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TESTIMONY OF KALI WATSON, CHAIRMAN HAWAIIAN HOMES COMMISSION (HHC)

U.S. SENATE COMMITTEE ON INDIAN AFFAIRS – OVERSIGHT HEARING ON "WATER AS A TRUST RESOURCE: EXAMINING ACCESS IN NATIVE COMMUNITIES."

September 27, 2023

Aloha Chairman Schatz, Vice Chairman Murkowski, and Members of the U.S. Senate Committee on Indian Affairs:

Thank you for inviting me to testify on behalf of the Department of Hawaiian Home Lands (DHHL) at your Oversight Hearing entitled "Water as a Trust Resource: Examining Access in Native Communities." DHHL is governed by the Hawaiian Homes Commission Act of 1920 (HHCA), enacted by the U.S. Congress to protect and improve the lives of native Hawaiians.[1] Spearheaded by Prince Jonah Kūhiō Kalaniana'ole, the HHCA set aside public lands, called Hawaiian Home Lands, to establish a rehabilitative program for native Hawaiians.[2] Under the HHCA, native Hawaiians may obtain 99-year homestead leases at $1 per year for residential, agricultural or pastoral purposes. Indeed and as my testimony will explain, access to water has been and remains a critical barrier in fulfilling the purposes of the HHCA. As detailed in my testimony, if DHHL is to fulfill the requirements of the Act we will need access to tens of millions of additional gallons of water per day, which will require hundreds of millions of dollars in investment to develop.

My testimony is divided into four main parts. In Part 1, I explain how water accessibility issues have been central to our struggle, even before the passage of the HHCA and to this day. Part 2 details the various Federal, State and Local policies that have attempted to address our water accessibility issues. Part 3 reviews the types of water accessibility issues we face, our calculated demands for water, water reservations held, and our known and estimated costs to develop needed water sources and systems. Part 4 summarizes how water is an essential trust asset for fulfillment of the HHCA.

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[1] Hawaiian Homes Commission Act, 1920, Pub. L. No. 67-34, 42 Stat. 108 (1921), https://www.doi.gov/sites/doi.gov/files/uploads/Act-of-July-9-1921-42-Stat-108.pdf.

[2] The HHCA defines a native Hawaiian as any descendant of not less than one-half part of the blood of the races inhabiting the Hawaiian Islands previous to 1778.

Part 1: Background on the HHCA and Water Accessibility Challenges

As contained in the Congressional Record and well documented by scholars[3], passage of the HHCA by Congress took many years of effort by Delegate Kalaniana‘ole, was controversial both in Hawai‘i and in Washington D.C., and required multiple compromises in order to secure passage. One of the key areas of controversy and compromise had to do with the dry and remote nature of the lands to be set aside in the Act and the difficulty homesteaders would face in water accessibility. This was discussed before the US Senate Committee on the Territories in December 1920 as they considered HR 13500, which became the HHCA. A written submittal to the Committee was provided by Albert Horner, a noted agricultural expert, who said in part:[4]

> You will note that all ‘cultivated sugar-cane lands’ are excluded from ‘available lands’…thus confining the lands available for the rehabilitation project to those upon which it is not possible for the Hawaiian or anyone else to make good. In short, it gives the plantation all arable and the Hawaiians all arid lands.

As it stands today, most of DHHL’s lands are located on the neighbor islands in rural or more remote locations with over half of the acreage on the island of Hawai‘i[5], including over 56,000 acres on the slopes of Mauna Kea and over 11,000 acres at the southernmost point in both the Hawaiian Islands and US.[6] With over 30,000 acres on Maui,[7] a significant portion of those lands include over 22,000 acres on the dry southern flank of Haleakalā at Kahikinui with elevation ranges from sea level to 9,700 feet near the summit.[8] DHHL’s lands on Moloka‘i consist of over 25,000 acres of which over half of those lands at Ho‘olehua is a rural agricultural community ranging from level plains to

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[3] See for instance McGregor, Davianna Pōmaika’i. 1990. “‘Aina Ho‘opulapula: Hawaiian Homesteading.” Hawaiian Journal of History. Vol. 24.
[4] The 1920 U.S. Senate Committee on the Territories Hearing on H.R. 13500 to Establish the Hawaiian Homes Commission, https://www.doi.gov/sites/doi.gov/files/uploads/HHCA-House-Hearing-Dec-14-1920-for-HR-13500.pdf
[5] DHHL Hawaii Island Plan (May 2002), https://dhhl.hawaii.gov/wp-content/uploads/2012/05/Island_Plan_Hawaii_2002.pdf.
[6] South Point Resources Management Plan (October 2016), https://dhhl.hawaii.gov/wp-content/uploads/2017/06/DHHL-South-Point-Final-Plan_101916_to-DHHL_low-res.pdf.
[7] Maui Island Plan (September 2004), https://dhhl.hawaii.gov/wp-content/uploads/2012/05/Island_Plan_Maui_2004.pdf.
[8] Kahikinui Regional Plan (July 2011), https://dhhl.hawaii.gov/wp-content/uploads/2011/06/Kahikinui_RP_110711.pdf.

rolling hills and sea cliffs at the northern coastal boundary.[9] Kaua'i includes over 20,000 acres of Hawaiian Home Lands with over 15,000 acres in Waimea, of which two thirds of the area is described as steep, mountainous terrain and isolated valleys.[10] O'ahu, the island with the greatest demand of applicants looking for homestead opportunities has the least amount of land with just over 8,000 acres, of which over 1,400 acres is designated conservation primarily consisting of the steep cliffs along the Ko'olau.[11]

Awareness of the water access challenges for Hawaiian Home Lands continued through the territorial period, and concerns about how access related to larger issues of equity were just as prominent in the 1950s as they were in the 1920s. In 1957, then territorial Delegate to Congress (and later Governor) John Burns raised concerns about water access for Hawaiian Home Lands. A contemporary news account noted his concern with obtaining water for planned homestead development in Waimānalo, O'ahu. The Hawaiian Homes Commission had been told by the water utility that there was insufficient source, and yet the paper went on to note "Many are asking why this could be when Harold Castle's Kaneohe Ranch is getting ample water for [its] subdivisions and is planning more subdivisions with hundreds of homes."[12]

The first responsibility to fulfill the Act and address its water accessibility and other challenges fell to the federal government, which served as the sole trustee of the Hawaiian Home Lands program until Statehood. As required by the Admission Act of 1959[13] and as a compact with the United States, the State and the people of Hawaii adopted the HHCA as a provision of the State Constitution and agreed to faithfully carry out the spirit of the HHCA.[14] The Admission Act provides that the United States continues to have oversight responsibilities over the HHCA and certain amendments

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[9] DHHL Molokai Island Plan (June 2005), https://dhhl.hawaii.gov/wp-content/uploads/2012/05/Island_Plan_Molokai_2005.pdf and 2019 Molokai Regional Plan, https://dhhl.hawaii.gov/wp-content/uploads/2020/02/Molokai-Regional-Plan-Update-Final_02-18-20_HHC.pdf.
[10] Kauai Island Plan (May 2004), https://dhhl.hawaii.gov/wp-content/uploads/2012/05/Island_Plan_Kauai_2004.pdf.
[11] Oahu Island Plan (July 2014), https://dhhl.hawaii.gov/wp-content/uploads/2013/04/DHHL-OIP-Final-140708.pdf.
[12] Honolulu Record, Volume 10 No. 19, Thursday, December 5, 1957 p. 1. https://www.hawaii.edu/uhwo/clear/HonoluluRecord/articles/v10n18/Hawaiians%20Kept%20Off%20Land%20By%20Suburban%20Water%20Stall%20System%20Supplies%20Subdivides%20but%20Not%20Homesteads.html
[13] Hawaii Admission Act, Pub. L. No. 86-3, 73 Stat. 4 (1959), https://www.doi.gov/sites/doi.gov/files/uploads/An-Act-to-Provide-for-the-Admission-of-the-State-of-Hawai.pdf.
[14] HAW. CONST. ART. XII § 1-2 (1978), https://www.capitol.hawaii.gov/hrscurrent/Vol01_Ch0001-0042F/05-Const/CONST_0012-0001.htm and https://www.capitol.hawaii.gov/hrscurrent/Vol01_Ch0001-0042F/05-Const/CONST_0012-0002.htm.

may be made only with the consent of the United States. Thus, the United States and the State assumed the duties of a trustee for native Hawaiians under the HHCA. Primary responsibility for the management and administration of the Hawaiian Home Lands program rests with DHHL, a principal department of the State subject to State and Federal laws.

Section 101 of the HHCA establishes the purpose of the Act as a device to enable native Hawaiians to return to their lands to fully support self-sufficiency for native Hawaiians and the self-determination of the native Hawaiians while preserving the values, traditions, and culture of native Hawaiians. This philosophy can only be attained by first making the lands delineated to DHHL usable. In particular this section notes that a principal purpose of the Act is "Providing adequate amounts of water and supporting infrastructure, so that homestead lands will always be usable and accessible."

To the degree that water accessibility and other challenges have been successfully overcome, credit goes not only to Federal and State efforts but to the homestead lessees themselves. As noted by Molokaʻi homesteader, farmer, and scholar Glenn Teves:[15]

> If these early pioneers didn't succeed, the Hawaiian Homes Commission Act would be rescinded. Through perseverance, and against all odds, they succeeded, and personal homestead journals of this era speak of fasting and praying for rain to assure success in their plantings. In the late 1920's, state and federal officials visited Hoʻolehua and saw the success of crops growing. As a result, the Act was deemed a success and the program was made permanent. It was through the determination of these early pioneers that the Hawaiian Homes Commission Act exists today.

Along with developing new homesteads, DHHL also has other critical, albeit lesser-known responsibilities. Akin to a County, DHHL maintains and repairs existing infrastructure (e.g. clearing of flood channels and drainage, fire protection of all lands, roads and facilities maintenance, sewer emergencies and repairs, etc.) In addition to County-like responsibilities, DHHL also performs water utility functions as part of its efforts to address water accessibility challenges. DHHL owns and operates three regulated public water systems on Molokaʻi, Kauaʻi, and Hawaiʻi islands. Together, the

[15] See pp. 2 in Teves, Glenn. ʻĀina Hoʻopulapula: The Hawaiian Homes Act Going Forward. Molokai Native Hawaiian Beginning Farmers Quarterly (Summer 2022).

systems have a total of 826 meters serving approximately 2,500 individuals (not including the schools and airport that are supported by the Molokaʻi system). DHHL also owns and operates a non-potable water system for stock watering purposes in Puʻukapu and soon to be constructed non-potable water system in Honokaia, both on Hawaiʻi Island. These non-potable water systems are designed to service over 200 connections.

The mission of DHHL is to manage the Hawaiian Home Lands Trust effectively and to develop and deliver land to native Hawaiians. Today, DHHL is responsible for the management of approximately 200,000 acres of these trust lands, 9,997 homestead leases statewide, and 47,036 lease applications.[16] Addressing this long list of lease applications will depend in significant part on continuing to address problems of water accessibility. There are some Federal, State, and County policies that have been enacted which are intended to address these and I will review those next.

Part 2: Federal, State and County Policies Addressing DHHL Water Accessibility

Federal Policies

DHHL and native Hawaiian beneficiaries of the HHCA do not enjoy access to all the same programs, laws, and court rulings that are available in Indian Country. Notably, Hawaiʻi Courts have ruled that the "Winters Doctrine" (which protects a reservation of water established as of the date the federal government created the reservation involved) does not apply to Hawaiian Home Lands.[17]

Programs that provide for funding in Indian County for water accessibility through the Indian Health Service does not extend to Hawaiian Home Lands. However, there is some availability for funding for DHHL water projects through the United States Department of Agriculture (USDA) and the Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA).

[16] Lease and application counts as of 8/31/2023. An applicant can hold a maximum of two applications, one for a residential lease and the other for either an agricultural lease or pastoral lease. The 47,036 lease applications are held by less than 29,000 native Hawaiian applicants.
[17] In re Waiola o Molokai, 103 Hawaiʻi 401, 83 P.3d 664 (2004). However, water reservations under state law are allowed, discussed further below.

State Policies

Water in Hawai‘i is held as a public trust resource, a status which derives from laws in the Hawaiian Kingdom as well as common law, case law, and State Constitutional provisions.[18] A number of laws and policies at the State level have been enacted and / or ruled on which, at least in black letter law, provide mechanisms for addressing the water needs of native Hawaiians on Hawaiian Home Lands. Chief among these are provisions of the State Water Code (HRS 174C). Key mechanisms in the Water Code which address DHHL water accessibility include:

- HRS 174C-101, “Hawaiian Water Rights” which provides in part that “Decisions of the commission on water resource management relating to the planning for, regulation, management, and conservation of water resources in the State shall, to the extent applicable and consistent with other legal requirements and authority, incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act.” This has allowed DHHL to work with the State of Hawai‘i’s - Department of Land and Natural Resources (SOH – DLNR) Commission on Water Resource Management (CWRM) to reserve water for DHHL across the archipelago.

- HRS 174C-49(e) which provides in designated water management areas, all permits issued “shall be subject to the rights of the department of Hawaiian home lands as provided in section 221” of the HHCA. Currently these permits are required for groundwater and surface water only in a portion of the state.[19]

- HRS 174C-31 requires the development of a multi-part Hawai‘i Water Plan (HWP). The Plan consists of five component parts including a Water Resource Protection Plan, Water Quality Plan, State Water Projects Plan, Agricultural Water Use and Development Plan, and Water Use and Development Plans for each County. Provision (q) of this part requires that in each of these Plans “...each county and the commission shall incorporate the current and foreseeable development and use needs of the department of Hawaiian home lands for water as provided in section 221 of the Hawaii Homes Commission Act.”

[18] See for example D. Kapua‘ala Sproat, From Wai to Kānāwai: Water Law in Hawai‘i, in Native Hawaiian Law: A Treatise (Second Edition of the Native Hawaiian Rights Handbook) (MacKenzie, Serrano, & Sproat eds., 2015).
[19] See https://files.hawaii.gov/dlnr/cwrm/maps/wmainfo.pdf

Some progress has been made in implementing these provisions since passage of the Code in 1987 and key amendments addressing DHHL water access issues in 1990. For instance, in 2015 CWRM reserved water for DHHL outside of a water management area. The 2017 update to the State Water Projects Plan specifically focused on DHHL water needs for nearly all of its landholdings, which provided information allowing for additional water reservations to be made.[20]

Though DHHL has some reservations granted by CWRM, the reservation process is still incomplete. DHHL has twenty-seven reservations as of November 2022. DHHL has submitted additional reservation requests and continues to calculate additional reservations for tracts. Triggers for CWRM considering water reservations include establishing new Interim Instream Flow Standards (which determine how much water should remain in streams for instream beneficial and public trust uses), adoptions of components of the HWP, designation of Water Management Areas, and State issuance of water licenses / leases.

Generally speaking, consistent underfunding and understaffing of CWRM compared to its vast duties has hindered DHHL interests, as it has slowed progress on the many triggering actions that would require adoption and / or enforcement of DHHL water needs and reservations. In addition, it is important to note that CWRM has often had their initial decisions overruled by State appellate courts, often for failing to protect native Hawaiian water rights, including the rights of DHHL and its beneficiaries.[21]

Other State legal provisions taking into account DHHL water accessibility challenges and rights are also noteworthy. These include:

- HRS 171-58(g), which requires that water dispositions by the State must be preceded by a reservation of water for DHHL sufficient for foreseeable needs.

- HRS Chapters 167 and 168, regarding the Molokai irrigation system, which protect DHHL and homesteader interests in that system.

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[20] State Water Projects Plan Update (May 2017), https://files.hawaii.gov/dlnr/cwrm/planning/swpp2017.pdf

[21] See pp. 97-98 *in* Scheuer, J. L. and B. K. Isaki, 2021. Water and Power in West Maui. Lahaina: North Beach West Maui Benefit Fund.

- Hawai'i Supreme Court rulings that have protected DHHL water interests and clarified that the reservations for and uses of water by DHHL are one of four protected public trust uses of water that should be accommodated prior to the allocation of water to private, commercial uses:

    - Waiola o Molokaʻi, 103 Haw. 401 (2004) and Kukui (Molokaʻi), Inc., 116 Haw. 481 (2007) established DHHL water reservations and homesteading uses as a public trust purpose, thereby creating priority over private interests. Additionally, proposed water uses cannot negatively affect native Hawaiian traditional and customary practices or impermissibly raise salt levels in DHHL wells.

