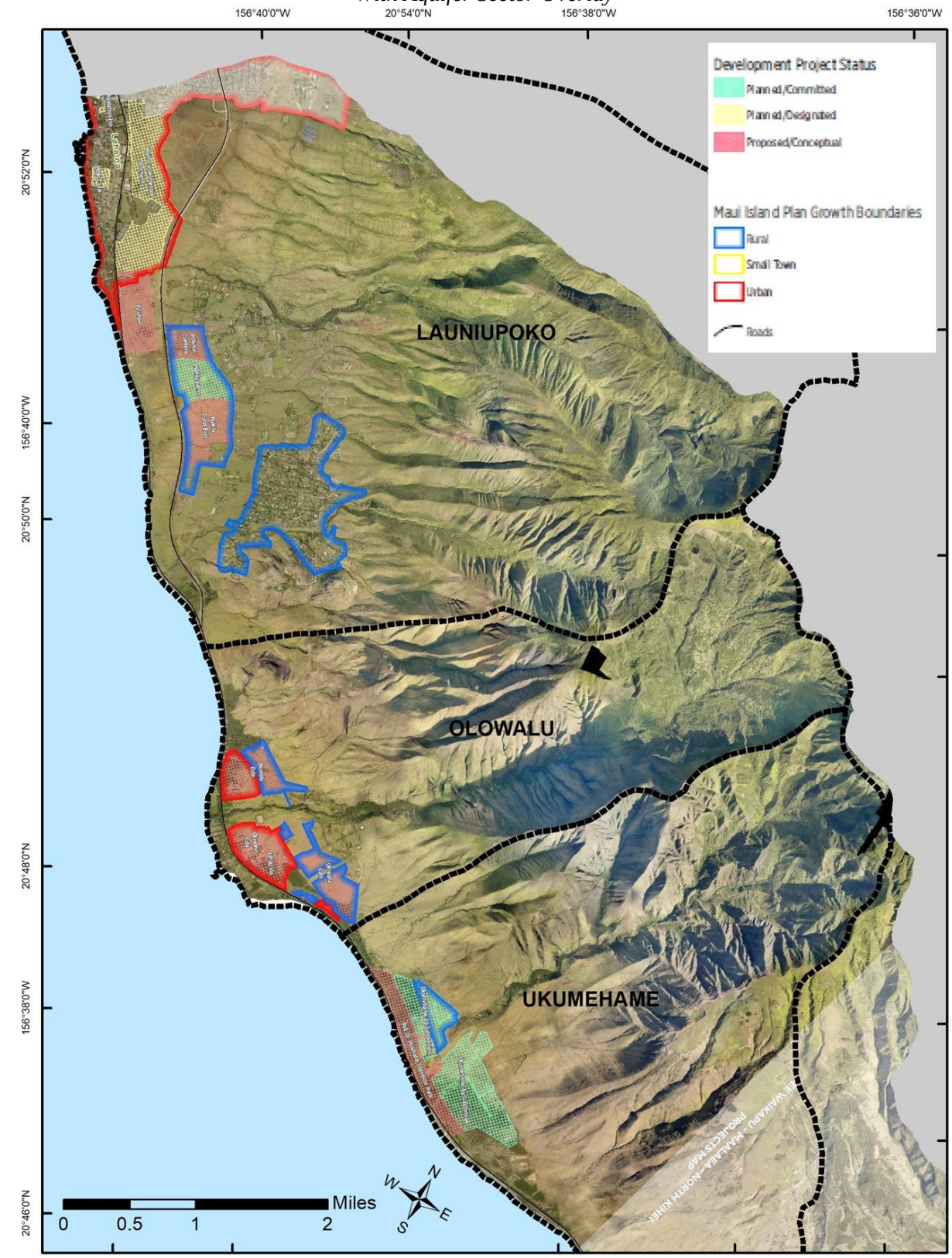
With Aquifer Sector Overlay



Source: *County of Maui Department of Planning Long Range Planning Division, March 2020*

Figure 34. South Lahaina - Ukumehame Development Projects Map

With Aquifer Sector Overlay



Source: County of Maui Department of Planning Long Range Planning Division, March 2020

Table 28. Kapalua - North Lahaina Development Projects Unit Types

Projects by Geographic Map Extent	Unit Types			
	Single Family	Multi-Family	Time Share and Hotel	Other
Planned/Committed				
Kaiaulu o Kupuohi Apartments	0	89	0	0
Honua Kai/Luana Garden Villas	0	72	0	0
Ka`anapali Coffee Farms	67	0	0	0
Kahoma Residential Subdivision	68	0	0	0
Kaiaulu Workforce Housing	33	0	0	0
Kahoma Village PD4	101	102	0	0
Keawe Street Apartments	0	200	0	0
Lahaina Cannery Mall Expansion	0	0	0	1
Lanikeha Ka`anapali	132	0	0	0
Mahana Estates	51	0	0	0
Maui Prep. Academy	0	0	0	1
Pailolo Place	0	42	0	0
Pulelehua	400	400	0	0
SUB-TOTAL	**852**	**905**	**0**	**2**
Planned/Designated				
Ka'anapali Lower North	275	330	0	0
Kapalua Mauka	690	0	0	0
Leiali'i HHFDC Community	4,000	0	0	0
Pu'ukoli'i Villages	292	648	0	0
West Maui Hospital	0	0	0	1
SUB-TOTAL	**5,257**	**978**	**0**	**1**
Proposed				
Honokōwai – DHHL	1,250	0	0	0
Ka'anapali Lower East	225	0	0	0
Ka'anapali Lower South	410	630	0	0
SUB-TOTAL	**1,885**	**630**	**0**	**0**
TOTAL	**7,994**	**2,513**	**0**	**3**

Table 29. South Lahaina – Ukumehame Development Projects Unit Types

Projects by Geographic Map Extent	Unit Types			
	Single Family	Multi-Family	Time Share and Hotel	Other
Planned/Committed				
Makila Farms	34	0	0	0
Ukumehame Ag Subdivision	48	0	0	0
SUB-TOTAL	**82**	**0**	**0**	**0**
Planned/Designated				
Moku`ula	0	0	0	1
Plantation Inn	0	0	14	0
Waine`e Residential Community	360	360	0	0
SUB-TOTAL	**360**	**360**	**0**	**1**
Proposed				
Lihau'ula	59	0	0	0
Polanui Gardens	100	0	0	0
Makila Rural-East	75	0	0	0
Olowalu Eula	(?)	(?)	(?)	(?)
Pali to Puamana Shoreline Park	0	0	0	1
Pu'unoa	125	125	0	0
SUB-TOTAL	**359**	**125**	**0**	**1**
TOTAL	**801**	**485**	**0**	**2**

4.10 County and Public Testimony

4.10.1.1 January Commission Meeting

4.10.1.2 County's Comments

The County's responses to the Chairperson's consultation letter can be found in Appendix B. Staff addressed the County's responses in its staff submittal for Agenda item A-2 of the Commission meeting on January 18, 2022. See Table 30.

Table 30. Staff response to County Comments and Questions

County's Comments/Questions	Staff Response
How is tunnel discharge accounted for in relation to sustainable yield?	• "Ground water means any water found beneath the surface of the earth, whether in perched supply, dike-confined, flowing, or percolating in underground channels or streams, under artesian pressure or not, or otherwise." HRS § 174C-3. Tunnels in the Honokōhau, Honokōwai, and Launiupoko AS tap into high level ground water that would otherwise discharge naturally as spring sources or discharge into the basal lens. As such, these tunnels, as developed sources of ground water, are counted against sustainable yield. • In June 2003, the 12-month moving average for the ʻĪao Aquifer System Area exceeded the Commission's designated trigger, and on July 21, 2003, ʻĪao was officially designated a Ground Water Management Area upon publication of the public notice declaring designation and describing the water management area regulations. Ground water in the ʻĪao Aquifer System specifically included basal, caprock, and high-level dike sources. In the designation of the ʻĪao Aquifer System, eight development tunnels penetrated dike compartments, but none were ever monitored, some went completely dry, and a few discharged directly into the stream above diversions. Multiple USGS studies suggested that most of the tunnel water would have discharged naturally into the streams[92] The remaining four development tunnels in active use at the time of designation penetrated alluvium beneath the valley floor, capturing surface water seepage that would have contributed to basal recharge[93] In the designation process, these four ʻĪao tunnels still required water use permits and their pumpage continues to be counted against the calculation of sustainable yield.
Do not support designation for entire aquifer sector because some aquifer systems included in this initiative	• Given the uncertainty of rainfall recharge due to the climate crisis, the Commission is recommending to proactively designate both ground and surface water management areas based on the data and analysis presented above and following the precautionary principle. Precautionary Principle: The

[92] Stearns, H.T., MacDonald, G.A. 1942. Geology and Ground-water Resources of the Island of Maui, Hawaii. Bulletin of the Division of Hydrography, 7.
Yamanaga, G., Huxel Jr., C.J. 1970. Preliminary report on the water resources of the Wailuku area, Maui. Hawaii. Division of Water and Land Development. Circular ; C61.

[93] Meyer, W., and Presley, T.K. 2001. The Response of the Iao Aquifer to Ground-Water Development, Rainfall, and Land-Use Practices Between 1940 and 1998, Island of Maui, Hawaii, Water-Resources Investigations Report 2000-4223. 10.3133/wri20004223

have no basis for designation as set forth in the State Water Code. Honokōwai aquifer may exceed sustainable yield and support investigations to consider designation of Honokōwai Aquifer System only.	Commission's duties under the constitution and Code embody the precautionary principle, which holds that scientific uncertainty should not be a basis for postponing effective measures to prevent environmental degradation. Rather, the Commission as a trustee has a duty to take anticipatory action to prevent harm to public resources. At minimum, "the absence of firm scientific proof should not tie the Commission's hands in adopting reasonable measures designed to further the public interest."[94] • The irrigation ditch systems in the Lahaina aquifer sector cross multiple aquifer systems and surface water hydrologic units. (See Figure 4) In *Waiāhole I*, the Hawai'i Supreme Court also held that the Commission can consolidate the regulation of a single system because it comports with the Commission's function of comprehensive water planning and management.[95] The Court ruled that the areas covered by the ditch system are to be considered hydrologically controllable irrespective of hydrologic units under HRS § 174C-50 (h) which deems uses between existing users as competing when water is drawn from a hydrologically controllable area.[96] • In *Waiāhole I*, the Court acknowledged the direct interrelationship between ground and surface waters and held that the designation of Windward O'ahu as a ground water management area subjected both ground and surface water diversions from the designated area to the statutory permit requirement.[97]
Designation undermines current efforts in Maui WUDP and West Maui Community Plan to engage public, private purveyors, and county agencies in land use and water planning integration.	• We acknowledge MDWS's significant effort, time and commitment spent in producing a comprehensive Maui Island Water Use and Development Plan (MIWUDP) and understand that the Maui County Council is currently reviewing the MIWUDP through its public hearing process and receiving public input on the WUDP. We also acknowledge MDWS's close coordination with Commission Staff ,the Maui Planning Department, and the community throughout this planning process. We encourage MDWS to continue its approval process for the MIWUDP while continuing to consult with Commission staff. Designation of Lahaina Sector as a ground and surface water management area will compliment and strengthen MDWS plans for future water development instead

[94] *Waiāhole I*, at 154, 155.
[95] *Waiāhole I*, at 174.
[96] *Id*.
[97] *Waiāhole I* , at 173.

	of undermining them, while ensuring the protection of public trust purposes and resources for future generations. • The State Water Code requires all counties to develop WUDP regardless of water management area designation. In fact, designation of a water management area and its subsequent Water Use Permit Application ("WUPA") process fosters more public and private participation including notice and public hearing requirements. A Water Use Permit is issued to reasonable and beneficial uses of water and will ensure even greater consistency and integration between land use and water resource availability. Moreover, the Hawai'i Supreme Court held in *Ko'olau Ag* that there is no judicial review of the Commission's decision to designate aquifers as water management areas because the rights of individual water users are fully protected in the permitting process. The Court further noted that water management area designations do not affect the interests of any potential water users; the impact of such a designation is only that the user's water source is subject to the Commission's regulation, which does not, in and of itself, affect the user's water rights.[98]
Based on cooperative studies with USGS to address threats of salt water intrusion and climate change impacts, Maui DWS plans to distribute pumpage throughout Launiupoko aquifer.	• While DWS can space pumpage through Launiupoko to minimize salt water intrusion in their wells, there are additional private wells that are being developed that may have impacts on other existing wells, including Maui DWS, and the larger aquifer as a whole. As such, designation will provide CWRM, as a regulator, the ability to determine the proper spacing of all wells to protect the aquifer and other legally permitted water uses.
Utilize groundwater models and monitoring data to ensure adequate pump distributions vs. designation.	• In addition to the pumpage data that's discussed above, the Commission only receives chloride data from 20 of 66 wells that report in the Lahaina district and water level data from its sole deep monitoring well. Based on that data and estimated future reduction in recharge, there is already indication of potential threats to water resources and increased management is important.
Request to defer SWMA proceedings until IIFS can be adopted for other priority streams. Balancing reasonable and	• The surface water conflicts in this region have been persistent for decades. Setting of IIFS and managing surface water use permits are not mutually exclusive and are handled by different staff. Commission staff anticipate completing all IIFS for relevant streams in the Lahaina district in the coming year, but

[98] *Ko'olau Agricultural Co., Ltd. v. Comm'n on Water Res. Mgmt* ("Ko'olau Ag."), 83 Hawai'i 484, 493 (1994).

beneficial in-stream and off-stream uses via water use permitting of both surface and groundwater resources will provide better data in determining the most appropriate IIFS.	deferral of designation is not dependent on establishment of an IIFS, as these are interim in nature and are meant to be iterative based on continuous evaluation and balancing of instream and off-stream needs.

4.10.1.3 Public Written and Oral Testimony

The public written and oral testimony on the informational item B-2 "Designation of Lahaina Aquifer Sector, Maui as a Surface Water and Ground Water Management Area" of the Commission's January 18 Agenda can be found in Appendix D. The staff submittal on action item B-4 of the Commission's February Agenda, excerpt below, provides a summary of the received written and oral testimony with staff's responses.[99] See Appendix E.

SUMMARY OF TESTIMONY:

Serious disputes over surface and ground water

The written and oral testimony of community members in the Lahaina Aquifer Sector Area unanimously referenced serious disputes over water and requested designation as proactive management. Testimony by the Hui Nā Mamo Aloha ʻĀina o Honokōhau, Nā Pāpaʻi Wawae ʻUlaʻula, the West Maui Preservation Association, the Sierra Club Maui Group, and the Hui o Nā Wai ʻEhā also offered specific examples of conflicts over water. The concerns raised are that established IIFS are not being met, water continues to be diverted and prioritized for off stream uses while protected instream uses and Kuleana families do not have sufficient amounts of water.

West Maui Preservation Association's written testimony outlines the historic and ongoing conflicts over water use in Ukumehame, Olowalu, Launiupoko, Kauaʻula, Kahoma, Kanahā, and Honokōhau while highlighting conflicts over surface and groundwater in the Launiupoko aquifer that are part of a proceeding before the Public Utilities Commission (PUC).

Staff response:

The community member's testimony resembles what staff has experienced in the numerous informal and formal complaints in the past decades. To holistically address these serious disputes, staff recommends designating the whole Lahaina Aquifer Sector Area as a surface and ground water management area. The Hawaii Supreme Court held that the Commission is the "primary guardian of public rights under the trust. Haw. Const. art. XI, section 7. As such, the Commission must not relegate itself to the role of a mere "umpire passively calling balls and strikes for adversaries appearing before it, but instead must take the initiative in considering, protecting, and

[99] https://files.hawaii.gov/dlnr/cwrm/submittal/2022/sb20220215B4.pdf

advancing public rights in the resource at every stage of the planning and decision making process."[100]

Staff notes that CWRM is not a party in the proceeding before the PUC regarding Launiupoko Irrigation Company's (LIC), LLC request for a rate increase, but has provided extensive public comment to the PUC on LIC's off stream uses, staff's data that indicate LIC's non-compliance with the IIFS for Kaua'ula stream, and a new pump installation at the Lahaina A/B skimming well (State Well No. 6-5240-002). See Exhibit 1 January Staff Submittal's Exhibit 1 CWRM Public Comment to PUC December 17, 2021.

Enhanced protection of the resource and public trust uses

Community members voiced grave concern over the lack of available stream water and streamflow to cultivate lo'i kalo and to exercise traditional and customary Native Hawaiian practices that rely on water in its natural state, mauka to makai flow, and healthy native stream fauna.

With regard to groundwater, oral testimony of community members and the Hui Nā Mamo Aloha 'Āina o Honokōhau, the West Maui Preservation Association, the Sierra Club Maui Group, the Hui o Nā Wai 'Ehā all stated concern over rising chloride levels in wells, lack of water use reporting of wells, and increased pumping while recharge is uncertain due to the climate crisis.

DHHL's written testimony outlined the benefits of designation for its beneficiaries; the increased legal protection of its surface and groundwater reservations by administrative rule and the requirement that water use permits are subject to the rights of DHHL. Additionally, DHHL's oral testimony also pointed out that the Commission's ability to regulate groundwater is limited to three factors, namely the existence/location of a well, its depth, and the amount of water that can be pumped.

Staff response:

WMA designation expands the tools available to the Commission to proactively protect water resources and regulate reasonable and beneficial uses of water, including public trust uses. The water use permit application process requires water users to disclose the purposes and amounts of their uses, which then are subject to the Commission's determination as to how to protect public trust uses affected by it.

The Hawai'i Supreme Court has recognized four public trust purposes; the maintenance of water in its natural state, domestic water uses, water for the Department of Hawaiian Home Lands, and water use in the exercise of traditional and customary Native Hawaiian rights.[101] Private commercial uses are not protected by the public trust and are subject to a "higher level of scrutiny."[102]

[100] *Waiāhole I*, 94 Hawai'i at 143, 9 Pd.3 at 455.
[101] *See Kauai Springs, Inc. v. Planning Comm'n of Kaua'i*, 133 Hawai'i 141, 172, 324 P.3d 951, 982 (2014).
[102] *Id.*

Staff recognizes that while the depth and instantaneous pump capacity (gallons per minute) are dictated by the Well Construction and Pump Installation Standards approved by the Commission, management of well location and amount of water use on a daily basis (gallons per day) can only be regulated in a designated WMA.

Constitutional duty to protect before crisis develops

DHHL's written testimony highlights the Commission's constitutional duty to protect the public trust resource water before a crisis develops citing to the 1978 Constitutional Committee Report 77, pages 688-689, "[a]ccordingly, your Committee concluded that the Constitution should specify that the State holds the water resources in trust, with the responsibilities of a trustee to actively protect, control and regulate the development of water resources in the State. This concept implies not only the power to protect the resources but the responsibility to do so long before any crisis develops."

Staff response:

Staff's research on the legislative history of the Water Code found a similar intent in the House Committee Report No. 348 on House Bill 35, that became Act 45 of the Session Laws of Hawai'i and established HRS Chapter 174C in 1987, "[t]o ensure that the availability of this precious resource will meet the present and future needs of the people, your Committee is of the opinion that the water code should serve as a tool and an incentive for planning the wise use of Hawaii's water resources, rather than as a water crisis and shortage management mechanism."

Scientifically proven facts

Wainee Land and Homes LLC ("Wainee") sent its written testimony on the day of the Commission meeting on January 18, 2022, at 11:27am. Wainee asserts that the Commission has a 'duty to designate based on "scientifically proven facts"' citing *In re Water Use Permit Applications*, 94 Hawai'i at 155, 9 Pd.3 at 467 (2000) "[T]he Code contemplates the designation of the standards based … on scientifically proven facts[.]"

Staff response:

This quote refers to the setting of interim instream flow standards (IIFS) and not the designation of water management areas. The full quote is "[n]or does present inability to fulfill the instream use protection framework render the statute's directives any less mandatory. In requiring the Commission to establish instream flow standards at an early planning stage, the Code contemplates the designation of the standards based not only on scientifically proven facts, but also on future predictions, generalized assumptions, and policy judgments." This sentence includes footnote 60 of the opinion which also points to the standard for designation that is actually applicable here "[…] cf. HRS § 174C–41(a) (requiring the Commission to designate water management areas "[w]hen it can be *reasonably determined*, after conducting scientific investigations and research, that water resources in an area may be threatened" (emphasis added)). […]"

Precautionary Principle

Wainee denounced "the Commission's reliance on a "purported "climate crisis" and "Precautionary Principle." Maui DWS also criticized the Commission's approach as "overzealous" and "too cautions" in its oral testimony.[103] Importantly, this testimony by Maui DWS' former Director was made at the January 18, 2022 Commission meeting before the Maui Board of Water Supply took an official position supporting designation on February 20, 2022.

Staff response:

The Commission's duties under the constitution and Water Code embody the precautionary principle, which holds that scientific uncertainty should not be a basis for postponing effective measures to prevent environmental degradation.[104] Rather, the Commission as a trustee has a duty to take anticipatory action to prevent harm to public resources. "[A]t minimum, the absence of firm scientific proof should not tie the Commission's hands in adopting reasonable measures designed to further the public interest."[105] In endorsing the precautionary principle, the Hawai`i Supreme Court rejected the requirement of scientific certainty before acting to protect public trust purposes, noting that to do so will often allow for only reactive, not preventive regulation.

Maui County's Water Use and Development Plan cannot substitute designation

Testimony by the Sierra Club Maui Group, Hui o Nā Wai 'Ehā, DHHL, West Maui Preservation Association and several individuals pointed out that the Maui Water Use and Development (WUDP) cannot function as a substitute for designation. There are four other private water companies besides Maui DWS whose well placement, pumping and water use the WUDP cannot regulate. Only the Commission has the authority to do so in a designated WMA.

Individual testimony shared that public participation in the planning process was for "damage control" to the impacts on public trust uses such as traditional and customary Native Hawaiian practices. Another concern is that MDWS cannot ensure the protection of protected public trust instream uses, especially when the County themselves is not compliant with the IIFS set for Kanahā and has not returned streamflow.

Staff response:

A WUDP is a plan and guidance document unlike the enforceable water use permitting regime of the Water Code that ensures due process rights. In its Draft WUDP, Maui County also recognizes its limitations to regulate and plan for use of the other private water companies as these systems are not interconnected and each is independently operated and maintained.[106] "The private public water systems were requested to provide demand projections but most did not supply

[103] Oral testimony by Jeff Pearson on behalf of Maui DWS.
[104] *Waiāhole I*, 94 Hawai'i at 154, 9 Pd.3 at 466.
[105] *Id.* at 155.
[106] *See* Maui WUDP Draft under 19.5.1. Water Use by Type, Municipal Use at page 34 of the Lahaina Aquifer Sector Area.

information."[107] Maui DWS's water use only accounts for 35 percent of the municipal groundwater use and 15 percent of municipal surface water use.[108] There are six municipal water systems using either surface water, groundwater or both in the Lahaina Aquifer sector area, with "public water systems" as defined by the DOH (systems serving more than 25 people or 15 service connections). See Table 1. The location of the public water systems is shown in Figure 2.

Additionally, Hawaii Water Service Company, Launiupoko Irrigation Company, LLC (LIC), and Olowalu Water Company provide non-potable water to their respective service areas and are regulated by the Public Utilities Commission (PUC). The non-potable water source is stream water. Staff has data that indicate that LIC has not been compliant with the IIFS for Kaua'ula stream, Olowalu Water Company has not been compliant with the IIFS for Olowalu stream, and that Maui DWS has not been compliant with the IIFS for Kanahā stream. These potential violations of the IIFS will be addressed in forthcoming Commission meetings.

Climate uncertainty and the Sustainable Yield

DHHL's oral testimony cautioned that the "sustainable yield (SY) as calculated is the maximum amount of groundwater that can sustainably be withdrawn for future withdrawal, if wells are optimally placed, if recharge is evenly distributed, if wells are at the same depth and pump at the same rate, and recharge does not change over time."[109] In the calculation of the current SY numbers for the aquifers in the Lahaina Aquifer Sector Area climate change has not been considered as explicitly stated in Appendix F of the Water Resource and Protection Plan (WRPP) of 2019.

Staff response:

The WRPP does recognize that further investigation in the rate of natural recharge for SY is needed. "Climate change and data from the last 25 years should also be included into recharge analysis."[110] As referenced by U.S. Geological Survey's presentation at the Commission's meeting on January 18, 2022 Item A1, island-wide recharge is expected to decrease for the mid-century and dry-climate scenarios on the islands of Kaua'i, Oahu, Moloka'i, Lana'i, Maui, and Hawai'i. Reduction in recharge in the Lahaina Aquifer Sector area range between 6.8-67.0 %.

Need for comprehensive approach

Testimony by the Sierra Club Maui, Hui o Nā Wai 'Ehā, DHHL, West Maui Preservation Association and several individuals lauded the Commission's comprehensive approach and intent to designate both surface and ground water WMA for all aquifer and hydrologic units in the Lahaina Aquifer Sector Area.

[107] Maui WUDP Draft under 19.6.4 Population Growth Based Water Demand Projections (20-Year), Private Public Water Systems Demand Projections at page 63 of the Lahaina Aquifer Sector Area.
[108] Maui WUDP Draft under 19.5.1. Water Use by Type, Municipal Use at page 34 of the Lahaina Aquifer Sector Area.
[109] Oral testimony by Dr. Jonathan Likeke Scheuer on behalf of DHHL.
[110] Appendix F, WRPP (2019) at page 68.

The Sierra Club Maui Group highlighted that only designating Honokōwai and Launiupoko Aquifer would not protect the aquifer because there are no geographical barriers in the Lahaina Aquifer Sector Area and the aquifer is a thin as it does not hold recharge in place as the ʻĪao aquifer.[111]

DHHL's oral testimony specifically provided an example for the need to designate adjacent aquifers; in 2004, shortly after the Commission decided against the designation of the Waiheʻe aquifer, which borders the designated ʻĪao aquifer, a new well construction permit application was received with the well location being right next to the aquifer boundary.[112]

Staff response:

At the 2004 February Commission meeting, the Commission rescinded automatic triggers for the designation of Waiheʻe aquifer set in November 2002 and limited the amount of MDWS's pumpage from the Waiheʻe aquifer from 4.5 mgd to 4 mgd via a memorandum of agreement (MOA)[113], which then MDWS Deputy Director Jeff Pearson was a part of.[114] Only three months after the Commission's attempt to limit the amount withdrawn from Waiheʻe aquifer, Commission was obligated to approve the new well construction and pump installation permit (WCPIP) of Koolau Cattle Company (Randy Betsill), Waihee Equestrian well (Well No. 5731-06), at its May 2004 meeting because the Waiheʻe aquifer was not a designated WMA and the Commission did not have authority to deny this permit request due to correlative rights of the applicant.[115] In the same year Koolau Cattle Company applied for an additional WCPIP, Waihee Equestrian II well (Well No. 5731-07). This permit did not come before the Commission due to the Commission's delegation of WCPIP to the chairperson in 1997 to issue WCPIP administratively; the first application was brought to Commission to highlight issues with MDWS MOA and the recent history of the Waiheʻe aquifer system. To date four additional wells have been drilled in the Waiheʻe aquifer with two pending completion approval.

Staff recognizes the limitations from only designating the ʻĪao aquifer as a *"lesson learned"* and strongly recommends including adjacent aquifers for proactive and comprehensive management, especially due to decline in recharge because of the climate crisis.

Additionally, staff would like to highlight that the ditch systems in the Lahaina Aquifer Sector Area cross multiple aquifer systems and surface water hydrologic units. (See Figure 2) *In Waiāhole I*, the Hawaiʻi Supreme Court also held that the Commission can consolidate the regulation of a single system because it comports with the Commission's function of comprehensive water planning and management.[116] The Court ruled that the areas covered by the ditch system are to be considered hydrologically controllable irrespective of hydrologic units under

[111] Oral testimony by Lucienne DeNaie on behalf of the Sierra Club Maui Group.
[112] Oral testimony by Dr. Jonathan Likeke Scheuer on behalf of DHHL.
[113] While minutes reflect an MOA, staff have been unable to locate any MOA document in CWRM files.
[114] *See* Minutes for CWRM Meeting, February 18, 2004, at pages 3-7, https://files.hawaii.gov/dlnr/cwrm/minute/2004/mn20040218.pdf
[115] *See* Minutes for CWRM Meeting, May 19, 2004, at pages 5-8, https://files.hawaii.gov/dlnr/cwrm/minute/2004/mn20040519.pdf
[116] *Waiāhole I*, 94 Hawaiʻi at 174, 9 P.3d. at 486.

HRS § 174C-50 (h) which deems uses between existing users as competing when water is drawn from a hydrologically controllable area.[117]

E hoʻi ka nani i Mokuʻula

West Maui Preservation Association's oral testimony highlighted Maui Komohana's (West Maui) rich cultural history. E hoʻi ka nani i Mokuʻula (Return the beauty to Mokuʻula) is the first in the series of mele (song) first published in Hawaiian newspapers in the 1860's that describes sacred springs, fishponds and Hawaiian royalty at Mokuʻula in Lahaina. Mokuʻula has been covered up because the water resources were depleted. Designation can be a tool to return to this beauty and carve out a better future by "extolling the past through traditional and customary Native Hawaiian practices." [118] Kūpuna have managed surface and ground water comprehensively without drawing artificial lines and boundaries.

Staff response:

We appreciate sharing of traditional ecological knowledge and lived experiences as a data set. This data will assist the Commission in decision making and helps to ensure that the Commission is meeting its duty of protecting traditional and customary Native Hawaiian rights under the State Constitution and HRS § 174C-101 "Native Hawaiian water rights".

4.10.2 February Commission Meeting

Table 31 and 32 provide summaries of the written and oral testimony received for agenda item B-4 of the Commission's February agenda. See Appendix E.