    - These provisions have been reiterated in many subsequent decisions, notably in Kauaʻi Springs, Inc. v. Kauaʻi Planning Commission, 133 Hawaiʻi 141 (2014)

Just as funding challenges for CWRM have impacted DHHL, shifting policy implementation priorities have also sometimes lessened our ability to address water accessibility issues. For a number of years, it was the practice of the State of Hawaiʻi's Department of Land and Natural Resources to secure funding for water exploration and development, and some of the water resources so produced were dedicated to County Boards and Departments of Water Supply, with some of the resulting credits issued in favor of DHHL. Those efforts however, ceased over a decade ago.

County Policies

Partly in recognition of the significant role in which DHHL Homestead development can address much needed housing demand in the Counties, the Counties have started to explore ways in which they can use their limited powers related to water to address the water needs and accessibility challenges of DHHL.

Maui County has led the way in these efforts. In 2007, Maui County enacted Ordinance 3502, often referred to as the "show me the water" ordinance. This requires verification of "a long-term reliable source of water before subdivisions are approved." The goal of this policy is to conserve the County's resources for affordable housing. In 2021, Ordinance 5313 specifically exempted DHHL projects from this requirement.

Also in Maui County, in November of 2022, Charter Amendment 12 was approved, establishing the East Maui Water Authority Board. This eleven-member

Board will oversee the Nāhiku, Keʻanae, Honomanu and Huelo water license areas. The responsibilities of the Board include approval of watershed management plans and related programs, approval of annual operations budget appropriation requests, and recommendations on water rates. One seat was reserved for a representative of the Hawaiian Homes Commission. This is the first instance in which a state or county water managing body has specifically dedicated a seat to represent and look out for DHHL interests.

In 2023, also in Maui County, the Council passed a 0.5 percent surcharge on top of the State's 4 percent general excise tax. Twenty percent of the county's revenue from the surcharge will go toward development of County infrastructure projects that would allow DHHL to proceed with homestead development, including the development of necessary water infrastructure.

In April 2022, the Hawai'i County Council passed two bills allowing the development of timeshares, affordable workforce housing and other facilities at a particular site in Waikōloa, South Kohala. As passed, 2% of timeshare sales and resales from the proposed project will be donated to the Waikōloa Foundation, and 25% of those derived funds will be allocated to an agency or program to directly or indirectly support water-related needs associated with housing programs for Native Hawaiians within the South Kohala district.

Despite the importance and significance of these Federal, State, and County policies, progress on addressing the significant water access challenges of DHHL on the Hawaiian Home Lands remains a very significant challenge. The scope of this challenge is described in greater detail next.

Part 3: DHHL Water Needs by Type, Island, Reservation, and Known and Estimated Costs

The water needs of DHHL on Hawaiian Home Lands are extensive and diverse. Beyond the basic distinction that we have significant needs for potable and non-potable water, there are other notable characteristics of our water accessibility challenges. I first review the types of water access issues we face and then offer a high-level summary of needs by Island, our reservations to date, and an overview of known and estimated capital needs.

Types of Water Access Issues

In some parts of Hawaiian Home Lands - such as Kēōkea and Waiohuli on the island of Maui - we have access to some water, but there is an insufficient volume of both potable and non-potable water, restricting both the ability to use vast landholdings for additional homesteads, and preventing existing homesteaders from farming or even irrigating residential yards. Just a few miles away, our lands at Kahikinui lack access to any flowing water whatsoever and homesteaders rely on trucking in water for domestic uses.

Some areas have access to water but it is not of potable quality, such as our Puʻukapu tract on Hawaiʻi island, which only has access to a non-potable water system. While the water comes from a potable source controlled by Hawaiʻi County, the vast size of the tract and the costs involved of building a system to county standards made that infeasible. Other tracts have similar situations where County water systems border Hawaiian Home Lands, but these lands have no access to that water, even as nearby developments receive water from those water lines, just as Waimānalo, O`ahu faced the same challenges in the 1950s described above. This includes HHL at Puʻueo and Laʻi ʻŌpua on Hawai'i Island, Honokōwai on Maui, and Ualapuʻe on Molokaʻi. Similarly, HHL in Anahola and Moloaʻa on Kauaʻi have privately controlled water systems abutting HHL, and yet lack sufficient access to water for homesteading. On Molokaʻi, despite significant landholdings and homesteading and demands for irrigation water, and a statutory guarantee to two thirds of the water from the Molokaʻi Irrigation System, many homesteaders lie just outside the service area of the system and cannot access that water. On Kauaʻi, for DHHL's extensive landholdings above the Mānā Plain, DHHL is partnering with the Kauaʻi Island Utility Cooperative in their pursuit of a pumped storage hydroelectric project that will if implemented, provide water access and other needed infrastructure to HHL around Puʻu ʻŌpae.

Some tracts, in addition to having source limitations, also face exorbitant water delivery costs. At Kailapa near Kawaihae on Hawaiʻi Island, water is delivered to homesteaders from a secondary system with source deliveries from a private system, and they pay some of the highest water costs of any customers in the State. Kailapa also faces some level of water insecurity, as the agreement with that private system, which provides water to a luxury development immediately north, allows that purveyor to cease delivering water with two years' notice. Water security issues also extend to other areas of Hawaiʻi. Especially on Oʻahu, the fuel spills from the US Navy Red Hill Bulk Fuel Storage Facility have contaminated the island's most productive and relied on aquifer. While the Navy has its own water system that draws on that aquifer, all homesteaders on Oʻahu are customers of the Honolulu Board of Water Supply, which

has been challenged by the loss of access to some of their most productive water sources.

Unmet Water Demands Statewide and by Island

While the typology above describes the diverse nature of water access challenges on Hawaiian Home Lands, much of DHHL's focus has been on securing basic water access for each tract, as it is self-evidently impossible to successfully homestead lands without any access to water. As noted above, the 2017 update to the State Water Projects Plan (SWPP) was developed by the Department of Land and Natural Resources' Engineering Division and focused on DHHL needs across all islands and tracts.

The SWPP 2017 update records DHHL's potable and non-potable water projections for each island until the year 2031. Though not completely up to date not without limitations, it is the best available estimate for DHHL water needs statewide.

A specific methodology and set of assumptions were employed in the SWPP to calculate water demands due to the diverse scope of land uses across Hawaiian Home Lands, the particular land use designation categories applied by the HHC under the General Plan, and the diversity of DHHL tracts. While those are laid out in detail in that document, the general practice was to calculate the demands by correlating DHHL's land use designations to an equivalent land use in the applicable County Water System Standards and apply the respective demand unit rate. For each tract, low, medium, and high demand rates were calculated. Under the guidelines adopted by CWRM for all elements of the Hawai'i Water Plan, the SWPP only looks at a twenty-year planning horizon. For this reason, the numbers in the SWPP do not represent the full build out demands for all Hawaiian Home Lands, but represent a research-based estimate of some of the demands.

Under a medium water demand scenario, the total potable water demand across the State was calculated to be just under 22 million gallons per day (mgd). The total non-potable water demand projection across the State is approximately 183.5 mgd. This medium demand by island appears immediately below.

DHHL Medium Range Water Demands through 2031

Island	Primary Use	2031 Demand (mgd)

Kauaʻi	Potable	2.918
	Non-Potable	35.807
	Total Island Demand	38.725
Oʻahu	Potable	5.426
	Non-Potable	22.539
	Total Island Demand	27.965
Molokaʻi	Potable	1.061
	Non-Potable	34.985
	Total Island Demand	36.046
Lānaʻi	Potable	0.067
	Non-Potable	0
	Total Island Demand	0.067
Maui	Potable	3.521
	Non-Potable	27.557
	Total Island Demand	31.078
Hawaiʻi	Potable	9.002
	Non-Potable	62.582
	Total Island Demand	71.584
All Islands	**Potable**	**21.996**
	Non-Potable	**183.47**
	Total Demand	**205.466**

Water Reservations to Date from CWRM

While the SWPP has been a valuable resource in helping DHHL and CWRM calculate our water demands as a basis for securing reservations of water (discussed in Part 2, above), the nature of the calculations in the SWPP means the two do not always completely corelate. Most significantly, as previously noted, the SWPP has a 20 year time horizon for calculating demand estimates. Water Reservations under Hawaiʻi State law are by contrast intended to protect "foreseeable" demands, which for the DHHL must include scenarios where all reasonably usable land is available for homesteading.

To date, reservations by CWRM for DHHL's uses have been pursued in a collaborative manner. DHHL has proposed its best estimates of foreseeable demands, and CWRM has evaluated them with knowledge of the set limits previously determined by them for the respective water resources. Progress has been slow but improving.

After passage of the Code in 1987, CWRM staff had interpreted the Code as only allowing for DHHL reservations in water management areas. However, beginning in 2015 they agreed with DHHL staff interpretation of HRS 174C-101 that reservations can and must be made anywhere we have foreseeable needs. Our reservations to date, representing about 16% of our foreseeable needs by volume, total 32.610 mgd.

The reservations adopted to date by CWRM by hydrologic unit are as follows.[22]

Island	Hydrologic Unit	Type	Reservation (mgd)	Adoption Date
Kauaʻi	Waimea	Surface	6.903	6/20/17
	Wailua	Ground	0.708	9/18/18
	Wailua	Surface	0.513	10/16/18
	Anahola	Ground	1.470	9/18/18
	Kekaha	Ground	0.336	9/18/18
	Makaweli	Ground	0.405	9/18/18
Oʻahu	Waipahu-Waiawa	Ground	1.724	2/18/94
	Waimānalo	Ground	0.124	2/18/94
Molokaʻi	Kualapuʻu	Ground	3.272	6/10/95
Lānaʻi	Leeward	Ground	0.067	9/18/18
Maui	Honokōhau	Surface	2.000	5/18/21
	Honokōwai	Ground	0.770	9/18/18
	Kamaʻole	Ground	2.547	9/18/18
	Keʻanae	Ground	0.003	9/18/18
	Kawaipapa	Ground	0.118	9/18/18
	Lualaʻiula	Ground	0.063	9/18/18
Hawaiʻi	Wailuku	Surface	1.600	3/17/20
	Hāwī	Ground	0.148	9/18/18
	Māhukona	Ground	3.014	9/18/18
	Keauhou	Ground	3.398	8/17/15
	Honokaʻa	Ground	0.396	9/18/18

[22] As summarized in a CWRM staff submittal from November 15, 2022 available at https://files.hawaii.gov/dlnr/cwrm/submittal/2022/sb20221115B5.pdf

	Hakalau	Ground	0.083	9/18/18
	Onomea	Ground	0.250	9/18/18
	Hilo	Ground	0.492	9/18/18
	Kea‘au	Ground	1.336	9/18/18
	‘Ōla‘a	Ground	0.025	9/18/18
	Nā‘ālehu	Ground	0.185	9/18/18
	Pāhoa	Ground	0.660	9/18/18
		TOTAL	**32.610**	

The CWRM is still considering DHHL’s newer reservation requests.

Infrastructure and Financing Needs to Develop and Maintain Homestead Lots

The HHC annually approves DHHL’s budget requests, including funding for lot development and repair and maintenance of infrastructure. Funding of $198.5 million for lot development and over $228 million for repair and maintenance of infrastructure including sewer and water systems would provide the level of infusion needed to quicken the pace of homestead development. A dedicated, consistent, and reliable stream of funding allows for steady production of lots. The funding amounts reflected in the table that follows may only represent funding for a particular phase (planning, design, construction) and not the entire amount.

AREA or SUBDIVISION	PROJECT COMPONENTS	Lots	FY 2025
LOT DEVELOPMENT			
HAWAI‘I			
Honokaia	Honokaia Water System		1,300,000
East Hawai‘i	East Hawai‘i Development (Pi‘ihonua, etc.)		1,000,000
Ka‘ū	Ka‘ū Agricultural Lots (Pu‘ueo)	50	1,000,000
Ka‘ū	Ka‘ū Farm & Ranch Lots Site Imp. (Kamaoa)	25	2,000,000
Kawaihae	Kawaihae Water Prod, Storage & Transm		2,000,000
Kawaihae	*Emergency Access Road*		*2,000,000*
Kealakehe	La‘ī ‘Ōpua Utility and Infrastructure Changes		500,000
Keaukaha	Hilo Community College Model Home	1	450,000
Keaukaha	Scattered Lots		5,000,000
Kona	North Kona Exploratory Well		2,000,000

Kona	North Kona Well, transm, storage (600 lots)		45,000,000
Lālāmilo	Lālāmilo Phase 2A, Increment 2	80	16,500,000
Panaʻewa	Panaʻewa Lot 184	6	2,000,000
Puʻukapu	Puʻukapu Pastoral Lots Pump & Elec. Fac		1,500,000
Island-wide	*UXO Mitigation and Construction Support*		*1,000,000*
KAUAʻI			
Anahola	Piʻilani Mai Ke Kai Phase 3	40	1,000,000
Anahola	Anahola Residence Lots, Units G & G-1	30	750,000
Hanapēpē	Hanapēpē Residential Subd Ph 3 Offsite Dev		15,000,000
Hanapēpē	Hanapēpē Residential Subdivision Phase 3	250	4,000,000
Moloaʻa	Moloaʻa Ag and Pastoral Lots	47	1,000,000
Wailua	Wailua Second Well Exploration		1,000,000
Wailua	Wailua Residential Lots Masterplan	200	1,000,000
MAUI			
Honokōwai	Honokōwai Water Non-potable Improvements		4,000,000
Honokōwai	Honokōwai Water System Imp, offsite storage		4,000,000
Kēōkea-Waiohuli	Kēōkea -Waiohuli Phase 3 Site Improvements	75	1,000,000
Pūlehunui	Pūlehunui Site Improvements & Infrastructure		4,000,000
Pūlehunui	Pūlehunui Regional Infrastructure Masterplan		3,000,000
Wākiu	Wākiu Development Plan		500,000
MOLOKAʻI			
Hoʻolehua	Nāʻiwa Agriculture Lots (Acceleration Awards)	50	25,000,000
Hoʻolehua	Hoʻolehua Scattered Agriculture Lots	8	3,000,000
Kalamaʻula	Kalamaʻula Farm Lots Water Improvements		3,000,000
STATEWIDE			
Statewide	Environmental Mit & Remediation on HHL		4,000,000
Statewide	Acquisition: Land and/or Building Purchase		40,000,000
	Total for Lot Development	**1462**	**198,500,000**
REPAIR AND MAINTENANCE OF INFRASTRUCTURE			
HAWAII			
Kaumana	*Kaumana Drainage Maintenance*		*100,000*
Kawaihae	Kawaihae Water: Production, Storage & Trans		750,000
Keaukaha	Keaukaha New Sewers/Conversions Imp		20,000,000
Lālāmilo	*Lālāmilo Phase 1 Kawaihae Road Imp*		*300,000*
Lālāmilo	Lālāmilo New Sewers/Conversions Imp		3,000,000

Panaʻewa	Panaʻewa New Sewers/Conversions Imp		3,100,000
Puʻukapu	Puʻukapu Non-Potable Water System Imp		250,000
Puʻukapu	*Puʻukapu Road Improvements*		*1,000,000*
Keaukaha	*Keaukaha Road Improvements*		*1,900,000*
Hilo	General Maintenance for Various Sites in Hilo		28,500
Islandwide	Hawaiʻi Cesspool Assessment		775,000
KAUAʻI			
Anahola	Anahola Fire Station		50,000
Anahola	Farm Lots, New Backup Well Improvements		3,000,000
Anahola	Anahola Dam & Reservoir Improvements		100,000
Hanapēpē	*Hanapēpē Drainage Improvements*		*100,000*
Anahola	*General Maintenance for Piʻilani Mai Ke Kai*		*175,000*
LĀNAʻI			
Lānaʻi	*Lānaʻi Drainage Improvements*		*500,000*
MAUI			
Kahului	*Waiehu Kou Drain Main (Fire Break Clearing)*		*200,000*
Kahului	Waiehu Kou New Sewers/Conversions Imp		1,000,000
Kahului	Waiehu Kou Sewer, Pump St Upgrades Imp		50,000
Kula	*Waiohuli Drainage Improvements*		*500,000*
Kula	Waiohuli New Sewers/Conversions Imp		2,000,000
Islandwide	Maui Cesspool Assessment		350,000
Islandwide	*General Maint for Various Sites on Maui*		*535,000*
MOLOKAʻI			
Hoʻolehua	Hoʻolehua Water System Imp – Equip		1,000,000
Kalamaʻula	*Kalamaʻula Drainage Improvements*		*2,000,000*
Kalamaʻula	Kalamaʻula Water Improvements		400,000
Kalamaʻula	Kalamaʻula New Sewers/Conversions Imp		2,000,000
Kapaʻakea-One Aliʻi	*Kapaʻakea-One Aliʻi Drainage Improvements*		*2,000,000*
Kapaʻakea-One Aliʻi	Kapaʻakea-One Aliʻi New Sewers/Conversions Improvements		2,000,000
Islandwide	*H&H Drainage Study*		*325,000*
Islandwide	*General Maint for Various Sites on Molokaʻi*		*175,000*
OʻAHU			
Kapolei	Kapolei Sewer Repair Improvements		1,000,000
Nānākuli	*Nānākuli Concrete Spall and Fencing*		*5,000,000*

Nānākuli	*Nānākuli Drainage Improvements*		*5,000,000*
Nānākuli	Nānākuli Sewer Improvements		40,000,000
Nānākuli	*Rehabilitation of School Seawall Imp*		*4,000,000*
Papakōlea	*Papakōlea Drainage Improvements*		*5,000,000*
Papakōlea	Papakōlea Sewer Repair Improvements		1,000,000
Papakōlea	Papakōlea Sewer Improvements Phase 2		20,000,000
Papakōlea	*Kapahu St & ʻĀuwaiolimu St Slope Maint*		*150,000*
Princess Kahanu	Princess Kahanu Sewer Repair Improvements		15,000,000
Waimānalo	*Waimānalo Bell Street Drainage Imp*		*7,000,000*
Waimānalo	*Waimānalo Drainage Improvements, Ph2*		*500,000*
Waimānalo	*Waimānalo Dirt Drainage Fire Break Clearing*		*200,000*
Waimānalo	*Waimānalo Relining of Concrete Flood Ch*		*8,000,000*
Waimānalo	Kakaina & Kumuhau Subd Sewer Repairs		2,000,000
Waimānalo	Waimānalo Sewer Repair Improvements		18,000,000
Islandwide	*Fence Installation*		*3,000,000*
Islandwide	Sewer Spill Response		45,000
Islandwide	*Towing Service*		*50,000*
Islandwide	*Street Light Maintenance*		*100,000*
Islandwide	*Street Sign Maintenance*		*100,000*
Islandwide	*Tree Trimming Maintenance*		*150,000*
Islandwide	*General Maint for Various Sites on Oahu*		*1,028,000*
STATEWIDE			
Statewide	*Wildfire Resp, Recovery, Prevention & Maint*		*20,000,000*
Statewide	*Geographic Information System (GIS)*		*100,000*
	Act 164/23 FY25 Appropriation		*20,000,000*
	Total for R & M of Infrastructure		**228,086,500**

Another critical component of infrastructure funding is upgrading and modernizing wastewater systems through cesspool conversion. Hawai‘i has nearly 88,000 cesspools that put 53 million gallons of raw sewage into the State’s groundwater and surface waters every day.[23] An estimated 2,500 cesspools or around 3% are on Hawaiian Home Lands.[24] The Cesspool Conversion Working Group recognizes that it

[23] Interim Report for the Cesspool Conversion Working Group (December 2020), https://health.hawaii.gov/opppd/files/2020/12/Act-170-Cesspool-2021-Leg-Report.pdf.
[24] The cesspool estimates are still being assessed by DHHL because there may be a conflation of cesspools and septic systems and some of the old cesspools may have long been decommissioned.

is critical to carefully consider conversion requirements that are socially equitable and financially feasible. Cesspool conversion costs are high, especially in remote locations, meaning that conversion options must be practical and regionally specific. There is no simple, single solution to replace Hawaii's cesspools. Each community's risk of health and environmental harm is different, along with the costs of conversions, when considering geography, hydrology, cesspool density, and proximities to groundwater and the ocean are taken into consideration.

The above data reflects the budgetary request from the DHHL to the State Legislature, but is not inclusive of all the costs that would be needed to develop the necessary infrastructure to deliver potable and non-potable water to tracts, either in the amounts of calculated demand from the SWPP or the amounts already reserved by CWRM,

Estimates of these costs are necessarily rough and will vary considerably by island, location, local hydrology, and proximity to existing infrastructure including power sources, roads, and water transmission and storage structures. For ground water, recent DHHL experience is that fully developing a one mgd well, along with the associated infrastructure, permitting, and reviews, will cost a range of $10-20 million. Looking only at one of our known reliable numbers – reserved ground water - DHHL would need an additional $220 - $440 million in capital funds. Less productive wells, developing surface water, and developing non-reserved water would require multiples of that figure.

Part 4: Conclusions

As potentially disarming and daunting as the above testimony is, it should also be noted that there are additional water issues and challenges related to water accessibility that are not addressed in this testimony today. DHHL under the original terms of the HHCA is entitled to 30% of the receipts from water leases / licenses that are issued by the State and that provision is contained in the State Constitution today. These receipts are to be deposited into the Native Hawaiian Rehabilitation Fund (NHRF) and distributed in grants to Hawaiian Homestead Associations. Due to significantly delayed State action on converting Revocable Permits into leases, and not assertively pursuing leases for private entities using water emanating from State lands, DHHL has had precipitously declining revenue into the NHRF in the past years.

DHHL, as a native Hawaiian serving organization also faces challenges in developing its water resources so that HHCA beneficiaries may also exercise

constitutionally protected traditional and customary practices associated with those waters. Not only can this both constrain water resource development and represent additional water needs for our beneficiaries, this raises additional complexities. Due to the history and nature of the Hawaiian Home Lands, many HHL tracts are in areas where there are also Native Hawaiian non-Hawaiian Home Land communities. DHHL must navigate how to develop its lands and serve its beneficiaries, but not in a manner that would harm other Native Hawaiian non-Hawaiian Home Land communities. This and other water dynamics in Hawai`i are reviewed in a "Water Primer" that I have attached to this testimony.

Finally, we note that the state CWRM estimates of water available from surface and ground water sources do not currently incorporate climate change projections. As our islands may be facing a much drier future – which can both decrease supply and increase demand – we must continue to monitor and update our water demands for existing and future homestead communities.

Water in Hawai'i is held in trust by the State, a distinct advantage we have in planning for a changing world where we still will work to implement the HHCA. However, our challenges we face in water access are very significant, as we have touched on in my testimony. Access to water has been and remains one of the most significant – if not the single largest barrier -- toward fulfillment of the HHCA.

In closing, I wish to express my appreciation and gratitude to Chairman Schatz for inviting me to testify and for focusing on this critical issue. It has been an honor to have had this opportunity to address you and this Committee.

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OLA I KA WAI: A LEGAL PRIMER FOR WATER USE AND MANAGEMENT IN HAWAI'I
D. Kapua'ala Sproat
Ka Huli Ao Center for Excellence in Native Hawaiian Law

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Office of Hawaiian Affairs

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Table of Contents

I. INTRODUCTION

Ua ka ua, kahe ka wai.

The rain rains, the water flows.[1]

Aloha mai kākou!

This primer provides an introduction to Hawaiʻi water law for those wanting to better understand their rights and the overall legal and cultural landscape. While it cannot resolve all questions regarding water use and management in these islands, it is designed to summarize major Hawaiʻi laws and issues, and direct those with additional questions to available resources, legal or otherwise. Although this primer is intended to provide helpful information, it is not a substitute for and does not provide individualized legal advice. If you have legal questions, please consult an attorney who specializes in this area.

Part II provides an overview of the current legal framework, beginning with a discussion of water use and management in ancient Hawaiʻi, as well as an examination of Western impacts on these systems and practices. After reviewing relevant constitutional and statutory provisions, this part examines the major water rights in existence today, as well as key features of the Water Code, Hawaiʻi Revised Statutes chapter 174C, including the Hawaiʻi Water Plan, designated Water Management Areas, and Water Use Permitting.

Part III focuses on the management and use of water from our streams and springs, by delving into Interim Instream Flow Standards, the Water Commission's principal tool for managing surface water. To better illustrate how the process works, this part includes a description of the Waiāhole water struggle on the Island of Oʻahu. It also provides information on the permits that may be required for various surface water uses, as well as current legal tools that may be available to community or other groups seeking to better manage these water resources. This part is a self-contained unit on surface water; therefore, some of the permitting and legal handles are similar to the information in Part IV regarding ground water.

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[1] MARY KAWENA PUKUʻI, ʻŌLELO NOʻEAU HAWAIIAN PROVERBS & POETICAL SAYINGS (4th ed. 2001). All ʻŌlelo Noʻeau in this primer are quoted from PUKUʻI.

Part IV addresses the management and use of ground water by reviewing the current legal framework governing this resource, including Sustainable Yields, the registration of existing wells, and water use reporting. This part also provides information on the permits that may be required for ground water uses (including wells), in addition to current legal handles that may be available to groups seeking to better manage their water resources. This part is a stand-alone unit on ground water; therefore, some of the permitting and legal handles are similar to the discussion in Part III regarding surface water.

A number of resources and references are also included. A glossary explains some of the legal, scientific, and cultural terms of art. Appendix A includes contact information for relevant legal resources, and county, state, and federal agencies. And, Appendix B is a CD that provides ready access to significant legal resources, such as Hawai'i constitutional provisions, the Water Code and its administrative rules, and several Hawai'i Supreme Court decisions.

Although independent review of applicable laws is always best, hopefully, this primer will provide a better understanding of water issues and direct the reader to additional resources to ensure that Hawai'i's water resources are appropriately managed for present and future generations. Ola i ka wai: water is life!

II. LEGAL OVERVIEW AND FRAMEWORK

He huewai ola ke kanaka na Kāne.

Man is Kāne's living water gourd.

Water is life and Kāne is the keeper of water.

In ʻōlelo Hawaiʻi, the mother tongue of these islands, wai is water, waiwai means values or wealth, and kānāwai is the law. It is no coincidence that, in an island community like ours, both wealth and the law were and continue to be defined by fresh water.

A. Water Use and Management in Ancient Hawaiʻi

Before the documented arrival of Westerners in 1778, water was the source of all life in Hawaiʻi. Ola i ka wai: water is life. Continuous mauka to makai (from the mountains to the ocean) stream flow provided critical fresh water for drinking, supported traditional agriculture and aquaculture, recharged ground water supplies, 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. For Kānaka Maoli (Native Hawaiians), appropriately managing fresh water resources was a true kuleana: both a privilege and a responsibility.

"Ahupuaʻa Poster" by Marilyn Kahalewai, 1974
Used with permission from Kamehameha Schools

Water was also revered as a physical manifestation of Kāne, one of the Hawaiian pantheon's four principal akua (gods, ancestors).[2] In fact, Akua Kāne is not limited to Hawaiʻi; many Polynesian cultures recognize him as a central deity and believe that Kāne and Kanaloa (another principal akua associated with the ocean) traveled to Hawaiʻi from Tahiti. Traditional moʻolelo (stories or history) explain that Kāne brought forth fresh water from the earth and traveled throughout the archipelago with Kanaloa creating springs and streams, many of which continue to flow today. "Fresh water as a life-giver was not to the Hawaiians merely a physical element; it had a spiritual connotation."[3] Due to this significance, in ancient times, water could not be commodified or reduced to physical ownership. Instead, aliʻi (leaders) managed water as a resource for the benefit of the community as a whole.

Given the critical role that water played in Hawaiian society, traditional Hawaiian law or kānāwai developed around the management and use of fresh water.[4] In fact, kānāwai literally translates as "relating to water." In ancient times, the aliʻi nui (area chief) or mōʻī (sovereign) was both a physical representative of akua and the water authority. Under the aliʻi nui, konohiki were resource stewards for ahupuaʻa (loosely defined as watersheds) or smaller land divisions including ʻili or kū.[5] Konohiki appointed lunawai (water stewards or superintendents) to manage water distribution within and between land divisions.

The konohiki's and lunawai's powers were tempered by reliance on, and the cooperation of, makaʻāinana (people that attend the land) for labor. It was the konohiki's responsibility to facilitate the work necessary to make the ahupuaʻa productive, and to pay tribute to other aliʻi. Therefore, konohiki endeavored to treat makaʻāinana fairly and to avoid disputes. Konohiki were also remiss to impose unreasonable burdens

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[2] E.S. CRAIGHILL HANDY & ELIZABETH GREEN HANDY WITH THE COLLABORATION OF MARY KAWENA PUKUʻI, NATIVE PLANTERS IN OLD HAWAIʻI, THEIR LIFE, LORE, & ENVIRONMENT 63 (4th ed. 1995) [hereinafter HANDY & HANDY].

[3] HANDY & HANDY at 64.

[4] See Antonio Perry, Hawaiian Water Rights, in HAWAIIAN ALMANAC & ANNUAL FOR 1913 at 92 (Thomas G. Thrum ed., 1912) (noting that kānāwai "in its origin signified regulations concerning water. The very first laws or rules of any consequence that the ancient Hawaiians ever had are said to have been those relating to water."). See also HANDY & HANDY, supra note 2, at 58.

[5] Emma Metcalf Nakuina, Ancient Hawaiian Water Rights, in HAWAIIAN ALMANAC & ANNUAL FOR 1894 at 79 (Thomas G. Thrum ed., 1893). See also PAUL F. NAHOA LUCAS, A DICTIONARY OF HAWAIIAN LEGAL LAND-TERMS 40, 58 (1995) (An ʻili is a land section "next in importance to ahupuaa and usually a subdivision of an ahupuaa." Kū is shortened from ʻili kūpono, "A nearly independent *ʻili* or division of land within an *ahupuaʻa*, tributary directly to the king and not, or only slightly, to the chief of the *ahupuaʻa*.").

because maka'āinana were free to leave the land if they became dissatisfied, and without a strong work force the ahupua'a would not thrive. Under these circumstances, water disputes were rare, and for the most part, a system of mutual support and interdependence developed between maka'āinana and ali'i.[6]

Kānaka Maoli relied on streams and springs to satisfy many needs. One principal purpose focused on distributing flow sufficient to cultivate the staple crop kalo (*Colocasia esculenta* or taro). "Water rights were primarily for [lo'i], that is, for kalo culture."[7] Wetland kalo requires a consistent supply of cool, fresh water flowing through the lo'i (wetland kalo patch) to survive and thrive. Consistent mauka to makai flow in streams is also necessary for native stream life to reproduce, including 'o'opu, 'ōpae, and hīhīwai (also known as wī), which provided an important food source, especially during winter months. Fresh water literally and figuratively was the lifeblood of the 'āina; therefore, laws that developed around water management reflected this vital role.

In ancient times, water was a public trust resource, which means that no one – not even ali'i – could own water. Instead, water was a resource managed for present and future generations. As Handy and Handy acknowledged:

> Inalienable title to water rights in relation to land use is a conception that had no place in old Hawaiian thinking . . . . Water, whether for irrigation, for drinking, or other domestic purposes, was something that 'belonged' to Kane-i-ka-wai-ola . . . . The *ali'i nui*, in old Hawaiian thinking and practice, did not exercise personal dominion, but channeled dominion. In other words, he was a trustee.[8]

B. Western Impacts on Traditional Water Use and Management

The documented arrival of foreigners to Hawaiian shores, beginning around 1778, affected everything in Hawai'i, including the use and management of ground and surface water resources. Hawai'i's favorable climate and year-round growing season made it a hotspot for 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 arid Central and Leeward plains. Ground

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[6] Perry, supra note 4, at 95; HANDY & HANDY, supra note 2, at 76.

[7] Nakuina, supra note 5, at 83.

[8] HANDY & HANDY, supra note 2, at 63 (emphases added).

water wells were also developed to supplement surface water systems. Water was quickly commodified: instead of continuing to be revered as a life form of Akua Kāne and managed for the common good, it became a product available for sale to the highest bidder. This change resulted in significant cultural harms to Kānaka Maoli, many of which remain unaddressed today. Although the concept of water as a public trust carried over into the Kingdom of Hawaiʻi, many newcomers to the islands were unaware of or failed to sufficiently respect traditional notions of resource management, and conflict ensued between and among Kānaka Maoli and others, especially plantation interests.