Table 31. Summary of Written Testimony CWRM Meeting February 2022

Sector	Name	Position	Comment
Hawaii Water Service	Anthony Carrasco, General Manager		• Owner and operator of the Kaanapali Water System which has nine wells in the Aquifer System; Owner and operator of the Kapalua Water System in the Honolua Aquifer System; Contract with Maui Land and Pineapple Company to operate and maintain the Honokōhau Ditch System which originates in the Honokōhau Aquifer System. • Requests the following information supporting the groundwater mountain that able to be public: 1) Actual measurement data of the tunnel discharge rates, including how many measurements were made, the dates of these

[117] *Id*.
[118] Oral testimony by Uʻilani Tanigawa Lum on behalf of the West Maui Preservation Association.

			measurements and how the time-varying rates of discharge were accounted for 2) A list of wells and the respective potential uses which comprise the "entitled/authorized planned use" for each Aquifer System 3) A list of wells and uses which comprise "other well capacity" and a justification of the inclusion in the comparison of each aquifer system's existing and planned pumpage versus its sustainable yield • If "other permitted well capacity" is not included only Honokōwai Aquifer System exceeds 90% criterion for designation • Impact on and effect on neighboring aquifers is very modest at best • Data from the DMW at Mahinahina indicates that the Aquifer System has been quite stable, data does not portray an aquifer that has been degraded over the eight-year period since 2013. • Time of designation process will delay Hawaii Water from moving forward new sources of supply; this delay will translate into additional significant costs
Public	Fay McFarlane	Support	• Experienced drought and declining stream flows; dual designation of SW and GW is best tool to address the challenges of new climate reality • Cites Water Code and believes "regulation is necessary to preserve diminishing groundwater supply for future needs" HRS § 174C-44 (3). Important to secure our water future now for the generations to come. • Well-researched staff submittal highlights many of the water challenges our community is facing, including water harm to ground water quantity and quality by saltwater intrusion, climate uncertainty due to prolonged drought and declining rainfall, as well as the connection between ground and surface water resources. • More numeric IIFSs have encouraged new well construction. Maui DWS has not notified CWRM of the new wells they have

			been planning in areas of severe water conflict. • Designation allows CWRM to manage well placement and to protect the long-term health of our precious ground water. • Public Trust requires preservation of Kānaka Maoli cultural practices, but these practices have been harmed and will continue to be harmed without additional protective action by this Commission. The ability of Maui Komohana to maintain ancestral traditions and lifeways is at risk. • Major conflicts over water use in our community, is that kalo farmers, whose water use is a protected public trust purpose, receive their water at the mercy of plantation water systems and the developers who currently operate them • Competition over declining water resources in our area has already led to conflicts over water, only expected to get worse • Designation helps Commission with balancing requests for water and ensure that public trust purposes, such as water for kalo, have priority as not all current uses of water are beneficial. • Without adequate water, our lāhui are unable to continue Kānaka Maoli practices that define who Kānaka are as a people and that made Lāhainā the "Venice of the Pacific." • County has proven it cannot manage the wai and Maui DWS has recently admitted to the county water board that the County is in the "position of begging" private corporations/landowners for help. Some of those private entities are culpable for water violations and have initiated aggressive conflicts with kuleana families with appurtenant water rights. This situation and the County's conflicted position is untenable • References Waiāhole opinion and that "the lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation"

Public	Uilani Kapu	Support	• Designation and permitting process is critical to address water availability issues caused by climate change, evidenced by decreasing rainfall and stream flows • Designation needed to protect and restore traditional and customary Native Hawaiian rights and practices
Na‘aikane o Maui	Ke‘eaumoku Kapu	Support	• Resident of Lahaina, ‘ohana has stewarded ‘āina kuleana in Kaua‘ula Valley since time immemorial, provided LCA and RP • Waited 20 years for recommendation to designate • Even though IIFS are set, there is still conflict and companies are taking all the water • Raised issues multiple times, even though his ‘ohana has kuleana rights to the water, there are many days w/o water also for domestic uses like bathing • Concerned about pocket rot for his kalo crop because intakes aren’t cleaned and managed, has to call water company manager for issues with intake • Kuleana users have the first right to water, but always need to wait Serious conflicts over water use in Kaua‘ula and across West Maui, historic and on going
Public	MJ Palau-McDonald	Support	• Designating the Lahaina Aquifer sector as a Surface Water and Ground Water Management Area is not only consistent with, but also likely required by, the precautionary principle and other Public Trust provisions given your Commission’s findings • Only CWRM has the authority to enforce IIFS and SY • Native Hawaiian community members throughout Maui Komohana remain cut off from freshwater resources, despite the fact that their traditional and customary practices, appurtenant rights, and domestic water uses are protected Public Trust purposes • Cites to 1978 Constitutional Convention, that framers of Hawai‘i’s Public Trust envisioned your agency having *“not only*

			the power to protect the resources but the responsibility to do so long before any crisis develops." • USGS presentation at the January 18th Commission Meeting shows that Maui Komohana's freshwater resources will only grow scarcer as climate impacts worsen, creating a dire situation if proactive steps are not taken now • Designation provides for an integrated approach to surface- and groundwater management that will more equitably distribute freshwater resources and enable the Commission to proactively plan for the future
Public	Pāʻanaakalā Tanaka	Support	• Experienced drought and declining stream flows; dual designation of SW and GW is best tool to address the challenges of new climate reality • Cites Water Code and believes "regulation is necessary to preserve diminishing groundwater supply for future needs" HRS § 174C-44 (3). • Well-researched staff submittal highlights many of the water challenges our community is facing, including water harm to ground water quantity and quality by saltwater intrusion, climate uncertainty due to prolonged drought and declining rainfall, as well as the connection between ground and surface water resources. • More numeric IIFSs have encouraged new well construction. • Cites Serious disputes; kalo farmers, whose water use is a protected public trust purpose, receive their water at the mercy of plantation water systems and the developers who currently operate them • Urges Commission to follow Precautionary Principle • Designation helps Commission balance requests for water and ensure that public trust purposes, such as water for kalo, have priority. Has keiki who are also farming kalo alongside on kuleana land. Because of wai (water) from Kahoma stream able to

			maintain this practice that is vital to identity as Hawaiians. • Without the water we have no kalo (taro), we lose that ʻai (food) that feeds us physically and connects us spiritually to our Native Hawaiian ancestors. • Designation is necessary to ensure any hope for the future that my children and their descendants will always be able to sustain those connections.
Public	Lauren Palakiko	Support	• The IIFS was mandated on March 20, 2018, however there was ever a time when the LIC had released the mandated 3.36 mgd. In fact, we have only seen the amount of water in the river decline since then • Sometime before 2019 would have been proactive to designate Lahaina as a WMA. It is now beyond crucial for our native practices, farming and island's ecosystem to do so.
Public	Charlene Rowland	Support	• Experienced drought and declining stream flows; dual designation of SW and GW is best tool to address the challenges of new climate reality • Cites Water Code and believes "regulation is necessary to preserve diminishing groundwater supply for future needs" HRS § 174C-44 (3). • Well-researched staff submittal highlights many of the water challenges our community is facing, including water harm to ground water quantity and quality by saltwater intrusion, climate uncertainty due to prolonged drought and declining rainfall, as well as the connection between ground and surface water resources. • More numeric IIFSs have encouraged new well construction. • Cites serious disputes; kalo farmers, whose water use is a protected public trust purpose, receive their water at the mercy of plantation water systems and the developers who currently operate them • Urges Commission to follow Precautionary Principle

Public	Charlie Palakiko	Support	• Kuleana landowner of Kaua‘ula Valley. Him and his family have been raising kalo on this land for over 30 years; restarted family patches in the mid-80s, fed patches with water from holes for years because there was no water in the stream • In 30-years ‘auwai was restored and stream running by negotiating with West Maui Land • Since then, water has dropped drastically from reaching the muliwai, to now a dry stream; killing many stream life such as all ‘o‘opu, ‘ōpae and prawns and also affecting kalo patches. As of today, water to patches is extremely low causing dirt to show in them • Called West Maui Land and was told water is being pinched because LIC’s water was running low. Was told the siphon 100 gpm which is equivalent to a little over 1,000,000 gallons a day. This is not enough, and it's been getting worse • LIC is not complying with the IIFS, which requires LIC to release 2,000,000 gallons at the dam • Cannot expand lo‘i because of decreasing water flow, a standstill for the last 2-1/2 years • Need designation of WMA to have a third party to fairly manage the developer’s water they’re taking • Provided photos of dried up muliwai in June 2019 and patches today showing dirt because the stream is so low.
Maui BWS Chair	Dean K. Frampton	Reservations	• Describes vote on January 20, 2022 BWS meeting. At the time of the vote, only five BWS members were present. Four members were in support of the designation. As Chair, was not in support of the motion, and expressed reservations based on the following reasons: 1) CWRM has admittedly had challenges keeping up with well-reporting; 2) CWRM has admittedly had challenges with monitoring and enforcing the IIFS;

			3) In light of the two issues above, it is questionable if CWRM has the resources and capacity available to properly manage the Lahaina Aquifer Sector; and 4) In its December 28, 2021 letter to CWRM, the County of Maui Department of Water Supply noted designation is "premature and inconsistent with our Water Use Development Plan." • A four-to-one vote would have stalled the motion; did not want to prevent the Board members in attendance from providing input on the matter, voted in favor of the motion.

Table 32. Summary of Oral Testimony CWRM Meeting February 15, 2022

Sector	Name	Position	Comment
County Council Member	Tamara Paltin	Support	• Designation sorely needed for GW and SW • Climate change has drastic impact, reducing rainfall, creating drought conditions • Serious concern for long term water resources, need for more wastewater reuse • Need to act quickly, people in West Maui do not want to wait for all triggers to be met, want to be proactive in resource protection • 289 low-income units being built right now, 1000 units at Pulelehua received approvals • Lesson from Nā Wai ʻEhā: GW withdrawals in one aquifer affect the neighboring aquifers, best way to protect resource is to designate all of the proposed areas and manage together • No piecemeal designation that will only encourage jumping the boundary lines • CWRM is the best entity to oversee the responsible use of water to ensure the public trust • Precautionary principle supports that where there's scientific uncertainty you should choose in favor of protecting the resource • Rights of kuleana user deserve to finally be protected, because they have the highest rights to water and have the least access to water
DHHL	Jonathan Likeke Scheuer, Ph.D.	Support	• Designation of GW and SW areas enhances the Commission's ability to defend DHHL's rights in the resource going forward
Public	Keʻeaumoku Kapu	Support	• Resident of Lahaina, ʻohana has stewarded ʻāina kuleana in Kauaʻula Valley since time immemorial (LCA, RP provided in written testimony) • Waited 20 years for recommendation to designate • Even though IIFS are set, there is still conflict and companies are taking all the water • Raised issues multiple times, even though his ʻohana has kuleana rights to the water, there are many days w/o water also for domestic uses like bathing • Concerned about pocket rot for his kalo crop because intakes aren't cleaned and managed, has to call water company manager for issues with intake • Kuleana users have the first right to water, but always need to wait

			• Serious conflicts over water use in Kauaʻula and across West Maui, historic and on going
Hui Nā Mamo Aloha ʻĀina o Honokōhau	Karyn Kanekoa	Support	• Hui Nā Mamo Aloha ʻĀina o Honokōhau is a 501 C-3 nonprofit made up of one Honokōhau Valley residents and lineal descendants committed to protecting the wai and restoring loʻi throughout Honokōhau valley • When it comes to protecting and managing wai there is no such thing as being too cautious or prudent • Experienced deadly, decreasing rainfall and drought in recent years, anticipated declines in rainfall based on future projections will negatively affect the groundwater recharge and stream flow, resulting in less water availability, therefore, putting kalo cultivation and stream life at risk • Designation is the best tool to address these challenges • With ongoing serious disputes over water issues or water use in West Maui community, Hui supports designation because it is necessary for proactive management of their water resources • Use of water for kalo cultivation is a protected trust use which is supposed to have the highest protection under the law • The designation of the whole Lahaina aquifer sector from ʻUkumehame to Honokōhau as a surface and groundwater management area, will help the Commission balance requests for water and ensure that public trust uses, and native Hawaiian rights and practices are protected • Leaving Honokōhau aquifer out of the management area wouldn't make sense; Hui members know firsthand from living there and farming kalo, that designation is necessary in Honokōhau in order to ensure that they will have wai in our stream for generations to come, and that our moʻopuna and hanauna e hiki mai ʻana will never be forced to stop farming kalo because of lack of water in the stream
Public	Lauren Palakiko	Support	• Resident of Kauaʻula Valley, born and raised right across the street from where the muliwai, wife of a kalo farmer • Mauka to makai connectivity is imperative to our native ecosystem, Kauaʻula Stream was filled with life such as or ʻoʻopu, ʻōpae, prawns and more, was enough water coming down, that the muliwai was

			running so much that the GM at Puamana was able to cultivate his own loʻi until about 2014-15 • 2019 muliwai dried up for the first time, besides after rainstorms, it has not run since then • Past summer was really hard on the loʻi, used to get 1,400 gpm and that was extremely low for Kauaʻula stream and loʻi; then LIC started running it at 1,200 gpm. Dave Minami, who is the previous LIC Water Manager advised to email Peter Martin to see if there are any changes that could be made; Peter responded that CWRM's decision was for them to give Palakikos 1,000 gpm. Now, LIC is running syphon at 800 gpm. The mud in patches is showing, the water temperature may be rising which all could be leading to rot and loss of crops. • Designation is beyond crucial now for Native practices for farming and ecosystem
Public	Charlie Palakiko	Support	• Kuleana landowner of Kauaʻula Valley. Him and his family have been raising kalo on this land for over 30 years; restarted family patches in the mid-80s, fed patches with water from holes for years because there was no water in the stream • In 30-years ʻauwai was restored and stream running by negotiating with West Maui Land • Since then, water has dropped drastically from reaching the muliwai, to now a dry stream; killing many stream life such as all ʻoʻopu, ʻōpae and prawns and also affecting kalo patches. As of today, water to patches is extremely low causing dirt to show in them • Called West Maui Land and was told water is being pinched because LIC's water was running low. Was told the siphon 100 gpm which is equivalent to a little over 1,000,000 gallons a day. This is not enough, and it's been getting worse • LIC is not complying with the IIFS, which requires LIC to release 2,000,000 gallons at the dam • Cannot expand loʻi because of decreasing water flow, a standstill for the last 2-1/2 years • Need designation of WMA to have a third party to fairly manage the developer's water they're taking
Public	Madison Palau-McDonald	Support	• Working with community members in Maui Komohana who are directly impacted by CWRM decision

			• strong support for designation today; designation provides the best opportunity to protect and preserve resources in our new climate reality. • Failing to designate will perpetuate the status quo; IIFS will continue to go unmet, well reporting will remain a struggle and municipal and commercial uses will continue to benefit at the expense of protected public trust purposes like an appurtenant rights, traditional and customary practices, and domestic uses. • As a Native Hawaiian, heartbroken to see community members denied their rights protected under Hawai‘i’s Constitution and the Water Code. As a law student, grateful that designation will give your CWRM the tools to address these issues in an integrated and comprehensive manner that will ensure that water resources are equitably and sustainably stewarded. Maui County cannot do this alone • Urges CWRM to fulfill its fiduciary duty under our public trust and vote to designate
Public	Erik Meade	Support	• Law student at William S. Richardson; praises Commissioners and staff for taking the initiative to move this issue forward. • CWRM has built an excellent record that provides more than reasonable basis for designation that coupled with the Supreme Court's recognition that the precautionary principle is an inherent attribute of the public trust domain, further supports designation. • Overwhelming community sentiment is that you've met legal criteria and that the community members feel it's vital. • Urges CWRM to stand with the community and its staff and to designate.
West Maui Preservation Association	Bianca Isaki, Ph.D., Esq.	Support	• Submitted written testimony to January 18th meeting in strong support of designation • Climate change is here. There's a long-term drought in West Maui. Kaua‘ula Stream is drier than even before the IIFS were amended in March 2018. • Diverters are now turning to well-drilling to substitute for stream diversion. Three of the private wells that supply the gentleman's estate in Launiupoko had pump installations in 2020 after the March 2018 IFS Designation.

			• On January 26, 2021, LIC reported curtailment of private wells number 3 due to rising chlorides. This well is fairly high up mauka at 751 feet in elevation. Those 3 wells have a combined 1,100 gallon per minute pumping capacity. • In the absence of designation there aren't institutional mechanisms that will prevent these well owners from pumping up to installed pump capacity. Institutional mechanisms are needed to counteract existing use and development pressures to pump more from these private wells. • In Kauaʻula and Launiupoko, communities fought several attempts to stall even more developments, Makila Kai, Makila Farms, Polanui. • Concerned that well owners who can increase pumpage will do so or at least imprudently announced plans to do so, is a real concern. This is a long way around to think we agree with the recommendation to examine permitted well capacity as your staff have recommended and considering designation. • WMPA supporters in Kauaʻula also learned that the West Maui Land Company and the County are planning to install yet another well that hasn't been considered and recently examined a site on the north side of Kauaʻula stream, north of the Dizon kuleana
Public	William Wood	Support	• Honokōhau Valley residents, supports designation of the Lahaina Aquifer sector as both ground and surface water management areas. • Living in Honokōhau Valley, firsthand knowledge of the mismanagement of water use by both MLP and the County of Maui Department of Water Supply • E.g., the County had a bridge in Honokōhau Valley that was used to hold water lines above the river. It was originally built by MLP and Jerry McDonald. It was then taken over by the county Department of Water Supply in 2000. The bridge failed in 2018. The County was well aware that the bridge had failed, and the bridge system was obstructing the width of the river. (Provides photos showing bridge laying in the river-wall to wall and one of the bridges in the stream) In 2018 after the bridge failed the County was aware of this, but nothing was done. During the tropical storm Olivia there was a big flood that came through and a lot of large logs came

			down and got stuck on this bridge eventually building up a big dam before it broke free sending catastrophic flooding below which destroyed land, homes and loʻi. After the flood, Ayron Strauch came up to take a look at the area and help us clarify what exactly had happened. After tropical storm Olivia, the flow in the stream was greatly diminished and we repeatedly tried to contact MLP to restore the water flow but did not receive a response. • Meanwhile MLP was wasting the water which was overflowing into the sea at Honokaoʻo, documented in the 2019 wastewater complaint. • "We are on a little island in the middle of the Pacific, and we should not allow so many straws to take from our cup treating this valuable resource as a commodity to be bought or sold." • When looking at who is in opposition of protecting West Maui's aquifers, faces of developers looking for foreign money and the people that are responsible for selling the water for those developments. • Designation assures that the use of our precious resources will be reasonable and beneficial for the future of our small island.
Public	Kanoelani Steward	Support	• West Maui community member, supports the designation of the Lahaina aquifer sector as a surface water and groundwater management area • As stated in the staff's submittal this designation is a way to proactively manage water disputes over surface and groundwater in the Lahaina Aquifer sector, especially since there are established IIFS that are not being met in West Maui which essential shows that off-stream uses are being prioritized over instream uses. • Designation is another layer of legal protection to regulate reasonable and beneficial uses of water. • The Commission has a constitutional duty and as stated in HRS Chapter 174-C, the Commission is to ensure the availability of this precious resource will meet the present and future needs of the people. • The climate crisis of the future is uncertain which will directly impact and affect our water sources. The future housing that is planned for the Lahaina aquifer sector will also directly impact and affect our water sources.

			• The current water disputes are already affecting our native Hawaiian practices. • Therefore, designation can only benefit the present and future needs of the people of West Maui. • In the staff submittal the Maui Department of Water Supply said that the move to designate is being too cautious. "However, I strongly disagree as do many of us community members as designation is a proactive move that can put our public trust resources and environmental protection at the forefront of regulation." • Designation is an important tool to manage water use as it will ensure that all water use in our area is consistent with the public interest.
Public	Sanna Kauhane	Support	• Strong support of this designation, crucial that this surface and groundwater designation happens for all of West Maui as a whole, rather than singling out certain problem areas for sole designation, such as simply the Honokōwai system or the Launiupoko system. • Surface and groundwater here in West Maui are hydrologically very clearly integrated. So much so that it is difficult to draw boundary lines between systems. It would be careless to move forward without managing all of our surface and groundwater together holistically. • The recent implementations of IIFS have been somewhat helpful to restoring stream flow; but we are now seeing groundwater being taxed more heavily. Increased enforcement of IIFSs will only shift the burden further to groundwater withdrawals which will return full circle to further impact our groundwater dependent ecosystems, stream flow and coastal discharge. • Designation will ensure that our region will be managed collectively as a whole, so that we can avoid simply shifting the weight around from one aquifer system to another which could prove catastrophic for future generations to come. Two of our aquifer systems are being threatened • Urges CWRM to take this proactive responsible step
Public	Kalamaʻehu Takahashi	Support	• Support designation of GW and SW areas because this process serves a holistic and proactive approach towards protecting this precious resource from development as well as climate change; ensuring accountability across the board, particularly those of

			the land irrigation companies that have historically mismanage this resource as seen in Wood's testimony. • Until today, water companies are still gatekeeping these resources; ultimately denying the kuleana landholders as well as other kalo farmers who want to revive these practices such as the Hui Nā Mamo Aloha ʻĀina o Honokōhau. • There have been years and years of struggle for wai and has severely affected not only the appurtenant right to farm kalo as kuleana landholders, but also their basic necessities to live under ʻāina kulāiwi, which all should have the right to as Hawaiians. • "There are also housing developments up and coming unless we have a way to hold current developers accountable for the impact on the resource, we're basically drinking the streams dry and all these resources dry." • Cites a quote by Jeff Pearson referring back to the January 18th meeting saying "there's not a lot of water here in West Maui and we are right near the edged in what we provide for our customers in West Maui." To deny the scarcity of this resource is also to deny the claims for necessity of water and needs for this type of measures to be taken. • The January 18th staff submittal references the Launiupoko and Honokōwai aquifers of the sustainable yield on page 7 of that submittal says that Launiupoko will be within 115% of the sustainable yield and Honokōwai will be within the 170% range of the sustainable yield, cannot move forward and rely on these unsustainable, criminal practices of mismanagement of this resource for communities and our future • Wants to ground truth one of the testimonies earlier. "I had the opportunity to visit Kauaʻula to harvest kalo for our ceremony relating to Makahiki and I would like to say that the water was in fact, very low, and the water did feel warm and so I see this I see this water issue not only talking about our appurtenant rights and for subsistence practice such as farming kalo; but also something that could jeopardize the cultural religious future and the relationship to these resources."
Public	Kekai Keahi	Support	• Family is from the ahupuaʻa of Panaewa in the valleys of Kanahā and Kahoma.

			• Designation is super important on the West Side; e.g. in Kahoma, there are two developers. First, West Maui Land shut the water off to Kahoma Stream and dried the entire river. Almost 80% of all of the species were lost that community fought long and hard to restore in that stream because they wanted to fill up the reservoir, and that was that was brought before Ayron Strauch. The second was because Kamehameha Schools owns the land, they gave management duties to West Maui Land to handle the intake and after one of those storms, they didn't get back to the intake to clean it out and dried up the river that time also. The designation would help us out in that in that area. • Second, looking at Kanahā, we got the Waipuka and Kanahā wells and the salinity and chloride levels in those wells from way back they discovered chloride levels way beyond the 250 parts per million that was set by Federal Government. • This led to the complete dewatering of Kanahā Stream to dilute this water they were drawing from the well; so, it was happening way back, and the County knew of this. The problem is we're looking at the County government is the ones to make sure that our public trust is taken care of but they're the ones that turn the blind eye to the to the problem and created another problem by diverting Kanahā Stream. • "Recently in the past few years, there have been these drought situations which I never did remember having when I was growing up. We got to pull back and if we use over a certain amount, we get fined." • There are private systems like Launiupoko and Kaʻānapali Resort, that don't experience these drought conditions as they continue to water their golf courses, to fill their swimming pools, the hotels continue to have their guests take showers and do whatever they want; "it's like a free for all, while the community have to go on water restriction and the risk of being penalized for using an excessive amount of water during drought conditions." • Water is a public trust and belongs to everybody. If because you're a private water company, doesn't mean that you don't fall under these drought condition measures and that's what we experience all the time.

			• Lines dividing the Lahaina sector in the different aquifers are fictious, “we cannot look at those lines as this area has this much amount in sustainable yield and then this sector is on this aquifer, is okay? This is the proverbial straw in the cup that we've been using to exhaustion to describe the situation here.” • The County does not support designation for the entire aquifer sector because some aquifer systems included in this initiative have no basis for designation. We're looking at triggers and what will trigger a designation. “In my opinion, we’re beyond the triggers. The gun is already fired. We just trying to find out where the bullet is going to hit? We do not wait and go up to the to the very edge of a cliff to say, stop! - I can see the cliff from far ahead and say I am not getting any closer before I fall off. We cannot do that.” • “The County and its developers are saying by this designation happening, it's going to completely stop development and people are not going to have a chance to own their homes, which is false and just scare tactics. It’s sad to know that the county who's supposed to protect this water resource for us is fighting against us, the public.”
Public	Blossom Feiteira	Support	• Lifelong resident of Maui, Native Hawaiian practitioner born and raised in Lahaina. • Supports the designation of the Lahaina sector surface and groundwater management area. • Issues and challenges of kuleana farmers, native practitioners, insufficient monitoring of the IIFS are very true and it's been ongoing and been a struggle in West Maui for many of the local families and Native Hawaiians on West Maui. • Designation of West Maui is also very important in terms of the maintenance and of future restoration of significant historic sites in Lahaina. The Mokuhinia complex is a Nationally Registered Historic site with the Department of Interior, sits right in the middle of Lahaina Town. The diversion of water, since 1890 has significantly impacted this area to the point where in 1905, they buried the pond due to stagnated water. • The other impact that happened along the shoreline is that the streams of Kaua‘ula and Kahoma that fed into the Mokuhinia Pond, also provided for a

			muliwai to be established that fed the Pōʻalima of Pakala, Makila, and Polanui, the shoreline across West Maui. • At a time when the muliwai was fully functioning, you had a very diverse and vibrant shoreline ecosystem that had different varieties of limu, varieties of fish species, and it was considered to be by the kupuna of Lahaina, their nursery. The tiger sharks would come in once a year to spawn in that area, and it was the baby sharks that fed through that ecosystem that fronted Mokuʻula and Mokuhinia. With the diversion of water, we saw immediately a degradation of the ecosystem, less fish, less limu, warmer waters, and overall degradation of the environment that led the kupuna oftentimes to kapu that place for no fishing and gathering because it just simply wasn't there. • The County of Maui is currently in the process of finalizing their archaeological inventory survey and are preparing an RP for the restoration project known as the Mokuʻula project. • Designation is so important in bringing back Mokuhinia pond. Without it, it can never happen. Stagnant water is not a good thing. The less water that comes off the streams and the underground aquifer system, clearly would have a major impact on this very significant site.
Public	Archie Kalepa	Support	• Shares hands-on perspective starting with Kahoma Stream, stream was dry for over 130 years. Worked hard along with CWRM to open up that stream from mauka to makai. It has been an educational process, changes in the stream from the ʻoʻopu coming back to allowing families to plant kalo in that valley again • Water running in the stream is helping the aquifers • Important to maintain instream surface water management because of both cultural, environmental, historical importance, and being faced with climate change • Very important to have mauka to makai flow in all streams, limu are dying because there's no fresh water for the limu to spawn, our aquifers are dry, there's not enough water to sustain current communities in West Maui • Encourage CWRM to protect the surface water management system for all of West Maui so that we may have a future. 9-generations plus from Lahaina

			and hopes his kids can stay home and not have to leave because there's no water for them to use when they become community leaders in this place that we love and call home, West Maui.
Hui o Nā Wai ʻEhā	Hōkūao Pellegrino	Support	• Strongly supports the designation for both groundwater and surface water management for West Maui • Ability of staff to go above and beyond to take care of IIFS without a contested case; shows Commission is committed to protecting both GW and SW areas, mahalo to staff for their ability to be proactive in their approach • Community that is ready to act, collaborate, and to work with all parties • Community deserves the highest and best protection and insurance that the descendants of these individuals, kuleana users and the Native Hawaiian families who have been there for generations, continue to not just live but thrive, cultivate and sustain the community they reside • Mahalo to commissioners as well for taking this upon you; it's a huge kuleana for all of you and you have an entire community much bigger than Nā Wai ʻEhā that stands alongside and behind you to help support this implementation process
ʻAha Moku o Maui	Fay McFarlane	Support	• Private wells and DWS are not included in the WUDP • Encountered private contractor and consultant of Maui DWS in Kauaʻula in week prior to meeting who was hired to dig a new well that hasn't been noticed to CWRM yet, could not provide information on pump size or alternative sites • Highlight unpermitted LIC wells on p. 12 of staff submittal • Other private water companies do not report water use accurately • Designation is only way to go; DWS has painted this as a home rule issue, but if it was working, we wouldn't be in the situation that we're in now
Sierra Club Maui	Clare Apana	Support	• Support of designation and will continue support • Consider impact of wells on kuleana water users, as stakeholders in the aquifer kuleana water users should be given the right to have prior informed consent for any well

Public	Joyclynn Costa	Support	• Kuleana users have suffered both from diminishing and extinguishing of their rights for too many years

4.10.3 Public Hearing

Table 33 provide summaries of the sixty-eight (68) written testimony received at the Public Hearing held on April 26, 2022. Actual written testimony can be found in Appendix I.