In partial response to these and other conflicts, Kingdom laws formalized and reduced Hawaiian customs and traditions to writing. As this occurred, even the earliest laws continued to recognize what we now describe as public trust principles. For example, the Declaration of Rights and Constitution of 1839-40, which was the first Western-style constitution of the Hawaiian Kingdom, expressly acknowledged that the land, along with all of its resources, "was not [the King's] private property. It belongs to the Chiefs and the people in common, of whom [the King] was the head and had the management of landed property." These and other laws, including the 1839 Law Respecting Water For Irrigation, attempted to protect the rights and needs of aliʻi, makaʻāinana, and Westerners, with varying levels of success.

Despite these efforts, foreign influences over water use and management grew. Throughout the Hawaiian Kingdom, Provisional Government, and even into Hawaiʻi's Territorial period, large agricultural plantations increased their influence and came to control a large portion of Hawaiʻi's water resources. The law was no exception, and cases during Hawaiʻi's Kingdom and territorial periods also began to reflect increasingly Western approaches to water use and management.

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. One critical development was that after statehood in 1959, judges were appointed locally instead of being chosen from Washington D.C., as they were during the Territorial period. Generally speaking, judges familiar with Hawaiʻi were better versed in local laws and issues, including Hawaiian custom and tradition, which provide a foundation for Hawaiʻi's common law. See, e.g., Haw. Rev. Stat. § 1-1 (adopting English common law except as established by Hawaiian usage).

As just one example, in 1973, the Hawaiʻi Supreme Court ruled on the controversial case of McBryde Sugar Co. v. Robinson, 54 Haw. 174, 504 P.2d 1330 (1973). The case involved a dispute between two sugar plantations over water rights to the

Hanapēpē River on the Island of Kaua'i. The Hawai'i Supreme Court, led by Chief Justice William S. Richardson, a part-Hawaiian, took the opportunity to re-examine the issue of water rights and management in general, which sparked a series of cases in both the state and federal court system, ultimately reaffirming that Hawai'i's water resources are held in trust and should be managed for the benefit of present and future generations.

Legal battles like McBryde and related cases highlighted the inadequacies and inequities in water use and the need for a more comprehensive management system. The 1978 constitutional convention was instrumental in this regard and resulted in several amendments to Hawai'i's Constitution, which established a new framework for water resource management.

C. Current Water Use and Management in Hawai'i

Today, water law in Hawai'i comprises the Hawai'i Constitution, a Water Code (Hawai'i Revised Statutes chapter 174C), administrative rules for the Commission on Water Resource Management (Hawai'i Administrative Rules §§ 13-167 to 13-171), and court decisions interpreting relevant laws.

1. Constitutional Mandates

In 1978, Hawai'i's people elevated resource preservation to a constitutional mandate by adding specific provisions protecting Hawai'i's natural resources and indigenous culture. Article XI, § 1 of Hawai'i's Constitution provides that "all public natural resources are held in trust by the State for the benefit of the people." Article XI, § 7 of Hawai'i's Constitution makes specific reference to water, including the directive "to protect, control, and regulate the use of Hawai'i's water resources for the benefit of its people." Significantly, "article XI, section 1 and article XI, section 7 adopt the public trust doctrine as a fundamental principle of constitutional law in Hawai'i." In re Waiāhole Combined Contested Case Hearing ("Waiāhole I"), 94 Hawai'i 97, 132, 9 P.3d 409, 444 (2000).

Many trace the public trust's origin to English and Roman law. However, as detailed previously, long before the constitutional provisions described above, cases and laws from the Kingdom of Hawai'i, along with Hawaiian custom and tradition, firmly established the principle that natural resources, including water, were not private property, but were held in trust by the government for the benefit of the people. Today in Hawai'i, courtesy of the constitution, Water Code, and common law, the "state water resources trust" applies to "all water resources without exception or distinction." Waiāhole I, 94 Hawai'i at 133, 9 P.3d at 445. The public trust imposes "a dual mandate

of 1) protection and 2) maximum reasonable and beneficial use." Waiāhole I, 94 Hawai'i at 139, 9 P.3d at 451. 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." Waiāhole I, 94 Hawai'i at 141, 9 P.3d at 453.

Thus far, the Court has identified a handful of "public trust purposes," including: environmental protection, traditional and customary Native Hawaiian rights, appurtenant rights, domestic water uses, and reservations for the Department of Hawaiian Home Lands. Waiāhole I, 94 Hawai'i at 137-39, 9 P.3d at 449-51; Wai'ola o Moloka'i, 103 Hawai'i 401, 431, 83 P.3d 664, 694 (2004). 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." Waiāhole I, 94 Hawai'i at 142, 9 P.3d at 454. Offstream diverters who seek to use water for their private commercial gain have the burden of justifying proposed uses in light of the protected public rights in the resource. As an example, a developer who wants to take water from streams for commercial use must prove both the social and economic utility of the proposed use, as well as the absence of alternate sources of water. Moreover, those who seek water for non-agricultural uses such as golf courses bear an even heavier burden of proof.

Article XI, § 7 also facilitated the establishment of the State Commission on Water Resource Management ("Water Commission") within the Department of Land and Natural Resources ("DLNR"). Although other county, state, and federal agencies may have overlapping jurisdiction in some areas, the Water Commission has primary authority over water use and management in Hawai'i. The Commission

> shall set overall water conservation, quality and use policies; define beneficial and reasonable uses; protect ground and surface water resources, watershed and natural stream environments; establish criteria for water use priorities while assuring appurtenant rights and existing correlative and riparian uses and establish procedures for regulating all uses of Hawai'i's water resources.

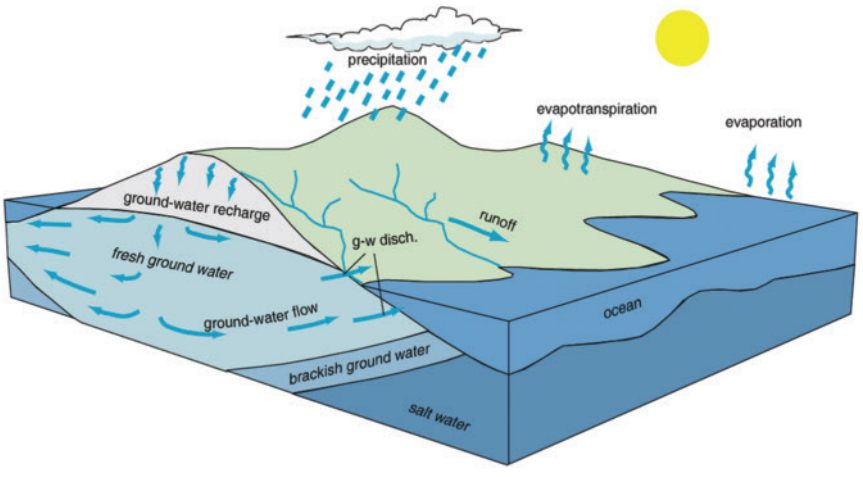
Haw. Const. art. XI, § 7. These are no small tasks. The Commission has tremendous kuleana with limited resources. Decisions are made even more difficult because some of the Commission's mandates are conflicting.

2. The Water Code: Hawai'i Revised Statutes Chapter 174C

Although article XI, § 7 of Hawai'i's Constitution was added in 1978, it took almost a decade for the legislature to enact Hawai'i Revised Statutes chapter 174C, Hawai'i's Water Code, due to opposition from some of the counties who were unwilling to give up control over their water resources. The Code more fully details the responsibilities and composition of the State Water Commission, as well as its directives for appropriately managing ground and surface water.

The Water Commission is comprised of seven members, all of whom are required to have "substantial experience in the area of water resource management." Haw. Rev. Stat. § 174C-7(b). Two Commissioners are members by virtue of the posts that they hold: the DLNR Chairperson automatically chairs the Water Commission; and the head of the State Department of Health also sits on the Commission to help address water quality concerns. The remaining five members are appointed by the Governor from a list put forward by a nominating committee comprised of two individuals chosen by the Governor, one from the State Senate, and one from the State House of Representatives. Of the Commission's five appointed seats, one is reserved for an individual with "substantial experience or expertise in traditional Hawaiian water resource management techniques and in traditional Hawaiian riparian usage such as those preserved by section 174C-101." Haw. Rev. Stat. § 174C-7(b).

Today, the use of fresh water in Hawai'i is managed largely through the State Water Code. The Code manages this important resource by attempting to separate ground and surface water. As detailed above, all of Hawai'i's water resources are connected through the hydrologic cycle. Heat from the sun causes water to evaporate and increases the moisture level or



Hydrologic Cycle
Diagram courtesy of S.K. Izuka, U.S. Geological Survey, Pacific Islands Science Center

humidity of the air. When our trade winds blow this moist, warm air up against our mountains and into cooler regions, the moisture condenses and it rains, which runs down the land and some of which seeps into the ground to recharge fresh ground water supplies that float on underlying salt water. Some of that ground water bubbles up on land and in the ocean as springs; other ground water feeds streams, which run down into the ocean. And so the cycle continues. Despite this clear connection through the hydrologic cycle, the Code manages fresh water differently depending on whether it is tapped underground via wells and pumps, or above ground by taking water from streams or springs via ditch systems. Notwithstanding the comprehensive nature of the Water Code, it is not the end-all or be-all of water management in Hawai'i. The Water Commission is focused primarily on water allocation and use and does not address other issues, such as water quality, which is regulated by the State Department of Health in coordination with the United States Environmental Protection Agency. Specific requirements and permitting for surface and ground water under the Water Code will be addressed in Parts III(B) and IV(B), respectively.

D. Water Rights

Today, Hawai'i's Constitution and Water Code recognize specific rights to ground and surface water, including appurtenant, riparian, Native Hawaiian, and correlative rights. To better understand how the Constitution and Code were designed to operate, it is important to have a basic understanding of these rights.

1. Appurtenant Rights

Appurtenant rights appertain or attach to parcels of land that were cultivated, usually in the traditional staple kalo, at the time of the Māhele of 1848. Hawai'i law recognizes that such land retained rights to the amount of water necessary to continue to cultivate crops. Although some kuleana land has appurtenant rights, land need not have been awarded as a kuleana to retain such rights. See, e.g., Haw. Rev. Stat. § 174C-101(d) (recognizing the "appurtenant water rights of kuleana and taro lands"). Because appurtenant rights attach to the land and not to any individual, they can be exercised by property owners irrespective of race or ethnic background.

Appurtenant rights have the highest level of protection under Hawai'i law and, as mentioned earlier, are a public trust purpose. For example, Hawai'i's Constitution recognizes that the Water Commission "shall set overall water conservation, quality and use policies"; but clarifies that any such priorities shall "assur[e] appurtenant rights[.]" Haw. Const. art. XI, § 7. The Water Code also recognizes the primacy of appurtenant rights: "Appurtenant rights are preserved. Nothing in this part shall be construed to deny the exercise of an appurtenant right by the holder thereof at any time. A permit

for water use based on an existing appurtenant right shall be issued upon application." Haw. Rev. Stat. § 174C-63.

Despite these strong protections, the Water Commission has never inventoried or forecasted the amount of water necessary to supply existing or future appurtenant rights. See Haw. Rev. Stat. §§ 174C-31(c), (d). Although the Water Commission's jurisdiction to make determinations of appurtenant rights was made explicit in 2002, at the time of this primer's publication, the Commission has yet to issue a formal declaration of any appurtenant rights, even though individuals have applied for such determinations.

Given the lack of action on the Water Commission's part, appurtenant right holders have had difficulty protecting their interests. This has been complicated by the Hawai'i Supreme Court's ruling that appurtenant rights may be severed if attempts are made to transfer or reserve these rights. See Reppun v. Board of Water Supply, 65 Haw. 531, 552, 656 P.2d 57, 71 (1982). Such reservations or transfers were and remain commonplace in deeds conveying property; thus, some appurtenant rights have been extinguished.

2. Native Hawaiian Rights

Given Hawai'i's unique history and background principles of property law, our laws recognize and protect traditional and customary Native Hawaiian rights and practices. "The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights." Haw. Const. art. XII, § 7.

In addition to that constitutional mandate, the Water Code includes specific provisions respecting and upholding the rights of Kānaka Maoli, which recognize that the "traditional and customary rights of ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 shall not be abridged or denied by this chapter." Haw. Rev. Stat. § 174C-101(c). The Code makes clear that such rights include, but are not limited to, the cultivation of kalo on one's own kuleana, as well as the right to gather various resources for subsistence, cultural, and religious purposes, including: hīhīwai (or wī); 'ōpae; 'o'opu; limu; thatch; ti leaf; aho cord; and medicinal plants. Haw. Rev. Stat. § 174C-101(c). Similar to the treatment of appurtenant rights, the Code specifically provides that the "traditional and customary rights assured in this section, shall not be diminished or extinguished by a failure to apply for or to receive a permit under this chapter." Haw. Rev. Stat. § 174C-101(d).

The Code also recognizes and upholds rights conferred by "the Hawaiian Homes Commission Act, 1920, as amended, and by chapters 167 and 168, relating to the Moloka'i Irrigation System." Haw. Rev. Stat. § 174C-101(a). Moreover, the Code directs the Commission to "incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act." Haw. Rev. Stat. § 174C-101(a).

Comparable to the treatment of appurtenant rights, both traditional and customary Native Hawaiian rights and reservations for the Department of Hawaiian Home Lands are public trust purposes. Despite that status, the Water Commission has yet to forecast the amount of water needed to supply existing and future traditional and customary rights as well as the existing and future needs of the Department of Hawaiian Home Lands, frustrating the ability of those with such rights to effectively exercise them. See Haw. Rev. Stat. §§ 174C-31(c), (d); -101(a). As a result, the strong protections intended for these rights remain largely on paper and unenforced on the ground in the community.

3. Riparian Rights

In Latin, ripa means river bank. Riparian rights protect the interests of people who live along the banks of rivers or streams to the reasonable use of water from that stream or river on the riparian land. Those rights are subject to other rights of equal or greater value, such as appurtenant, traditional and customary Native Hawaiian, other riparian rights, or reservations for the Department of Hawaiian Home Lands.

Hawai'i's Constitution protects existing riparian uses. Haw. Const. art. XI, § 7. Due to the Water Code's establishment of Water Management Areas as described in Part II(F), below, Hawai'i has a bifurcated system of rights. In non-designated areas, the common law controls and anyone with riparian land retains riparian rights. Once an area has been "designated," however, only existing riparian uses, as opposed to unexercised riparian rights, continue to retain preferential status. See Haw. Const. art. XI, § 7. Although riparian landowners who are not currently using water from the adjacent stream may apply for a permit, they will not receive any special preference if they seek to use that water on riparian land. Existing riparian uses, on the other hand, retain such a preference.

In Reppun v. Board of Water Supply, the Hawai'i Supreme Court ruled that riparian rights cannot be severed from riparian land. 65 Haw. 531, 550, 656 P.2d 57, 70 (1982). Efforts to sever or transfer such rights, which usually occur as part of a deed of sale, are ineffective. Reppun, 65 Haw. at 550, 656 P.2d at 70. This means that even if you have riparian land and the deed conveying the property reserves or transfers riparian

rights or water rights in general, your land will still retain those rights unless the geographic region is designated a Water Management Area.

4. Correlative Rights

Similar to the riparian right to surface water, correlative rights protect the interests of individuals who own land overlying a ground water source or aquifer. This land has rights that correlate to the water below it. Like riparian rights, Hawai'i's Constitution protects existing correlative uses, as opposed to inchoate correlative rights. This means that correlative rights are protected in non-designated areas, but only existing correlative uses receive priority in designated Ground Water Management Areas. Moreover, correlative rights are subject to the reasonable-use doctrine, which means that in times of a water shortage each use with correlative rights has a share to a reasonable amount of water as long as the correlative use does not injure the rights or interests of other correlative right holders. Hawai'i courts first recognized correlative rights in City Mill Co. v. Honolulu Sewer & Water Comm'n, 30 Haw. 912 (1929). The Hawai'i Supreme Court later clarified the current correlative rights rule in the context of the State Water Code in Waiāhole I, 94 Hawai'i 97, 9 P.3d 409.

5. Other Water Rights

During the Hawaiian Kingdom and Territorial period, various court decisions created a range of rights, such as konohiki (or surplus) and prescriptive water rights. Those rights no longer exist under the current regulatory regime, and the range of rights now available are outlined and defined in the Water Code.

E. The Hawai'i Water Plan

1. The Water Resources Protection Plan

The Hawai'i Water Plan is the heart of the Water Commission's management framework. The Plan has four major parts: (1) a Water Resource Protection Plan; (2) Water Use and Development Plans; (3) the State Water Projects Plan; and (4) a Water Quality Plan. It was targeted for completion in 1990 with periodic updates. Haw. Rev. Stat. § 174C-31(a). The legislative design behind these components is to develop comprehensive, long-range plans for the protection, conservation, and management of Hawai'i's water resources in advance of any decision to allow the use of water covered by these plans.

The Commission is responsible for completing and implementing the Water Resource Protection Plan ("WRPP"). Haw. Rev. Stat. §§ 174C-31(c), (d). The WRPP was designed to study and inventory water resources, rights, and uses so that the

Commission can adequately protect and manage those resources and the uses dependent on them. The scope of the information required under the plan is massive and includes: the quantity and quality of available resources; requirements for beneficial instream uses and environmental protection; existing and contemplated uses of water including the current and future water needs of each County; and programs to conserve water resources; to identify just a few requirements. Haw. Rev. Stat. § 174C-31(d). Based on these statutory obligations, the Commission must, among other tasks: (1) formulate water conservation plans and resource augmentation strategies to address water supply and demand, and resource sustainability; (2) review and analyze statewide data on water consumption by municipal, agricultural, industrial, commercial, domestic, and instream uses; (3) establish and maintain inter-agency coordination between federal, state, and county governments and the private sector; and (4) provide planning-related oversight in the processing of permits and the setting of instream flow standards to protect beneficial instream uses of water as provided by law. Haw. Rev. Stat. § 174C-31(c). Unfortunately, much of this information was never compiled in the manner and to the level of detail outlined in the Water Code.

For example, one piece of information critical to enabling informed planning is the status of existing water uses throughout Hawai'i. In an effort to obtain this information, the Code required "[a]ny person making a use of water in any area of the State [to] file a declaration of the person's use with the commission." Haw. Rev. Stat. § 174C-26(a). If the Commission determines the declared use reasonable and beneficial, it is required to issue a certificate describing the use. In any dispute over water rights, the Commission would recognize the certificate as signifying a "confirmed usage." Haw. Rev. Stat. § 174C-27(a). Approximately 2,600 declarants filed more than 7,000 declarations by the deadline.[9] Due to the volume of declarations and the complexity of verifying uses, the Commission issued only a handful of certificates of use; one major problem was verifying the reported information.[10] This lack of information continues to plague the Commission and limits its staff's ability to appropriately manage water resources for present and future generations. It has also increased the burden on individual water users who seek to exercise protected rights.

2. Water Use and Development Plans

To complement the duties of the Commission, each County is responsible for preparing and updating its own Water Use and Development Plan ("WUDP") to

[9] OFFICE OF THE AUDITOR, STATE OF HAW., REPORT NO. 96-3: MGMT. AUDIT OF THE COMM'N ON WATER RES. MGMT. 10, 11 (1996) [hereinafter MGMT. AUDIT].

[10] MGMT. AUDIT at 10, 11.

address how a County will meet water demands given limited supplies and competing needs. Haw. Rev. Stat. § 174C-31(b). WUDPs are designed to forecast water needs by County and ensure that any expansion plans comply with both the State Water Projects Plan and County land use plans and policies. WUDPs must detail current and future water needs by County, so that the Water Commission can adequately plan for and allocate water for future requirements, while first accommodating the current and foreseeable needs of the Department of Hawaiian Home Lands. Haw. Rev. Stat. § 174C-31(q). As part of their WUDPs, counties are required to identify: the status of county water and related land development; future land uses and water needs; and regional plans for water development. Haw. Rev. Stat. § 174C-31(f).

3. State Water Projects and Water Quality Plans

The State Water Projects Plan is designed to include a Water Use and Development Plan for agricultural uses in the State, prepared by the State Department of Agriculture ("DOA"). DOA's plan is supposed to inventory irrigation systems and repair needs, including priorities and a five-year plan for repairs. Haw. Rev. Stat. § 174C-31(e). In December 2004, DOA submitted the first two phases of its WUDP to the Legislature and the Commission, focusing primarily on the rehabilitation needs of the ten state irrigation systems and three private systems. In 2008, the Legislature amended the Water Code to require the Agricultural WUDP to identify water sources and current and future needs, which are critical for resource planning and management. See Haw. Rev. Stat. § 174C-31(e), (f)(1).

The State Department of Health ("DOH") is responsible for preparing a Water Quality Plan "for all existing and potential sources of drinking water." Haw. Rev. Stat. § 174C-31; Haw. Admin. R. § 13-170-50. The Water Quality Plan is an important part of the Water Commission's planning framework because it sets forth policies for protecting water quality that will guide future development. Although DOH is responsible for promulgating and updating the plan, the agency is also directed to consult with federal, state, and county agencies.

4. Hawai'i Water Plan Updates

The Commission adopted the Hawai'i Water Plan and its constituent parts by 1991. However, a 1996 state program audit determined that the plan did not sufficiently meet legislative requirements, particularly because it lacked accurate data, was non-standardized, and did not function as a decisionmaking tool.[11]

[11] MGMT. AUDIT at 12.

In 2000, the Commission developed a statewide framework for updating the Hawai'i Water Plan. This framework adopts an integrated approach that calls for robust public participation in the long-range planning process. However, funding constraints have limited the plan's update to the Water Quality Plan (which has not been updated since 1990), and a partial update of the Commission's WRPP, which was published in June 2008. At the time of this primer's publication, the Legislature has yet to provide sufficient funds to complete and update the other water plan components. In particular, none of the WUDPs of the various counties and DOA has incorporated the "current and foreseeable . . . needs" of the Department of Hawaiian Home Lands for homestead development. Haw. Rev. Stat. § 174C-31(q). In addition, none of those plans suggest even an attempt to reserve water to protect Native Hawaiian traditional and customary practices beyond mere reiteration of the statutory and policy mandates, despite the fact that those practices, as detailed in Parts II(C)(1), III(B), and IV(B), have priority over private commercial uses. At the time of this primer's publication, however, three of the four counties are updating their WUDPs and the Water Commission is working with those counties to incorporate the needs of the Department of Hawaiian Home Lands.

F. Designated Water Management Areas

In addition to the Hawai'i Water Plan, the Code has several principal tools to manage water resources, including the designation of Water Management Areas. The Water Commission has a dual mandate to promote maximum reasonable-beneficial use while also protecting the community's interest in public trust resources. Although the Commission has tremendous responsibility to manage water resources, it lacks the administrative tools to make this happen unless an area is designated a surface or ground Water Management Area ("WMA"). Therefore, designation is a necessary first step toward implementing the management framework needed to control water use and withdrawals. The Water Code requires designation when a resource is or may be threatened with degradation. Haw. Rev. Stat. § 174C-41(a). This can be raised either by the Commission on its own volition, or by an interested member of the public. Haw. Rev. Stat. § 174C-41(b). If the Commission's Chair recommends designation, the Commission must hold public hearings at a location near the area proposed for designation, and must publish a notice of hearing in the newspaper. Haw. Rev. Stat. § 174C-42. The Commission may also conduct investigations with regard to any proposed designation. Haw. Rev. Stat. § 174C-43. Decisions by the Water Commission to designate a surface or ground WMA are final and are not judicially reviewable. Ko'olau Agricultural Co., Ltd. v. Comm'n on Water Res. Mgmt ("Ko'olau Ag."), 83 Hawai'i 484, 494, 927 P.2d 1367, 1377 (1994).

The Code thus establishes a "bifurcated system of water rights." Ko'olau Ag., 83 Hawai'i at 491, 927 P.2d at 1374. In WMAs, the Code regulates all consumptive uses of water via Water Use Permits. In contrast, "water rights in non-designated areas are governed by the common law." Waiāhole I, 94 Hawai'i at 178, 9 P.3d at 490.

So far, all of O'ahu except Wai'anae, the whole island of Moloka'i, and the 'Īao aquifer on Maui have been designated Ground Water Management Areas ("GWMAs"). In April 2008, the Water Commission designated Nā Wai 'Ehā, Maui the first Surface Water Management Area ("SWMA") in the history of the Water Code.

Despite – or perhaps because of – the difficulty of managing water use absent a WMA, designation efforts have been hotly contested. These and other issues, including the Water Commission's lack of resources, have limited both the number of WMAs designated and the Water Commission's ability to effectively manage water use and withdrawals in non-designated areas.

When the Water Code was adopted in 1987, designation was conceived as a way to prioritize water management for areas that were in need of the most help. It also offered a transition period for entities like Maui County that opposed the Water Code's adoption. Nevertheless, it was always understood that all of Hawai'i would eventually be designated as a GWMA or SWMA. Given these and other considerations, in 1993, the Review Commission for the State Water Code recommended abolishing the designation process. The legislature, however, never acted on that or any of the Review Commission's recommendations. Over twenty years after the Water Code's enactment, the designation process appears to be hampering the Water Commission's ability to effectively manage precious water resources. Until the Review Commission's recommendations are implemented and Water Use Permit requirements apply throughout Hawai'i, designation will continue to offer community groups a less than ideal legal handle to better manage their resources.

G. Water Use Permitting

1. Water Use Permits

As detailed above, in designated Water Management Areas, the Water Code's water use permitting requirements apply. Anyone seeking to continue or begin any consumptive use of surface or ground water must apply for a permit, and bears the burden of establishing that their use complies with all of the requirements of the law. Haw. Rev. Stat. §§ 174C-48; -49. No permit, however, is required for domestic consumption by individual users, or for water catchment systems. Haw. Rev. Stat. § 174C-48(a).

To obtain a permit, each applicant must establish that a proposed new use of water:

(1) Can be accommodated with the available water source;

(2) Is a reasonable-beneficial use;

(3) Will not interfere with any existing legal use;

(4) Is consistent with the public interest;

(5) Is consistent with state and county general plans and land use designations;

(6) Is consistent with county land use plans and policies; and

(7) Will not interfere with water rights of the department of Hawaiian home lands as provided by Section 221 of the Hawaiian Homes Commission Act.

Haw. Rev. Stat. § 174C-49(a). Existing water uses are limited to the reasonable-beneficial use requirement, which is the most difficult to establish. Haw. Rev. Stat. § 174C-50(b). The precise information required to satisfy the Water Use Permit requirements identified here has been the subject of much litigation, and is discussed in more detail in Parts III(B) and IV(B). In general, to establish that a use is reasonable-beneficial, Water Use Permit applicants must demonstrate their actual water needs, as well as the absence of practicable alternatives, such as using other sources of water or making a use more efficient. In reviewing applications and issuing Water Use Permits, the Commission regulates how and where water is used and is better able to balance competing needs and interests while prioritizing public trust purposes.

Any existing water user in a WMA must apply for a permit within one year from the effective date of designation to preserve their status as an "existing use." Haw. Rev. Stat. § 174C-50(c). "Except for appurtenant rights, failure to apply within this period creates a presumption of abandonment of the use[.]" Haw. Rev. Stat. § 174C-50(c). Individuals who would like to expand existing water uses or begin new uses may also apply. Generally, the Commission processes applications for existing Water Use Permits first, before addressing new applications. If a use is reasonable-beneficial, and fulfills all of the criteria set forth in the Water Code and relevant cases interpreting those provisions, the Commission will issue a permit to continue that use. Haw. Rev. Stat. § 174C-50(b). However, as the Supreme Court made clear, "existing uses are not automatically 'grandfathered' under the constitution and the Code, especially in relation to public trust uses. . . . the public trust authorizes the Commission to reassess

previous diversions and all allocations, even those made with due regard to their effect on trust purposes." Waiāhole I, 94 Hawai'i at 149, 9 P.3d at 461. On the contrary, the Water Code preserves appurtenant rights and "[a] permit for water use based on an existing appurtenant right shall be issued upon application." Haw. Rev. Stat. § 174C-63. Similar to the treatment of appurtenant rights, the Code specifically provides that the "traditional and customary rights assured in this section[] shall not be diminished or extinguished by a failure to apply for or to receive a permit under this chapter." Haw. Rev. Stat. § 174C-101(d).

To allow flexibility for a brief transitional period after the Water Code was adopted, the Code gave the Commission limited discretion to allow late filings of Water Use Permit Applications for five years after administrative rules for the Water Code were adopted in 1988. Waiāhole I, 94 Hawai'i at 166, 9 P.3d at 478. If the Commission determined that there was just cause for failing to file by the deadline, it had the discretion to allow a late filing. That discretion, however, expired in 1993.[12]

The Code sets forth various other requirements regarding Water Use Permits, including the process for applying for, modifying, and revoking permits. Haw. Rev. Stat. §§ 174C-48 to -63. The Commission may revoke a permit on several grounds, including non-use of the water for a period of four consecutive years. Haw. Rev. Stat. § 174C-58. The Code also allows the transfer of a permit to another party, which may be accomplished administratively provided that all conditions of the transfer are met. Haw. Rev. Stat. § 174C-59. Otherwise, the permit would have to be modified at a Commission meeting. See Haw. Rev. Stat. § 174C-57.

2. Other Permits

Although the Code's requirements for Water Use Permits apply in designated Water Management Areas only, other permit requirements apply throughout Hawai'i, regardless of whether a Surface or Ground WMA is designated. These permits regulate various actions, including altering stream channels, installing, modifying, or abandoning stream diversions, and drilling, pumping, or abandoning wells.

For existing uses, the Code requires the registration of all existing wells. Haw. Rev. Stat. § 174C-83. The Code likewise mandates the registration of all "stream diversion works" – meaning any artificial or natural structure placed within a stream for the purpose of diverting stream water. Haw. Rev. Stat. §§ 174C-91; -92. Similarly, existing water users no longer interested in maintaining a stream diversion must apply for a

[12] Administrative rules for implementing the Water Code were passed in 1988. Therefore, the Commission had discretion to accept late filings until 1993, five years after the rules were adopted.

permit to abandon their diversion structure or intake. Haw. Rev. Stat. § 174C-95. For new uses, anyone seeking to prospectively construct or alter a stream diversion must obtain an appropriate permit. Haw. Rev. Stat. §§ 174C-93; -94.

Similarly, the Code requires a permit before a new well is constructed or modified, pumps or pumping equipment are installed, or an existing well is abandoned. Haw. Rev. Stat. §§ 174C-84(a); -87. An applicant's entitlement to various ground water permits may be affected by claims of right, including correlative rights claims discussed in Parts II(D)(4) and IV(A)(4).

Parts III(B) and IV(B) provide more information on the specific requirements for the permitting provisions of the Water Code. Permits required by other county, state, and federal agencies – such as Conservation District Use or Dredge and Fill Permits – will not be addressed by this primer.

III. STREAM PROTECTION AND MANAGEMENT

Pū'ali kalo i ka wai 'ole.

Taro, for lack of water, grows misshapen.

For lack of care one may become ill.

Historically, Hawai'i has been blessed with abundant fresh water supplies. Whether that water resides under the soil as ground water or flows over the earth as runoff after rain events, or as rivers or springs fed by underground supplies, our surface and ground water resources are inextricably intertwined and the source of all life for our island homes. Ola i ka wai: water is life! The diagram of the hydrologic cycle on page 9 makes this point eloquently.

The Water Code defines surface water as "both contained surface water – that is, water upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other watercourses, lakes, reservoirs, and coastal waters subject to state jurisdiction – and diffused surface water – that is, water occurring upon the surface of the ground other than in contained waterbodies." Haw. Rev. Stat. § 174C-3. Regardless of whether surface water is contained in streams or springs, or diffused in some other form, it is a public trust resource that must be managed for the benefit of present and future generations.

Long before the arrival of Westerners in Hawai'i, fresh water was the lifeblood of the land and a foundation for society. Streams and springs supported household uses, such as water for drinking and bathing, and provided irrigation for crops, including the staple food kalo. Streams flowing from mauka to makai sustained robust ecosystems in both the streams and related muliwai (nearshore marine waters). As detailed in Part II(A), this mauka to makai connection also provided a travel corridor for native stream animals (including o'opu, 'ōpae, and hīhīwai) to complete their lifecycles, enabling a healthy fishery in the streams that provided an important food source, especially during the winter.