Table 33. Summary of written testimony received for the public hearing

	Name	Position	
1	Coung Tran	Support	• Lahaina resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
2	Dr. Ilene Bellerue	Support	• Kula resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
3	Daniel Bishop	Support	• Strong support
4	Kyle Kajihiro	Support	• Lecturer in Dept. of Geography & Environment and Ethnic Studies at UH Mānoa, works with Hawai‘i Peace and Justice and O‘ahu Water Protectors • CWRM's role in protecting Hawai‘i's resources is vital, especially with climate change, development pressures, and demands for government to ensure sustainability of life in Hawai‘i

			• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Surprised that West Maui not already designated • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
5	Jennifer Valentine	Support	• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
6	Tlaloc Tokuda	Support	• Terrible record of Hawai'i turning sustainable agricultural system into colonial cash crop third world economy where missionaries brought religion and took the land • In Maui ex-missionary A&B controlled large land holdings, grew sugar, diverting water from subsistent kalo farmers and continue to dominate water consumption (in collusion with BLNR) • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because climate chaos is diminishing rainfall levels, significant increases in water demand and already arising conflicts • Lives on Hawai'i island • Implement water management area now that people of Maui can begin discussions over water future I sustainable way
7	William Reese Liggett	Support	• Honolulu resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts

			• Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
8	Pete Wilson	Support	• Pahoa resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
9	Carole Berthiaume	Support	• Wailuku resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
10	Ann Wallace	Support	• Kihei resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
11	Sierra Club of Hawai‘i, Wayne Tanaka (Director)	Support	• On behalf of 20,000 members Sierra Club of Hawai‘i strongly supports designation • Public Trust Doctrine, enshrined in constitution, requires manage and protect water resources, including and particularly for the protection of the environment, Native Hawaiian traditional and customary practices, the appurtenant rights of kuleana landowners, and the water rights of the DHHL and its beneficiaries

			• Designation will provide CWRM with regulatory tools to uphold its public trust responsibilities in light of ever-increasing water demands for West Maui's diminishing water resources, the reported conflicts arising from Native Hawaiian cultural practitioners' and kuleana farmers' inability to access water sufficient for their needs • Public trust requires water resources to be managed for present and future generations, including a high level consideration and precautionary presumptions in favor of public trust purposes (environmental benefits, Native Hawaiian T&C practices, appurtenant rights, domestic uses, and water needs of DHHL) • State legislature has tasked CWRM as principle agency for upholding public trust obligations, Water Code envisions designation as management tool when water resources may be threatened, wasted, or subject to serious disputes • Ample evidence provided by CWRM staff that designation is critically needed: severe drought, diminishing rainfall patterns, climate change impacts threaten West Maui streams and aquifers while existing and planned development will only increase water demand • Streams continue to be diverted and wells developed to support luxury developments [provides link to real estate listings in Launiupoko and Kā'anapali Coffee Farms] on agricultural lands to the potential detriment of the environment and kuleana landowners, and small farmers • West Maui is textbook example when designation is necessary to fulfill CWRM's public trust obligations, CWRM will be able to balance and condition competing water uses to maximize benefits to present and future generations • CWRM can condition certain water uses on exploration & implementation of water efficiency and conservation measures, including water reclamation/reuse and irrigation infrastructure upgrades, that can reduce strains on aquifers and streams; • Ensure that stream diverters adequately provide for kuleana and bona fide agricultural uses of surface waters; and ensure that private development projects plan for and accommodate the DHHL's water rights. • Concerns of delays, but growing strains and conflicts call for careful and timely planning in the use of these resources, which will only benefit the long-term stability and sustainability of regional activities dependent on water. • Tremendous cost impacts of readjusting projects and addressing conflicts that may only be exacerbated without up-front resource management, common sense counsels designation

			sooner, rather than later, to both uphold the public trust, and avoid the harms and costs of maintaining the status quo
12	B.A. McClintok	Support	• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
13	Kainoa Wilson	Support	• Honokōhau resident for 50 years • through hard work, perseverance and love and respect for the aina and resources, built and live a beautiful life, water in the river has been an integral part of daily life, providing the nourishment for our kalo lo'i, plants and animals, water for our domestic household use and recreation, and a bountiful resource for aquatic life used as a food source • more families chose to move back to live on kuleana lands, but demand from streams increased for more hotels, private estates, villas and mansions while amount in stream is insufficient • demand needs to be controlled to ensure sufficient resources for all, protect Native Hawaiian T&C rights, and future generations • Water is Life
14	Kim Jorgenson	Support	• Private enterprises should no longer be allowed to monopolize water in the streams and aquifers • The proposal to manage the water will be much fairer to kuleana farmers who do the back-breaking work of growing food that does not have to be shipped TO Hawaii.
15	Denise Boisvert	Support	• Last decade seen significant decreases in rainfall, threat of climate change in full swing • Management of this natural resource is vital for FAIR distribution and for the survival of future generations
16	Ron Valenta	Oppose	• Kahoma Land Holdings LLC, owner of approx 1,000 acres on West Maui • Nā Wai ʻEhā/Molokai take decades to approve water use permit • No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai ʻEhā

			• CWRM does not have resources to process existing water use permit from Molokai and Nā Wai ʻEhā, let alone new water use permits
			• Not based on scientifically proven fact, table of Jan staff submittal is used
			  o SY unclear how it is determined, rate of recharge and basis for the rate of recharge
			  o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater
			  o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use
			  o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation
			• Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact
			• If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina
			• Designation causes decades of delays, any dispute will result in litigation
			• WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM
			• CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County

17	West Maui Preservation Association	Support	• Designation is sorely needed in Lahaina to address the inertia preventing implementation of more equitable and sustainable solutions to protect water resources and public trust uses thereof • WMPA applauds the Commission staff's herculean effort in fostering the designation proposal, offers comments to bolster and clarify the CWRM's Draft FOF • [cites page 22 of Draft FOF] Conflicts in Kauaʻula arise from: (1) poor planning by LIC, and its related entities, which have created a service area outsized to surface and ground water sources; and, (2) the County's failure to enforce agricultural district standards, permitting single-family dwellings to be constructed in the absence of any farm plans or other evidence of agricultural activity in the Kauaʻula valley area;

			• State Land Use Commission commented that Maui County allowed the subdivision without any assurances of an adequate support of non-potable water for irrigation, innocent purchasers who must obey the land use restrictions and actively conduct agricultural activities on the lands, would be frustrated if they cannot productively conduct agricultural activities because of a lack of access to non-potable water in LUC Docket No. DR-02-26, at 8 (Jul. 2, 2003) • [cites page 26 of Draft FOF] CWRM's appurtenant rights study notes approx. 51.5 acres of loʻi existed around 1900, documented in a set of maps by Duncan and Shishido, including 30.08 acres owned by individuals and 21.67 acres in which Maui Land & Pine claims an interest • Nā Mamo Aloha ʻĀina o Honokōhau, an active nonprofit organization in Honokōhau, includes in its mission the restoration of the historic bounty of Honokōhau valley, including traditional loʻi kalo. • List of pending well applications may soon include well by MDWS in Launiupoko, kuleana landowners accompanied engineers to potential well sire and were contacted by consultants re T&C practices in the area • Should further evidence of authorized planned use be required for designation decision-making, further inquiry or clarification from MDWS about the location, size, and timing of its planned well may be appropriate • Re *lessons learned*, WMPA notes West Maui will likely see shifts in water resource use consequent to both climate change, a resurgence of kuleana tenant occupancy, and management changes • As part of resolving the Ka Malu o Kahālāwai's water wasting complaint, phased IIFSs for Honokōhau surface water were installed that do not provide for offstream, non-public trust uses during low flows, including Kapalua Plantation Estates' landscaping uses; MLP may begin using their Kapalua wells in the Honolua aquifer; LIC has proposed ramping down Kauaʻula surface water use in favor of pumping wells, albeit in the same aquifer area
18	Greg Puppione	Support	• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts

			• Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
19	Kamalani Holokai	Support	• Peʻahi, Haʻikū resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
20	Uʻilani Kapu	Support	• Ground and surface water resources are connected and should be managed together to ensure sustainability • CWRM should oversee all well locations and the impacts it may have on our streamflow • As a Kuleana water user with appurtenances rights, who have the highest rights to water and has managed it responsibly by allowing the return to the • Too many times without water, would like a dull system set up for kuleana and KS users. • Designation it is necessary to protect the Kuleana owners of Kaua'ula and KS' appurtenant rights, to continue and pass Native Hawaiian T&C rights to the future generations

21	Maui DWS	Support/ Oppose	• Hearing Notice
			  o Wrong subdivisions
			• Climate uncertainty + SY
			  o Climate uncertainty applies statewide and not just Lahaina
			  o Changes in recharge should be addressed in SY
			  o CWRM relies on 2015 and 2017 data, disregards wet climate scenarios of 2019 study
			• Threats to water resources by existing and proposed withdrawals
			  o Count 100% of tunnel discharge against SY is inconsistent with WRPP, findings of 2021 USGS study, and approach in ʻĪao Ground Water Management Area and upheld in Nā Wai ʻEhā
			  o APU, data in MDWS provided table is double counted, correct APU is shown in table

	Ukumehame	Olowalu	Launiupoko	Honokōwai	Honolua	Honokōhau
APU* (MGD)	1.080	0.003	0.9364	2.4102	1.8473	0.000

*Projects with county land use entitlements known to MDWS. Projects may have partial building permits issued (overlapping with Open Building Permits). Project may or may not be served by underlying ASYA, may be served by surface water or recycled water.

  - Calculating APU by underlying aquifer system is misleading as projects may be served by adjacent aquifers, surface water or recycled water as explained in WUDP
- Serious disputes over surface and groundwater
  - Favors a collaborative approach among water purveyors to ensure sustainable water pumpage throughout the aquifer
  - WUDP offers compromises to address community concerns and disputes, align with general plan and community plan to allocate water to planned land use
  - CWRM neglects to respond to MDWS written testimony re WUDP, MDWS written testimony is not included in "summary of written testimony" in Draft FOF
  - Concerned over hasty approach to designate before exploring solutions in WUDP, support collaboration between purveyors in lieu of designation
  - HRS 174C-44 gives CWRM the option to invite water users and assess groundwater situation and devise mitigative measures
  - CWRM should give proactive guidance to interpret and utilize available groundwater models and monitoring data to ensure adequate pump distributions, these are better tools to enhance and integrated management
  - MDWS supports designation of Honokōwai only
- Harm to groundwater quantity and quality by saltwater intrusion
  - Low initial chloride levels are expected to increase after cessation of plantation irrigation in wells underlying former plantations
  - MDWS Honolua wells underlie former pineapple fields
  - Chloride levels MDWS Kanaha wells respond to changes in pumpage, new MDWS well in Launiupoko would help redistribute pumpage from this field
  - MDWS has funded multiple cooperative studies with USGS to guide resource management and to address threats to water quantity and quality and climate change impacts

			○ These tools under pin WUDP strategies to allocate water to land use, guide sustainable groundwater pumpage, address declining rainfall and climate uncertainty • Water shortage ○ MDWS provides 5.5 mgd or 59% of potable water needs in Lahaina ASA ○ Actively shifting to GW to reduce reliance on SW long-term, comply with IIFS and provide for planned growth ○ Conservation and infrastructure improvements relieve some stress on MDWS system and resource ○ MDWS cannot meet planned growth and affordable housing without new source to offset SW from Kanaha stream, designation requires existing uses and wells to be processed first, before new sources will be awarded ○ Completing construction of new well sites currently in the works will be further delayed ○ Once MDWS has to stop Kanaha stream diversion, MDWS will not be able to serve additional customers, which triggers a water shortage declaration per Maui Code Chapter 14 and de facto building moratorium per MDWS Admin rules title 16, chapter 201. • Lessons learned ○ ʻĪao designation was allegedly triggered by withdrawals exceeding 90% of SY, CWRM subsequently issued WUP exceeding 95%, but guidance on well spacing, pump optimization and adaptation has been forthcoming ○ MDWS has funded multiple studies with USGS to guide resource management and distribute aquifer pumpage in a sustainable fashion ○ All Molokai aquifers were designated regardless of any realistic future pumpage, in Ualapue MDWS requested additional 165,000 gad and were met with strong objection and CCH petition, now Ualapue face a de facto building moratorium on MDWS system ○ Designation does not provide for better integration of land use and water planning, better approach is proactive collaboration between CWRM, public and private purveyors and community representatives to ensure implementation of WUDP strategies and refine integrated management

			• Surface water designation and IIFS
			  ○ SWMA may be warranted where ongoing conflicts over water use have not been resolved, such as Kauaʻula
			  ○ MDWS acknowledges noncompliance with IIFS in Kanahā, MDWS and USGS actively pursued access to install gages in Kanahā stream since 2018
			  ○ MDWS has budgeted and pursued well development to offset reduced diversions, designation does not resolve the obstacles to develop wells, improve infrastructure and balance water needs between MDWS sources and subsystems
			  ○ Designation would prevent or seriously delay new source development

22	Piʻimauna Aiwohi	Support	• Honokōhau resident, represents ʻohana of past, present, and future, kupuna have been raising kalo since 1899 and family carries on this traditional practice • Native people of this ʻāina struggle to receive adequate water to sustain their T&C practice • For many years and still today, blatant disregard was/is the practice throughout the state, little to no regard was given to traditional users of the water system that was put in place by ancestors who thrived • Ancestors were akamai to figure out a system were all benefitted from the water that was so precious to kupuna • Today, Native People have to fight to get what once was the normal process of water rights • Injustice has been done to Native People, their ʻohana and many generations before, disregard of humanity • Hopes community leaders will come up with solution that will benefit all • Appreciates the process and the effort to fix the wrongs that were done
23	Devon Haia	Support	• Third year law student at the William S. Richardson School of Law • Wrote 50 page paper on why CWRM should designate of Lahaina ASA, research revealed that pre-contact Hawaiʻi, Lahaina was a paradise of countless loʻi kalo shaded under ulu trees with abundant fresh water flowing in streams ma uka to ma kai, • When foreigners arrived, the waterways were so plentiful they felt like they were in the city of Venice, foreigners razed the valleys for their sugar and pineapple plantations, destroying many of the ʻauwai systems, and dewatered streams to feed their exported crops at the expense of kalo farmers and natural and human communities

			• Important constitutional provisions that are not only foundational to your decision to designate, but also compel you to do so: [cites] Article XI, Section 1, Article XI, Section 7, Article XII, section 7 and HRS § 174C-101 • With regard to Lahaina's future needs: There is already more land zoned for urban development in Lahaina than there is water available to service it, unsustainable future development of Lahaina, coupled with projected diminishing surface water supply as shown in this Commission's own FOFs, require you to take action through designation. • Regarding serious disputes over water: FOFs report that there have been generational conflicts generating numerous complaints to this Commission over the lack of streamflow, wasted water, and issues of ditch system management for almost every stream in the Lahaina district • Diversions, now largely maintained by private developers, have contributed to the lack of streamflow which continues to impede downstream kuleana users of water and prevents many of them from being able to cultivate kalo on their land • Aunty owns a kuleana parcel in Kauaʻula, shared her mother's stories of going to the family property to tend to the land that grew not only kalo, but also mango, banana, ulu, and more; on Pōʻalimas, her mother's family would huki the kalo, boil it, make poi, and travel throughout the valley trading with other families; On these days, the families in the valley showed their spirit of community and sustainability. • Multiple times in her life, aunty has gone up to her property to do the very hard work of cleaning the area by clearing away brush and cutting back overgrown grass in hopes of being able to farm kalo and restore it to the way her mother described it to her; these dreams have yet to come to fruition because the water, due to diversions, no longer runs through the property • Without water, a loʻi cannot exist, stream that previous generations used to cultivate kalo is now being diverted almost completely for private use without any care or consideration for the Native Hawaiian kalo farmers–who have superior rights to this water –and who wish to use the stream water for the T&C Native Hawaiian protected public trust purpose of growing kalo. • Hawaiʻi Supreme Court has counseled this Commission to be proactive as "the primary guardian of public rights under the trust" and "take the initiative in considering, protecting and advancing public rights in the resource," Court also recognized "the ultimate value of

			water to the ancient Hawaiians" and that even the King "intended to guarantee public rights to all water" • Water in Hawai‘i is a protected public trust resource, held for the benefit of the people of Hawai‘i, as shown consistently in the Constitution, Water Code, and decisions of the courts. • As a law student, understands that designation is a proactive approach that attempts to ensure availability of stream and ground water resources to all who seek it, as a mom, hopes that one day there will be enough water in the streams so that keiki will be able to help grow kalo in the same place their kūpuna did • Urges this Commission to designate Lahaina as a Ground and Surface Water Management Area to fulfill its public trust obligations to protect and ensure fair access to water, giving kalo farmers the chance to cultivate lo‘i, care for their family and community, and hopefully recreate a lush, green Lahaina to thrive once again, as it did over a thousand years ago.
24	Aha Moku O Lahaina (U‘ilani Kapu)	Support	• Aha Moku, Lahaina representative for Maui, voted for by Community in 2017, taking Mr. Bonconco's position • Community made up of kupuna, makua and keiki are in support of designation • These waters need to make it to the ocean, because our limu and E'a are disappearing and Kanaka Māoli of this moku depend on that source as medicinal and traditional uses. • Wai is life from the wao akua to the kai, for lo‘i to fishponds; Mountain to ocean is what we teach
25	Patty Nishiama	Support	• Na Kupuna O Maui and Aha Moku Kupuna Council are in favor of this designation. • The ahupua‘a of Ku‘ia and Kaua‘ula feed the Royal Island Mokuhinia/Moku‘ula. • These waters are very important to the Kanaka Māoli tradition and for future generations • Moku‘ula is the capital of Hawaii and all these waters traverse from the mountain to ocean and at this moment Na Aikane O Maui and Our Aha Moku Council are cleaning this Historical site.
26	Priscilla Stuckey, Ph.D	Support	• With rainfall decreasing on Maui decade by decade because of climate change, need to use maximum protections to safeguard precious groundwater and surface water on Maui • Designating this aquifer area as a Management Area is consistent with the Hawai'i Constitution, which recognizes water as a public trust, to be managed for the best use of all

			• Managing water as a public trust means using all legal means available to limit nonpublic commercial uses that threaten the availability of water to—and therefore the survival of—the wider community, cannot live without water. • Urges Commission to use all means available to preserve this precious and limited resource • Water Is Life.
27	Kapalua Resort Association (Frank Violi, Jr.)	Oppose	• On behalf all Resort Partners • Nā Wai ʻEhā/Molokai take decades to approve water use permit • No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai ʻEhā • CWRM does not have resources to process existing water use permit from Molokai and Nā Wai ʻEhā, let alone new water use permits • Not based on scientifically proven fact, table of Jan staff submittal is used o SY unclear how it is determined, rate of recharge and basis for the rate of recharge o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation • Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact • If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina • Designation causes decades of delays, any dispute will result in litigation • WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM • CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County

28	Maile Aiwohi	Support	• ʻO Maui nui a Kama kuʻu mokupuni. ʻO Kāʻanapali kuʻu moku. ʻO Honokohau kuʻu ahupuaʻa. ʻO Panioi kuʻu ʻili ʻĀina. • Raised on the waters of Honokōhau Valley • Access to freshwater has been a growing concern in Maui and Hawaiʻi in general; from stream flow restoration to Nā Wai ʻEha to ʻAnakala Walter Ritte and the many families on the west side of Molokai who recently were awarded natural stream flow to 5 streams after over 100 years of water diversion by Molokai Ranch • Ka lāhui Hawaiʻi, the Hawaiian people are becoming more verbal about traditional rights and concerns that hinder way of living • Family has been sustainably living in Honokōhau Valley since the late 1800s, growing up in Honokōhau with many memories that occur around the river and the waters that flowed through these ridges, fond memories are of pāpā, Darryl Aiwohi who made sure to rise early each morning to tend to the kalo, remembers him ridding his loʻi of weeds before the sun rose above the ridges; arms got itchy from the sap when carried the huli from one loʻi to the other and he often scolded us moʻopuna about running around the banks of the loʻi; He made kalo chips and coconut milk from the very resources from Panioi (the ʻili ʻāina we cared for), followed behind him in the loʻi with a net catching crayfish and pulling the bright pink Apple Snail eggs from the stalks of kalo; These memories are all centered around most important resource, wai (freshwater). • Kūpuna knew of necessity of wai. Mōhala i ka wai ka maka o ka pua (Unfolded by the water are the faces of flowers. Flowers thrive where there is water, as thriving people are found where living conditions are good) • This ʻāina has been in ʻohana for many generations, today still present and continue with the water levels currently have which is not enough to sustainably live • Without the adequate amounts of water, left to rely on western forms of living. Troubled that without wai, and not granted the SWUP, surface water usage permit, culture that is taken from us. • Generational knowledge is being stolen away from families. It is moʻolelo and traditions that are being robbed from future generations • Without this resource, cannot keep growing healthy kalo, tī, māmaki, ʻulu, and the different resources that rely on water to grow; because of this, won't be able to share those stories that transmit who we are as a lāhui.

			• Important not just for food sustainability but also for us as a culture to have access to this water. • Urges Commission to consider the necessity of designation as well as the restoration of the natural stream flow to Honokōhau Valley
29	TY Management Corporation		• Owner of the Bay (acquired 2010) and Plantation (acquired 2009) Golf Course at Kapalua Resorts, approx. 100 full time and 35 part time employees, essential landscape features and economic drivers for Kapalua Resort • Understands precious nature of water, uses tools to use water as efficiently as possible, done that in absence of water management area because wants to be good stewards and effective contributors to West Maui economy • Potable and non-potable needs provided by HWSC, potable water from wells owned by MLP, non-potable from Honokohau ditch from diversion on Honokohau stream owned by MLP • Participated actively in review IFSAR for Honokohau, now concerned about designation process, wishes CWRM to understand the extent historically relied on groundwater and surface water resources • Understand that golf course irrigation is not a public trust, believes that golf course irrigation is an existing use, which meets standard of reasonable and beneficial, some use predate closure of plantation • If designated, critical to ensure adequate protections for reasonable and beneficial water users, which have historically relied on the existing water systems
30	House Representative Angus L.K. McKelvey	Support	• State Representative for House District 10: West Maui, Ma‘alaea, North Kihei • Approval of this designation is important to the West Maui community due to the effects of climate change resulting in a decline in rainfall, threats to groundwater by increased levels of chlorides, intrusion of salt water, and prospective increase in usage with an increase in population • By taking this protective action, Commission can fulfill the mandate of the Hawai‘i State Constitution and prevent further harm to our water systems and residents • To holistically address these serious disputes, instead of piecemeal declarations, concurs with the recommendation to designate the entire Lahaina Aquifer Sector Area as a Surface and Ground Water Management area.

			• While the commission should not have its hands tied in acting proactively, argues that the proverbial horse has left the barn; To act now would be an attempt to try and stave off the unfolding perfect storm of overuse, contamination, and degradation of the present, and future rights of the Native Hawaiian community • Holistic approach needed, as ground water resources reach or exceed maximum withdrawal rates in areas like the Honokowai and Launiupoko Aquifers, ground water development will need to shift to other adjacent aquifers to avoid harm of over pumping • Existing wells in the Lahaina Aquifer Sector cannot be continuously pumped • Besides current conflicts and issues, future growth will exacerbate the current situation; Increased demands at Pulelehua. Wailele Ridge, Mahana Estates, and Kapalua Mauka will increase demand by 3.64 mgd while irrigation for Kapalua Resorts, common areas, and luxury home landscaping will increase demand by almost 1 mgd • Landscaping gentlemen estates and common areas for the proposed 194 acres will add fuel to the fire by putting an additional demand of 1.500 million gallons per day from our freshwater resources • Designation will not erode the MDWS' plans for future water development but ensure the protection of public trust purposes and resources for future generations • State Water Code requires all counties to develop a water use plan regardless of water management area designation • Designation of a water management area and its subsequent Water Use Permit Application process will allow for more public and private participation including notice and public hearing requirements • Designation will not curtail the rights of individual water users because they are fully protected in the permitting process - a process with Due Process rights; Hawaii State Supreme Court noted, water management area designations do not affect the interests of any potential water users; The only impact is that the user's water source is subject to the Commission's regulation, which does not, in and of itself, dilute their water rights • Critical to note there are four other private water companies besides MDWS that are using these resources; well placement, pumping, and water use by these entities cannot be regulated by the County and only the Commission has the authority to do so in a designated Water Management Area

			• County has itself recognized its limitations to regulate and plan for the use of other private water companies as these systems are not interconnected and are independently operated and maintained • Data also indicates that these companies have not been compliant with the IIFS for Kaua‘ula Stream or Olowalu Stream • To say that additional manpower is needed by the Commission is a red herring because private-public water systems were requested by the County to provide demand projections and did not supply it only speaks to the need for complementary state oversight • When the Hawai‘i Supreme Court clarified that the Commission is to uphold the public trust in the matter of water protection and use, the safeguards which West Maui needs are exactly the protections the Court had in mind. • It is imperative that not only the environment is protected but that Native Hawaiian rights as well as public resources be a priority • Commission must approve the Lahaina Aquifer designation for continued protection and to ensure that entities are in compliance with the IIFS.
31	Leona Nahooikaika	Support	• Designate to protect and restore traditional Native Hawaiian rights and practices • Lahaina hasn’t rained recently, streams are low, and there’s climate change • Ground and surface water resources are connected, should be managed together
32	Tiffany Banggo	Support	• Kahului resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui’s people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
33	Yasha Ronquillo	Support	• Kahului resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui’s people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts

			• Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
34	Kainalu Stewart	Support	• Originally from Lahaina and Napili • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
35	Earthjustice Elena Bryant	Support	• Applauds Commission's vision and foresight in proposing designation of the Lahaina ASA as a critical and necessary tool to manage West Maui's finite water resources proactively and comprehensively • Commission demonstrated that it is not relegating itself to the role of "a mere umpire passively calling ball and strikes for adversaries appearing before it," and instead, is taking the initiative to plan and proactively manage water resources from a global, long-term perspective (*Waiāhole I*) • Commission's initiative to designate to better protect, control, and regulate the use of Hawai'i's water resources for the benefit of its people is exactly the type of intergenerational approach to water resource management that is essential to preserve water future, combat the deleterious impacts of global warming. • After discussions with the Maui Komohana community, Earthjustice is in strong support of the Commission's recommendation to designate Honokōhau, Honolua, Honokahua, Kahana, Honokōwai, Wahikuli, Kahoma, Kaua'ula, Launiupoko, Olowalu, and Ukumehame as surface water management areas and to designate Honokōhau, Honolua, Honokōwai, Launiupoko, Olowalu, and Ukumehame as ground water management areas. • Designation not only appropriate, but necessary to give Commission the tools to comprehensively manage water resources and ensure that public trust purposes are protected. • Lahaina ASA Meets Multiple Criteria for Designation. • Commission's discretion to designate a water management area is broad. ("*Ko'olau Ag.*"); presence of just one criterion is sufficient to designate; "Regardless of how many or how few of the criteria are applicable, the Commission shall designate an area as a [water

			management area] when it can be reasonably determined that the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water." • Two of the three surface water criteria for designation met; HRS § 174C-45 (1) and (3) • In January 18, 2022 USGS presentation to this Commission, island-wide recharge is expected to decrease for the island of Maui, reduction in recharge in the Lahaina ASA alone ranges between 6.8-67.0%. FOF at 119; rainfall data for the past decade evidences a constant decline of rainfall, which is not just rainfall variation; Thus, a reasonable determination may be made that surface water levels are excessively declining. • Conflicts among water users, stakeholders, and the protection of instream values have persisted for more than a century. *Horner v. Kumuli'ili'i* (1895 lawsuit in which the largest sugar plantation in the Lahaina area, Pioneer Mill, sued 60 Hawaiians in West Maui over water claims involving Kaua'ula Valley) • Conflicts over wai continue today; Multiple informal and formal complaints have been filed regarding the lack of streamflow, the waste of diverted surface water, the delivery of water, and issues with diversion management from Honokōhau to Ukumehame • Community groups raised concerns that numeric IIFS are not being met, water continues to be diverted and prioritized for offstream uses while protected instream uses and kuleana families with superior rights do not have sufficient water; Kuleana users, who once thrived on the traditional 'auwai system, are now forced to rely on the operation of plantation-era diversions for the delivery of their water, which can (and has) been shut off without notice • In a PUC docket LIC seeks to offset the cost of pumping ground water; residents of Launiupoko's gentlemen estates whose irrigation water is supplied by LIC are crying foul and complaining about the state of their lawns which has been compared to "a war zone" [link to hearing https://www.youtube.com/watch?v=GxSXlK2SELs] meanwhile, water continues to be prioritized for offstream uses while protected instream uses and public trust purposes lack sufficient water for crops, livestock, and even to shower or flush toilets • FOF clearly demonstrates that the Lahaina ASA's surface water resources are threatened by existing withdrawals or diversions of water, thus necessitating designation of a surface water management area • Five of the eight ground water criteria for designation are met • Current and authorized planned uses of Honokōwai and Launiupoko aquifer systems either exceed or approach 90% of SY and threaten the aquifer due to saltwater intrusion of the freshwater lens. FOF at 7, 121.

			• Of the nineteen wells reporting chlorides in the Honolua, Honokōwai, and Launiupoko, the chloride content has increased to levels surpassing the maximum for safe drinking water as determined by the US EPA and Hawai‘i DoH. FOF at 123 • Despite threatened sustainable yields and increasing chlorides, in the Launiupoko Aquifer System alone, there have been four new wells drilled since 2019, five new well applications are pending. FOF at 48, 56. • A proposed new pump installation at the Lahaina A/B skimming well further threatens to tax sustainable yields and contribute to saltwater intrusion. See FOF at 60; Appendix K. • While USGS has determined that island-wide recharge is expected to decrease, Maui DWS projects that potable water consumption will increase by 67% in the next 15 years based on population growth and community planned development timelines. FOF at 122. • Reduction in recharge, coupled with the increase in demand, will exacerbate diminishing ground water supplies for future needs. • Conflicts among surface water users also have direct implications for ground water use; Maui DWS’s drinking water supply is dependent on blending surface and ground water sources to meet current and future demand; Management decisions that affect one source are likely to have consequences for • competition over declining water resources has already led to conflicts over water, and this will only worsen as demand increases2 and global warming limits the amount of water available. In the Lahaina ASA, multiple criteria for designation as both a ground and surface water management area are met. Maui Komohana’s freshwater resources will only grow scarcer as climate impacts worsen, creating a dire situation if the Commission does not take the necessary •
36	Marissa Kennedy	Support	• Makawao resident, family ties to Lahaina • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui’s people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Best interest of Maui and the keiki's future to be better stewards of this land

			• Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
37	AOAO GOLF VILLAS (John Horvarth)	Oppose	• On behalf of Golf Villas in Kapalua, Lahaina • Nā Wai ʻEhā/Molokai take decades to approve water use permit • No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai ʻEhā • CWRM does not have resources to process existing water use permit from Molokai and Nā Wai ʻEhā, let alone new water use permits • Not based on scientifically proven fact, table of Jan staff submittal is used o SY unclear how it is determined, rate of recharge and basis for the rate of recharge o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation • Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact • If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina • Designation causes decades of delays, any dispute will result in litigation • WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM • CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County
38	Sylvia Rodriguez	Support	• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations

			• CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
39	Maui Land & Pineapple Company		• Before designation, requests that CWRM provides advice and guidance to West Maui community, various stakeholders in water delivery systems and MDWS and allow these maui-based groups opportunity to reach a reasonable solution on water usage • WUDP, would be prudent to wait to consider plans findings, which are based on years of community outreach • CWRM shouldn't rush into designation, should take WUDP into consideration as it contains extensive studies and reflects MDWS' experience • Good stewards • Great strides have been made in maintenance of and operation of ditch system by HWSC, relationship forged between HWSC and residents/kuleana community in Honokohau • Designation will not resolve disputes, only result in decades of litigation • CWRM should allow MLP and HWSC to work with residents and kuleana users to come to reasonable understanding regarding the water • NWE is cautionary tale, many users rely on non-potable surface water for their domestic needs and would be required to apply for surface water use permit if consistent with Na Wai 'Eha • County is upgrading recycled water system, CWRM should take this into account the effects of improved R-1 distribution prior to designation
40	Jennifer Valentine	Support	• Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent

41	Jamie Takushi	Support	• Before Western contact, Native Hawaiian people had a management system that made sure seven generations after were assured resources, need to look into and apply ways of management like the Native Hawaiians did many years before • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
42	Mapuana Pali	Support	• Kuleana in Kauaʻula, more than 3 kuleana families live in Kauaʻula as misstated by Glenn Tremble that depend on the water source • History in the valley, ahupuaʻa system is important, water from the mountain to ocean has fed kuleana families and loʻi kalo, uala, ulu, niu, noʻi and livestock • Water was diverted for sugar, dried up streams, kuleanas were forced to leave • Water system was working ok before Kauaʻula Land Company, Makila Land Company, and now LIC (Peter Martin) as well as West Maui Construction • Kuleana first, especially for the ones with Land Commission Award is still in the family • Not one drop of water provided to the kuleana ʻohana, have to go out of their way to haul water up to their home, can't even farm on their own kuleana land • Hydrosystem is not working since night of August 24, 2018 because of surge • Mismanagement of LIC's whole business, from the beginning on and now want to dig wells and suck out all of resource
43	Kahikilani Niles	Support	• Recognized lineal descendant of Lahaina, a Kuleana landowner in Kahoma Valley, whole life lived in Lahaina • Support designation because it is dangerous and scary to have just one private entity such as LIC controlling all the water of West Maui • Throughout the years LIC have mismanaged the water systems with inexperienced employees, now LIC is asking to increase the rates and also to charge Kuleana landowner for water, which sustains Kuleana landowners and is their appurtenant right for water which LIC does not own, nor pays for and has not created

44	Johnny Kahakaloa	Support	• Lahaina resident • Constitution and laws require water to be protected and managed to ensure availability for the benefit of present and future generations • CWRM must designate now to uphold public trust and balance water needs of West Maui's people and environment because of diminishing rainfall levels, significant increases in water demand and already arising conflicts • Designation now before development and planning decisions result in less than appropriate water use that are more difficult and costly to reverse than prevent
45	Evan Miyaki Jr.	Support	• Ground and surface water resources are connected and should be managed together to ensure sustainability. • Several areas of Maui Komohana are notoriously dry, rainfall and stream flow decreased in recent years; With impending climate destabilization and population growth, the amount of water available will decrease while the demand for water will rise. • Existing disputes over water use in the region and many who are entitled to water do not receive an adequate amount; Kuleana water users with appurtenant rights have the highest rights to water, but they are currently at the mercy of plantation ditch system operators who prioritize their finances over the public good. • Plantation ditch system operators are able to cut people off from their water without warning and are not held accountable by the current system. • Designation and the associated permits help to manage water resources and prevent conflict by promoting sustainable water use and ensuring that all users obtain the water they are entitled to. • Delaying this process serves the financial interests of a few, while public trust resources, environmental protection, and Native Hawaiian practices, all of which have legal priority, are neglected.
46	MJ Palau-McDonald	Support	• Had the great privilege of working with community members from Lahaina who are directly impacted by CWRM decision • Myriad reasons to support designation, highlights one specific area of acute concern: the skimming wells in Launiupoko. • SY for the Launiupoko aquifer sector is only 7 mgd; As noted in Table 4.8.3.3 of Draft FOF, LIC is already taking 1 mgd via freshwater wells, and gentleman estate owners have

			drilled their own wells since the establishment of the IIFS; Now, LIC wants to reopen the old skimming wells that dried Mokuhinia to take an additional 2 mgd. • Historic pumpage from those wells was extremely high (over 10 mgd) with high chloride levels. Moreover, as your Commission explained in Table 4.8.3.7, five additional private parties have filed well applications. It seems that LIC and wealthy private owners are attempting to circumvent the IIFS by increasing pumpage before designation; Proposed well sites are so close together that chloride levels will surely rise; MDWS' WUDP depends on developing new wells in Launiupoko. • Kaua'ula Stream's IIFS is rarely—if ever—met. • Because surface- and groundwater resources are intimately connected, failing to take a proactive, wholistic approach to these well applications will inevitably wreak more havoc in Kaua'ula. • Kuleana 'ohana with the highest rights under Hawai'i law consistently bear the brunt of the ongoing water theft in the valley; time to stop treating the Kuleana as collateral damage. • Commission is constitutionally required to protect and prioritize their appurtenant and T&C Native Hawaiian rights and domestic uses over commercial and municipal uses, like those of wealthy gentleman estate owners and MDWS. • As the trustee of our Public Trust, it is CWRM's constitutional duty to move towards water stewardship that is just for all communities, not just the wealthy, vocal ones.
47	Kaanapali Land Management	Oppose	• Conflict-ridden, costly, lengthy, and impractical regulatory procedures o "confuse-o-gram" o Reference to Na Wai 'Eha and Molokai via WML's testimony o Scope and extent of designation unprecedented, more complex aquifers system • Outdated, questionable and poor data o SY calculation o Wrong application of Precautionary Principle o Evidence-free interconnectivity between aquifer sectors, if all connected CWRM should look at combined SY for sector o Ignorance of wet climate scenario o DMW data on TTZ and MTPZ shows higher recharge and SY o No actual or threatened quality degradation (no DOH determination)

			○ CWRM is overlooking baseline chloride levels and has not engaged in necessary fact finding called for by the statute for upconing or increasing encroachments of salt water ○ No evidence of serious disputes, no regulatory finding of fault on KLMC ○ Incorporation of brief to CWRM in October 2019 on IFSAR, no surface water criteria present • Takings issue ○ Designation extinguishes unexercised correlative and riparian rights which pose challenge to vested and entitled property rights of KLMC
48	Maui Tomorrow Albert Perez	Support	• Designation will enable the Commission to ensure that competing water uses are balanced and protect the public trust • With ever-diminishing rainfall levels, well withdrawals are already approaching SY for several aquifers in the West Maui regions • Water needs of cultural practitioners and stream biota need to be balanced with those of non-instream uses; this balance is not being achieved in West Maui, because such decisions are currently being made independently by self-interested water managers, some of whom repeatedly cut off water from kuleana users, whose needs should have top priority • Designation will incentivize aggressive conservation measures, such as paying for the retrofitting of inefficient water fixtures, paying for low water use landscaping, wastewater reclamation, and other measures; These actions should be a prerequisite for non-instream uses • Asks Commission to consider that the West Maui area is seeing a resurgence of loʻi taro farming; this area has the potential for significantly more kalo growing, as people return to the land to reclaim loʻi that have been idle for decades • Long past time to restore water to people who never should have lost it. • Urges Commission to put an end to the current situation, wherein the self-interested decisions of individual water managers often ignore the wider impact on underlying aquifers, as well as the relationship of ground water with the streams • Designation would help to bring order to the current chaos
49	Daniel Tanaka	Support	

50	Meleana Shim	Support	• Had the opportunity to work with Lahaina community members who will be impacted by CWRM decision • Designation is necessary to protect and restore T&C Native Hawaiian rights and practices, particularly that of kuleana users and kalo farmers; Kuleana lands and loʻi should have water use priority over all other water users. • Comment on rumors regarding designation preventing potential "affordable housing" development plans – something that is being used to convince community members to oppose designation. This is fear mongering and a list ditch effort to block community members from getting water on their property that is necessary to sustain their traditional and customary practices; there is no affordable housing in this area and not enough water to develop further. • Already see that there is not enough water to sustain the current developments. • Urges Commission to designate so kuleana users and loʻi farmers have water to continue their traditional and customary practices.
51	Pāʻanaakalā Tanaka	Support	• Resident of Lahaina, ʻohana that are restoring loʻi kalo on kuleana land • For some time now, experiencing drought and related impacts, including declines in stream flow; preparing for our new climate reality, believes that designation, and the water use permitting that goes with it, are the best tools to address these challenges • Water Code requires designation when resources "may be threatened by existing or proposed withdrawals" of water. HRS § 174C-41(a) • As a resident of Lahaina and kalo farmer in Kahoma Valley that depends on Kahoma stream, believes that "regulation is necessary to preserve our diminishing ground water supply for future needs." HRS. § 174C-44(3) • CWRM staff submittal highlights water challenges community is facing, including harm to ground water quantity and quality by saltwater intrusion, climate uncertainty due to prolonged drought and declining rainfall, as well as the connection between ground and surface water resources. • More numeric IIFSs encouraged new well construction; In designated areas, CWRM better able to manage well placement to protect the long-term health of our precious ground water • Native Hawaiian cultural practices have and will continue to be harmed without additional protective action by Commission

			• Ability to maintain traditions and lifeways is at risk; Major conflicts over water use in community, which makes designation necessary for pono management of our resources. • Cannot continue to have kalo farmers, whose water use is a protected public trust purpose, receiving their water at the mercy of plantation water systems and the developers who currently operate them. • Competition over declining water resources has already led to conflicts over water, expects that to get worse; Water Code proclaims that designation is appropriate where "serious disputes respecting the use of surface water resources are occurring." HRS §174C-45 • Serious disputes are occurring in our community right now and CWRM submittal confirms that
52	Launiupoko Irrigation Company	Oppose	• Kahoma Land Holdings LLC, owner of approx 1,000 acres on West Maui • Nā Wai 'Ehā/Molokai take decades to approve water use permit • No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai 'Ehā • CWRM does not have resources to process existing water use permit from Molokai and Nā Wai 'Ehā, let alone new water use permits • Not based on scientifically proven fact, table of Jan staff submittal is used o SY unclear how it is determined, rate of recharge and basis for the rate of recharge o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation • Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact • If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina • Designation causes decades of delays, any dispute will result in litigation

			• WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County
53	Launiupoko Water Company	Oppose	• Kahoma Land Holdings LLC, owner of approx 1,000 acres on West Maui • Nā Wai ʻEhā/Molokai take decades to approve water use permit • No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai ʻEhā • CWRM does not have resources to process existing water use permit from Molokai and Nā Wai ʻEhā, let alone new water use permits • Not based on scientifically proven fact, table of Jan staff submittal is used o SY unclear how it is determined, rate of recharge and basis for the rate of recharge o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation • Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact • If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina • Designation causes decades of delays, any dispute will result in litigation • WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM • CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County

54	Olowalu Water Company	Oppose	• Kahoma Land Holdings LLC, owner of approx 1,000 acres on West Maui
			• Nā Wai ʻEhā/Molokai take decades to approve water use permit
			• No new uses can start until all existing uses have water use permit processed, no new uses have been permitted in 13 years of Nā Wai ʻEhā
			• CWRM does not have resources to process existing water use permit from Molokai and Nā Wai ʻEhā, let alone new water use permits
			• Not based on scientifically proven fact, table of Jan staff submittal is used
			  o SY unclear how it is determined, rate of recharge and basis for the rate of recharge
			  o Development tunnel discharge, estimates made in 1930s, double counting of discharge against streamflow and groundwater
			  o Entitled/APU table from MDWS should be provided to assess validity of included wells and respective pump capacities and expected use
			  o Other permitted well capacity, based on 24/7 use assumption not justifiable inclusion as basis for designation
			• Affects to neighboring aquifers, only Honokowai aquifer's current use and APU reach 90% of SY, CWRM stated that withdrawals likely affect Launiupoko and Honolua aquifer due to permeability contrasts, assumption without basis in fact
			• If all aquifer systems are connected, then SY should be added up and only 55% of SY are met in Lahaina
			• Designation causes decades of delays, any dispute will result in litigation
			• WUDP should be implemented and IIFS implemented for priority streams subsequently enforced by CWRM
			• CWRM can monitor and evaluate the changed circumstances, until that time regulating powers should remain with the County

55	West Maui Land Company	Oppose	• Forcing everyone into litigation when water use permits are challenged in a contested case • 13 years to issue water use permits in Nā Wai ʻEhā • 30 years after Molokai, Molokai Ranch's water use permits still pending, MDWS's water use permits supposed to be in contested case with Ranch but CWRM has not accepted water use permits • Unclear whether separate applications needed for surface and ground water

			• Even domestic user had to apply in Nā Wai ʻEhā • Exemption for MDWS, extent unclear • More existing users than in Nā Wai ʻEhā and Molokai • Designation process should be treated as EIS proceeding, with formal replies to all submittals • 12 questions concerning implementations, how many water use permits anticipated, timelines, procedures for surface and ground water use permits, "policing" of water use permits and approved uses, who's order prevail PUC or CWRM o 4. How much water will be left for other users after DHHL reservation? Will this or could this impact or limit existing users? o 8. What are the impacts on housing? Will designation stifle housing, incl entitled undeveloped land? There are several approved projects, but they would not be considered existing users- what happens to those projects? Are they delayed? o 9. Does MDWS have to wait until all WUPA are processed before they are issued a well permit for a new well to offset Kanahā stream water? o 10. Will all water companies and MDWS be directed to issue moratoriums on any new water meters until all existing WUPA are processed? o 11. Describe how the water from development tunnels applied? o 12. Provide detail of calculations and assumptions used for the Authorized Planned Uses. How will they be treated? As new uses?
56	Lauren Palakiko	Support	• Born and raised in Lahaina, resident of Kaua'ula Valley. • The ongoing health and well-being of our island's precious eco system has always been very important to me; more now since married to a kalo farmer. • Over the past 7 years seen the decline in the stream first hand; documented with our GoPro the flourishing life from the muliwai to up above the dam where the water is diverted; ʻōpae and different varieties of ʻoʻopu. • Muliwai went dry on April 8, 2019, extremely sad to witness with our own eyes these native species dying off by the masses; By June, it was an ʻoʻopu graveyard down there; • Been by Charlie's side as he calls LIC, sometimes daily having to ask for more water; There is a disconnect in reality with these folks; Legally, the stream and kuleana owners

			with appurtenant and riparian rights have the highest rights to the water. They have been telling us some day they'll give us more water when they fill all of their reservoirs. • IIFS was mandated on March 20, 2018. The next two weeks the water ran at an extreme low. On April 30, a month later, there was almost no water in the stream while their reservoir was overflowing; as if LIC had cut us back even further than normal out of spite. • Also, less than 2 weeks ago, LIC had cut off our domestic water which feeds our homes; son and I had to bathe out of a bucket filed with river water. The water in pipes is extremely important as this is also how we water our plants and lawn, which we must keep green in order to create a buffer to shield us from fires. • Based on LIC's track record, does not believe that they would act justly, or ever comply with the law, witnessed since the IIFS was implemented, unless they were managed by an outside third party to keep them honest. • LIC is a private company acting in favor of their own personal interests and profits, and therefore couldn't care less about the health of the environment and native farmers that have been in the valley for generations, living under their tyranny because no one has been able to hold them accountable until this past month, when CWRM issued a letter of alleged IIFS violation • Designating the Lahaina aquifer as a water management area would put an end to this
57	Lilian Suter	Support	• Kupuna of Lahaina, born and raised, part of the ʻohana that are restoring loʻi kalo on kuleana land • For some time now, experiencing drought and related impacts, including declines in stream flow, preparing for our new climate reality, believes that designation, and the water use permitting that goes with it, are the best tools to address these challenges • Water Code requires designation when resources "may be threatened by existing or proposed withdrawals" of water. HRS§ 174C-41(a). • As a resident of Lahaina, a mother as well as grandmother whose descendants are kalo farmers in Kahoma Valley, whom depend on Kahoma stream, believes that "regulation is necessary to preserve our diminishing ground water supply for future needs." HRS. § 174C-44(3) • CWRM's staff submittal highlights water challenges of community, including harm to ground water quantity and quality by saltwater intrusion, climate uncertainty due to prolonged drought and declining rainfall, connection between ground and surface water resources

			• More numeric IIFSs encouraged new well construction; in designated areas, CWRM better able to manage well placement to protect the long-term health of precious ground water • Native Hawaiian cultural practices have and will continue to be harmed without additional protective action by Commission; Ability to maintain traditions and lifeways is at risk. • There are major conflicts over water use in community, which makes designation necessary for pono management of our resources; Cannot continue to have kalo farmers, whose water use is a protected public trust purpose, receiving their water at the mercy of plantation water systems and the developers who currently operate them. • Competition over declining water resources in area has already led to conflicts over water, expect that to get worse; Water Code proclaims that designation is appropriate where "serious disputes respecting the use of surface water resources are occurring." HRS §174C-45. • Serious disputes are occurring in our community right now, CWRM submittal confirms that • Designation would help Commission balance requests for water and ensure that public trust purposes, such as water for kalo, have priority; has children and grandchildren that are farming kalo on kuleana land • Because of wai (water) from Kahoma stream able to maintain this practice that is vital to identity as Hawaiians; Without the water we have no kalo (taro), we lose that ʻai (food) that feeds us physically and connects us spiritually to our Native Hawaiian ancestors. • Designation necessary to ensure any hope for the future that children and their descendants will always be able to sustain those connections, the best tool to address these and other issues community faces • Under the Hawaiʻi Supreme Court's ruling in Waiāhole, "the lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation" and "where [scientific] uncertainty exists, a trustee's duty to protect the resource mitigates in favor of choosing presumptions that also protect the resource." • Doesn't believe uncertainty exists, urges Commission to move forward with designation process.
58	Suzette Felicilda	Support	• Kanaka Maoli from Mala, Lahaina and supports designation
59	Fay McFarlane	Support	• The esteemed hydrologists and staff of CWRM have presented plenty of well-researched data in the Draft FOF.

			• On one point differs- As longtime Launiupoko ratepayers, our family would argue that it wasn't the IIFS that caused Kauaula conflicts - it was the decades long mismanagement and total lack of planning by the private "water company" which serves as a sham subsidiary for the land developers who own it. • Makila Land Co cut off Piʻilani Auwai way before LIC could blame the IIFS for all the conflicts that they and their investors created. The ratepayers can tell you that even yesterday, the potable main was broken, wasting largescale water in addition to the regular unaddressed leaks, breaks, and loss in this poorly maintained system, from diversion to delivery pipe. • The mismanagement and bad business practices is the reason our community is constantly in court, filing for injunctions, or defending our cultural practitioners from lawsuits filed by these water companies and their investors. • Seen what the uncontrolled situation in West Maui looks like without dual designation; long overdue to implement the protections afforded by designation; finally adopt mindset of precautionary principle when it comes to resource management. • Urges Commission to designate aquifer for special management; Maui Komohana community will partner with you to ensure protection of the wai, source of life.
60	Leilani Keliʻikipi	Support	• Kauaʻula valley resident on behalf of Nakaikuaana alongside longtime partner, Kamuela'Okalani Dizon, the youngest son of Yolanda and Albert-Dall Dizon. • Direct lineal descendant of a few parcels in Wainee nui, Kauaula Valley, lives with children, youngest being 10 months old • Wants her children to have consistent water flow for their generation and generations to come before water is depleted • Will never be any changes if there's no stand for what's right, this is our moment for our keiki and their keikis • Asks how Commission can promise that designation is the solution, turnaround time for WUPA, difficulty for Kuleana to obtain for WUPA, time after WUPA issues be resolved • Do what's right, Do PONO, Don't just speak it, Actions speak louder than words. Taking everything into account, ACTIONS give importance to words, make results, and at last have the ability to impact individuals • E ola I ka wai, WATER is life. Without water, there's nothing! Mahalo iā ʻoe no kou manawa a me koʻu ahonui i ka hoʻolohe ʻana iaʻu i kēia pilikia koʻikoʻi

61	Kalena Shim	Support	• Born and raised in Lahaina • For 25 years I have seen our streams lose its water resources to hotels, golf courses, pools etc.. while kānaka struggle to have water flow for loʻi and other natural crops. Which is our culture! And • when you deplete the water resources from the people of Hawai'i, you deplete the culture; when you deplete the culture, you deplete the people; when you deplete the people you deplete Hawaiʻi; the people are what make Hawai'i, Hawai'i. • Because we keep the culture alive and protect all its resources from Mauka to Makai!
62	Charlene Rowland	Support	• Designation is necessary to protect and restore T&C Native Hawaiian rights and practices to include kalo cultivation. It is very important to secure our water future now for generations to come. • Ground and surface water resources are connected and should be managed together to ensure sustainability. Please vote to designate. Requests for delay serve only the financial interests of a few, and our public trust resources and things like environmental protection and Native Hawaiian practices, have legal priority. • Have serious disputes over water use in our community • Designation because it is necessary for proactive management of our water resources, Kuleana water users with appurtenant rights, who have the highest rights to water, cannot continue to be at the mercy of plantation ditch system operators.
63	Vince Saures	Support	• Return the water to the stream and to the Native Hawaiians. • It is the Native Hawaiian peoples' rights to water. Letting Native Hawaiians and Native Hawaiian plants like kalo go without water is shameful and illegal. • Shameful that for all these years you folks let corporate entities plunder our river beds and let it dry up killing all of Native species. Shame on you! Make it right. HOʻI KA WAI!
64	Lynn McFarlane	Support	• Despite the inconvenience of water use permit applications, Lahaina community is loud and clear that we prioritize the greater good, resource protection and public trust doctrine • Designation is supported by our elected officials, community advocates, DHHL, environmental scientists, Kānaka cultural practitioners, and everyday makaʻāinana of Maui • Dual designation been discussed for many years, most moku descendants and longtime residents wish this process had started long before proliferation of private wells, sustainable yields approached or exceeded max, before traditional and customary users

			were plagued by serious water disputes, lawsuits, and harassment by private water/land companies. • Urges Commission to honor community's unwavering objective – surface and groundwater designation of the entire Lahaina Aquifer sector • Doing the hard work now will benefit mo'opuna in the future
65	Gary McFarlane	Support	• Resident of a subdivision in West Maui where there have been many years of conflicts about water use, river diversions, underreporting of wells, and lackadaisical management by privately owned "utility" companies • Urges Commission to designate, community will deal with consequences and restrictions that arise from designation because of understanding that state of affairs is not sustainable. • Without designation, water wars will continue unchecked and future generations will be disenfranchised
66	Joshua Guth	Oppose	• Concerned with the permitting process of obtaining a surface water diversion permit and a water use permit, affected residents especially those on kuleana lands or those that utilize stream water should be shown exactly what will be expected of them if the designation were to be implemented, time frame for approval of such and all applicable permits. • Asks if there's a grace period for users without SDWP, outcome of all West Maui residents, year round water restrictions, where is Lahaina water supposed to come from • Intention of CWRM is good, looking at the challenges of each stream, number of streams, not confident that the Commission has resources to properly implement management area effectively
67	Ke'eaumoku Kapu	Support	• Kuleana owner in Kaua'ula, on these lands from the time of the Mahele • Grows Kalo to help sustain livelihood and heritage imbedded in 'ohana • Heir to the original lands still governed by a pre-existing kanawai (law) of our constitutional monarchy and case set standards to water uses in Kaua'ula by a Supreme Court ruling in 1897, Kumuliilii v. Horner • Over 70+ Kaua'ula kuleana families, including the Palakiko, Ka'ahanui, Mahelona, Nakaikuaana, Opunui, Kua, Apaa, Kaaeae, Namauu, Kupihea, Puali, Espinda, White, Pali, Kapule, Kalua, Kealo, Kalaipaehala, Paki and the Kapu ohana are the same original heirs that are named in the Kumuliilii v Horner case. • Case was about sharing water, now subjected to a monitoring system because of a colonial management system that showed huge profits with zero resource benefit to fauna, species,

			and diminishing entitlements as a mahiai kalo farmer, who are supposed to have the highest protection for water uses in the State of Hawai‘i • Asks Commission to please start the designation process now
68	Consuelo Apolo-Gonsalves	Support	• People who grumbling about the process too bad, before you go buying land do your research

Below is the transcript of oral testimony received at the public hearing. A total of Seventy-six (76) people signed the attendance sheet. Sixty two (62) people testified.

1. Tamara Paltin [0:21:10]

My name is Tamara Paltin and I am the Council Member for the West Maui residents on the Maui County Council. First, I want to express my deep respect and appreciation to the Water Commission for holding this Public Hearing in Lahaina and thank you for the summary presentation because there is no way I could have summarize that for the residents. In addition, I would like to thank the West Maui community members for showing up to hearings and other meetings for water use. I am sure this just feels like the latest round in a long struggle. I am very grateful to the Maui County Board of Water Supply who voted in favor of designation because of the strong testimony in support. On March 4th 2022, I introduced a resolution in support of designation, which was unanimously supported by the Maui County Council. As we know and have presented designation is sorely needed in West Maui. We are already at the point of serious concern for long term water resources, and we are already fighting over water. We are regularly discussing the need for more wastewater reuse, so it seems like we are already past the time for designation. Unlike what our former Water Director Pearson said, we should not go slow in protecting our resources, we need to act quickly in the best interests of future generations. Climate Change is already having drastic impacts on our West Maui community. I do not remember a time before during the wet season when both the Mahinahina Water Treatment Facility and the Lahaina Water Treatment Facility were shut down due to lack of stream flow. So, lack of rainfall is already impacting and extending drought conditions. Although some suggests that triggers for designation are not yet met, we do not wait for them to be met. We want to be proactive in protecting these resources, especially with so much planned development coming to West Maui in the future. There is Kā'anapali 2020 and Pulelehua. We know that the County's Water Use Development Plan only compliments water resources planning, it does not replace the need for designation and closer management of our water resources. From studying water resources in the Nā Wai 'Ehā and how groundwater withdrawals in one aquifer can impact another, the best way to protect our groundwater resources for future is to designate all of these proposed areas and manage them holistically. We also know that these aquifer boundary lines are arbitrary, there is no real distinction between aquifers. All of these wells are like straws in the same cup. Similarly, there is no distinction between ground and surface water resources. When one dries up, people tap the other. We cannot afford to be careless with our most precious resource, at this point in time when we know better. We also cannot continue to have kalo farmers dependent on plantation water systems for their traditional and customary practices. That is why the State Water Commission is the best entity to oversee the responsible use of water, both public and private, and ensure it is in line with the law and the public trust. Mahalo for all you do for our wai. Thank you.

2. George Fujita [0:25:06]

Aloha everybody, my name is George Fujita. I am a kuleana land-owner in Ukumehame alongside with my māmā Victoria Keluna Palafox. I have six kids, five of them are living full time with me and one moʻopuna. So, I plan for seven generations. I studied the assessment plan before, and I know Pioneer Mill moved out in about 1982. The only reason why the generations that resided before me had left is because of these issues over water. And the only reason why I am blessed to return is because we got our water back. Ukumehame river just continued to flow back in 1984, since then along with some efforts of Ayron [Strauch] and efforts of community members and I am trying to bring the flora and fauna back into that river. I personally am trying, I take a little bit of credit from the people that resided before me, but I am trying to bring back the natural indigenous organisms. It seems like it is for us to speak and fight arguments of which things that we need, but I am here to fight for the indigenous species that is practically dying right now. We successfully transplanted a lot of different species into our river in Ukumehame. I have seen it up and down because of the waters of up and down. We don't have in stream flow right now and that is not up to standards. There is some diversion of water that is stopping the natural flow of spawning and nature flowing. For water management I definitely decline anybody else but kānaka people to manage our waters, getting it back to the way that we used to know it. We are educated Hawaiians. We take back into the moʻolelo and the things that our ancestors used to manage these resources. It seems like the humans, us guys, are winning against nature. I am her to fight for nature. Leave our aquifers and rivers exactly where it is and if we have to manage it, stop people from taking things that really harms the ecosystem. I think we are above the limit already as our council member had already said and we've been dealing with water problems for a long time. I definitely care about the water, I do not agree with other people managing our water because then permits and things will go under the table without the community knowing. When the water is gone, we lose out. I definitely want my seven generations to be blessed with water. Thank you very much.

3. **Lucienne DeNaie [0:28:35]**

Aloha, my name is Lucienne DeNaie. I am very honored to be here representing Sierra Club Maui in full support of what the Commission and the community is proposing to step up and look this situation in the eye. We, as Sierra Club, have the diversion of some of those streams for many years through a long history of hiking. We have done many service projects in Honokōwai valley and have visited Kahoma stream, Honokōhau stream, and Honolua stream. These are places are legendary and we don't have a plan to take care of them long term. Because we all know that less rain is our future and maybe our future for a long time. We are really short-changing the next generation and we are shortchanging ourselves because we are going to have to live through the crises of the next five years, 10 years, 15 years. We applaud this action that is taking place, the research has been done. The Commission has done its due diligence. The community can share their stream by stream and aquifer and aquifer stories. It is all true. The time has come. Thank you for your work. Aloha.

4. **Clare Apana [0:30:18]**

I am Clare Apana on behalf of Mālama Kakanilua. I want to testify by in support of finding the right solution. I have to say that I could never say it better than the second testifier and I don't know his real name, but I call him Toshi. I think that he said it all, Mālama Kakanilua supports that. Thank you very much.

5. **Danielle Haia [0:31:08]**

Aloha mai kākou, thank you guys. I just wanted to say that we are in agreement that we need to manage the water. Poor management will affect us generationally. It is very important, water is life, as we all know. We just want to make sure that it is being properly managed. We have seen people just opening up the water lines and just letting the water run for nothing. And it is not just for an hour or two it is for days. We just want to make sure that there is a well management of our water, of our lives, and of our resources. Mahalo.

6. **Angus McKelvey [0:32:17]**

Aloha everybody. Thank you for having me. I am State Representative Angus McKelvey. This was an important hearing, so much so, that I left conference to fly back to be here to testify. I have to get on a plane to go back to conference because of the issues that are facing the State of Hawai‘i. To begin, I stand in support of the designation for many reasons which have been echoed both by my counterpart on the Council as well as the community. I think the keyword is holistic approach. There needs to be a holistic approach, nothing happens in a vacuum. When you look at the stresses on the aquifer today, whether it is climate warming, whether it is the contaminant issue, whether it is the use and future uses most importantly that will be placed upon the aquifer. The need for a holistic plan that will work in cooperation with the county and not over it is very important. We are about to close the books on giving $600 million of long overdue money to Department of Hawaiian Homelands. Much of that money will be put into work in the villages of Leiali‘i Phase Two and Three. It is imperative that we have a resource plan in place at the state level to ensure those resources are available to us as obligated by our State Constitution. When you look at some of the proposed uses for the county plans, you are looking at potential drawdowns of three and a half million gallons in one area, Kapalua area another million gallons a day, plus the report mentioned 194 acres for gentlemen estates that could add another 1.5 million gallons a day on there. The water management area does not subsume or obviate public participation or involvement, it actually enhances and adds to it. It also doesn't interfere with or suspend the right to have water permits, that is given to you. Your report mentioned due process rights are there to ensure that the water permit system will still occur. That is an important thing to clarify, in my mind. I think the ability of this overlay of management will help to develop and get the data of the instream flow which is actually occurring to be given to the Water Resource Commission, so that decisions can be made. There is a lot of stress on the aquifer. I repeat it again, just today the Board of Water Supply in Honolulu, where they have very well developed artesian wells for fresh water, has put out a notice that they are going to look at water restrictions and rationing and the suspension of permits. If that is happening there, what will happen here? I think this is an overdue thing. I think it is being proactive in many ways, and again, I think this is a strong partnership with the community, the State, and the County to ensure

that our water resources can be managed and met, and that are Native Hawaiian community of kuleana land owners as well as our DHHL beneficiaries will have the water they need to carry on their customary practices as well. Mahalo and Aloha and thank you for allowing me to testify.