With the coming of foreigners, streams were diverted to support plantation agriculture, such as sugar and pineapple. Years of plantation diversions have severely impaired stream and nearshore marine ecosystems, as well as Kānaka Maoli and other local communities who still rely on these resources to put food on their tables

and sustain their cultures. Today, Hawai'i's changing environment and economy – especially the closure of all but one sugar plantation in the islands – have created a unique opportunity to protect and restore Hawai'i's streams and related watersheds and enable them to, once again, support thriving public trust and other community uses.

A. Overview of the Legal Framework Specific to Surface Water

1. Interim Instream Flow Standards

Given competing needs for Hawai'i's limited water resources, instream flow standards ("IFSs") and interim instream flow standards ("IIFSs") are the Water Commission's principal mechanisms to ensure that surface water rights and interests, including resource protection, are adequately considered. To facilitate IFSs and IIFSs, the Legislature mandated that the Commission "establish and administer a statewide instream use protection program" when the Water Code was passed in 1987. Haw. Rev. Stat. § 174C-71. This program was specifically designed "to protect, enhance, and reestablish, where practicable, beneficial instream uses of water." Haw. Rev. Stat. § 174C-71(4). To implement the program and establish meaningful IFSs and IIFSs – which are vital to support public trust purposes – the Commission must conduct investigations and collect instream flow data including streamflow characteristics, fishing, wildlife, aesthetic, recreational, water quality, and ecological information necessary to determine instream flow requirements. Haw. Rev. Stat. § 174C-71(4).

An IFS assures a minimum amount of stream flow "necessary to protect the public interest in [a] particular stream. Flows shall be expressed in terms of variable flows of water necessary to protect adequately fishery, wildlife, recreational, aesthetic, scenic, or other beneficial instream uses in the stream" and must be established "on a stream-by-stream basis." Haw. Rev. Stat. §§ 174C-71(1), -71(1)(c). To establish an IFS, the Commission must "weigh the importance of the present or potential instream values with the importance of the present or potential uses of water from the stream for noninstream purposes, including the economic impact of restriction of such uses." Haw. Rev. Stat. § 174C-71(1)(E). It must also consult specific agencies and hold a public hearing before any IFS is established. Haw. Rev. Stat. §§ 174C-71(1)(E), (F). Because an IFS is intended to be permanent, it requires rigorous biological, hydrologic, and cultural data, as well as other information.

Upon the petition of any interested person, the Commission may adopt an IIFS for any stream on a "stream-by-stream basis" or for a larger geographical region. Haw. Rev. Stat. §§ 174C-71(2)(A), (F). An IIFS petition must "set forth data and information concerning the need to protect and conserve beneficial instream uses of water and any

other relevant and reasonable information required by the commission." Haw. Rev. Stat. § 174C-71(2)(C). In establishing an IIFS, the Commission must adhere to the same balancing standard established for an IFS. This process is supposed to be expedited, however, and the standard is more flexible in terms of how broadly it may be imposed, when compared to a permanent IFS.

The Code contemplates that IIFSs would be established expeditiously. The Code requires the Commission to grant or reject a petition to amend an IIFS within one hundred eighty days of the date the petition is filed. Haw. Rev. Stat. § 174C-71(2)(E). That time period may be extended a maximum of one hundred eighty additional days at the request of the petitioner and subject to the Commission's approval. Haw. Rev. Stat. § 174C-71(2)(E). As detailed below in Part III(C), if history is any indicator, actions to amend IIFSs are often complex and take years to resolve, far beyond the six months the Code contemplates.

The Commission is required to "designate instream flow standards as early as possible, . . . and particularly before it authorizes offstream diversions potentially detrimental to public instream uses and values." Waiāhole I, 94 Hawai'i at 146, 148, 9 P.3d at 458, 460. This timing is crucial to fulfill both the letter and spirit of the law. "The tentative grant of water use permits without any determination of instream flow standards, conversely, presents the least desirable scenario: no assurance that public rights are receiving adequate provision, no genuine comprehensive planning process, and no modicum of certainty for permit applicants and grantees." Waiāhole I, 94 Hawai'i at 149, 9 P.3d at 461. While "interim instream flow standards are merely stopgap measures," it is clear that "they must still protect instream values to the extent practicable." In re Waiāhole Combined Contested Case, 105 Hawai'i 1, 11, 83 P.3d 643, 653 (2004) ("Waiāhole II") (citations omitted). Despite their "temporary effect," the statute requires that "interim standards must still provide meaningful protection of instream uses." Waiāhole II, 105 Hawai'i at 11, 83 P.3d at 653 (citations omitted).

Notwithstanding these clear mandates, the Commission has failed to timely exercise its powers or to establish flow standards for protecting streams prior to issuing permits for offstream uses. Specifically, the administrative rules implementing the Water Code contemplated that by December 31, 1988 – approximately one year from the date of the Code's passage – the Water Commission would establish scientifically based IIFSs for all perennial streams in Hawai'i, which number almost four hundred. Haw. Admin. R. § 13-169-42; Hawai'i Cooperative Park Service Unit, National Park Service, Hawai'i Stream Assessment 9 (1990).

To establish both IIFSs and eventually IFSs, the Hawai'i Water Plan required the Commission to study and inventory water resources, needs, and rights, and draft plans for each hydrologic unit that account and provide for these needs and uses. See, e.g., Haw. Rev. Stat. §§ 174C-31(c), (h). Unfortunately, this never happened. For a number of reasons, including lack of funding and other resources, the Water Commission never fulfilled these requirements. As a result, in 1988, the Water Commission adopted the status quo as IIFSs: in other words, the Commission simply adopted as standards whatever amount of water, if any, happened to be in a stream on a particular date, regardless of whether it was sufficient to protect the public trust and community uses. As of the date of this primer's publication, the Water Commission has not adopted a single IFS.

Although over twenty years have passed since the Code's enactment, the only scientifically based IIFSs that either have been or are in the process of being set were the result of litigation. At the time of this primer's publication, the Water Commission has amended the IIFSs for the streams diverted by the Waiāhole Ditch System on O'ahu, although that case is still on appeal. The Commission is also in the process of amending the IIFSs for twenty-seven streams diverted by East Maui Irrigation and four streams being diverted by Wailuku Water Company and Hawaiian Commercial and Sugar Company in Nā Wai 'Ehā, Maui. Amendments to other IIFSs will likely follow in turn.

This creates an awkward situation where litigation has determined which streams are addressed first, rather than the Water Commission making this important policy decision. The situation has become even more complex as many of the large agricultural plantations that dominated life in Hawai'i for centuries have declined and those plantation ditch systems are being purchased and run as water companies for private profit regardless of Hawai'i law. Complexities like these have inspired a series of Hawai'i Supreme Court decisions that have helped to clarify outstanding issues and provide greater guidance to the Water Commission so that it can more effectively manage our water resources for present and future generations. Although this primer will not examine each of those cases in detail, one example illustrates how such litigation plays out in the courts and the larger community.

a. A Case in Point: Waiāhole

A prime example of how IIFS litigation unfolds is the battle over the water diverted by the Waiāhole Ditch System on O'ahu. The Waiāhole Ditch stretches from Kahana all the way to Kahalu'u and, since it was constructed in the early 1900s, that system has taken roughly 27 million gallons of water each day from Windward streams and communities, through the Ko'olau mountains to the Central plain where it was used primarily for sugar.

In 1993, shortly after the areas surrounding the Waiāhole Ditch were designated as Ground Water Management Areas, O'ahu Sugar announced that it would be closing. A coalition of Windward interests, represented by pro bono attorneys including the public interest litigation firms Earthjustice and the Native Hawaiian Legal Corporation, filed a petition requesting that all of the water taken by the ditch system be returned to Windward streams, to support a range of uses, including kalo. At the same time, nearly 20 other parties also wanted water, most seeking permits for large scale agriculture and urban development on O'ahu's Central plain.

After many months of contested case hearings akin to a trial, in December 1997 the Water Commission issued a decision dividing the water between Windward streams and Leeward users. For the first time in Hawai'i's history, the Commission ordered that the ditch operator restore water that had been taken for plantation agriculture to the streams of origin. No one was completely satisfied with the Commission's decision, and it was appealed to the Hawai'i Supreme Court. The Windward parties argued that not enough water had been restored to the streams, while Leeward interests contended that too much water had been returned.

In August 2000, the Hawai'i Supreme Court issued a landmark decision in that appeal. Although the Court acknowledged the Commission's efforts at water conservation, it went far beyond them to ensure that Hawai'i's streams receive the protection that the law requires. After reviewing the Commission's decision, the Court ruled that much of it was not supported by the evidence and did not comply with the Water Code. Specifically, the Court ordered: (1) the Commission to reconsider the amount of water the Windward streams need to support native stream life and community uses; (2) vacated permits the Commission had issued to Leeward interests; and (3) ordered the Commission to make a new decision on the permits that followed from the evidence. In summary, the Court decided some issues and sent seven others back to the Commission for more hearings.

After those hearings were held, the Commission issued a decision in December 2001. This decision again divided the water between the Windward streams and Leeward users. About 10 million gallons per day ("mgd") was split between three different streams: Waiāhole; Waianu; and Waikāne. About 13.3 mgd was permitted for offstream use in Central O'ahu. The remaining water – less than 4 mgd – was temporarily restored to the streams, but could be taken later for agriculture or other uses. That decision was appealed to the Hawai'i Supreme Court, which rendered another decision in July 2004 affirming part of Water Commission's decision, vacating others, and remanding more issues back to the Commission.

The Commission's 2006 decision on remand again divided the water between Windward streams and Leeward users: About 12 mgd was split between Waiāhole, Waianu, and Waikāne streams; about 12.6 mgd was permitted for offstream use in Central O'ahu; and the rest, about 2.4 mgd, was temporarily restored to the streams, but could be taken later for other uses. For the first time in the Commission's history, the 2006 decision also included a vigorous dissent, which argued that more water should be restored to the streams and that the permit issued to a defunct golf course was wrong. That decision is currently being appealed for the third time since the case started. Although a final decision is still pending, the Hawai'i Supreme Court's 2000 and 2004 decisions strongly reaffirmed several important principles, including the public trust's grounding in Hawai'i law.

After Waiāhole, other cases – on Moloka'i and Maui in particular – have helped to further clarify or are in the process of clarifying some outstanding issues, including the recognition of Department of Hawaiian Home Lands reservations as a protected public trust purpose, and the burdens of proof imposed on applicants who seek to use public trust resources for their private commercial gain.

2. Registration of Existing Stream Diversion Works

To help manage surface water resources, the Water Code requires the registration of all existing stream diversions regardless of whether the diversion is located in a Water Management Area. See Haw. Rev. Stat. § 174C-92. The Code defines a stream diversion as "the act of removing water from a stream into a channel, pipeline, or other conduit." Haw. Rev. Stat. § 174C-3. Initial registration was required by 1988, within one year from the date of the Water Code's enactment. Haw. Admin. R. § 13-168-31. The Water Commission provides registration forms and imposes requirements, such as monitoring and reporting. Haw. Admin. R. § 13-168-31. For more information on required reporting, see Part IV(A)(3), below.

3. Water Use Reporting Requirement

To assist the Water Commission in monitoring water uses, the Code's administrative rules require the owner or operator of any stream diversion to provide and maintain an approved meter or other measuring device, and submit monthly reports of total water use. Haw. Admin. R. § 13-168-7(a). For stream diversions that are part of a larger ditch system or network, the Water Commission may approve a centralized measuring device or system. Haw. Admin. R. § 13-168-7(a).

The Water Commission maintains the discretion to modify reporting requirements for each stream diversion or ditch system. Haw. Admin. R. § 13-168-7(c). In instances

where there are significant disputes over water use, including charges of water dumping or excessive waste, such as in the Waiāhole Ditch litigation on O'ahu, the Water Commission has imposed specific reporting requirements detailing, (1) the total amount of water used, (2) the amounts delivered to various end users, and (3) other requirements such as amounts of leakage, seepage, evaporation and overflow from reservoirs, to identify just a few. The Water Commission recently amended its penalty policy and may impose penalties of up to $5,000 per violation per day for failing to comply with any provision of the Water Code or its administrative rules, including the water use reporting requirement. Haw. Admin. R. § 13-169-3.

Where disputes over water use are commonplace, some counties have implemented more stringent water reporting requirements. For example, Maui County passed a 2005 ordinance requiring water users to submit detailed monthly reports, including: the total and average inflow and metered usage for the system in million gallons per day; a description of each individual site and user; the acres in actual cultivation by each individual user; the location and status of any gauges; and the capacity and levels of any storage facilities (such as a tank or reservoir) at the beginning and end of the period of record. Maui County Code § 2.90A.050. In addition, copies of monthly water use reports submitted to the Commission must also be transmitted to the Maui Department of Water Supply. Maui County's ordinance includes administrative penalties and judicial enforcement for failing to timely submit monthly reports, with fines of up to $1,000 per violation per day of non-compliance.

Reports of water use are an excellent source of information for individuals or community groups seeking data on water resources or uses in their area. Copies of these reports may be obtained from the Water Commission or county Board or Department of Water Supply. If you are not sure whether you need to submit a monthly report of water use, contact the Water Commission's surface water branch or your County Water Department. Contact information is provided in Appendix A.

B. Overview of Permits Specific to Surface Water

As described above in Part III(A), an IIFS is the Code's principal instrument to ensure that enough water flows in our streams to support beneficial instream uses of water and offstream needs. In addition to an IIFS, the Water Commission has other tools intended to help manage water uses. This section outlines some of the permits and other requirements that the Water Commission uses to manage surface water in Hawai'i. This primer focuses on the Water Code and does not address county, state, federal, or other permits that may be required.

1. Water Use Permits in Surface Water Management Areas

As detailed previously in Part II(F), in designated Surface Water Management Areas such as Nā Wai 'Ehā, Maui, any use of surface water – which is defined by the Water Code as a diversion, impoundment, or other consumptive use – requires a Water Use Permit. Haw. Rev. Stat. § 174C-48. The only uses that do not require permits are catchment systems and domestic consumption of water by individual users. Haw. Rev. Stat. § 174C-48. "Domestic uses" include the use of water for individual personal needs and household purposes such as drinking, bathing, heating, cooking, noncommercial gardening, and sanitation. Haw. Rev. Stat. § 174C-3. Domestic uses are different from "municipal uses," which refer to the public water services commercially provided by counties, such as your local department of water supply. See Haw. Rev. Stat. § 174C-3.

In designated Surface Water Management Areas, any uses that were "existing" on the date of designation have priority. Applications may also be filed for "new" uses that were not taking place on the date of designation. Of course, protected public trust purposes (such as appurtenant and traditional and customary rights) have priority over private, commercial uses. See, e.g., Haw. Rev. Stat. §§ 174C-63, -101(d). Applications are made on Water Commission forms, and initial applications are due one year from the date of designation.

Generally, after an application is completed and filed, the Water Commission will circulate it for comment. At that time, agencies or affected members of the public can comment on or object to the application. If objections are made to an application for an existing use, the Commission customarily has held a public hearing; however, at the date of this primer's publication, the Commission recently clarified that public hearings are not required but may be held at the Commission's discretion if objections are made to a permit application for a new use. If the Commission cannot resolve the concerns, the matter may proceed to an administrative trial called a contested case. Regardless of whether objections are received, the Commission will eventually determine whether the permit should be granted. Although the Water Code projects that this process should be completed within ninety days for new uses and up to one hundred eighty days for existing uses, the process can be extremely complex and drawn out.

At the date of this primer's publication, the Commission has designated only one Surface Water Management Area: Nā Wai 'Ehā, Maui. In Waiāhole I, however, the Hawai'i Supreme Court agreed that, in designated **Ground** Water Management Areas, given the "direct and inevitable interrelationship" between ground and surface water, issuing Water Use Permits for surface water is also appropriate. Waiāhole I, 94 Hawai'i

97, 175, 9 P.3d 409, 487. Therefore, Ground Water Management Area designation may provide a handle for permitting surface water in the future.

2. Stream Diversion Works Permits

The Water Code also regulates the installation and alteration of new stream diversions. See Haw. Rev. Stat. § 174C-93; Haw. Admin. R. § 13-168-32. Although normal maintenance is allowed, any expansion or other alteration requires a permit from the Water Commission and could require an IIFS amendment as well. Haw. Rev. Stat. § 174C-93; Haw. Admin. R. § 13-168-32. Within thirty days of completing the construction or alteration, the permittee is required to file a completion report with the Water Commission. Haw. Rev. Stat. § 174C-94. Any authorized representative of the Water Commission is empowered to access any stream diversion at any reasonable time to inspect it, obtain data, or investigate any matter. Haw. Admin. R. § 13-168-34.