7. **Keʻeaumoku Kapu [0:35:35]**

Aloha mai kākou, my name is Keʻeaumoku Kapu. I live on kuleana lands in Kauaʻula Valley, on property awarded to our kūpuna during the Great Māhele of 1848. I grow kalo to help sustain my livelihood and heritage embedded in our ʻohana to the next generation and so on. I am an heir to the original land that is still governed by a preexisting kānāwai law of our constitutional monarchy from a case that sets precedence and stands in water uses in Kauaʻula by a Supreme Court ruling in 1897, Kumuliʻiliʻi v. Horner. I am here to literally inform everybody that we are not sticking to the original rule that sets precedence for kuleana users in Kauaʻula. With 70+ kuleana families today, also including the Palakiko, Kaahanui, Mahilona, Nakaipuana, Opunui, Kua, Apaa, Kaaeae, Namau, Kupihea, Puali, Espinda, White, Pali, Kapule, Kaleo, Kealo, Kalaipaihala, Pākī, and the Kapu ʻohana. The same original heirs that are named in the Kumuliʻiliʻi v. Horner case. Again, lands governed by the constitutional monarch with these very water laws are woven into the fabric of today's existing State of Hawaiʻi Water Code. West Maui, Kauaʻula in particular, should have been designated a water management area long ago, which would have had different effects today. Many families, up to 50, were forced off their kuleana by water mismanagement from a sugar company and then development companies even more worsen the situation of water use is on the West side. With that said, the kuleana of Kauaʻula also feel that this watershed not only should be designated a water management area to help with the instream flow standard, it also should be set up as a dual management system for kuleana to manage our own. With the help of this Commission to foresee our water uses are not being hindered by future developments or developers which has been the ongoing problem by a water company that does not have the capabilities or expertise to manage a pristine resource such as water for the benefit of all and not just the repairs. Hawaiʻi's Water Code requires designation of a water management area when those resources may be threatened by existing or proposed withdrawals of water. As kuleana users for my kalo cultivation, I believe that regulation is necessary to preserve my diminishing groundwater supply for future needs. I am already seeing historical adverse effects in our old historical waterway that runs under this building and empties into the canal in front of our building, the culture center of Naʻaikane of Maui. I am already seeing these changes today, now at the water is falling free from the river it doesn't give that amount of capacity to make sure that the water is saturated to recharge the aquifer, so now that the pumps are running full blown ,I'm seeing those adverse effects of what is happening right in front of my building of the diminishing water that is happening on the surface water that is impacting our building and our historical town. I see that today. Let's get together, let's do it right. Let's put the responsibility back where it belongs to make sure the management of these waterways are within the privy of this body and not the privy of private interest holders and their greed for money. Mahalo nā kākou everybody. I support this 100%.

8. **Hauoli [0:40:02]**

Aloha mai kākou. ʻO Hauoli ʻo wau. Mai Maui a Kama mai. I will keep it short I'm in favor of designation. Kuleana, ʻāina, papa, and moana all have a claim to the wai. The natural state of the river and all that surrounds it, the life of our reefs and sea life and the native Hawaiian rights which depend on those resources are being threatened by climate change and poor management. The use of Public Trust resources for private gain is all too common in Maui and must change. Public Trust purposes have priority over private commercial uses. Water availability and uses should be monitored closely. It is vital for proper management and stewardship to recognize their legal priority to uphold their authority and duty under Public Trust. Nā Wai ʻEhā is an example, designation was made because of serious disputes. We see a repeat of that here. For the generations ahead of us, I vote to designate. I am for designation.

9. Kanoelani Steward [0:41:54]

Aloha mai kākou. ʻO wau ʻo Kanoelani Steward. No Lahaina mai au, noho au ma Honokōhau. As a West Maui community member, I support designation of the Lahaina Aquifer Sector as a surface water and groundwater management area and strongly urged the Commission to accept this recommendation from the chairperson. Designation is a way to proactively manage surface and groundwater in the Lahaina Aquifer Sector. For many years now, there have been continuous water disputes within West Maui and more so now since there are established interim instream flow standards that are not being met in several streams, which essentially shows that offstream uses are being prioritized over instream uses. Moreover, surface and groundwater should be managed together as stated earlier. Lately groundwater has been mismanaged and overlooked. CWRM staff have reported that there has been an increase in well water use and two aquifer systems Launiupoko and Honokōwai have exceeded its sustainable yields. Our sustainable yields are supposed to be our rate of pumping that can be maintained and sustained without harming the overall water source. However, these reported pumping rates for these aquifer systems are well over 100%. This should alarm all of us. Especially since we project the 67 % increase in water consumption in West Maui by 2035. It is 2022 and we are already over our sustainable yields. A decline in rainfall is also something that we should be prepared for. CWRM hydrologist Ayron Strauch who shared earlier and also shared in his informational briefing back in January that cumulative rainfall in West Maui is falling well below the long-term average. This means that our aquifers will see a decrease in recharge, not having as much water available as we do today. This decline in rainfall is a serious concern for Maui komohana. Especially in Ukumehame where a USGS model found that its aquifer system will see a drop in reach recharge of up to 67%. How can Ukumehame as well as other areas in West Maui continue to plan for large developments with no assurance of where water will come from. The water usage is seen today will continue to affect the availability of water for Public Trust uses, which in turn will negatively impact our Native Hawaiian practices, such as farming kalo, fishing, and others associated with the availability of resources. As a kumu at Kula Kaiapuni o Lahaina, we take our haumana to these valleys and other places throughout Maui Komohana. To be immersed in our practices that can only happen with sufficient water flow to these areas. If these water conflicts continue and the values that we visit dry up, the next generation loses out on an opportunity to learn more about how momona the place they come from is, as well as the practices that are tied to that place and our resources. Supporting designation can only benefit the

present and future needs of our West Maui community, while also upholding the law of protecting our fish and wildlife habitats and our traditional customary Hawaiian rights all while regulating non instream uses. I urge all members of the Commission on Water Resource Management to support the designation of the Lahaina Aquifer Sector as a surface water and groundwater management area, so that CWRM can fulfill its duty to manage and protect our water sources in West Maui to ensure reasonable beneficial use of water for our community. In closing, in 1880 it was stated in the Hawaiian Language Newspaper Ka ʻElele Pōʻakolu, when talking about Ka Malu Ulu o Lele, *"E kahe ana a hoʻokena ana i ka make wai o nā loʻi kalo lehulehu he tausani a ʻoi - Water flowed and quenched the thirst of more a 1,000 loʻi kalo and lele."*
Our water flowed and quenched the thirst of more than a 1000 loʻi kalo and lele. Maui Komohana was known for his abundance pre plantation era and designation of a water management area is one step forward and bringing that abundance to fruition. Mahalo nui for your time today.

10. Holden Kalamaʻehu Takahashi [0:45:57]

Aloha pumehana kākou, I am Holden Kalamaʻehu Takahashi. I am a resident of Honokōhau and local volunteer. I am in support of this designation to protect and preserve our water for generations to come as it has been stated by the community, staff, and first-hand experience and observation. Our ground and surface water West Maui are undeniably threatened. We need to act now and mālama pono our wai lest we are doomed to post-apocalyptic shortage scenario due to mismanagement and become more entrenched on our dependence on our occupier. How many of us want our children, are moʻopuna, be able to drink clean fresh water now? How many of us want to, better yet, need to have access to our stream to water to sustain ourselves and our community through culture and sustainable practices like farming Hāloa, the kalo to feed our families? How many of us would like to see more appropriate measures taken to regulate the current water management situation and those that abuse it for their own benefit? I perceived this designation as a proactive step towards promoting and ensuring accountability for all users, especially the corporate conglomerate that has been pillaging the land's resources and kānaka of West Maui for years to come and do so to this day? Why is it that those with the least amount of kuleana and pilina to this place are allowed to breeze by permitting, commodify a Public Trust resource, bulldoze iwi kupuna, while the real kuleana, keiki no papa, multigenerational linear descendants must sustain themselves on whatever is left, if any at all, trickle at best, to miscommunication, misdirection or outright refusal to comply from irrigators denying access to water for kalo farming, our sustainable cultural practice and birth right? How can gentlemen estates in Launiupoko and Olowalu be considered agriculture and their gross misuse of land and water with their employee of labor which only seizes to perpetuate their racist, classist, capitalist legacy of the plantation economy and mindset of centuries past, to me is not only morally problematic, but just being unsustainable whose foundations are rooted in economic failure and instability? Just to keep the grass green and swimming pools filled while families, friends, community, educators that work closely with and essentially hope to raise and feed our children of farmers, that labor to keep us fed, facing shortages, staggered irregular irrigation schedules, but not even properly maintained and upheld, resulting in the loss of crops that true evidence that our sustainable economy is a good alternative tourism and luxury real estate industries. There might be a chance,

that they are going to talk about affordable housing, but who is it affordable for? I'll give you a hint, it's not you and me. Thanks for laughing. We are in a housing crisis in the pae ʻāina, rising rents, a vicious domination of the housing market by foreign American buyers and land companies that deny Hawaiians their inherent right to reside in their own kula iwi. How many of our families can afford to live in the Kapalua villas, in the plantation estates up at Honolua? I only see our ʻohana working their hands to the bone at these places in servitude. But where are ʻohana living? On the beach, in their cars, and conditions far less appropriate than they deserve as human beings, working multiple jobs in sacrificing their well-being to pay their rent, feed their families, and, if so blessed, afford a house. Who can afford $1,000,000 price tag right here, right now? I can barely pay money for my lunch later on. But how many families are born here, raised here, have been here for more than three, five, or seven generations? Mahalo e nā ʻohana. Does anybody else see an issue here? So, until I see all of our ʻohana in homes, with food in their bellies and ʻāina to grow their own sustenance, until I see all of our hands raised, do not ever pitch affordable housing and development as a means to acquire more of our lands in our water! As they say [starts signing, puts rocks in jar]

ʻAʻole mākou aʻe minamina
I ka puʻu kālā o ke aupuni
Ua lawa mākou i ka pōhaku
I ka ʻai kamahaʻo o ka ʻāina

As recorded in some amongst for generations, we are not willing to gamble on availability of our most fundamentally precious resource and the foundation of our maoli, for the promise of economic gain of a select few in an industry and system that only seeks to marginalized, exploit, destroy, and replace us. If by chance you don't think that all of these issues are related or if I am off topic, I suggest you look in the past, I suggest you look past the plastic paradise and look in all of our dry loʻi, the withering, dying crops, in the faces and tears of frustrated farmers. The kānaka who are struggling for a better future, for our way to protect our water, to voice our opinions. It is our responsibility to resist these hegemonic regimes and their schemes, to resist foreign interest speculators in their affiliates that leave us cash, land, and power poor, to free our brothers, sisters, aunties, uncles, tūtūs, and keikis from a life dedicated to servitude of the arbitrary whims of political fallacies of the foreign minority, and most importantly and finally to secure resources for the collective well-being of our families, communities, and ʻāina above all else. Because if we don't, this will be our future [shakes jar with rocks]. We cannot drink this [shakes jar with rocks], we cannot water our crops with this [shakes jar with rocks], and we cannot conduct our aha with this [shakes jar with rocks]. Not before, not now and not ever. If you assume otherwise, have a sip, taste the bitter waters, and silvery truth for our future. E ola i ka wai a Kāne. Aloha nui. Mahalo for your time.

11. Steve Miller [0:51:35]

Aloha staff, my name is Steve Miller. I am here representing myself and my children and my grandchildren. Like the previous testifier I think I am not alone in being a parent with kids who have to live at home because they can't afford to live anywhere else or else move to the mainland. There's a desperate shortage of housing here, which is the reason everything is so expensive. Rents are going up. House prices are going up. As much as I respect the study that you folks have done. I think it has unintended consequences of becoming a moratorium on affordable housing development on the West side. I think without any water it just means a halt to housing. What's going to happen is, the price will keep going up. And you don't want to have rich people from the mainland coming to live here and displacing local people, but that was is what will happen because they'll be the only ones that can afford to live here. I have looked at the implementation requirements for this WMA. It is so, I wanna say convoluted, but it is very extensive, it's confusing, it's complicated, it's very time consuming. Anyone needing an application is or needing a permit to use water whether there are kuleana or whether they're a new house being built could take you two, three, or four years to get approval. And who's going to wait that long? So, I just hope that you all think about that. I think it's you know whether you've testified here for or against, the writing is on the wall. This is going to happen, it doesn't really matter, what we say, but thank you for that opportunity.

12. Chad Fukunaga [0:54:15]

Good evening, my name is Chad Fukunaga and providing testimony on behalf of Kaanapali Land Management Corp. The water is critical to our farming operations in Kā'anapali and we take great care in overseeing the proper delivery and resource to our crops. We are greatly invested in the efficiency of use and the long-term sustainability of the aquifer. To that point, we believe the recommendation to designate the Lahaina Aquifer Sector Area as a surface and groundwater management area is premature. As such a decision carries heavy implications on many stakeholders within the area, it should be evaluated utilizing the latest and most accurate data. The published reports provided data that at times inconclusive, outdated, or selectively interpreted. Also, the magnitude and logistics of implementing the proposed management area over such a complex system should be thoroughly examined. Written testimony by my company that further explains these points was submitted today, and I encourage you to review those points. I am not testifying for or against the designation but ask full due diligence be taken to address all questions and concerns. Thank you.

13. Glenn Tremble [0:56:00]

Aloha everyone, my name is Glenn Tremble. I know I am not gonna be very popular here today, but I represent West Maui Land. I have been working with the water systems of Launiupoko and Olowalu and even Haiku for the last 20 years. So, I have extensive experience dealing with a lot of the issues that everybody expresses, and they feel their frustration as well. We have on the West side approximately 400 connections of potable and 400 connections of non-potable water use in the Launiupoko region and another 50 in Olowalu. Both served by dual systems which deliver water for farming and potable water for drinking. The wells support the groundwater supports the drinking water, and the surface water has supported the irrigation water for the many farms and different

things. It has been adapted from plantation systems to run the irrigation systems going through these small farms, and it is a struggle. And with the new IIFS rule to leave more water in the stream, it's less water surface water to deliver to these households. But what we're seeing here is, I believe, a premature step. We have been working with CWRM, we're trying to work on possibly different IIFS numbers, working with ideas to deliver water to the kuleanas that would bypass the diversion that they could have their own system, we're exploring these ideas without the need for a management area designation. I think the Safe Water Drinking Branch already does a good job of monitoring our wells and keeping the water safe to drink, and the CWRM is administrating well permits and stream diversion permits and other permits. So, I think there is a lot of coverage already and I think we're premature in going into the designation. That's it. Thank you.

14. Karen Kanekoa [0:58:50]

Welina mai kākou. My name is Karen Kanekoa. I am testifying today on behalf of Nā Mamo Aloha ʻĀina o Honokōhau, a 501c nonprofit hui made up of valley residents and lineal descendants who are committed to restoring and protecting the natural resources, cultural sites, and practices throughout Honokōhau Valley. We'd like to start out by thanking you all for taking the time to listen to testimony and for all your aloha ʻāina effort across the pae ʻāina. Mahalo nui. We strongly support the recommendation to designate the entire Lahaina Aquifer Sector as a surface and groundwater management area. We have experienced steadily decreasing rainfall and stream flow in recent years, making it difficult to maintain the appropriate amounts and quality of wai in our loʻi throughout Honokōhau. Many times, kalo farmers are forced to harvest early or end up harvesting rotten kalo due to the constantly fluctuating water levels in the stream. On March 7, 2022, the County of Maui Department of Water Supply issued a statement asking West Maui residents and businesses to conserve water during a Mahinahina Water Treatment Facility shut down due to the lack of rainfall in the moku of Lahaina and Kaʻānapali. This is just one recent example of water issues in West Maui. Designation along with the permitting requirements that accompany it will help to address these issues brought on by overusage, mismanagement, and Climate Change. Additionally, kuleana water users with appurtenant rights who have the highest rights to water cannot continue to be at the mercy of plantation ditch system operators. We believe that designation is necessary to protect and restore these traditional and customary Native Hawaiian rights and practices, especially to continue cultivating kalo. It is important to secure our water future now for generations to come. Any request to delay the designation process will only serve the financial interests of a few, and those few are *not* those who prioritize and protect the environment and our Public Trust resources which are directly tied to our Native Hawaiian practices. We urge the Commission to support and to please vote to designate the entire Lahaina Aquifer Sector as a surface and groundwater management area now. This is all very important to us being that the kahawai and the ʻāina cannot speak for themselves. There's an ʻōlelo noʻeau that we live by "He aliʻi ka ʻāina, he kauwa ke kānaka. The land is chief, man is its servant." Let's all work together, using best practices to ensure that West Maui streams, its stream life, and its people can continue to live pono for generations upon generations. Mahalo nui iā ʻoukou pakahi a pau. And adding to that, for those of you who think that this designation is premature and that there hasn't been enough research done, I beg to differ. In other words, to me, you are saying that all these people

right here, that all the work, research, time, energy, equipment, technology that they're using, is not sufficient?! Shame on you for doubting these kānaka who have dedicated their lives to protecting our natural resources. And if I can say, are you doing any better? I don't think so. E kala mai. ʻO ia wale nō.

15. Joshua Dean [1:02:38]

Hi, my name is Joshua Dean. Yeah, a lot of the testifiers, every testifier I think so far has agreed that we're in support of protecting and preserving a precious resource, which is water. It's a lot of facts that have been presented and there is less water to go around. The sustainable yield of the aquifer all these things might. To be clear I am not supportive of this designation. So, we know the facts, we know what the problems are. I want argue that this is not the solution. That is where has this designation happened elsewhere? Molokai where they're still trying to, they haven't worked through the existing use permits. It has been 29 years. In Nā Wai ʻEhā it's been 13 years and still haven't processed the water use permits. It's clear what this, what this is to me, that what this designation would entail, it would mean that every existing user, a new user would have to file for a water use permit and so when I ask how long is it gonna take for you to get a permit? What is that process like? I look at this this flow chart that was provided and the water use flow chart. It's very difficult to understand, what is going on and who makes the decisions? What factor used to grant the permit? So, I mean there's other ways to manage a resource. Like how to how to find more resource, right? How price you know? Do you know that the County of Maui charges about two $2 per 1000 gallons of water, but you understand how cheap that is. Like people buy water bottles right, it's like the 16 ounces of water and it paid $2.00 for it. So that's the equivalent instead of $2 to 1000 gallon that the county charges it's like $6000. If so I mean there's other ways other than saying OK let's just not give anyone permission. The only thing one fact that you guys fail to present here is that the CWRM is not competent in creating these water use permits, so that is a fact and it's documented in Nā Wai ʻEhā and Molokai and it will be here in West Maui. Thank you.

16. Maka Kanekoa [1:06:05]

Howzit. First of all, to those who brought the water fight to light, mahalo you guys. Bringing that up and still fighting for it. I am here today in support of the designation of the whole Lahaina Aquifer Sector at the groundwater and surface management area. There is a few things I picked up along the way. In 1839, the western concept of material wealth, water is commodified and separated from the land, consumed rather than being managed as a resource shared as the kupuna intended. By 1876 the foreign government of the United States made the lands and waters of Hawaii free and available to the plantation industry. It is 2022, the centuries of plantation agriculture monopoly over ground and surface water, things haven't changed, only hands, from plantations to the now foreign developers and their shared ideals with manaʻo of how much and how long can I consume and profit off Hawaiʻi before being noticed. It's all so familiar, they're all in this room. My great grandfather is one of the kanaka kalo farmers who have suffered through Honokōhau's waters diminishing and kalo dying, families pushed out. We are left here today struggling to pick up those pieces, restart as kanaka. Hopefully

this will shed more light on the mismanagement and misuse that these plantation style foreign investors continue to practice today. I hope this designation will help secure a more sustainable future for not only me, but generations to come, for all those kalo farmers in West Maui and for those who cannot speak for themselves like the ʻoʻopu, the hīhīwai, limu, and so on. I'll read a short quote real quick by Judge Kawai to the queen: "There's only one inch left, the Hawaiian government will be for the haole. The haole before the people of Hawaiʻi, there will be no Hawaiians, so you are the only single inch that is left by you the Hawaiian Kingdom shall be forever therefore be patient. There is hope spreading all above the hills. The haole not judged by the color of skin but that of non Hawaiian descent are still here raising havoc among our resources. But guess what we Hawaiians are still here and we are going to fight you today. A hiki i ke aloha ʻāina hope loa, until the last Aloha ʻĀina.

17. Makana Kanekoa [1:09:32]

Aloha mai kākou. ʻO Makana Kanekoa koʻu inoa. He haumana o Honokōhau. kākoʻo wau i ka designation of the Lahaina Aquifer Sector as a ground and surface water management area. Ina aʻole kākoʻo e mālama i ka wai, pehea e ola ai kākou i ka haunauna e hiki mai ana. No ko kākou ke kuleana a na kākou e ʻauamo. He aloha ʻāina kākou a hiki ke aloha ʻāina hope loa.

18. Healani Kanekoa [1:10:20]

Aloha mai kākou. ʻO wau ʻo Healani Kanekoa. He kupa au no Honokōhau. He haumana au ma ke Kula Kaiapuni o Lahainaluna. I am a junior at Lahainaluna High School and ''m here to speak for myself as well as all the ʻōpio on Maui that are not able to be here today, as well as all of them back there, my papa, my class because we are here to support the Lahaina Aquifer Sector as a surface and groundwater management area. A lot of people doubt us ʻōpio and think we are not educated today, but we are educated, and we're being educated. I'm here to speak on behalf of everyone that will not be able to be here today and that we support. Mahalo.

19)+20) Naomi and Patrick Guth [1:11:32]

Aloha, I am Naomi Guth. Thank you for being here and allowing us the opportunity to come forward and share our testimony. Aloha, my name is Patrick Guth. In 1984 we started farming in Honokōhau valley on our family land that's where her mother was born and raised. In fact, Maka who was just up here, referred to his great grandfather as Naomi's mother brother. Ok, so we're all connected. But back in 1984 was started farming and we were part of the West Maui Molokai Taro Growers Farmers Association and then we had a Honokōhau Valley Association which I was under Aimoku Pali and I was vice president, he was the president, and I learned a lot from him. He was really special. In 1989, we did file our declaration with you folks, with the help of the Native Hawaiian Legal Advisory Council. They assisted us in Honokōhau Valley. Fast forward now to today, we purchased land in Kahoma Valley from West Maui Land. We tried to get a permit or we try and we're in the process of it. We started this a year ago, last August, and this is kind of a

point I want to bring up because people are kind of all excited about this, but the process isn't that easy. We started it a year and a half ago, almost two years ago, we asked, we wrote to you folks got an application from Rebecca Alakaʻi and we took about six months to finally get it to the point where she said that it was complete because it's not that easy. They ask a lot of complicated questions for normal people like us. Anyway so and last over the year ago January that it was complete, then they said that they're going to go for a three month period where it goes online and people can make public comment about it, and it did that and then it was on the agenda a year ago or almost a year ago last May and at the last minute, just like couple days before they got pulled off because of it was so full. I guess their agenda for the zoom meeting that they were going to do they said they had to postpone it till June. And so that we did we said Ok and so then June came and then they postponed to July and then they postponed it to August. Then we've got a letter saying that now they're not going to consider it because we didn't go through the State Historic Preservation yet. So, we said Ok how do we do that? So, we went through HICRIS which is their new website they started and we fill in the application went through the whole process with Andrew McAllister and about four months later they said OK it's complete we found no historically significant things on your property that you have to worry about, anyway we they said that we need to contact now the Commission for them know that they've completed their study and to ask them for the results. So, I did that and then the results I guess got to them and then we heard back them and saying that now they're backlogged, and that they'll get back to us and we haven't gotten anywhere further than that since then. So, it's been a long process and I think this is what Josh Dean might have been referring to that it's not that easy and if now everybody has to do this it's not that easy. How can you guys handle you know? Are you guys going to be able to handle that if a lot we're trying to comply, we always have from back in the 80s and we've been trying to do it this way too, but you know that's all we just want to make sure you get know, that it's not that easy for us on the other end. OK thank you very much.

21) Kaliko Kalani Teruya [1:16:25]

Welina mai kākou. ʻO Kalikookalani Teruya koʻu ʻinoa. He ʻumikūmākahi oʻu makahiki a hele au i ke kula waena ʻo Lahaina a noho au ma Honokōhau. Kākoʻo au i ka ground surface water management. Kākoʻo au kēia no ka mea pono mākou e hoʻomaka e noʻonoʻo no na hānauna hou aku no laila loaʻa i ka wai a na ka kai a ola maikaʻi. I kēia manawa ke lawe nui nei i ka wai no nā ʻano mea like me nā hōkele. No laila, mai kekahi keiki o Maui me ke kākoʻo nei i ka ground surface water management.
Welina mai kākou. My name is Kaliko Kalani Teruya. I am eleven years old, and I go to Ke Kulawai no Lahaina and I live in Honokōhau. I support the ground and surface water management area and I support it because we have to really start thinking about the generations yet to come so they can have enough water and a healthy eco systems. Right now, most of the water is being sent to big things like hotels. Coming from the keiki of Maui I support the ground surface water management. Mahalo.

22) Yolanda Dizon [1:18:06]

Hi, my name is Yolanda Dizon. 22 years later we're still fighting for the same thing, but 22 years later the studies are excellent. You guys have done great job on the studies. Thank you. Thank you very much, it's a lot of hard work. Long time coming for the designation. Long time coming. The water faucet is empty, it's gonna like one more drop and it's gone, out the door. Build more homes, build more, build really?! With what water? Do you suck up the stones for water, really? Worried about moratorium, really? I want to build a house, I want my own home, doesn't matter if I don't have any water to drink, if I die 'cause there's no water, I have my home. Ok, so all the points have been covered. I'm sorry I forgot to thank you for the other points. No more time, there is no more time, these babies are here. Are here telling you, telling everyone not just you, these babies are telling all of us "what about us?", "what about our turn?" when we get 40, when we get 30, when we get 20, what about us? They want to live, they want to live. And we are depriving them from that. If we don't sue, if we don't fix mother earth because she does wells, oh my God. Wells?! It's like every time a well is dug, you're piercing a wahine. Piercing her womb as she's leaking until nothing comes out anymore. Salt water, just keep going. Nobody is monitoring. Is somebody really monitoring? How many well are going around in this area alone? Thank you for the studies, thank you for giving us actually food for thought. But we don't have time people, we really don't. That's it. Thank you.

23) Leilani Keliikipi [1:21:10]

Aloha, my name Leilani Keli'ikipi. I not only reside in Kaua'ula Valley as a partner to Kamuela Dizon who is Yolanda Dizon's youngest, along with our children, and our youngest is 10 months old, but I am also a direct lineal descendant up there myself. I am in support of designation on a couple of things which was mentioned earlier. Mahalo for everybody's testimony. Mahalo to you folks for holding this meeting tonight. I just want to make sure that everybody pro designation is heard and taken into consideration of everybody's options. What else is there to be said? E ola i ka wai. Mahalo.

24) David Kahiwa Dizon [1:22:30]

Aloha. Good evening, ladies and gentlemen, my name is David Kahiwa Dizon, and I am a lineal descendant of Nakaikua'ana 'ohana nei. I need to express how extremely important it is to have designation of the entire Lahaina Aquifer Sector as a ground and surface water management area right now. Due to climate change, rainfall is decreasing, which leads to low stream flow and mismanagement of the people that are in charge of water right now. The process of designation and the permitting requirements that accompany it are critical to address these and other water availability issues brought on by climate change and rampant mismanagement. If you, we don't get a handle on this now, and proactively manage the water to its fullest capacity, then there will be no water for anyone. Yes, not even the rich can buy water when there is none to be had. Right now, this decision by CWRM is one of the most crucial decisions it will ever make for Lahaina. Because this vote will decide the true future of Lahaina. Do what is right, do what is pono. You are reaping what you sow, so sow good things. Ka wai ola, the water of life. Let's not wait until ka wai 'a'ole, no water. Thank you very much. Good evening.

25) Samantha Dizon [1:24:20]

Aloha, good evening. Mahalo to all of you for being here. CWRM mahalo for your all mana‘o sharing. Mahalo to the community who showed up. I am Samantha Dizon and I live in Kaua‘ula with my husband David and our two kids. I’m here today to testify that our family has been suffering the problem of acute water shortage for many months now. Maybe even more than that, our water supply has been extremely poor on a day-to-day basis making our lives miserable. Why? Cause the lack of mismanagement and I’ve been hearing that in almost all the testimonies. We all know that Lahaina means cruel sun, which common sense says we have a dry region. So, with the projections of population growth and development, it is so important to secure our water for our future. And as my pastor would say to now generations to come. I’m here to support the designation. Mahalo.

26) Josh Guth [1:25:51]

Good evening, everyone, my name is Josh Guth. I’ll start off by saying that I’m opposed to the current management area that we’re talking about today. It’s hard to argue, you can’t argue the criteria. I believe what they’re showing, what the data they’re showing, that they’re showing that their criteria being met. You know we’re obviously in climate change. We have less rainfall, it’s hot and we’re out there. You know people want water. My concern, my opposition to it, is that I feel it’s early. I think my parents and Josh Dean kind of touched on the fact that the permitting process, which, if I understand the management area proposal correctly, will be implicated on everyone, who uses stream water. End users, Hawaiians, non-Hawaiians, my specific conversation with Rebecca Alakai, was that there is no distinguishment between Native Hawaiian, Haole, Japanese that everyone is subject to the permit for water. You guys got this kind of get a glimpse into what my parents are going through. Their declaration from Honokōhau from 1989, they’re now being informed that they need to file for a water surface permit for Honokōhau. So, you’re hearing testimony, some testimony that you know CWRM is backlogged that they’re having trouble getting caught up, that it’s taking years and years and years. I was the one who convinced my parents that they should be in compliance with the Water Commission and that they should go forward and apply for a water permit. I mean they’ve been working on it for two-years, they’ve been complete now for a year, they’ve been backlogged and getting bumped over and bumped over. I’m not blaming them, I don't think that they’re not good at their job, I think they're great at their job, I think they’re understaffed. I think that we need to just think about I guess the implications the complications the unforeseen. You know we’re moving forward if you’re a water user if you pull water from the stream if you do not have a permit right now, what does that mean for you? You know, I can read you the letter of violation to my parents they were being faced with, up to $5000 a day in fines for every single day that didn’t pull out their two and a half-inch pump for the stream for the taro patch. The words I was told was “Pull it out and if it dies, it dies,” so I have a hard time supporting that type of language. I know there’s a need for this type of management and I know the intention is good, you know I know everyone support here is good that it’s you know great intentions,

but my concern is on the other end of it. You know once we do fall into this management area. What does that mean for the rest of us? Thank you.

27) Charlie Palakiko [1:28:56]

Aloha kākou. Charlie Palakiko, I'm a kalo farmer and a kuleana Kaua'ula resident. I've been farming kalo for like 20 years and I've been working with LIC for a long time. And it's always been a constant battle with water. It has always been depleting, getting worse and worse throughout the years, but just recently through the IIFS through you guys, you guys released that 3 mgd and just that 3 mgd alone is better than what they have been offering me throughout the years. So, I'd rather deal with you guys than these private developers. Another concern is the wells that is being permitted now. Everybody right now is trying to get one well in this stream. Our whole plan here when I started it, was to stream life extreme running like how it used to be. I think no well should be ran until we get the stream running. You know before we cannot be taking a water before I think you can reach the muliwai. So, I notice wells and stuff being done right now, but my biggest concern is that needs to be managed and that's why I'm in support of this and designation. Thank you.