3. Stream Channel Alteration Permits

To protect stream channels for public trust and community uses, the Water Code prohibits the alteration of stream channels without a permit, subject to exceptions for "routine streambed and drainageway maintenance activities and maintenance of existing facilities," and projects already approved or under construction. Haw. Rev. Stat. § 174C-71(3)(A), (B); Haw. Admin. R. § 13-169-50. Anyone wishing to place any materials or structures within a stream channel must apply for and receive a Stream Channel Alteration Permit from the Water Commission **before** commencing work. See Haw. Admin. R. § 13-169-51. In deciding whether to grant the permit, the Water Commission will consider: adverse impacts on stream flow, water quality, and stream ecology; whether the alteration would violate an IIFS; and whether it would "interfere substantially and materially with existing instream or non-instream uses" or previously permitted channel alternations. See Haw. Admin. R. § 13-169-52(c).

The Code also includes some provisions for emergency work necessary to prevent or minimize the loss of life or damage to property. Haw. Admin. R. § 13-169-55. In such cases, the Water Commission must be notified and a report submitted describing the nature and extent of the work performed.

4. Permit for the Abandonment of Stream Diversions

To help the Water Commission monitor the existence and use of stream diversions, permits are also required if any owner seeks to abandon or remove a stream diversion. Haw. Rev. Stat. § 174C-95. Such permits must be obtained **before** action is taken. Haw. Rev. Stat. § 174C-95.

C. Potential Legal Handles

Unfortunately, disputes over surface water have plagued Hawai'i for at least the last hundred years. With the growth of sugar plantations beginning in the mid to late 1800s, local disagreements escalated into epic legal battles. With Hawai'i's more recent transition from plantation agriculture to urban and other types of development, these struggles have only intensified. The Water Commission has jurisdiction to hear any dispute regarding water resource protection or use, including water rights, interests, permits, and even the lack of water to satisfy competing needs. Haw. Rev. Stat. § 174C-10. This section describes some potential legal handles that may be available under the Water Code to resolve disputes over Hawai'i's limited surface water resources.

1. IIFS Amendment

As described earlier in Part III(A)(1), one problem facing many local communities is the partial or total diversion of stream flows for offstream uses such as plantation agriculture and urban development. As detailed above, the Water Code created the IIFS as the principal tool to establish the minimum amount of water that must remain in a stream, or even in a specific reach of a stream, to support beneficial instream uses such as environmental protection and traditional and customary Native Hawaiian rights and practices. Unfortunately, scientifically-based IIFSs were never established for the vast majority of Hawai'i's streams. Because initial IIFSs adopted by the Water Commission simply recognized the "status quo," those IIFSs never considered whether the amount of water flowing in streams was sufficient to support public trust and other protected rights and uses. As a result, since the Water Code's adoption, most litigation over surface water in Hawai'i has involved challenges to IIFSs.

The legal handle that has been consistently and successfully utilized by community members to address insufficient stream flow is a petition to amend an IIFS. "Any person with the proper standing may petition the commission to adopt an interim instream flow standard for streams in order to protect the public interest pending the establishment of a permanent instream flow standard[.]" Haw. Rev. Stat. § 174C-71(2)(A). Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules. Although the Code empowers community members to take such action, the Hawai'i Supreme Court has ruled that it "do[es] not believe that the ultimate burden of justifying interim standards falls on the petitioner." Waiāhole I, 94 Hawai'i at 153, 9 P.3d at 465. Instead, the Commission bears an affirmative duty under the public trust to protect and promote instream uses via IIFSs. See, e.g., Waiāhole I, 94 Hawai'i at 141-43, 146, 153, 9 P.3d at 453-455, 458, 465. The public trust also requires 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." Waiāhole I 94 Hawai'i at 142, 9 P.3d at 454. "In practical terms, this means that the burden ultimately lies with those seeking or approving [private diversions] to justify them in light of the purposes protected by the trust." Waiāhole I 94 Hawai'i at 142, 9 P.3d at 454.

Despite the Hawai'i Supreme Court's clear articulation of who bears what burden in a petition to restore stream flow, the practical reality is that any such action will be extraordinarily time and resource intensive for the petitioner. The initial petition is only the beginning. Often, a petition will lead to a protracted administrative trial or "contested case." Although the Code envisioned that the Commission would make a determination on any IIFS petition within one hundred eighty days, the process has taken much longer than that. For example, in Nā Wai 'Ehā's contested case to restore stream flow by amending four IIFSs – which took place after the Supreme Court's ruling in the Waiāhole cases – the hearings stretched on from December 2007 until October 2008, and involved written and oral testimony from dozens of expert and community witnesses and hundreds of exhibits.

Although petitions to amend an IIFS remain one of the best ways to address the lack of stream flow, community members must comprehensively assess the merits of their case and whether sufficient resources are available to see the process through. In particular, before action is taken, community members should consider contacting public interest law firms with expertise in this area, such as Earthjustice and the Native Hawaiian Legal Corporation. Moreover, consider reviewing other petitions that were filed to restore stream flow to help determine the type and amount of information that will be required.

2. SWMA Designation

Given ongoing disputes over limited water resources, a petition to designate a Surface Water Management Area is another potential legal handle to address disputes over who is entitled to use water from a particular source or system. As described above in Part II(F), if an area is designated, almost all consumptive uses (with limited exceptions) will require a Water Use Permit. While this provides the Water Commission with the administrative mechanism to regulate the vast majority of water uses in that area, assuming the Commission agrees to designate, the permitting process is time and resource intensive and will impose burdens on all existing and potential water users. Before this action is taken, careful consideration must be given to whether the benefits of designation outweigh the requirements.

Designation may be initiated by a recommendation of the Water Commission Chair or a petition. Haw. Rev. Stat. § 174C-41(b). Specific formatting requirements are

provided in section 13-167-25 of the Water Commission's Administrative Rules. Once a determination has been made to pursue designation, a petition setting forth the reasons for designation may be filed "by any interested person[.]" Haw. Admin. R. § 13-171-4(a). The Water Code outlines the criteria for designating Ground and Surface Water Management Areas. See, e.g., Haw. Rev. Stat. §§ 174C-44; -45. In determining whether to designate a Surface Water Management Area, the Commission "shall" consider:

> (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;
>
> (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; or
>
> (3) Serious disputes respecting the use of surface water resources are occurring.

Haw. Rev. Stat. § 174C-45. Apart from these factors, designation is required when "the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water[.]" Haw. Rev. Stat. at § 174C-41(a).

Once a petition is filed, the Water Commission Chair must determine whether to recommend that the Commission grant the petition. To do so, factual investigations are often undertaken and appropriate county officials consulted, including the mayor, county council, and water board. Haw. Rev. Stat. § 174C-41(b); see also Haw. Rev. Stat. § 174C-43. Although the Code envisioned that the Commission Chair would make such a recommendation within sixty days, additional time may be necessary to determine if factual data warrants designation, and the process often takes much longer. Haw. Rev. Stat. § 174C-41(b).

Once a recommendation for designation is accepted, the Commission must hold a public hearing in the affected area so that water users and landowners can testify on the matter. Haw. Rev. Stat. § 174C-42. After the public hearing, the Water Commission meets to vote on the petition.

Despite this clear process, achieving Surface Water Management Area designation can be difficult. In fact, many such petitions remain pending at the Water Commission

for years. Similar to IIFS petitions, before taking action, community groups should contact public interest law firms with expertise in this area, such as Earthjustice and the Native Hawaiian Legal Corporation, for input and advice.

Community groups on Maui successfully used this process to better regulate water use and distribution in Nā Wai 'Ehā, although it has proven extremely resource intensive. At the time of this primer's publication, three years after the community groups initiated SWMA designation, the permitting process is still not completed.

3. Monitoring and Objecting to Water Use Permits

Once a Surface Water Management Area is designated, the Water Use Permit process begins. Individuals or community groups concerned about their water resources should regularly review pending Water Use Permit Applications, which are noticed both in newspapers of general circulation in the affected area, as well as in the Commission's Water Resource Bulletin. The Bulletin is published each month and is available on the Water Commission's website. Appendix A includes the website and other contact information for the Commission.

Contact the Water Commission for email notification when the Bulletin is posted. The Bulletin will contain information on the applications, including the deadline for any comments or objections. Review periods are often short, so each Bulletin must be reviewed promptly. Individuals may also file a written request with the Commission for notification of any pending applications affecting a particular designated Water Management Area. See Haw. Rev. Stat. § 174C-52(a).

Individuals and community groups have successfully used this process to seek better protection for the streams diverted by the Waiāhole Ditch System on O'ahu.

4. Citizen Complaint

In addition to Petitions for IIFS amendment and Surface Water Management Area Designation, the Water Commission has several other tools to address issues of water use. For example, if someone is interfering with water rights or uses – such as wasting or polluting water, or diverting or using water without a permit – any individual can file a Citizen Complaint. See Haw. Rev. Stat. § 174C-13; Haw. Admin. R. § 13-167-82. Citizen Complaints may be submitted on Water Commission forms regardless of whether the problem takes places in a Water Management Area. Haw. Admin. R. § 13-167-82. Once a Citizen Complaint is filed, the Water Commission must notify the complainant and conduct an investigation. Haw. Admin. R. § 13-167-82. Complaints regarding water quality, however, must be filed with the Department of Health. Haw. Admin. R. § 13-167-82. Citizen Complaints may also be coupled with Petitions for

Declaratory Ruling, which are explained below. Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules.

Community groups on Maui have used this tool to raise issues of water dumping with the Water Commission.

5. **Petition for Declaratory Ruling**

Any interested person can also seek clarification from the Water Commission regarding any question of law or fact. See Haw. Admin. R. § 13-167-81. This provision can be used, for example, to determine whether a provision of the Water Code applies, whether a parcel of land has appurtenant rights, or whether a water shortage must be declared. Petitions "shall state clearly and concisely the controversy or uncertainty, shall cite the statutory authority involved, shall include a complete statement of the facts, reasons, or grounds, prompting the petition together with full disclosure of petitioner's interest[.]" Haw. Admin. R. § 13-167-81(a). Specific formatting requirements are set forth in section 13-167-25 of the Water Commission's Administrative Rules.

The Water Commission may also require additional information to resolve a Declaratory Ruling. Haw. Admin. R. § 13-167-81(b). Although the Commission is not required to hold a hearing on a Petition for Declaratory Ruling, it may do so. Haw. Admin. R. §§ 13-167-81(c), (d). Petitioners or other interested parties may also request a hearing, which will be held in accordance with Hawai'i's Administrative Procedure Act, Haw Rev. Stat. ch. 91. Haw. Admin. R. § 13-167-81(d). Even if a hearing is not held, the Commission will usually decide the matter at a publically noticed meeting where interested members of the public can submit oral or written testimony.

Community groups on Maui have used this tool to raise issues of water dumping with the Water Commission.

6. **Reservation of Water**

In designated Water Management Areas, the Water Commission has the discretion to "reserve water in such locations and quantities and for such seasons of the year as in its judgment may be necessary." Haw. Rev. Stat. § 174C-49(d). Such reservations must be made by rule and are subject to periodic review. Haw. Rev. Stat. § 174C-49(d); Haw. Admin R. § 13-171-60(a).

The Code also directs the Water Commission to "incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act." Haw. Rev. Stat. § 174C-101(a). The Code's mandate to reserve and protect water for Department

of Hawaiian Home Lands' use operates independently of any Water Management Area Designation. Currently, reservations have been made for future Hawaiian Home Land developments for various amounts on different islands. See, e.g., Haw. Admin. R. §§ 13-171-61; -62. Specific formatting requirements for reservation requests are provided in section 13-167-25 of the Water Commission's Administrative Rules.

7. Water Shortage and Water Emergency

The Water Code also directs the Water Commission to prepare a plan to address periods of water shortage, and to publish criteria for determining when such a shortage exists. Haw. Rev. Stat. §§ 174C-62(a), (b). The Commission may declare a water shortage by rule for all or part of a Water Management Area "when insufficient water is available to meet the requirements of the permit system or when conditions are such as to require a temporary reduction in total water use within the area to protect water resources from serious harm." Haw. Rev. Stat. § 174C-62(b). A declaration of water emergency may be made regardless of whether the area is a Water Management Area. Haw. Rev. Stat. § 174C-62(g).

During a water shortage, the Commission may impose restrictions "as may be necessary to protect the water resources of the area from serious harm and to restore them to their previous condition." Haw. Rev. Stat. § 174C-62(c). If the Commission's water shortage plan is "not sufficient to protect the public health, safety, or welfare, or the health of animals, fish, or aquatic life, or a public water supply, or recreational, municipal, agricultural, or other reasonable uses," the Commission may declare a water emergency and take action necessary to address the situation, "including but not limited to apportioning, rotating, limiting, or prohibiting the use of the water resources of the area." Haw. Rev. Stat. § 174C-62(g).

After declaring a shortage, the Commission must notify the general public by publication in a newspaper of general circulation in the affected area. Haw. Rev. Stat. § 174C-62(e). For the first week of the water shortage, notices are published each day; thereafter, notices are published once a week until the shortage is rescinded. Haw. Rev. Stat. § 174C-62(e). Individual permittees must also be notified by regular mail. Haw. Rev. Stat. § 174C-62(f). A water shortage may be rescinded by Commission rule. Haw. Rev. Stat. § 174C-62(d).

As demand continues to increase for Hawai'i's limited water resources, which are already taxed by global warming and other environmental factors, the community at large should be prepared for potential water shortages. Although this tool is for the Commission rather than the public at large, interested community groups could file a Petition for a Declaratory Ruling that a water shortage exists in a given area.

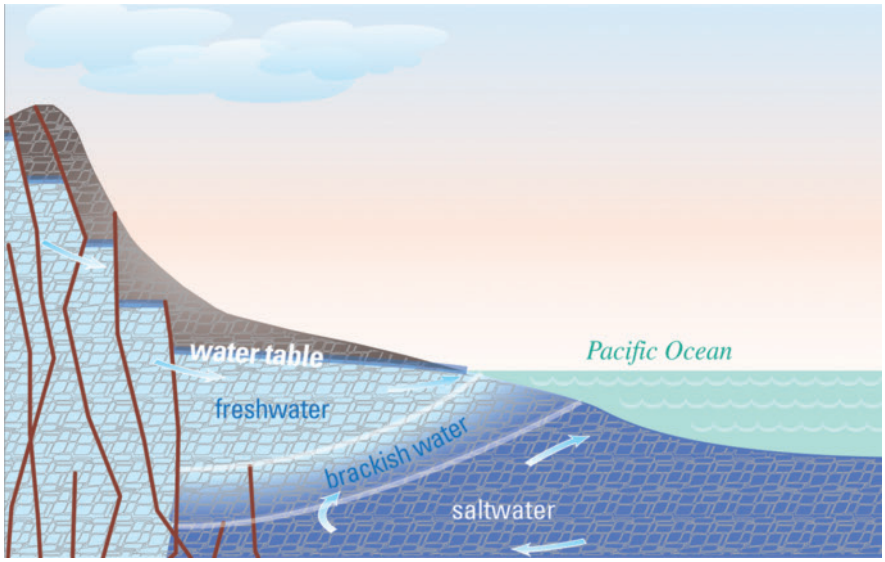
IV. HAWAI'I'S PRECIOUS GROUND WATER SUPPLIES

Mohala i ka wai ka maka o ka pua.

Unfolded by the water are the faces of the flowers.

Flowers thrive where there is water, as thriving people are found where living conditions are good.

In Hawai'i, we have been blessed with abundant fresh water supplies. Below our islands, a lens of fresh water floats on the ocean and is separated by a "transition zone" of brackish water in which the water goes from fresh near the top to very salty near the bottom of the zone. In addition, fresh water resides within the earth in different forms, such as dike or artesian systems, confined spaces, or underground channels. These ground water supplies can bubble up as fresh water springs on land or in the ocean, feed rivers and streams, and are a major source of drinking water for Hawai'i's communities. Even during ancient times, Kānaka Maoli utilized these underground supplies for a wide range of purposes.