28) Lauren Palakiko [1:30:56]

Aloha kākou. My name is Lauren Palakiko. I am born and raised in Lahaina and I'm a resident of Kaua'ula Valley. I'm here to ask that you designate the entire Lahaina Aquifer Sector as a ground and surface water management area. The ongoing health and well-being of our island's precious ecosystem has always been very important to me. It's even more now that I'm married to a kalo farmer. Over the past seven years that I've been with Charlie, I have seen a decline in the stream first hand, although he's been fighting for the water in Kaua'ula stream for over 20 years. We documented with our GoPro the flourishing life from the muliwai to up above the dam where the water is diverted. Ōpae and different varieties of 'o'opu. The muliwai went dry on April 8th, 2019, and it was extremely sad to witness with our own eyes these native species dying off by the masses. By June it was an 'o'opu graveyard down there. I've been by Charlie's side as he calls Launiupoko Irrigation Company, sometimes daily, having to ask for more water. There's a disconnect in reality with these folks, legally the stream including the kuleana owners with appurtenant and riparian rights have the highest rights to the water. They have been telling us some day they will give us more water after they fill all of their reservoirs, and only after. The IFFS was mandated on March 20th, 2018. The next two weeks after that the water ran in an extreme low. On April 30th, a month later there was almost no water in the stream while their reservoir was overflowing. It's as if they had cut us back even further than normal out of spite. That's malign mismanagement if you ask me. Less than two weeks ago, they had cut off our domestic water which feeds our home, so my baby and I had to bathe out of a bucket filled with river water. The water in our pipes are extremely important as this is also how we water our plants and our lawn which we must keep green in order to create a buffer to shield us from fires. Based on LIC's track record, I personally do not believe that they would ever act justly or ever comply with the law as we witnessed since the

IIFS was implemented, unless they were managed by an outside third party to keep them honest. They are a private company acting in favor of their own personal interests and profits. And they therefore couldn't care less about the health of the environment and the Native farmers that have been in the valley for generations. They are merciless. We've been living under their tyranny because no one has been able to hold them accountable until this past month when CWRM issued a letter of alleged IIFS violation. I believe designating the Lahaina Aquifers as the water management area would put an end to this. Mahalo.

29) Wili Wood [1:34:05]

Aloha everybody. My name is Wili Wood. I live in Honokōhau, I'm a taro farmer up there. First of all, I would like to thank you for everything you guys are doing and have been doing I'd like to say we support and accept see worms recommendation to designate the aquifer sectors both ground and surface water management areas living in hall valley we have seen first-hand that mismanagement of water use here are a few examples the county department of water supply had a bridge in home valley used to hold water lines above the river it was originally built by MLT and McDonald was taken over by the county department of water supply in 2000 the bridge failed in 2018 and the department of water supply was aware that this bridge system was obstructing the whole width of the river nothing was done about this because the water lines is still functioning that was in February in September 2018 during tropical storm Olivia this broken bridge captured many large logs and debris floating downstream which created a large dam that eventually broke free standing catastrophic flooding destroying land homes and lucky after the flood Aaron Strauch and see where it came up and took a look at everything and kind of helped us wrap our head around the situation what exactly happened so if you guys have any questions for Erin about that here are a few pictures taken in March just after the February high water that knocked the bridge down love you guys can see but I'll pass I'll pass these photos around this is the first line of the bridge system link sideways blocking the whole stream and here's another one of the same bridge this is before the big flood that hit us showing all the pipes and just basically it's blocking the whole stream yeah so that was bad let's see after tropical storm Olivia what you call the bridge was still laying in the stream it is still laying in the stream today and it shows in the pictures that you guys can see that pipes are many pipes laying on top of that bridge only one of those pipes are working which shows that year after year when they're replacing pipes new pipes are just added on top of old pipes and the old pipes were not removed Thomas actually leaving a ton of rubbish up there hazards for everyone downstream well after the flood the fixed job that was done by the county department of water supplies just one pipe now so fast that picture and Fast forward through almost four years now and we have some pictures of that bridge still sitting in the river today still wet laying right in the in the stream bed itself with a ton of tree branches and small logs and things like that wrapped around it so these next two pictures thank you guys for looking so that's one example another example is after tropical storm Olivia the flow in the stream was greatly diminished we repeatedly tried contacting MLP to restore the water flow but did not receive a response meanwhile MLP was wasting the water which is flowing into the ocean and this is documented in the 2019 wastewater complaint the cost for the negligence we believe it is the lack of regulations enforcement and general oversight which strongly supports worm to designate West Maui as a surface and groundwater management

area so that we can be assured that the use of our precious resources will be reasonable and beneficial for the future of our small island. Thank you.

30) Kazuo Flores [1:38:20]

Aloha, my name is Kazuo Flores. I'm here to testify in support of the designation of water to a righteous management company. Mahalo.

31) Kekai Keahi [1:38:53]

Howzit. My name is Kekai Keahi. You guys know every place you go throughout Hawai'i, everybody saying the same thing, no sense I even repeat to myself because it's always the same thing. What I like to say is I hear some people talking about the hardship of acquiring one permit to get water and stuff like that and it's a long hard process but, a lot of people got to understand was a hard long process of 100 years of de-watering our streams and fighting to put their water back in the streams. That's a long hard process. Then you get people from Launiupoko calling you things like greedy, no like share that we're trying to take away things from the people in these areas and yet we gotta eat that because we wasn't used to speaking in this setting when we first came because everything was with this! So, we have to learn and to this very day the IFS is set in Kahoma, 2 times cut the water off 80% of all the return to Kahoma after 100 years did we get the pictures. They still not meeting the IFS in Kaua'ula. I go to Olowalu, they pumping 100% of the stream up to the reservoir, the tanks. They're not following the rules and that's why designation is important. They like to say we cannot depend on our state doing the right thing 'cause you guys have mismanaged. You know the State probably did mismanage a lot of **** but also Maui County. But does it mean right now that the state not trying their best to correct what was done because we guys, the remedy the cure to the problem is the one that is pushing this. 100 years, that's hard. Our Tutus was the ones who went lose their water and lose their livelihood, had to move off their land. Our family was the last family to raise taro in Lahaina. Years later in high school, Charley Palakiko, his father and family, we go up there and opened up the first couple of patches in Lahaina since the last time we raised taro there. You know what's hard, we watered with a hose. That's all the plantation gave was a green hose, we watered the taro patch. What is hard? I want to know what is "hard". I see as Lauren was talking, she was explaining what was going on; Lauren Palakiko, Charlie's wife was going on with the water situation; I seen Glenn Tremble was shaking his head like she don't know what she's talking about. But funny 'cause we get pictures of his guys turning off the valve up at the intake. You want the picture? Shake your head some more. Eh we never fight for this island and then walk away and forget about it and think that the state would do the right thing. We know the state get hard time to manage or enforce. That's why we're looking at the river every day. We look at the river every day and we pay attention and Ayron get calls, this is what's happening probably before I say hello, he said "oh yeah Kai, what you need" because we call plenty. I'm a party to that complaint filed against MLP when they were dumping the water in Honokōhau. I'm one of the guys who filed a complaint with the Honokōhau people, mismanaging water. There's a reason why we're here. The County is issuing of permits

when we don't know even have the water supply these permits. We're beyond our sustainable yield. You know what that means? Why did they make the treatment facility upper in Lahainaluna? Because in '97 the wells were going salty. So, the State and County got together and make the treatment facility so they can take the water 100% of Kanaha stream, treat and dilute the water they were pulling from the wells in Lahainaluna and Kanaha so they can serve the public. They knew back then and because of that the county is like OK we're good continue to give more permits build some more and look at where we stay now. (was asked to "wrap up testimony") What I'm saying is straight up truth. I like you guys be scared you West Maui Land, Kaanapali Land, cause you saw all the kids, the 11-year old and high school kids? We're raising warriors already. You guys going be long gone dead and gone and all the kids going be here scrapping.

32) Mapuana Pali [1:44:35]

Aloha mai kākou. 'o wau 'o Mapuana Pali ko 'u inoa o Lahaina mai au a me noho i ma Kaua'ula.
Mahalo CWRM for all your hard work. And that was disrespectful what Josh Dean said to you guys of your guys hard work, I'm apologizing for him. That was hewa. Before LIC, it was Makila Land company and workers would come up flush out, clean gates - sometimes they'd do it and most times when they are told to caus investors are coming up. Then LLC came in and did nothing at all. They said there was no water, not enough water; there mismanaging it on purpose. They're leaving gates open letting everything overflow. We have lo 'i in the back and right above it up on the top the Ridge, Pi'ilani would flow and it's all green up there you know there's water diverting that way. That was Kamehameha Schools lands and Pi'ilani is flowing constantly here and there. You can see leakage of the 'auwai so there is Kamehameha Schools pipes does exist as Glenn said at the last meeting. And there is more than three 'ohana that farms and live up there. Family that won in court still has not had one drop of water up there for their homes; they can't even provide to grow anything. They would have to go down a rocky terrain with crates to fill up and haul back; and they have kids as well. From 14 to a 3-year old and one is extra special, and they have no water cause of this land company, of greedy. They do have the water-I know a lot of people say that there is no water, but there is water 'cause we live right there you see workers come up, Kalani comes up mess around with things on purpose. This is only three weeks they've been coming up this is the first time in three weeks they came up constantly. Why? 'cause CWRM put them on the spot, and they can't pay anybody else in the system to hush them; so, they gotta send their workers up and try and figure it out. Oh, put water that way, say we don't have any water in our reservoir. Throw water over there. We see. I work, get phone calls or there's no pressure to our house and we live up, so they have to push the pressure up to our house. There's no pressure-it's hard-yes, it's hard, but when they shut off the water and there is no water and I came home and see the lo'i dry, we can go down and shower at the ocean. That's fine for us-I don't know about long time but in the meanwhile, we can take our kids to the ocean to shower but we cannot carry water up to our lo'i. It was hard seeing the lo'i dry. The pipe that we get water that goes straight back into their diversion to Launiupoko, I think they should be getting taken away their rights of watering the system of mismanagement. Kaua 'ula Land Company, Makila Land Company, LIC, West Maui Construction which you said you own that company Mr. Josh Dean, but Peter Martin was in there talking for you who said he had plenty money in his pocket it's all under Peter

Martin. West Maui Land, they are hewa to everyone for the rich, poor, the medium, no one is gonna have water if this kind company still have control. So, I Mahalo CWRM for all their hard work.

33) Kaipo Kekona [1:50:38]

Aloha mai kākou. Aloha Commission and Chair of Water Resource Commission Management. My name is Kaipo Kekona. I'm born and raised here in Lahaina and have a family of six all of which are descendants to the moku of Lahaina and Kaʻanapali. I'm the Kaʻanapali Moku Rep with the Aha Moku o Maui under Act 212 Advisory to the state Department of Land and Natural Resources and the Chair of the Hawaii Farmers Union Lahaina Chapter, a statewide organization. I manage and operate a 12-½-acre farm here in Lahaina on the Ahupuaʻa of Kūʻia. Legacy lands to Keʻelikolani owned by Kamehameha Schools Bishop Estate. Kūʻia Ahupuaʻa is just over 1300 acres in total and is mainly undeveloped Ag lands and will remain Ag lands. I appreciate the commission's efforts to uphold the constitution and the implementation of the Water Code. I'm offering testimony in support of the dual designation of special management. After reviewing the hydrological report by the USGS department, it is even more evident the immediate need to not only secure the environment but seek efforts to restore and expand on this system; not only for our current existence but for the generations to come. Time is of the essence. No one is speaking as far as how to build the capacity; everyone is just considered on how to hold and maintain what we have. In a short time this process has begun, we have seen the push to establish personal and large scale well systems and off stream uses. I believe this only increases the risk and will ultimately undermine the efforts of this Commission. In closing, I understand there are standard procedures, and the Commission must perform such as research and investigation. I feel this body has done their due diligence in this process and see that it is within the commission's capacity to pass the designation. I requested that motion be made in the soonest date possible. We cannot wait longer-we will not wait longer. If you notice the maps projected today, Lahaina in its current state, is yellow. and if you know what Lahaina looks like under that yellow designation, it is in a sustainable system to be living in. The future projection in 80 years, the end of the century, shows Honokōhau turning yellow. I cannot imagine what Honokōhau would look like if it was in the same situation of Lahaina's environment. Efforts like this extreme restoration and dual designation is immediately needed to be done. I support the designation again and Mahalo you for your time and effort.

34) Charmane Yamada [1:53:51]

Aloha mai kākou. ʻo Charmane Yamada koʻu inoa. Noho mākou i ka moku o Kaʻānapali. And I am here on behlaf of my ʻohana and my community and many of these people are friends and ʻohana. To support the designation and because it's important for the well-being of Maui and the future of this place for our children. I do wanna say something to the developers and the people heard just doing herrendous things to our community-please open your eyes, open your hearts-see what you're doing to these people. I mean I didn't even know these stories until now but, please, please just find a different way. Money is not everything. Community is everything, ʻohana is everything. Look through that lens all the new developers and people making money off of lands that don't really belong to

you and water which should be shared for everybody. Really open your hearts and see that; listen so everybody who has testified today; and Mahalo you guys; you guys are so awesome.

35) Hana Yamada [1:55:42]

Welina mai kākou. ʻO Hana Yamada koʻu inoa. He ʻumikūmāhā oʻu makahiki. Hele i ke kula kaiaupuni ʻo Lahaina. Ke haʻiʻolelo nei wau no ke kākoʻo ʻana i ka ground surface water management no ke Komohana holoʻokoʻa o Maui. He koʻikoʻi loa ka wai no ka mea pono nā kanaka i ka wai no ka hoʻola ʻana i nā mea kanu e like me ke kalo, maiʻa, lāʻī, ulu, koa a me nā mea he nui hou aku. A he mea nui ka wai no ka mea ina ʻaʻohe wai, ʻaʻohe ola. Ua lawa lākou i ka wai no ka makahiki he nui ʻaʻole i noʻonoʻo i ka hopena ke pau ka wai a o kēlā ka manaʻo koʻikoʻi loa. ʻAe, he keiki wau akā ʻike au i kēia mau hana a ʻike wau he kupono ʻole. Ina holomua ʻoukou i kēia hana i ka lawe mau a mau ana i ka wai, ʻaʻohe wai e pau ana, ʻaʻohe ola. Ke hele a luhi nei nā kānaka Hawaiʻi i ka ʻōlelo mau ana i kēia moʻolelo. Pono wale mākou e ʻōlelo hou kahi manawa a ua pau. No laila, lawe I kēia haʻiōlelo i kou nāʻau a koho i ka hana pololei.
Aloha, my name is Hana Yamada, and I am 14 years old, and I go to kula Kaiaupuni O Lahaina. I'm testifying today to support the ground surface water management for all West Maui. It is important to me that we protect our water so the kanaka can keep tradition and keep growing native plants like kalo, maiʻa, lāʻī, ulu, koa and many others. It's also important to keep the water because if there's no water there's no life and the aquifer only has so much water left and only gets so much water to the point where it's crossing the line. I also don't support the water going to rich houses and hotels that are owned by tourists or people that aren't even from here or don't even live here. The people of Hawaiʻi are tired of saying the same moʻolelo and facts over and over again, but I hope you guys take these testimonies and actually see the big changes that are going to be made by your decision. Mahalo.

36) Manalani Yamada [1:58:04]

Aloha mai kākou. ʻO Manalani Yamada koʻu inoa. he ʻumikūmālua oʻu makahiki a hele wau o ke kula kaiaupuni ʻo Lahaina. Kākoʻo wau keia ground surface water management no kēia i hiki ke maopopo mākou ke mālama kūpuna nei mākou i ke kumu waiwai i hiki ke kaiāola ke kūpuna a hanauna e hiki mai nei.

Aloha, my name is Manalani Yamada. I am twelve years old and I go to Ke Kula Kaiapuni o Lahaina. I support this ground surface water management to ensure that we are taking care of our resources so that our ecosystem is healthy and strong for the generations to come. Mahalo.

37) Sesame Shim [1:59:05]

Aloha mai kākou. O wau no o Sesame. He kumu wau ma ka kula waena ʻo Lahaina.
I'm a teacher at Lahaina Intermediate Kaiapuni with Kanoe Stewart and Kai Keahi. And in these two years of teaching at Lahaina, I've only learned. I've been inspired by these kanaka, by this community on there working together there pilina in how they support this community as a whole. They fight endlessly for their wai, for their Keiki and their leo means more than anything than any other corporation any other business that is speaking at this table. For the Keiki. I absolutely support the designation of the entire Lahaina aquifer sector as a ground and surface water management area. We take our keiki to different field trips all over Lahaina, Honokōhau, Kuia, Kauaʻula, and we see the effects of water mismanagement the effects of climate change everything that CWRM has worked so hard to show us the scientific evidence of the degradation of our water in Lahaina. It's not premature to be proactive in making sure and ensuring the well-being of our future, our keikis future and it's all dependent on wai. Waiwai, we learn that and our keiki learn that. And like Kai Keahi said, yeah sometimes paperwork doing all of that might take a long time but it's nothing compared to what our kanaka has struggled and still continue to endure today. We teach our keiki that and the word I like to teach them is entitlement. We're not entitled to take wai. That's a western concept of people thinking oh we don't need to apply for this permit we can just take the wai. Entitlement it's not what we're trying to teach our next generation so in the end, I Mahalo the Lahaina community, Kai Keahi, Kanoe Stewart, Kaipo. All of these guys that are working effortlessly and without money just to support the future for our keiki.

38) Devon Haia [2:02:20]

Aloha mai kākou. My name is Devon Haia, and I am a member of an ʻohana that has been in Lahaina for centuries. I'm also a third-year law student at the University of Hawaiʻi William S. Richardson School of Law. I am testifying in full support of designation. This semester I wrote a 50-page paper on why the Commission should designate Lahaiana as a water management area. Don't worry, I'm not gonna read it to you now, but I am going to highlight some of the major points. My research revealed that in a pre-contact Hawaiʻi Lahaina was a paradise of countless loi kalo shaded Ulu trees with abundant fresh water flowing in streams mauka to makai. When foreigners arrived, the waterways were so plentiful that they felt like they were in the city of Venice. I won't go into the painful history of how foreigners razed the valleys for their sugar and pineapple plantations, destroying many of the auwai systems, and dewatered streams to feed their exported crops at the expensive of kalo farmers and natural and human communities. I will remind you and everyone else here today that there are important constitutional provisions that are not only foundational to your decision to designate, but also compel you to do so. I outlined them in my submitted written testimony. My auntie owns a kuleana parcel in Kauaʻula and she shared her mother stories of going to the family property to tend the land that grew not only kalo but also mango, banana, ulu and more. Our family, The Pōʻalima's would huki the kalo, boil it and make poi and travel throughout the valley trading with other families. On these days the families in the valley showed their spirit of community and sustainability. Multiple times in her life my auntie has gone up to her property to do the very hard work of cleaning the area by clearing away brush and cutting back overgrown grass in hopes of being able to farm kalo and restore it to the way her mother described it to her. However, these dreams have yet to come to fruition because the water due to diversions no longer runs through the property. Without water, a loi cannot exist. The stream

that previous generations used to cultivate kalo is now being diverted almost completely for private use without any care or consideration for the native Hawaiian kalo farmers who have superior rights to this water and who wish to use the stream for the traditional customary native Hawaiian protected public trust purpose of growing kalo. As a reminder, the Hawaii Supreme Court has counseled this Commission to be proactive as the primary guardian of public rights under the trust and taken initiative in considering protecting and advancing public rights in this resource. Therefore, designations should not be called premature and permitting will only be prolonged if people choose to fight it. As you well know, water in Hawaii is a protected public trust resource held for the benefit of the people of Hawaii as shown consistently in the constitution, the water code and decisions of the courts. As a law student, I understand that designation is a proactive approach that attempts to ensure availability of stream and groundwater resources to all who seek it. As a mom, my hope is that one day there will be enough water in the streams so that my keiki will be able to help grow kalo in the same place there kupuna did. In closing, I respectfully urge this Commission to designate Lahaina as a grounded surface water management area to fulfill its public trust obligations to protect and ensure fair access to water giving kalo farmers the chance to cultivate loi, care for their family and community and hopefully recreate a lush green Lahaina to thrive once again as it did over 1000 years ago. Mahalo for your time.

39) Fay McFarlane [2:06:11]

Aloha mai kākou. ʻO Fay McFarlane koʻu inoa. I am testifying to kākoʻo designation of surface water and groundwater in the Lahaina aquifer sector. I know that there's a lot of people still waiting to testify so I'm gonna keep it short and stand on written testimony that I've submitted. Mahalo for your time, thank you.

40) Jade Chihara [2:06:51]

Aloha mai kākou. Aloha Deputy Manuel and Commission staff. Mahalo for being here tonight. My name is Jade Chihara and I'm a resident of Lahaina and Stewart to the lands of Kuia, testifying in support to designate the entire Lahaina aquifer sector as a ground and surface water management area. This decision will make steps forward to mitigate the serious conflicts and disputes that have only intensified since the Commission meeting in January. Since then, as you know Launiupoko Irrigation Company has convinced many of its constituents to subvert the IIFS and the public trust. I ask that we remember that LIC infrastructure is an irrigation system designed by the plantations to disconnect kanaka from ancestral food sources. The longer this process takes, the longer this harm will continue. Please vote as soon as possible to support the designation, Mahalo.

41) Jesse Kapu [2:08:02]

Aloha, my name is Jesse Kapu. I'm a kuleana and reside up in Kaua'ula Valley. I'd like to just Mahalo CWRM Ayron, Kaleo, everybody-all you guys hardwork. I'm in support of this designation on many reasons. From these private sectors, is lack of due diligence. Just this common sense like we see water in the river, water filling up the reservoirs, but these guys just keep not going with the IFS and not compliant with any or agreeing or anything you guys have to say; but I just like to say I'm in support of this designation, Mahalo.

42) Daniel Ku'ulei Palakiko [2:09:10]

Aloha mai kākou me ka awāwa o Kaua'ula. Ka pā mai ana o ka makani kaulana o kēia awāwa nei, Aloha.
My name is Ku'ulei Palakiko. I'm the eldest of the siblings of Palakiko that reside up in above Kaua'ula. You heard from my brother Charlie earlier speaking on behalf of our ohana and our long experience not just dealing with the water issue but just in general dealing with all the issues related to a continuous systemic problem which is that from the moment of colonization we have seen a continual rape of all of our resources of our culture and our traditions; and we of this generation just keep carrying on the fight and having to pass it on to the next generation as our cousin Kekai had said, well that's admirable, it shouldn't be the case. Our keiki and mo'opuna should be able to leave a peaceful, free, easy life. I'm going to testify real quickly on three things first of all I'm gonna testify as a kupuna as a tutu of my first mo'opuna. When LIC and the powers that be, shut off our water, they threatened my mo'opuna. This is important because this is the scope of the volatile atmosphere that we've had to deal with and we're talking about mismanagement, lack of management, no management, no oversight. I wanna Mahalo those representing the developer side that came and spoke earlier 'cause they proved our point. They stood here and they talked about 20 plus years of experience running these different systems though we have 20 plus years of mounting evidence of the mismanagement of the system. So, I would have them rethink how they introduce themselves because in fact the evidence clearly overwhelmingly supports their inability to run our water. Secondly, about what has been touched on which is understand that the history of this fight of our water is indeed a long-standing issue. Even now as we are on the verge of perhaps a monumental change for the positive, I would say this in support of what I have heard; and that is too long you tried it your way; too long that developers and the plantation before them, AMFAC, tried it their way, taking the water running the water according to their own desires; too long. Time for some mea ho; time for change. So, I'd rather take an avenue that might still be broken, still be in its infancy, and try this then continue in what's been happening for too long. Change is better than the scheme going on some more. So, ua pau me kēlā mea. Final thing I like share with you guys, is up until recently, I spent my entire life in this battle. I spent my entire life in my young adult in this battle; having to fight for easement rights, for the ability for us to have enough water to support ourselves; and I wanna make this one point clear, you have heard overwhelming testimony about kalo; and if you for a second diminish the importance of kalo as it's just an agricultural item, it's just a mea kanu. Then you're missing the importance of kalo in our culture and tradition. That is our hiapo; that is ma mua o nā kanaka o ka 'āina nei. We have to take care of that, which came before us. There's more at stake than some kalo plants that are dying and withering 'cause no more water. Please folks, I'm in support of this

designation and I plead with you guys. I will give one last little clarity here, and I'm gonna ask everybody here if you in support of this designation, Eo! I think that answers it all, Mahalo.

43) Hōkūao Pellegrino [2:14:16]

Aloha mai kākou. Welina mai ke aloha e nā kupa o kēia ʻāina nei o kamakani o Kauaʻula no kēia moku e kaulana nei o Kamalu ulu o lele o ka moku o Kaʻānapali e kaulana nei i ka wawae ulaʻula. ʻo wau o Hokuao Pellegrino no ka ʻai no kamakani kokololio ʻo ia hoʻi Waikapū e kaulana nei o Na Wai ʻEhā. He wahi mahalo kēia ia ʻoukou i ka hoʻokipa ʻana mai ia makou e kukakuka e pili ana i kēia wahi koʻikoʻi no ka wai.
My name is Hokuao Pellegrino. I am a president of Nā Wai ʻEhā, a kuleana kalo farmer from the ahupuaʻa of Waikapū and a water use permittee among 60 plus water use permittees in the Nā Wai ʻEhā area. As the president of Hui o Nā Wai ʻEhā, we have been engaged in this process which includes the designation of the ʻIao aquifer, the surface waters of our streams and rivers, the IIFS process, and the water use permit process for almost two decades now. The Hui has on ground knowledge, real time data and experience. If this process didn't work, we would be the first to tell you. We have shown time and time, that collaboration between a multitude of parties which includes CWRM, large water users such as Mahi Pono, the County of Maui, Waikapu properties, Maui Tropical Plantation, and other large diversified commercial farmers, and kuleana users, can work together. The only ones who resist and have a problem with this process or the corporate water companies like Wailuku Water Company, Launiupoko Irrigation Company, Kaanapali Land Company, Makila Land Company, Maui Land and Pine, and so on. Why? Because they care about their business model; they care about their financial status; they care about their bottom line and old boy politicking. The reality is that their days are numbered. The future of community-based water resource management and transitioning back to our traditional ʻauwai systems and stream stewardship, is the future. We kākoʻo and we request that this process moved swiftly. There's no need to reinvent the wheel; we only need to keep building on the foundation that was set forth by Nā Wai ʻEhā. The proof is in the pudding. We are the data, the outcome. We've set a strong precedence that can only help strengthen the West Maui ground and surface water management process. While no process is perfect, we must trust in the process what we have learned is that CWRM needs a community just as much as a community needs CWRM. That's how success in Nā Wai ʻEhā perspective, is defined. The stream life restoration came back almost immediately. The springs of Kawaiola in Paukūkalo almost came back immediately. Kalo farming began to grow exponentially in Nā Wai ʻEhā immediately. And so, we know this process works and we trust that it will work here in West Maui from Ukumehame all the way to Honokōhau. The longer we wait and toy around with this idea, the more our water resources and native communities will suffer. Community based water resource management is the future, and this is the vehicle to get us there. The Lahaina community is resilient and has the wherewithal. The ʻike kupuna, the generational knowledge and the ability to collaborate which is most importantly in this process. We've seen this over and over again, that this community can do exactly as we did in Nā Wai ʻEhā. We are in full support of this designation, and we ask the commission and commission staff to act swiftly on this, Mahalo.

44) Kailani Ross [2:19:15]

Aloha mai kākou. ʻO wau ʻo Kika Kailani Ross. Mahalo e Kaleo a me nā Commission CWRM no keia wahi. Aloha e nā poʻe nā kupa ʻāina o kēia wahi pana no Honokōhau mai au a me Olowalu a me Ukumehame a me Pahoa.
Our ancestors come from many places throughout Lahaina. This is not an uncommon phenomenon. Many of us are seen. Hahai ka ua i ka ulu lāʻau. The rain follows the forest. I'll have to see that right up front because that to me is mea nui. Water management isn't just about the water, it's about the ʻahupuaʻa system. After years of our industrial revolution and industrial agriculture, we've seen the effects of depletion of the forest which has led to depletion of the wai. When I heard about the reopening of the prevailing of water, I excitedly called my cousin; and her response shocked me. She said ʻaʻole. Who are they to tell us how we gonna manage our water, that's our water. That's for us to manage for our kalo, for our keiki. There is some entitlement there because they're our keiki o ka ʻāina. I was shocked with her response, and we went into pule. We are women of faith in iʻo and kaʻuhane hemolele. The same holy spirit that also wrote the kumulipo and are parallel and consistent. In this pule, we came across Romans13 which says, put authorities into place for a purpose. It's not always because they're pono but it's to reveal their hewa. After all these years of seeing capitalism manifest destiny or regard in ruling the ʻāina, displacing kanaka maoli, seeing that our water system wasn't pono, we were wasting water and throwing it in the ocean, and they diverted the water, but we all know happened. We realize the revelation that the system isn't working. The laws says, first rights go to kalo; as you do your research, remember first rights go to kalo and the water management doesn't happen in a vacuum in the stream. It's the entire off ahupuaʻa system and that's what we need and worked for thousands of years. I recommend looking back to incorporating those techniques in your water management system. Mahalo for the testimony. I did also hear the pain; there's a history of disempowerment-we all know the displacement of population reduction and how developer's and corporations and capitalists call on the free-market system and manifest destiny to continue their rights to make money on the land. If we had no more mortarium, if this leads to a moratorium on construction it would be a good thing. It will help reforestation and there are other ways to deescalate the high cost of housing like giving the lands to DHHL and reducing the blood quantum. However, we the people must continue to manage all that we can ourselves short of getting locked up for years, like Devin Haia, we all need to learn the law. Put in place education systems that wasn't the missionaries, that was our king who said my Kingdom is a Kingdom of literacy. As we continue to do this and take responsibility over our management systems in government, in law, in holding people accountable with Aloha, we solve this problem.

45) Aukahi Curem [2:24:44]

Aloha mai kākou. ʻO wau ʻo Aukahi Curem. E walawalaʻau i Climate Change no ka mea ina ʻaʻohe wai no ka ʻāina, hele i luna ka CO2 i a ʻoi ka wela a keia mau la ma Lahaina, wela loa mai ka wahi o Lahaina. ʻO ia no o Mala i ka wai hele maʻo, ʻo ia ka wela i nā wahi a pau, ʻo ia nā mea maʻo ke kaʻa ka one a me ke kai a i keia manawa e walawalaʻau i ka namu haole.

Global warming is starting. The ice is melting, the sea level is rising. The land is drying, and life is not growing. Are you people going to make it good or make it worse? We can help make it good by designating Lahaina as a ground and surface water management area. Water is everything to human society. That is all I have to say.

46) Dean Frampton [2:26:16]

Aloha, good evening. Thank you for having me here, my name is Dean Frampton. I'm testifying as an individual, a community member and an advocate for balanced use of our water resources, and in no particular order for the Department of Hawaiian Homelands, affordable housing for local residents, kalo farming and stream restoration. I'm also a member of the Board of Water Supply, but I want to be clear, I'm testifying as an individual tonight. In preparation for this meeting, I went back to the CWRM presentation that was made before our Board in January. And at the onset I was definitely opposed to the idea of designation and when I reviewed the video, I was taken back by how many of the concepts presented by CWRM that I was in agreement with. Agreement with things like integrated management, efficient use of water resources, holding all users accountable, and ensuring wells are evenly spaced. All good management techniques, but the one thing I struggle with is the information divide and specifically on sustainable yield and tunnel discharge. So, I would simply ask that CWRM staff and perhaps with the assistance of USGS, work with our Department of Water Supply to try and come to a closer place of agreement on some of those critical numbers; and take time to try and find agreement, because the differences of opinion are significant. Going back to the CWRM presentation, there was a comment made by Deputy Director Manuel that stood out to me. In the meeting he said, "We have built up the expectation that water will always be there." I completely agree with him, and we need to do more to move away from this. We need to evolve and move away from this misguided concept. As a community, we need to do more and be more proactive in the way we treat this precious resource and the way we honor it. At the County level, we can start by revamping our water rate structure, which Keani Rawlins-Fernandez has already begun, and we need to tax significantly, water use that's beyond the basic requirements. We also need to embrace more definitively the use of R-1 or recycled water in our community, and we need Department of Health to come online with us so that it can be used in residential applications. Finally, we need to move away from fresh water for irrigation purposes. But I wanna thank this body and this this community for allowing me to testify. I'm not from the West Side, I'm from upcountry. I've seen the devastating effects of poor management of water resources and a water meter moratorium on our own community where local families, the fabric of our community up-country has been destroyed. They've been waiting for 20 to 30 years for water meters, unable to subdivide, unable to give their lands to their kids and their descendants. And it's literally changed the fabric of upcountry. So, I hope that that doesn't happen here. Again, thank you for allowing me to testify.

47) Jordan Aimoku Chee [2:29:50]

‘Ano ai ke aloha e nā makamaka ma kahi o kou leo. ‘O ‘Aimoku Kauhiaimokuahea ko‘u inoa. mai kau hana Mailua ma Lahaina. E noho ana i kēia manawa i Kuhilile‘a i Kahoma. ‘Ōlelo au I ka ‘ōlelo haole i kēia manawa, no ka mea, ‘a‘ole maopopo kēia mau po‘e ma ane‘i no ka ‘ōlelo.
My name is Jordan Chee. I am from the ‘ohana of Mailua. We're from Lahaina. I now live in Kuhilile‘a in Kahoma. My people are from there, I grew up in Kilauea mauka, at one portion of my life next to Kahoma stream. That stream was dry for many years. As a kid, I swam in it when it did run. Right now, I am against this SMA. The reason being is because, if the state is responsible, they told me that I could have a permit right now. And if I get the permit, I would get 140,000 gallons of water every single day. My question to the kānaka over here is, how come if you get the permit, you no moa water already? [*Starts screaming*] That's not, to me is not the haole man taking the water, that's the state never do what they supposed to do in regulating the water. They supposed to give you the water today, 140,000 if you already got the permit. The permit process stay over there right now. Right? But what, you guys apply for the permit and they still not giving you water. So, who the devil over here? The state that like more power, more control. I live in Kahoma right now and I carrying water in buckets to feed my goats. You know that? For take a shower for six months, I carried water. Why? Because the state telling me I no can get the water that I own by appurtenant rights on my kuleana, my vested rights from Kauikeaoli, that came with that kuleana track, my riparian rights. And you’re telling me [*addresses other community members screaming*], I should give them more power now? And I am supposed to trust them? You nuts or what. That's the truth, you're nuts. That I don't believe them, the people that overthrew the government and my queen and took away my rights and not even take more of my rights away and I supposed to believe that as one kanaka? You think I'm stupid or what? I will tell you one thing, I graduated of University of Mānoa with one Juris Doctorate out of Ka Huli Ao, which is the law school for Hawaiians up there. And you tell me I won't believe this. No, there's other ways? It's already on the record, they can monitor the water, they can give you the water tomorrow, if you had your permit. They're not giving you nothing, but you believe in this thing. You believe in this thing and I'm telling you, they can do em if they like, but they are not doing that. Why I gotta go through the hoop and jump through that, you know what the konohiki, even the konohiki knew we had vested right in that water. We don't need permission, people saying well we should get permission for take water that's one haole idea. No that's one haole idea, it’s a kanaka idea that we have the right to that water. We can pick that water out from there, we don't need your permission. They already have the right to regulate how much water you take from there, they don’t have the right to give you permission from that. What's the matter with you folks thinking that they should this that’s one haole idea that they a right we shouldn’t just take water, the water belong to us. The water belong to us, one vested rights from the king, from what he said. That's where it's at. That's our right to water. Why we got to get regulated by them? Yes all of them, they should, they can't tell us as konohiki of this land how much water we could take out, but they cannot tell us, we looking and address the water, we gotta wait one year, two years like the Guths. Waiting, waiting, waiting for go get the permit and then we running fines or possibility of fines. How long we gonna put up with that? And not just that, I get SMA land for the ocean in Hana. All my family over there, we cannot even live on that land because they regulated land, they tell us what for do. We stuck under this kine law, and you telling me we should put ourselves under that law for the next 20 years? You know how hard going be if they change that law and make all kine of rules and regulations, they gonna kick you off that ‘āina. If you like get you that ‘āina, I put you on there right now, you would have

given you that water. That's my testimony I against this sma. I don't agree with the state regulating rights we already have and they shouldn't have that right.

48) Andrew Chee [2:36:05]

My name is Andrew Chee. My father just spoke to you before. I hear a lot of pain, a lot of hurt. I can hear from the people this is more than just water, this is going back for a long time since people were young. And the problem is, it's the land. It's always been about that, and I agree with my father is that the state, the government, they regulate our lives over all this stuff including this. I say that there'll be a full investigation and audit on the water management for anything going further. On how we've been running it. And then we get a third party outside of them and the Council that is transparent and shows everything what has happening, before we give them any more power of your life because let me tell, you just a small little bit of education. Before in the early 1900s, there was no income tax and they brought it in in the early 1900s and it was only for the major corporations and for the ultra-wealthy people. And they taxed them a little bit, when they did that, it's slowly progressed over to the people, when they started taxing the people, and then they increased the tax and increments overtime. That's why you paying so much tax. That's why your life is so hard. That's just a little bit there's way more than that it gets complex, but if you give them this, they will regulate this and then they will move further and further to regulating your own life. When they start putting meters on your own house of how much water you can use, it's coming, they tell you that. That's what they tell you, I'm telling you something is wrong here. And before you give up more of your freedoms and your right, there should be a full investigation on these people. You do not, maybe some of your family, I don't know, but how do you know, what they're doing with that getting paid to be doing this, and getting one deal on the side, you don't know, they just people, and we all know people, I say think about it because this goes back, way back for a long time and this is how they play us all the time. People against people, the public; while they always sitting in the seats of control that's the truth. So basically, I'm against it. I'm against it.

49) Scott Chee [2:39:30]

Aloha guys. I'm just gonna keep it short. I'm in protest of what's going on here.

50) Brianna Kapu Kekona [2:40:10]

Welina mai kākou. ʻO Kupa Kekona koʻu inoa. ʻumikūmāha oʻu makahiki a hele au i ke kula waena o Lahaina. I'm in support of this designation. After many years of listening to stories of beautiful streams that fed directly the beautiful lands of Lahaina. Streams that people and kids can only know the names of today. I witnessed many of the struggles that the loss of water has caused many Native Hawaiians and Native families. I hope that one day or know that one day, I will be able to sit with my kids and grandkids and the future

generation to come and tell them the stories of the beautiful streams of their hometown that they will be able to feed their land and sustain their kuleana lands off of. Mahalo.

51) Cal Chipchase [2:41:22]

Hi, I'm Cal Chipchase. I'm an attorney. It was nice to see a law student testifying, expressing her wisdom. I waited until the end to talk a little bit because I wanted to hear what everybody had to say. And I don't have that much to share, I work with the CWRM guys, I represent private owners mostly and these guys are great. I really respect them, and I respect the work that they do. All I would like to share is that I don't think the designation will do the things that a lot of folks think it will do. It will have the benefits a lot of folks think it'll have, and I think it'll have a lot of consequences, unintended consequences that folks don't think it'll have. And I hope that, as this process moves forward, everybody can be really open about that, and we can talk about those consequences and the real effects. And we have some information, my colleague Darene, if you can raise your hand, just some papers if anybody wants them or we're happy to pass them out to you guys afterwards. But I appreciate the opportunity to talk. I appreciate the opportunity to listen to you and I appreciate the opportunity to sit with you guys. Thank you very much.

52) Nameaaea Hoshino [2:43:04]

Aloha mai kākou. ʻO wau no ʻo Nameaaeʻa mai Lahaina mai o ka moku o ʻIhikapalamaewa, no ka ʻāina o Kahoma Kanahā na pili koko o Kauaʻula.

My name is Nameaaea Hoshino and for myself, I always look at myself as a historian and moʻolelo of our place. When we talk about these things with the state, and I support this process, but the issue for a lot of us when we talk about what the state has done, you have to look at the history of what overthrower came. These individuals who own these plantations who controlled our water is what's to understand; but a lot of our histories with our illegal diversions, all those things played a factor what these plantations has did to us. You cannot deny the fact that Pioneer Mill, A&B, the sugar plantations what it did to our water to divert, yes and I agree we don't want the state but also the thing that we're dealing with right now is the developers. That's a big issue for us because what is for future for generations if we continue to struggle every day and I work at Maui Nui Botanical Garden, I'm a kalo varieties manager and I share these type of stories of our kaikuana hāloa. When the last kalo falls, we fall. That's the whole point that a lot of our kuleanas wants to grow color but with the lack of resources that we have here, we're not sharing those types of things. And who's not being truthful? These are the things that I look at is the core issue for us especially for our families who wants to grow kalo wants to give back in the ʻaina. For myself, we had had loʻi in patches in Kauaʻula Valley. We had 24 loʻi and because of the development what they did, we couldn't cut off other families because of the lack of water it is providing us. Our ʻohana the Palakiko's, there were growing right below us. We

had 24 loʻi and because we didn't want to make him suffer, we had to leave. When you talk about history, think about what they did first; they locked up our queen was the plantation did that. Mahalo.

53) Keoni Palakiko [2:46:36]

Aloha, my name is Keoni Palakiko. I am a kalo farmer in Kauaʻula Valley and I'm in support of the water management because for too long I've witnessed mismanagement of our streams. It seems that if you get the money, you can pay off whoever you like, you can do whatever you like with the water. No more, us kanakas will witnesses this. I feel for my keiki, my future for my keikis because one day they're not gonna have ʻāina because of all this mismanagement. And right now, I get five patches running by water hose because we don't have enough water to bring down the ʻāina or the stream to us. I'm in support of this. Mahalo.

54) Suzette [2:47:40]

Aloha, my name is hello good evening my name is Suzanne Felicida. My ohana is from here, Mala. Our all the way up to Kanaha, Kahoma and Kauaula. The Haia ʻohana, Keahi, Neesman and also Felicida. Our families are all here in Lahaina. It is sad to see from generation to generation like we shared from Kai from Nameaai. Our family was up in Kanaha with our loi which no longer exists. It's there, we have to bring life, we're trying to get there again. We are now in Kahoma working along with our own ohana there. And this designation I believe will help us to flourish as our own resources for our kanaka. We have so much love for our ohana. We help each other, struggle. Like they said, you give up your land, if you give up water to get to the next family to help support them. You're there to help your ʻohana, you're not here to harm them. I am for this designation for the Lahaina Aquifer and Mahalo for giving me this opportunity. Kūʻē.

55) Troy Ballard [2:49:40]

Esteemed Commissioners, Mahalo for the opportunity to testify today in regards to the contemplated designation of the Lahaina Aquifer Sector. My name is Troy Wallace Ballard and I'm a proud graduate of the University of Hawaiʻi's William S. Richardson School of Law. I testify today in strong support for the designation of Maui Komohana's ground and surface water and believe it is the only option that CWRM has moving forward. There are countless reasons and established precedent, which support the decision to designate the Lahaina Aquifer Sector. Many of which have been expressed here tonight. From my perspective, in addition to the aforementioned reasons from so many folks here, I believe that CWRM decision to designate is a mandatory step in correcting a manifest injustice that is existing for nearly 130 years in Maui Komohana. The outright theft of land and in turn water from kānaka persists to this day at the malicious hands of developmental and corporate interests. What we have all witnessed is the deliberate and systemic cultural genocide of Native Hawaiians by those very interests. And for what? I ask the Commission. Water features, golf courses, pools, and perfectly

manicured lawns on multimillion dollar resorts and estates. It is unacceptable. While no redress could ever begin to atone for the generations of damage and trauma caused by the diversion and withholding of wai from kuleana families, CWRM can take an affirmative step in righting this 130 year wrong by fulfilling a moral, ethical, and legal duty to designate the Lahaina Aquifer Sector. The time is now for CWRM to do this, to exercise the jurisdiction they have, and act affirmatively and proactively. The criteria for designation have been met, the community has spoken, and the severity of this situation cannot be made more clear. Designation simply cannot wait. It cannot wait. As was aptly stated by Dr. Martin Luther King Jr. "We shall overcome, because the arc of the moral universe is long, but it bends towards justice." It is time for CWRM to further bend that arc and provide equitable water access and security for generations of kānaka in Maui Komohana. Mahalo nui.

56) Uilani Kapu [2:52:38]

Aloha, my name is Uilani Kapu. I am the secretary for Kuleana Kuʻikahi who had to scramble on April 13th to get an injunction against LIC. We came home to no water, the whole valley Kauaʻula. We had to call an emergency meeting to make sure everybody has access to it and had backups. I listened to everybody, and I sit here saying we applied for water through the state. They sent it back saying we have no jurisdiction in the area, its run by a private company. OK we did that, it's the legal process right? We're kuleanas, we grow our food. I sit here for my future. That's their ʻāina, it's not mine. My kuleana is Kahakuloa, Honokōhau, Kahoma; as my husband read out and the Kumuliʻi case. My kupuna is in there. I have water rights on the West side. The struggles of land and water that we have thrived through for years and years and years. I'm in favor of moratoriums of no developments. Show me the water bill; all of that needs to come back out again. We're going to kill ourselves slowly. My family has moved but they're not moving us. They're not moving my next generation and the generation after that. It is our kuleana, this is our home. The air, the birds, the plants, everything that's our kuleana as kanaka maoli of the ʻaina. Yes, we've struggled for years of identification of who we are as a people. Saying that we're lazy; no, we work strategy. We work from the morning, we take a break during the hot, and we work in the evening. That's sensible, that's reasonable – we no work 8 hours straight we don't take what is not needed. Everybody moving here doesn't have that concept that we do but we try ourselves to help them to understand, if you're going to move here you have to be sensible and you have to be sensitive to the police and the people of the land. I can't sit here listening to kanaka argue against each other. We all want to live here in peace-we all know the histories and struggles of our life. What are we going to do about it? Are we going to allow it to continue? Are we gonna stand up 'cause we don't want our kids to be here, we don't want our grandkids to be here? We want to solve the problem now, and that's my kuleana, my husband and I have made that pact, we're gonna fulfill our duties as kupuna for our kupuna and we're going to make it happen and do it right, Mahalo.

57) Kapali Keahi [2:58:00]

Aloha, my name Kapali Keahi. I speak on behalf of my little family. I belong to the families of the Lahaina, and I just want to say that I support the designation and I know where braddah ʻAimoku coming from. I understand the situation you guys know the situation that Hawaiians have in regard to the State of Hawaii and our long-held claims against the State of Hawaiʻi and the United States of America and the theft of our lands and overthrow of our Kingdom and usurpation of our resources by the plantations from our alii and from our people; we all know those things. Let's be clear here, this effort to protect our water resources has always been led by our people, by our community. The state of Hawaii has yet to prove themselves. But our people have been steadfast. Out alii told us to onipaʻa, despite over 100 years of forced assimilation, we still yearn for our Kingdom to rise again. We still yearn for our nation to come back. For our people to thrive once again as a nation and a people. We deserve respect. We come from an ancient culture. Has the plantations respected us? Hell no! They haven't respected us, and guess what? Their successors are riding proud on their coattails. Who are their successors? Not us. Plantations and developers are their successors. Understand we support this designation with conditions of course. Because we hope that this maybe the tool to help us do better things for our future and our children. We hope it will help make this land healthy again to help us to protect this ʻāina and our waters for future generations. Of course, that's a no brainer. We read all the writings on the walls of over population, overdevelopment, stupid development, as opposed to smart growth. Over terrorism but we tend to forget a lot of times where our people have experienced the US imperialism and settler colonialism always rising above. This is one way we can do and do it together. The state of Hawaii definitely has to prove themselves but we gotta prove ourselves too to do it.

58) Maile Shaw [3:01:20]

E pule kākou. E hosana e mililani e hoʻopōmaikaʻi he mai no kupuna, he mai ʻoe i na kupuna a pau i na tutu Analea anoʻi leʻa a me ke akua kou alo ma ʻaneʻi e lohe i kakou a pau e kaha mai e laina ku i naʻau, puʻuwai, ʻolelo, manaʻo ia ʻoukou a pau o na lani, o na kai, i na mea a pau, kupuna a pau, aumakua a pau, kupu lau a pau, kau keiki a pau. i ka inoa o kahi kolu, amene. \
You cannot have Aloha and anger, just cannot. I am Aunty tutu Maile Shaw. I'm the hiapo of David Napihe and Kalaleʻaleʻa. I am the granddaughter of George Palenapa Shaw, keiki kane of my tutu Haleakamaʻele Shaw. She is the kuaʻana like tutu Alice Kaehukai (married) Captain Bill Kaai who was a clerk, and my aunties were all ladies in waiting because of our tutu. We tend to be related to all by the design of ke akua. I thank you, each one of you for helping. We forget that Lahaina is where our teachers come from. I was sacred queen, Keopuolani when this church was Ebenezer. Through her to be 200 years baptized the only kanaka and 1st baptized and her fervent love is that Aloha i kekahi kekahi. I kau ʻolelo ka ʻaina ke aliʻi. Ke aliʻi i ʻai kau keiki. They're not the first board. We've been before many boards and although you have to get a permit from the PUC, the less trips through the state induced procedures for kanaka and for people, because we have people that don't understand Hawaiian, we don't understand German, we don't understand this, but we have heart and spirit. When you can make it where we can hear like tonight, be cool and e kala mai "Chee" from other side. Our island are exposed to two different; this is the heart, this is the law, this site. Lahaina wasn't only cool sun. This was the land of prophecy, ha or spirit. Don't disrespect the eternal spirit. It didn't mean a trickster for all of Pacific. In this eternal spirit is how we

hanau. We have all our soldiers the ‘iwi kupuna that we malama. For our people and for kanaka maoli. What came, and I know it will get better, that this is a step for betterment. There are suggestions, why perhaps the’re not equipped to answer or so I’m told. You could integrate a higher respect for all those on kuleana land. We are finding that those coming home from the mainland, they’re coming home to kuleana. And to also highlight when you want things to stand out highlight and define APURTENANT, kuleana. The English word writes don't fulfill the standing but things standing together like the old name here of Lele. You think it's ING from the first ray of dawn, it ends darkness. It is to olamau, not only do we remember our tutu, the hard work, we had all that, but always with Aloha. I’ll always told forgive one another. This room is very crowded right now in very grace and to remember that everyone is more than skin and bones that in these suggestions you mentioned there was a name Mahi Pono, I will mention a Peter Martin, pretty heavy duty. Cause when the name come, it's not so maikai. Though we always pule for every soul. Love that person, no like what they do, is very kanaka. When you have Aloha, we have forgiveness. When you have anger, it was to punch first talk later, but it's easier to be refined because even in the hana, we were not gender ID. If you can go in me and go hunt and feed, maikai. Not, you’re a boy, you gotta go shoot, and it's OK. Ka Wahine, stay put, I got it. Today, we all got it we finally kuka, not in the sense of uprisings; but all this that come out, at least will leave peace. Once you pau erupt, may there be no hilahila and that we leave with that thought, we're gonna hana like. It took us 100 years for get to our grace and our shortcomings before we had the lanakila on the east. From Honopou all the way Hana. Thank you for that red earth color.

59) Kahikilani [3:13:40]

Aloha mai kākou. ‘O Kahikilani Wahinemaika‘iopuna. No Lahaina mai au.

I am here tonight in support of the designation of the Lahaina Aquifer because it needs to happen. There needs to be some kind of control, better management over our waters here in the West Maui. It's been too long that it's been under control by the plantation. The plantation had it and now the developers have it. That’s just one and they’re all the same. Enough already. Time to give kānaka a chance and mahalo to all of you in CWRM for trying to work with all of us and upholding the constitution that you guys are governed by. That is much appreciated. I just want to support the aquifer designation because too long our kanaka had suffered. Pau already. We gotta try something new. So mahalo kākou, Mahalo ke akua, Mahalo kānaka, Mahalo nā kūpuna. A hui hou.

60) MJ McDonald [3:15:15]

Aloha. Mahalo for the opportunity to testify in strong support of designation. My name is MJ, and I have had the great privilege of learning from Maui Komohana communtiy members who are directly impacted by your decision. As a Kanaka and law student at the William S. Richardson School of Law, I’m grateful that the people of Hawai‘i chose to steward our freshwater resources as a Public Trust for present and future generations. But these constitutional protections are meaningless when IIFSs are not enforced, fines are not

assessed, and kanaka only get water once lawns are saturated and pools are filled. Tonight, we have heard folks say that designation is premature. These claims are concerning because they disregard the Precautionary Principle. As you know, the Hawai‘i Supreme Court in the Waiāhole Combined Contested Case adopted the precautionary principle as a corollary to the Public Trust, which your Commission stewards as a trustee. At bottom, the Precautionary principle mandates that if the science is unclear, you, the trustee, must favor resource protection. Put simply, your Commission does not have to produce data affirmatively showing harm to freshwater resources to designate. In fact, designating the Lahaina Aquifer Sector as a surface water and ground water management area is not only consistent with, but also likely required by, the precautionary principle and other Public Trust provisions given your Commission's findings. It is my understanding that you are also constitutionally mandated to protect and prioritize appurtenant and traditional and customary Native Hawaiian rights over private uses, like those of gentleman estates and LIC. As the trustee of our Public Trust, it is your duty to steward our water resources in a manner that is just for all communities, not just the wealthy ones. So, please vote to designate. Mahalo nui.

61) Meleana Shim [3:17:32]

Aloha, my name is Meleana Shim. Thank you for the opportunity to testify. I am kanaka. My ‘ohana is originally from Maui and I am a third-year law student. I am in strong support of designation. I stand with my classmates, MJ being one of them, who have highlighted the reasons why under the Public Trust Doctrine you have a responsibility to designate. The criteria has been met now. I want to address two things I have heard tonight. The first one, "It's not time yet," "This is premature." But isn't that what always happens to kanaka? You tell us it's not time yet, or worse yet, it's too late. But we won't let you tell us that anymore. This Lahaina community that I've had the pleasure of meeting this week and in the last six months. They've been waiting for too long. They have been waiting for water management for too long. They've been screwed over by private developers. We all know this since the developers arrived in Hawai‘i. That's no secret, so no, they can't wait. The time is now. And let me tell you, they are ready with their paperwork. The second thing, affordable housing. "For whom?" As someone said. We know, it's not me. And we know, it's not you. I have more debt than most people in this room and I know that wai and kalo come before me, come before all of us. And finally, I just want to elevate the voices of the keiki tonight. I had the opportunity to visit Lahaina Intermediate today, the 6th, 7th, and 8th graders. And I'm just so proud of them. You can see that they're the results of a strong and resilient community and their wonderful makua. I just want to commend all of you. They asked me "are you here to help us with our water?" I wasn't there to talk about any of this, and I said, "Why what do you need help with?" and they said, "We want wai" and I was like ok just look there and say that then, that's it. And then they asked, "Why do my parents have to say the same mo‘olelo over and over and over again?" But you know what? They know, that if they have to continue this work, they will. They know that this is a priority that wai and kalo come before them. So please listen to all of our voices. Mahalo.

62) Elena Bryant [3:20:11]

Aloha mai kākou. So, I have plenty notes from sitting here tonight listening to the concerns of the community and the ‘eha. I’m going to try to keep it together for you folks. My name is Elena Bryant. I’m a graduate of the William S. Richardson School of Law at UH Mānoa and I’m a proud graduate of the Ka Huli Ao Center for Excellence in Native Hawaiian Law. I, too, have a J.D. and I mean no disrespect to ‘Aimoku, but, as a product of Ka Huli Ao, I need to make one thing very clear: at Ka Huli Ao one thing we learn is that you don’t go into a community and disrespect the kupa of that community by acting like you know more than them because you have a J.D. I stand with the community in their request for designation. This is not an unintended consequence as others have suggested. The community is going into this process with eyes wide open, knowing the difficult process that lies ahead. Unlike the big Ag companies and development corporations, they can’t afford to hire the expensive attorneys to represent them through this process. But they go forward anyway because they’re tired. They’re tired of the way our Public Trust water resources are being mismanaged to the benefit of off stream uses at their expense. All that being said, I stand here today and testify as an attorney with Earthjustice. We’re an organization with experience advocating on behalf of communities like Waiāhole on Oʻahu, like Nā Wai ‘Ehā who seek restoration of healthy waters and waterways throughout Hawaiʻi pae ‘āina. At the outset we just wanna mahalo and applaud the Commission’s vision and foresight proposing designation of the entire Lahaina Aquafer Sector Area as a critical and necessary tool to manage Maui Komohana’s finite water resources proactively and comprehensively. The Commission taking the initiative to plan and proactively manage water resources from a global long-term perspective is exactly the kind of intergenerational approach to water resource management that’s essential to preserve Maui Komohana’s water future and combat the impacts of global warming. Earthjustice submitted written testimony, so I won’t go over all of that, but I do want to highlight a few key points and also in response to some of the statements that others have made tonight.

First, the Water Code sets forth criteria for the Commission to consider in designating a water management area. Under the Water Code and Hawaiʻi Supreme Court precedent the presence of just one criteria is sufficient to designate an area as a water management area. Here there’s multiple criteria that justify designation as both a ground and surface water management area. As previous testifiers stated, “You can’t argue with the criteria.” And I would agree, two of three of the surface water designation criteria are met, five of the eight criteria for designation of groundwater management areas are met. Designation requires just one. Designation is not premature, and I don’t want to go over all of the criteria, but I do want to highlight one important one. The Water Commission is required to consider the presence of serious disputes respecting the use of ground and surface water resources. In Maui Komohana conflicts among water users, stakeholders, and the protection of instream uses have persisted for more than a century and continue today. Complaints have been made to the Commission regarding the lack of stream flow, the waste of diverted surface water, the delivery of water, which can and has been shut down without notice, interim instream flow standards are not being met, water is diverted and prioritized for offstream uses while protected instream uses and kuleana families with superior rights don’t have enough water. These problems extend from Honokōhau to Ukumehame. In fact, in a docket currently before the Public Utilities Commission residents of Launiupoko’s gentlemen estates, whose irrigation water is supplied by Launiupoko Irrigation Company are crying foul and complaining about the state of their lawns, which they’ve compared to a “war zone.” Meanwhile kuleana families with protected instream uses and Public

Trust purposes lack sufficient water for their crops, their livestock, and even to shower and flush their toilets. This is not balanced management of water resources, and yet despite the laundry list of ongoing water disputes new proposed development seek to further divert streams. CBRE recently put out a 29-page real estate offering of a 216-acre parcel of land in Ukumehame with entitlement to build up to 48 single family homes on 45 agriculturally zoned residential estate lots. Despite the fact that Launiupoko is already at or near its sustainable yield and in Maui Komohana, there is a one-to-one relationship between ground and surface water management. What's most concerning about this proposed development is the advertised "dedicated freshwater stream" that purports to "produce water year-round and provide the agricultural subdivision with low-cost water source." These gentlemen estates circumvent county laws, they siphon water from West Maui streams, leaving streambanks dry and kuleana users wondering if they'll have enough water to maintain their loʻi kalo and meet their true domestic needs. Designation would give the Commission the necessary tools to correct the rampant misuse of Public Trust water resources and ensure consistency and integration between land use and water resources. Thank you.

63) Kailani Ross [3:26:45]

I am Kailani Ross. So, regarding wells, I am super opposed to wells for so many reasons. Just wanna say that no wells. Kiko pau. And that I am in support of the area (water) management, with conditions as Kapali said. We, the people need to make sure that accountability is in place and laws are followed, and even become the makers of those laws. That's all I wanted to say. Mahalo.

64) Elena Bryant [3:27:48]

My name is Elena Bryant testifying on behalf of Earthjustice. I just wanted to address comments I've seen that designation of just one or two hydrologic units is sufficient. It is not. I encourage this Commission to take to heart the important "lessons learned" in Nā Wai ʻEhā about the importance of including adjacent aquifers to ensure proactive and comprehensive management. Piecemeal designation would only encourage off stream users to jump artificially drawn boundaries, but Maui Komohana's hydrology is not confined by geographical barriers on a map. So, the best way to protect and comprehensively manage Maui Komohana's water resources is to designate the entire Latina Aquifer Sector Area.

Second, it has come to our attention that there has been an email circulating from private interest calling people to testify in opposition to the designation on the misplaced fear of what designation might do. The Hawaiʻi Supreme Court has made clear that water management area designations do not affect the interests of any potential water uses. These rights of individual water users are fully protected in the permitting process. And this type of fear mongering is not helpful, nor is it warranted, and it shouldn't detract from the law, the science, the precautionary principle approach that all clearly point to designation as the necessary approach to address the existing threats to Maui Komohana's water resources.

Lastly, some folks have expressed concern with the permitting process that follows designation. It is an imperfect process, and it takes a lot of work, especially for underrepresented parties like those testifying tonight. So, the fact that you have so many people asking for designation even with the understanding that it will take so much of their time, emphasizes how desperate the situation is in Maui Komohana. It is time to hoʻi ka nani, to preserve Maui's water future and designation is a vital part of that process. So, in sum, Earthjustice strongly supports the Commission's recommendation to designate Maui Komohana as both the ground and surface water management area. A hiki i ke aloha ʻāina hope loa.

5. ANALYSIS

5.1 CONSTITUTIONAL DUTY

Even though the Commission fulfilled its primary duty to establish interim IFS in the Lahaina ASA, public trust uses are threatened or remain unfulfilled. For example, community members voiced grave concern over the lack of available stream water and streamflow to cultivate loʻi kalo and to exercise traditional and customary Native Hawaiian practices that rely on water in its natural state, mauka to makai flow, and healthy native stream fauna.

The non-potable water needs of 2 mgd for current and foreseeable development and use of Hawaiian Home Lands as set forth in section 221 of the Hawaiian Homes Commission Act may be impacted by other off-stream non-potable uses in Kapalua and Kāʻanapali.

DHHL's written testimony outlined the benefits of designation for its beneficiaries; the increased legal protection of its surface and groundwater reservations by administrative rule and the requirement that water use permits are subject to the rights of DHHL. Additionally, DHHL's oral testimony also pointed out that the Commission's ability to regulate groundwater in non water management areas is limited to three factors, namely the existence/location of a well, its depth, and the amount of water that can be pumped. While the depth and instantaneous pump capacity (gallons per minute) are dictated by the Well Construction and Pump Installation Standards approved by the Commission, management of well location and amount of water use on a daily basis (gallons per day) can only be regulated in a designated WMA.

Designation expands the tools available to the Commission to proactively protect water resources and regulate reasonable and beneficial uses of water, including public trust purposes. The water use permit application process requires water users to disclose the purposes and amounts of their uses, which then are subject to the Commission's determination as to how to protect public trust uses affected by it.

Moreover, Maui DWS's assertion that its WUDP should substitute for designation cannot account for the fact that the Commission is the primary guardian of the public trust resources and uses and only the Commission has the authority to regulate well placement, pumping and water use. A WUDP is a plan and guidance document unlike the enforceable water use permitting regime of the Water Code that ensures due process rights. In its WUDP, Maui County also recognizes its limitations to regulate and plan for use of the other private water companies as these systems are not interconnected and each is independently operated and maintained.[119] "The private public water systems were requested to provide demand projections but most did not supply information."[120] Maui DWS's water use only accounts for 35 percent of the municipal groundwater use and 15

[119] *See* Maui WUDP Draft under 19.5.1. Water Use by Type, Municipal Use at page 34 of the Lahaina Aquifer Sector Area.
[120] Maui WUDP Draft under 19.6.4 Population Growth Based Water Demand Projections (20-Year), Private Public Water Systems Demand Projections at page 63 of the Lahaina Aquifer Sector Area.

percent of municipal surface water use.[121] There are six municipal water systems using either surface water, groundwater or both in the Lahaina Aquifer sector area, with "public water systems" as defined by the Department of Health (DOH) (systems serving more than 25 people or 15 service connections). See Table 1. The location of the public water systems is shown in Figure 2. Additionally, public testimony raised the concern that Maui DWS cannot ensure the protection of protected public trust instream uses, especially when the County themselves is not compliant with the interim IFS set for Kanahā Stream and has not returned streamflow.

5.2 PRECAUTIONARY PRINCIPLE

The precautionary principle requires that *scientific uncertainty "should not be a basis for postponing effective measures to prevent environmental degradation*."[122] Rather, the Commission as a trustee has a *duty to take anticipatory action to prevent harm to public resources. "[A]t minimum, the absence of firm scientific proof should not tie the Commission's hands in adopting reasonable measures designed to further the public interest.*"[123]

DHHL's written testimony highlights the Commission's constitutional duty to protect to protect water as a public trust resource before a crisis develops citing to the 1978 Constitutional Committee Report 77, pages 688-689, "[a]ccordingly, your Committee concluded that the Constitution should specify that the State holds the water resources in trust, with the responsibilities of a trustee to actively protect, control and regulate the development of water resources in the State. This concept implies not only the power to protect the resources but the responsibility to do so long before any crisis develops." This comports with research on the legislative history of the Water Code found a similar intent in the House Committee Report No. 348 on House Bill 35, that became Act 45 of the Session Laws of Hawai'i and established HRS Chapter 174C in 1987, "[t]o ensure that the availability of this precious resource will meet the present and future needs of the people, your Committee is of the opinion that the water code should serve as a tool and an incentive for planning the wise use of Hawaii's water resources, rather than as a water crisis and shortage management mechanism."

Additionally, DHHL's oral testimony cautioned that the "sustainable yield (SY) as calculated is the maximum amount of groundwater that can sustainably be withdrawn for future withdrawal, if wells are optimally placed, if recharge is evenly distributed, if wells are at the same depth and pump at the same rate, and recharge does not change over time." In the calculation of the current SY numbers for the aquifers in the Lahaina Aquifer Sector Area climate change has not been considered. The WRPP does recognize that further investigation in the rate of natural recharge for SY is needed. "Climate change and data from the last 25 years should also be included into recharge analysis."[124]

Given the data limitations, the time to act and take preventive measures to guarantee resource availability for future generations is now. It can be reasonably determined that there may

[121] Maui WUDP Draft under 19.5.1. Water Use by Type, Municipal Use at page 34 of the Lahaina Aquifer Sector Area.
[122] *Waiāhole I*, 94 Hawai'i at 154, 9 P.3d at 466.
[123] *Id.* at 155.
[124] Appendix F, WRPP (2019) at page 68.

a risk for the resource and the Precautionary Principle guides the Commission to err on the side of caution and to protect the resource with the enhanced management tools of the designation of a surface and ground water management area designation. Designation of a water management area will also require analysis and use of alternative water sources for non-potable uses, which may lead to a faster adoption of R-1 water use and infrastructure expansion.

5.3 STATE WATER CODE REQUIREMENTS

The State Water Code, HRS chapter 174C, part IV, Regulation of Water Use, proclaim that the Commission *shall* designate an area once a *reasonable determination* is made – based on scientific investigation and research – that water resources in an area are threatened by existing or proposed withdrawals or diversions of water. If determined, the Commission shall designate the area for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface waters in the area to ensure reasonable-beneficial use of the water resources in the public interest. HRS § 174C-41(a). (Emphasis added)

5.3.1 Surface Water Designation Criteria

Below are the criteria to be considered in designating an area for surface water use regulation along with staff discussion and conclusion.

5.3.1.1 HRS § 174C-45 (1)

> *Whether regulation is necessary to preserve the diminishing surface water supply for future needs, as evidenced by excessively declining surface water levels, not related to rainfall variations, or increasing or proposed diversions of surface waters to levels which may detrimentally affect existing instream uses or prior existing off stream uses. HRS § 174C-45 (1).*

Discussion:

Subsection (1) can be divided into two parts. The first part deals with the situation where there is evidence of excessively declining surface water levels not related to rainfall variations. The second part concerns increasing or proposed diversions of surface water levels which may detrimentally affect existing instream uses or prior existing off stream uses. "Existing instream uses", for the Lahaina ASA, would be those instream uses existing when the interim instream flow standards were set.

As referenced by U.S. Geological Survey's presentation at the Commission's meeting on January 18, 2022 Item A1, island-wide recharge is expected to decrease for the mid-century and dry-climate scenarios on the islands of Kauaʻi, Oahu, Molokaʻi, Lānaʻi, Maui, and Hawaiʻi. Reduction in recharge in the Lahaina Aquifer Sector area range between 6.8-67.0%. The recharge is comprised of rainfall. The rainfall data for the past decades documents a constant decline of rainfall, which is not just a rainfall variation. Thus, the surface water levels are excessively declining.

As for the second part of HRS § 174C-45 (1) there are no increasing or proposed diversions of surface water present in the whole Lahaina ASA. The Commission has set numeric interim IFS for Honokōhau, Honolua, Kahoma, Kanahā, Kaua'ula, Launiupoko, Olowalu, and Ukumehame stream, which lowered the amount that was previously diverted, except for Launiupoko streams.

Conclusion:

Criterion are met.

5.3.1.2 HRS § 174C-45 (2)

Whether the diversions of stream waters are reducing the capacity of the stream to assimilate pollutants to an extent which adversely affects public health or existing instream uses. HRS § 174C-45 (2).

Discussion:

DOH did not provide any comments related to this criterion in their response to CWRM's consultation request.

Conclusion:

The Commission staff cannot make a determination if this criterion is met.

5.3.1.3 HRS § 174C-45 (3)

Serious disputes respecting the use of surface water resources are occurring. HRS § 174C-45 (3).

Discussion:

Conflicts among water users, stakeholders, and the protection of instream values have persisted for generations. See, e.g., *Horner v. Kumuli'ili'i*, 10 Haw. 174 (1895). Starting in 2018, the Commission amended interim instream flow standards for nine perennial streams in the Lahaina District (Table 10). However, subsequent reductions in the availability of water to meet off-stream demand continue to strain existing water uses, including kuleana tenants and traditional and customary practitioners, and have led to additional conflicts. A number of informal (e.g., phone calls, letters, emails) and five formal complaints have been filed with the Commission regarding the lack of streamflow, the waste of diverted surface water, the delivery of water, and issues with diversion management from Honokōhau, Honokōwai, Kahoma, Kanahā, Kaua'ula, Launiupoko, Olowalu, and Ukumehame since 2018. In 2021 alone, Commission staff have fielded complaints for Honokōhau, Kahoma, Kanahā, Kaua'ula, Olowalu, and Ukumehame streams. The latest formal complaint was filed in December 2021 regarding waste of water in Kaua'ula.

At the Commission's January and February 2022 meetings, the written and oral testimony of community members in the Lahaina Aquifer Sector Area unanimously referenced serious

disputes over water and requested designation as proactive management. Testimony by the Hui Nā Mamo Aloha ʻĀina o Honokōhau, Nā Pāpaʻi Wawae ʻUlaʻula, the West Maui Preservation Association, the Sierra Club Maui Group, and the Hui o Nā Wai ʻEhā also evidence conflicts over water. The concerns raised include that established IIFS are not being met, water continues to be diverted and prioritized for off stream uses while protected instream uses and Kuleana families do not have sufficient amounts of water.

West Maui Preservation Association's written testimony outlined the historic and ongoing conflicts over water use in Ukumehame, Olowalu, Launiupoko, Kauaʻula, Kahoma, Kanahā, and Honokōhau while highlighting conflicts over surface and groundwater in the Launiupoko Aquifer that are part of a Docket before the Public Utilities Commission (PUC). In this Docket, LIC requests a rate increase to offset the cost of pumping groundwater, which LIC asserts is required to substitute the reduced available surface water for offstream uses. The Commission is not a party in the Docket, but staff has provided extensive public comment to the PUC on LIC's off stream uses, staff's data that indicate LIC's non-compliance with the IIFS for Kauaʻula stream and Notice of Alleged Violation (NOAV), and a new pump installation at the Lahaina A/B skimming well (State Well No. 6-5240-002). See Appendix M CWRM Public Comment to PUC December 17, 2021, and April 12, 2022.

Of the seven surface water hydrologic units in West Maui, six support loʻi kalo production downstream of former plantation diversions, and many of these streams provide excellent habitat for a number of native aquatic fauna.

In Ukumehame, the original ʻauwai was replaced by the plantation diversion and open ditch system, which has now been converted to pipelines. Two loʻi complexes are currently reliant on the operation of the plantation diversion for the delivery for water. In Olowalu, 12 loʻi managed by Olowalu Cultural Preserve are reliant on the operation of the former plantation diversion for the delivery of water. In Kauaʻula, the former Piʻilani ʻauwai was replaced by Kauaʻula Ditch and the hydropower penstock. Kuleana users who used the ʻauwai are now reliant on the operation of the plantation diversion for the delivery of water. Cultural practices along Kahoma and Kanahā streams are impacted by the operation of former plantation diversions which, despite the establishment of interim IFS, continue to impede cultural practices. As previously discussed, Kanahā stream is relied upon by the Maui DWS as a source of drinking water supply, while lands riparian to the stream continue to support agriculture. These uses are in direct conflict with the maintenance of stream flow for natural and cultural values. The former plantation diversions in Honokōwai remove water in excess of the current agricultural needs, impeding traditional and customary practices downstream. In Honokōhau, the former plantation diversion also removes water in excess of non-instream uses, with negative impacts to natural, cultural, and domestic uses in the stream. In some hydrologic units, households rely on the stream for domestic uses as well.

The latest conflict over LIC's operation of the diversion in Kauaʻula Stream that Kuleana tenants rely on as their only water source for their domestic uses and T&C practices was heard at the Commission April 19, 2022 meeting. See Appendix N.

Conclusion:

Criteria is met.

5.3.2 Ground Water Designation Criteria

Below are the criteria to be considered in designating an area for ground water use regulation along with staff discussion and conclusion.

5.3.2.1 HRS § 174C-44 (1)

Whether an increase in water use or authorized planned use may cause the maximum rate of withdrawal from the ground water source to reach ninety percent of the sustainable yield. HRS § 174C-44 (1).

Discussion:

Current and authorized planned uses of the Honokōwai and Launiupoko Aquifer Systems either exceed or approach 90% of sustainable yields and threaten the aquifer due to saltwater intrusion of the freshwater lens.

Conclusion:

Criteria is met.

5.3.2.2 HRS § 174C-44 (2)

There is an actual or threatened water quality degradation as determined by the department of health. HRS § 174C-44 (2).

Discussion:

Per consultation with the DOH, there are water quality issues within the Lahaina Aquifer Sector, but overwhelmingly these are problems from isolated legacy contaminants, including:

- 1-2-Dibromo-3-Chloropropane (DBCP)
- Ethylene Dibromide (EDB)
- 1-2-3-Trichloropropane (TCP)
- Hexachlorocyclopentadiene
- Carbon Tetrachloride
- Tetrachloroethylene (PCE)

Per DOH, these contaminants will not be made worse by increased groundwater withdrawals or water diversions. On the other hand, further development of West Maui may cause an increase in groundwater concentration of Nitrate and chlorides. DOH's assessment is that this criterion is only met for Honokōwai Aquifer System.

While DOH's analysis only indicates Honokōwai Aquifer System is approaching the maximum that can be sustained without degradation of water resources, Commission staff believe it's prudent to still manage water as a sector and larger region. Wells will need to shift

north and south of Honokōwai that may have further water quality impacts on these adjacent aquifers, with the possible additional discovery of legacy contaminants and increases in chlorides. Commission staff are also concerned that DOH's analysis only attributed rises in chlorides do to increase pumpage due to droughts and water shortage, but staff are already seeing a shift to groundwater wells sources, especially in Launiupoko, to meet non-potable needs as IIFS are updated throughout the region.

Conclusion:

Criteria is met.

5.3.2.3 HRS § 174C-44 (3)

Whether regulation is necessary to preserve the diminishing ground water supply for future needs, as evidenced by excessively declining ground water levels. HRS § 174C-44 (3)

Discussion:

As referenced by U.S. Geological Survey's presentation at the Commission's meeting on January 18, 2022 Item A1, island-wide recharge is expected to decrease for the mid-century and dry-climate scenarios on the islands of Kaua'i, Oahu, Moloka'i, Lāna'i, Maui, and Hawai'i. Reduction in recharge in the Lahaina Aquifer Sector area range between 6.8-67.0 %.

This reduction in recharge will most likely lead to diminishing ground water supply for future needs. Currently, there is no evidence for excessively declining ground water levels, but there may be a rise in the transition zone. The data is limited due to the fact that the Commission only has one deep monitoring well in the Lahaina ASA.

Conclusion:

Criteria is met.

5.3.2.4 HRS § 174C-44 (4)

Whether the rates, times, spatial patterns, or depths of existing withdrawals of ground water are endangering the stability or optimum development of the ground water body due to upconing or encroachment of saltwater. HRS § 174C-44 (4)

Discussion:

There is evidence that the current withdrawal rates of some wells are causing chlorides to increase from their initial chlorides when the wells were first developed. Most of these wells are spatially located in areas that pull water from the thin basal aquifer that sits above salt water, so the increased chlorides indicate some level of upconing and encroachment of saltwater. As indicated in the reported chloride data relative to pumpage, the time of pumpage is managed to an extent to manage increases in chlorides.

Conclusion:

The Commission staff cannot make a determination if this criterion is met.

5.3.2.5 HRS § 174C-44 (5)

Whether the chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses. HRS § 174C-44 (5)

Discussion:

Based on the 19 wells reporting chlorides in the Honolua, Honokōwai, and Launiupoko hydrologic units, the chloride content of some of these existing wells has increased to levels, surpassing 250 ppm, the maximum for safe drinking water as determined by the US EPA and Department of Health. This has led wells to be either discontinued completely or the pumping rate managed to such a degree as to materially reduce the value of their existing use.

Conclusion:

Criteria is met.

5.3.2.6 HRS § 174C-44 (6)

Whether excessive preventable waste of ground water is occurring. HRS § 174C-44 (6)

Discussion:

At this time, investigations are ongoing whether there has been excessive waste.

Conclusion:

Criteria not met.

5.3.2.7 HRS § 174C-44 (7)

Serious disputes respecting the use of ground water resources are occurring. HRS § 174C-44 (7)

Discussion:

Conflicts among surface water users also has direct implications for groundwater use. The Maui DWS drinking water supply is dependent on blending surface water and groundwater sources to meet current and future demand as well as limiting the chloride content of water supply to potable

standards[125]. Management decisions that affect one source (e.g., an interim IFS) are likely to have consequences for other sources (e.g., groundwater pumpage). Further, streams in West Maui have strong interactions with the groundwater[126]. Dike-impounded water may overflow directly to a stream at the ground surface where stream erosion has breached dike compartments. Once breached to the water table, the percentage of overall contribution to total stream flow depends on the head of the stored water, how deep the stream has cut into the high-level reservoir, the permeability of the lavas between dikes, the size of the compartments as well as connections to other compartments, and the amount of recharge into the breached compartment. Surface water and ground water interactions in these aquifers are assumed to have a one-to-one relationship for management purposes[127]. Streams that intersect the water table of the dike-impounded ground water body are commonly perennial because they are continually recharged by the ground water body.[128] A stream that receives ground water discharge is called a "gaining" stream. In general, the flow increases as one moves downstream within dike zones. The development of a system to capture dike-impounded ground water can affect natural springs and reduce the amount of spring flow that feeds the perennial streams in the upper reaches, resulting in diminished streamflow. An example of where such streamflow impacts have occurred is in the Windward Oʻahu watersheds affected by the Waiāhole Ditch system of tunnels and ditches.[129]

The current PUC Docket, 2020-0089, regarding LIC's rate increase request involves a dispute over the use of ground water in the Launiupoko aquifer to substitute stream flow from Kauaʻula Stream.

Conclusion:

Criteria is met.

5.3.2.8 HRS § 174C-44 (8)

Whether water development projects that have received any federal, state, or county approval may result, in the opinion of the Commission, in one of the above conditions. HRS § 174C-44 (8)

Discussion:

The wells refenced as "other permitted well capacity" have received a WCPIP from the Commission and in the completion stage of construction/pump installation. The majority of these wells are not included in the County's authorized planned use calculations due to the factor that most of these wells are either drilled by individual homeowners and/or for non-potable purposes.

[125] Maui WUDP 2019 Draft, p. 74.
[126] Cheng, C.L. 2014. Low-flow characteristics of streams in the Lahaina District, West Maui, Hawaiʻi. U.S. Geological Survey Scientific Investigations Report 2014-5087.
[127] State of Hawaii Water Resource Protection Plan. Adopted July 2019. Appendix F. Inventory and Assessment of Resources, p. 17. http://files.hawaii.gov/dlnr/cwrm/planning/wrpp2019update/WRPP_AppF_201907.pdf
[128] Oki, D.S. 2003. Surface Water in Hawaii. U.S. Geological Survey Fact Sheet 045-03, 6 p.
[129] Izuka, S.K., and Gingerich, S.B. 1998. Groundwater in the Southern Lihue Basin, Kauai, Hawaii. U.S. Geological Survey Water-Resources Investigations Report 98-4031, 71 p.

The potential full usage of these wells when run at maximum capacity for twenty-four hours needs to be included in the calculation of the existing and planned use under HRS § 174C-44 (1).

Conclusion:

Criteria is met.

5.4 CASE LAW REQUIREMENTS

Waiāhole I:

- *Commission can consolidate the regulation of a single system because it comports with the Commission's function of comprehensive water planning and management.*[130] *The Court ruled that the areas covered by the ditch system are to be considered hydrologically controllable irrespective of hydrologic units under HRS § 174C-50 (h) which deems uses between existing users as competing when water is drawn from a hydrologically controllable area.*[131]
- *Direct interrelationship between ground and surface waters*.[132]

The Honokōhau ditch system crosses multiple surface and ground water hydrologic units, namely Honokōhau, Honolua, Honokahua, Kahana, Honokōwai, and Wahikuli. Honokōhau Stream water is diverted to provide for non-potable needs in these units and to supplement potable needs that the underlying groundwater units of Honokōwai and Honolua cannot provide.

The ditch system also transfers development tunnel water from Kahoma across the ground water hydrologic unit boundary between Launiupoko and Honokōwai. A crossover between surface water hydrologic units also exists between Kahoma and Kaua‘ula and Kaua‘ula and Launiupoko.

Streams in West Maui have strong interactions with the groundwater. Surface water and ground water interactions in these aquifers are assumed to have a one-to-one relationship for management purposes. To accomplish a comprehensive water resource management, designation of all hydrologic units, surface and ground is warranted.

Public testimony lauded this comprehensive approach and intent to designate both surface and ground water WMA for all aquifer and hydrologic units in the Lahaina Aquifer Sector Area. Additionally, multiple testimony highlighted that only designating Honokōwai and Launiupoko Aquifer would not protect the aquifer because there are no geographical barriers (arbitrary) in the Lahaina Aquifer Sector Area and the aquifer is a thin as it does not hold recharge in place as the ‘Īao aquifer.

DHHL's oral testimony specifically provided an example for the need to designate adjacent aquifers; in 2004, shortly after the Commission decided against the designation of the Waihe‘e

[130] *Waiāhole I*, 94 Hawai‘i at 174, 9 P.3d. at 486.
[131] *Id*.
[132] *Waiāhole I*, 94 Hawai‘i at 173, 9 Pd.3 at 485.

aquifer, which borders the designated ʻĪao aquifer, a new well construction permit application was received with the well location being right next to the aquifer boundary.[133]

This example describes the 2004 February Commission meeting, where the Commission rescinded automatic triggers for the designation of Waiheʻe aquifer that were set in November 2002 and limited the amount of MDWS's pumpage from the Waiheʻe aquifer from 4.5 mgd to 4 mgd via a memorandum of agreement (MOA).[134] Only three months after the Commission's attempt to limit the amount withdrawn from Waiheʻe aquifer due to concerns about well spacing and stress on the aquifer, the Commission approved the new well construction and pump installation permit (WCPIP) of Koolau Cattle Company (Randy Betsill), Waihee Equestrian well (Well No. 5731-06), at its May 2004 meeting because the Waiheʻe aquifer was not a designated WMA and the Commission staff believed that it lacked the authority to deny this permit request due to applicant's correlative rights.[135] In the same year, Koolau Cattle Company applied for an additional WCPIP, Waihee Equestrian II well (Well No. 5731-07). This permit did not come before the Commission due to the Commission's delegation of WCPIP to the chairperson in 1997 to issue WCPIP administratively; the first application was brought to Commission to highlight issues with MDWS MOA and the recent history of the Waiheʻe aquifer system. To date, four additional wells have been drilled in the Waiheʻe aquifer with two pending completion approval.

The limitations of only designating the ʻĪao aquifer serve as a *"lesson learned"* and further justify including adjacent aquifers for proactive and comprehensive management, especially due to decline in recharge because of the climate crisis.

The case law requirements established by the Hawaiʻi Supreme Court are met.

6. CONCLUSION

It can be reasonably determined that water resources in the Lahaina ASA may be threatened by existing and proposed withdrawals. The Commission must designate the Lahaina ASA for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface waters in the Lahaina ASA to ensure reasonable-beneficial use of the water resources and protection of public trust uses.

[133] Oral testimony by Dr. Jonathan Likeke Scheuer on behalf of DHHL.
[134] While minutes reflect an MOA, staff have been unable to locate any MOA document in CWRM files.
[135] *See* Minutes for CWRM Meeting, May 19, 2004, at pages 5-8, https://files.hawaii.gov/dlnr/cwrm/minute/2004/mn20040519.pdf

REFERENCES

Cheng, C.L., 2014, Low-flow characteristics of streams in the Lahaina District, West Maui, Hawai‘i: U.S. Geological Survey Scientific Investigations Report 2014–5087, 58 p., http://dx.doi.org/10.3133/sir20145087.

County of Maui Department of Planning Long Range Planning Division, March 2020; https://www.mauicounty.gov/DocumentCenter/View/8334/Development-Projects-Kapalua---North-Lahaina?bidId= https://www.mauicounty.gov/DocumentCenter/View/8335/Development-Projects-Ukumehame---South-Lahaina?bidId=

Elison Timm, O., *et al*. 2015. Statistical downscaling of rainfall changes in Hawai‘i based on the CMIP5 global model projections. Journal of Geophysical Research: Atmospheres, 120(1): 92-112.

Frazier, A.G., and T.W. Giambelluca. 2017. Spatial trend analysis of Hawaiian rainfall from 1920 to 2012. International Journal of Climatology, 37(5): 2522-2531.

Gingerich, S.B., 2008, Ground-water availability in the Wailuku area, Maui, Hawai‘i: U.S. Geological Survey Scientific Investigations Report 2008-5236, 95 p. [http://pubs.usgs.gov/sir/2008/5236/].

Gingerich, S.B., and Engott, J.A., 2012, Groundwater availability in the Lahaina District, West Maui, Hawai‘i: U.S. Geological Survey Scientific Investigations Report 2012–5010, 90 p., available at http://pubs.usgs.gov/sir/2012/5010/.

Glenn, Craig R., Robert B. Whittier, Meghan L. Dailer, Henrieta Dulaiova, Aly I. El-Kadi, Joseph Fackrell, Jacque L. Kelly, Christine A. Waters, Jeff Sevadjian. 2013. “Lahaina Groundwater Tracer Study – Lahaina, Maui, Hawaii.” *Final Report prepared from the State of Hawaii Department of Health, the U.S. Environmental Protection Agency, and the U.S. Army Engineer Research and Development Center*.

https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals

In re Wai‘ola o Moloka‘i, 103 Hawai‘i 401, 431, 83 P.3d 664, 694 (2004). (*Wai‘ola)*

In re Water Use Permit Applications, 94 Hawai‘i, 97, 139, 9 Pd.3, 409, 451 (2000). (*Waiāhole I*)

Izuka, S.K., Engott, J.A., Rotzoll, Kolja, Bassiouni, Maoya, Johnson, A.G., Miller, L.D., and Mair, Alan, 2018, Volcanic aquifers of Hawai‘i—Hydrogeology, water budgets, and conceptual models (ver. 2.0, March 2018): U.S. Geological Survey Scientific Investigations Report 2015-5164, 158 p., https://doi.org/10.3133/sir20155164.

Izuka, S.K., and Gingerich, S.B. 1998. Groundwater in the Southern Lihue Basin, Kauai, Hawaii. U.S. Geological Survey Water-Resources Investigations Report 98-4031, 71 p.

Ka Pa‘akai o Ka ‘Aina v. Land Use Comm’n, 94 Haw. 31, 42, 7 P.3d 1068, 1079 (2000) (“*Ka Pa‘akai*”)

Kauai Springs, Inc. v. Planning Comm’n of Kaua‘i, 133 Hawai‘i 141, 172, 324 P.3d 951, 982 (2014)

Kolja Rotzoll, Aly I. El-Kadi, Stephen B. Gingerich, 2007 Estimating Hydraulic Properties of Volcanic Aquifers Using Constant-Rate and Variable-Rate Aquifer Tests, Volume 42, Issue2, April 2007, Pages 334-345.

Ko'olau Agricultural Co., Ltd. v. Comm'n on Water Res. Mgmt, 83 Hawai'i 484, 490, 927 P.2d 1367, 1373 (1996) ("Ko'olau Ag.").

Luo, X., Wang, B., Frazier, A. G.,& Giambelluca, T. W. (2020). Distinguishing variability regimes of Hawaiian summer rainfall: Quasi-Biennial and interdecadal oscillations. Geophysical Research Letters, 47, e2020GL091260

Mair, A. *et al*. 2019. Estimated groundwater recharge from a water-budget model incorporating selected climate projections, Island of Maui, Hawai'i. USGS SIR 2019-5064.

Maui DWS Final Water Use and Development Plan (Ordinance 5335), https://waterresources.mauicounty.gov/DocumentCenter/View/608/Ord-5335

McBryde Sugar Co. v. Robinson, 54 Haw. 174, 504 P.2d 1330 (1973). (McBryde)

Meyer, W., and Presley, T.K. 2001. The Response of the Iao Aquifer to Ground-Water Development, Rainfall, and Land-Use Practices Between 1940 and 1998, Island of Maui, Hawaii; Water-Resources Investigations Report 2000-4223. 10.3133/wri20004223

Mink, 1980; Mink, J.F., 1981, Determination of Sustainable Yields in Basal Aquifer, in: *Groundwater in Hawaii-A Century of Progress,* Book published by the Water Resources Research Center, University of Hawaii at Mānoa, pp.101-116.

Nā Wai 'Ehā, 128 Hawai'i at 247, 287 P.3d at 148

Oki, D.S. 2003. Surface Water in Hawaii. U.S. Geological Survey Fact Sheet 045-03, 6 p.

Public Access Shoreline Haw. v. Haw. Planning Comm'n, 79 Hawai'i 425, 437-442, 447-51, 903 P.2d 1246, 1258-63, 1268-72 (1995) ("*PASH*")

Reppun v. Board of Water Supply, 65 Haw. 531, 560 n. 20, 656 P.2d 57, 76 n. 20 (1982) (*Reppun)*

Robinson v. Ariyoshi, 65 Haw. 641, 674-76, 658 P.2d 287, 310-11 (1982)

Rotzoll, K., El-Kadi, A.I., and Gingerich, S.B. 2007. Estimating hydraulic properties of volcanic aquifers using constant-rate and variable-rate aquifer tests. Journal of the American Water Resources Association, 43(2): 334-345.

State of Hawaii Water Resource Protection Plan. Adopted July 2019. Appendix F. Inventory and Assessment of Resources, p. 17. http://files.hawaii.gov/dlnr/cwrm/planning/wrpp2019update/WRPP_AppF_201907.pdf

Stearns, H.T., MacDonald, G.A. 1942. Geology and Ground-water Resources of the Island of Maui, Hawaii. Bulletin of the Division of Hydrography, 7.

A Study to Investigate the Operation of the Kā‘anapali Water Corporation Domestic Water System, December 11, 1998.

USGS Scientific Investigations Report, 2015-5164. https://pubs.er.usgs.gov/publication/sir20155164

USGS Hawaii Division of Hydrography Bulletin. 1942. Bulletin 7. https://pubs.usgs.gov/misc/stearns/Maui.pdf

Xue, L., Wang, Y., Newman, A.J. *et al.* How will rainfall change over Hawai‘i in the future? High-resolution regional climate simulation of the Hawaiian Islands. *Bull. of Atmos. Sci.& Technol.* 1, 459–490 (2020). https://doi.org/10.1007/s42865-020-00022-5

Yamanaga, G., Huxel Jr., C.J. 1970. Preliminary report on the water resources of the Wailuku area, Maui. Hawaii. Division of Water and Land Development. Circular ; C61.

APPENDIX

Appendix	Content
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