Ground Water Occurrence
Diagram courtesy of Gordon Tribble, U.S. Geological Survey Circular 1312, p. 35 (2008).

The Water Code defines ground water as "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." Haw. Rev. Stat. § 174C-3. These supplies are fed by various sources, including rain, surface water runoff, and seepage from rivers, dikes, and other fresh water bodies. Today, our changing environment (including global warming), land use patterns (such as increasing urbanization and the loss of forested watersheds and other open spaces), and other factors make water management

even more challenging. Hawai'i's ground water supplies are carefully regulated by county, state, and federal agencies, which are mandated to ensure that these important resources are preserved and restored for present and future generations.

A. Overview of the Legal Framework Specific to Ground Water

Given competing cultural, environmental, domestic, municipal, agricultural, and other demands for Hawai'i's limited ground water supplies, the Water Code provides a system for regulating ground water that includes the establishment of Sustainable Yields, registration of existing wells, and water use reporting. Permitting requirements are also critical, but will be discussed separately in Part IV(B), below.

1. Sustainable Yields

Sustainable Yields are the Water Commission's principal mechanism to ensure that ground water resources are adequately managed, while at the same time enabling the exercise of various rights and interests. The Water Code defines Sustainable Yield as "the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the commission." Haw. Rev. Stat. § 174C-3. In other words, it is the maximum amount of water that may be taken from an aquifer over a given period of time while still maintaining the integrity of that water source. For example, at the date of this primer's publication, the Sustainable Yield for the 'Īao Aquifer on Maui is 20 mgd. Therefore, all of the wells, tunnels, or other sources in that aquifer that access ground water, cannot cumulatively pump, siphon, or otherwise withdraw more than 20 million gallons on any given day.

In 1987, the Hawai'i Water Code directed the Water Commission to "[s]tudy and inventory existing water resources," as well as "existing and contemplated needs." Haw. Rev. Stat. §§ 174C-31(c)(1), (2). Once existing resources and needs were catalogued by hydrologic unit, the Code directed the Commission to establish Sustainable Yields "using the best information available." Haw. Rev. Stat. § 174C-31(i)(2). The Code also directed the Commission to review these limits periodically and, where appropriate, adopt variable Sustainable Yields that reflect seasonal changes. Haw. Rev. Stat. § 174C-31(i)(2). Moreover, any Water Use Permit for a given source must be conditioned to "maintain sustainable yields of groundwater[.]" Haw. Rev. Stat. § 174C-31(j). Sustainable Yields were later adopted by the Commission for each hydrologic unit of every island except Makaiwa in Ewa-Kunia on O'ahu.

The initial Sustainable Yields adopted by the Water Commission – including the Sustainable Yield for the 'Īao Aquifer on Maui – largely used the RAM or Robust Analytical Model, a two dimensional model developed by John Mink. Scientific models

have since demonstrated that the RAM incorporated certain principles, such as the ideal placement of wells, which are not required or provided for by the Water Code. Therefore, many of the Commission's initial Sustainable Yields overestimated the amount of water that could be safely withdrawn without impairing the integrity of the water source. Later studies by the United States Geological Survey and others have assisted the Water Commission in calculating more accurate Sustainable Yields and the Commission is in the process of updating those figures. In the absence of more detailed data and modeling, however, RAM continues to provide the only information available.

To find out the Sustainable Yield for ground water sources in your community, consult the Water Commission's June 2008 Water Resources Protection Plan. At the time of this primer's publication, the plan was available at the Water Commission's website: http://www.state.hi.us/dlnr/cwrm/planning_wrpp.htm#2008update. If you do not have internet access, you can contact the Water Commission by phone or email. Additional contact information for the Commission is provided in Appendix A.

2. Registration of Existing Wells

To better manage ground water resources, the Water Code also requires the registration of all existing wells "on the forms provided by the commission." Haw. Rev. Stat. § 174C-83. The Commission requires a range of information, including the location and size of the well, capacity, and name of the well driller or person who constructed the well. Haw. Rev. Stat. § 174C-83. The failure to register a well can result in the Water Commission's denial of a Water Use Permit for any other well owned or operated by the same applicant. Haw. Rev. Stat. § 174C-83.

3. Water Use Reporting Requirement

The Code requires the owner or operator of any active well to "provide and maintain an approved meter or other appropriate device" and submit monthly reports of total water use. Haw. Admin. R. § 13-168-7(a). For wells that are part of a larger network or battery of sources, the Water Commission may approve a centralized measuring device or system. Haw. Admin. R. § 13-168-7(a). The Commission also has the discretion to modify the requirements for monthly reports of water use on a case-by-case basis. Haw. Admin. R. § 13-168-7(c). Based on its updated penalty policy, the Water Commission may impose penalties of up to $5,000 per violation per day for failing to comply with any provision of the Water Code or its administrative rules, including the water use reporting requirement. Haw. Admin. R. § 13-169-3.

Well owners or operators should also be aware that individual counties have the power to implement more stringent water reporting requirements. In Maui County, for

example, where access to water is at a premium, the County Council passed an ordinance in 2005 requiring that copies of monthly water use reports submitted to the Commission be transmitted to the Maui Department of Water Supply. Moreover, the ordinance added additional water reporting requirements, including: the total and average inflow and metered usage for the system in million gallons per day; a description of each individual site and user; the acres in actual cultivation by each individual user; the location and status of any gauges; and the capacity and levels of any storage facilities (such as a tank or reservoir) at the beginning and end of the period of record. Maui County Code § 2.90A.050. Maui County's ordinance also includes administrative penalties and judicial enforcement for failing to timely submit monthly reports, with fines of up to $1,000 per violation per day of non-compliance.

Reports of water use are an excellent source of information for individuals or community groups seeking data on water resources or uses in their area. Copies of these reports may be obtained from the Water Commission or county Board or Department of Water Supply. If you are not sure whether you need to submit a monthly report of water use, contact the Water Commission's ground water branch or your County Water Department. Contact information is provided is Appendix A.

4. Relevance of Correlative Rights Claims

As detailed earlier in Parts II(F) and II(G), Hawai'i has a bifurcated system of water rights. In non-designated areas, rights to water are governed by the common law, which are articulated through decisions in court cases. In the ground water context, this is most relevant to correlative rights. As discussed earlier in Part II(D)(4), correlative rights to ground water protect the interests of individuals who own land overlying a ground water source. Such land has rights that correlate to the water below it. Hawai'i's constitution protects existing correlative uses only, as opposed to inchoate (or unexercised) correlative rights. This means that unexercised correlative rights are protected in non-designated areas, but only existing correlative uses receive priority in designated Ground Water Management Areas. Practically speaking, this means that if you own land over a ground water source in a non-designated area, you should have a higher priority for that water (for example, if you were seeking a permit to drill or pump a well) than if you were in a Ground Water Management Area. That said, all permit applications are determined on a case-by-case basis.

B. Overview of Permits Specific to Ground Water

As described above in Part IV(A)(1), although Sustainable Yields establish a limit for ground water withdrawal, the Water Commission has other tools to help regulate ground

water uses. This section outlines some of the permits and other requirements that the Water Commission uses to effectuate the letter and spirit of the Water Code.

1. Water Use Permits in Ground Water Management Areas

In designated Ground Water Management Areas, the water use permitting provisions of the Water Code apply, and any withdrawal, impoundment or other consumptive use of ground water requires a Water Use Permit. See also Haw. Rev. Stat. § 174C-48(a). Therefore, in these areas, even if you own a well, you cannot legally pump water from it unless you have a corresponding Water Use Permit. Some exceptions to the permitting requirements exist, however, such as domestic consumption by individual users. Haw. Rev. Stat. § 174C-48(a). Again, "domestic uses" include the use of water for individual personal needs and household purposes such as drinking, bathing, cooking, noncommercial gardening and sanitation. Haw. Rev. Stat. § 174C-3. Domestic uses should not be confused with "municipal uses," which refer to the public water services commercially provided by counties, such as your local department of water supply. See Haw. Rev. Stat. § 174C-3.

In designated Ground Water Management Areas, any uses that were "existing" on the date of designation have priority. Applications may also be filed for "new" uses that were not taking place on the date of designation. Again, protected public trust purposes (including Department of Hawaiian Home Lands reservations and traditional and customary Native Hawaiian rights) will have priority over private, commercial uses. See, e.g., Haw. Rev. Stat. §§ 174C-101(a), (c). The Water Commission provides appropriate forms and applications, which are due one year from the date of designation, a deadline set by the Water Commission.

After an application is completed and filed, the Water Commission will circulate it for comment. At that time, agencies or affected members of the public can provide comments or object to the application. The Commission has historically held a public hearing when an objection was made to Water Use Permit Application for an existing or new use. However, at the date of this primer's publication, the Commission recently clarified that public hearings are not required but may be held at the Commission's discretion if objections are made to a permit application for a new use. If the Commission cannot resolve the concerns, the matter may proceed to an administrative trial called a contested case. Regardless of whether objections are received, the Commission will eventually determine whether the permit should be granted. Although the Water Code projects that this process should be completed within ninety days for new uses and up to one hundred eighty days for existing uses, the process can be extremely complex and drawn out.

In designated Water Management Areas, the Commission shall delegate to the county Boards of Water Supply "the authority to allocate the use of water for municipal purposes[.]" Haw. Admin. R. § 13-171-11(b). In the past, this was done through a "bulk allocation" where the Board of Water Supply ("BWS") received a permit for water use that was not restricted to a particular source. BWS then allocated that amount between individual users as it saw fit. Allocations to County Boards of Water Supply can also be accomplished through individual Water Use Permits that are source specific.

At the date of this primer's publication, the Commission has designated only a handful of Ground Water Management Areas: all of Oʻahu except Waiʻanae, the Island of Molokaʻi, and the ʻĪao Aquifer on Maui. Again, in the Waiāhole I case, the Hawaiʻi Supreme Court ruled that in designated Ground Water Management Areas, Water Use Permits can be appropriate to manage surface water if there is a "direct and inevitable interrelationship" between the ground and surface water at issue. Waiāhole I, 94 Hawaiʻi 97, 175, 9 P.3d 406, 487.

2. Well Construction and Pump Installation Permits

To keep a handle on water use and withdrawals while also protecting aquifers, optimizing infrastructure, preventing waste, and facilitating the collection of hydrologic data, the Water Code strictly regulates the construction of new wells. "No well construction and no installation of pumps and pumping equipment shall commence without [an] appropriate permit from the commission." Haw. Rev. Stat. § 174C-84(a). Permits for well construction and pump installation are required regardless of whether an area is designated. Haw. Rev. Stat. § 174C-84(a). The appropriate application must be filed by a licensed contractor on forms provided by the Commission. Haw. Rev. Stat. § 174C-84(a). Although the information required for an application (such as location, proposed depth, method of well construction, size and expected capacity, etc.) is relatively standard, in Ground Water Management Areas, information on the corresponding Water Use Permit is also required. Haw. Rev. Stat. § 174C-84(b). The Water Commission also promulgated specific standards on well construction and pump installation, which must be adhered to. See Haw. Rev. Stat. § 174C-86.

Before acting on a well construction or pump installation application, the Department of Health ("DOH") must review the submission. Haw. Rev. Stat. § 174C-84(c). DOH must ensure compliance with various rules and standards, including consideration of the well's location. Haw. Rev. Stat. § 174C-84(c).

If a permit is denied, an applicant may obtain a hearing before the Water Commission pursuant to the administrative rules for contested cases. Haw. Rev. Stat. § 174C-84(f). Once a permit is issued, the Commission retains the discretion to amend

it in certain circumstances, such as a new proposed well location. Haw. Rev. Stat. § 174C-84(e). The Commission may also suspend or revoke a permit for good cause. Haw. Rev. Stat. § 174C-84(g).

Within thirty days of completing the well, the driller and pump installation contractor must file a well completion report with the Commission. Haw. Rev. Stat. § 174C-85. The Commission requires a range of information for that report, including a chloride analysis of the water drawn from the well. Haw. Rev. Stat. § 174C-85.

3. Permits for Well Abandonment

If a well will no longer be actively used, the owner must file a permit application to abandon it. Haw. Rev. Stat. § 174C-87. The application must include information on the well, including the owner and Water Use Permit, if any, as well as information on the contractor who will plug the well. Haw. Rev. Stat. § 174C-87. To protect public safety, preserve the aquifer from contamination, and prevent waste, the Water Commission must approve a method to fill and seal the well before it can be abandoned. Haw. Rev. Stat. § 174C-87.

C. *Potential Legal Handles*

The Water Commission has jurisdiction to hear disputes regarding resource protection and use, including water rights, interests, permits, and even the lack of water to satisfy competing needs. Haw. Rev. Stat. § 174C-10. Although disputes over ground water have and will continue to occur, these differences are often over individual aquifers or water sources and, generally speaking, are less complicated and appear to be resolved more quickly than surface water disputes. This section provides an overview of some of the legal handles that may be available under the Water Code to community members seeking to resolve disputes over ground water resources. Since some of these tools – such as Citizen Complaints, Petitions for Declaratory Rulings, reservations, and declarations of water shortages or emergencies – are more general legal handles, they may be similar or identical to avenues available to address surface water issues.

1. GWMA Designation

A petition to designate a Ground Water Management Area is one potential legal handle to address disputes over water use and management of a particular source. As described above in Part II(F), if an area is designated, almost all consumptive uses (with very limited exceptions) will require Water Use Permits. While this provides the Water Commission with the administrative mechanism to regulate the vast majority of water uses in that area, assuming it even designates, the permitting process is time and resource intensive and imposes burdens on all existing and potential water users. Before pursuing

this action, careful consideration must be given to whether the benefits of designation outweigh the requirements.

Designation may be initiated by a recommendation of the Water Commission Chair or a petition. Haw. Rev. Stat. § 174C-41. Once a determination has been made to pursue designation, a petition setting forth the reasons for designation may be filed "by any interested person[.]" Haw. Admin. R. § 13-171-4(a). The Water Code outlines the criteria for designating Ground Water Management Areas. Haw. Rev. Stat. § 174C-44. In determining whether to designate a Ground Water Management Area, the Commission "shall" consider:

> (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 of the proposed ground water management area;
>
> (2) There is an actual or threatened water quality degradation as determined by the department of health;
>
> (3) Whether regulation is necessary to preserve the diminishing ground water supply for future needs, as evidenced by excessively declining ground water levels;
>
> (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 upcoming or the encroachment of salt water;
>
> (5) Whether the chloride contents of existing wells are increasing to levels which materially reduce the value of their existing uses;
>
> (6) Whether excessive preventable waste of ground water is occurring;
>
> (7) Serious disputes respecting the use of ground water resources are occurring; or
>
> (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.

Haw. Rev. Stat. § 174C-44. Apart from these factors, designation is required when "the water resources in an area may be threatened by existing or proposed withdrawals or

diversions of water[.]" Haw. Rev. Stat. § 174C-41(a). Moreover, designation is "imminent" if ground water withdrawals reach ninety percent of the Sustainable Yield. Haw. Rev. Stat. § 174C-44. Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules.

Once a petition is filed, the Water Commission Chair must determine whether to recommend that the Commission grant the petition. To do so, factual investigations are often undertaken and appropriate county officials consulted, including the mayor, county council, and water board. Haw. Rev. Stat. § 174C-41(b); see also Haw. Rev. Stat. § 174C-43. Although the Code envisioned that the Commission Chair would make such a recommendation within sixty days, additional time may be necessary to determine if factual data warrants designation, and the process often takes much longer. Haw. Rev. Stat. § 174C-41(b).

When a recommendation for designation is accepted, the Commission must hold a public hearing in the affected area so that concerned water users and landowners have the opportunity to testify on the matter. Haw. Rev. Stat. § 174C-42. After the public hearing, the Water Commission votes on the matter at a Water Commission meeting.

Community groups have successfully used this process to seek better regulation of their ground water resources. On Maui, community groups filed a petition for Ground Water Management Area designation for the ʻĪao and Waiheʻe aquifers in 2001. Although the Water Commission designated only the ʻĪao aquifer, this effort was helpful in regulating new well development in the area.

Despite this process, achieving designation of a Ground Water Management Area can be complicated and have unanticipated results. Before taking action, community groups should contact public interest law firms with expertise in this area, such as Earthjustice and the Native Hawaiian Legal Corporation, for input and advice.

2. Monitoring and Objecting to Water Use Permit Applications

Once a Ground Water Management Area is designated, the Water Use Permit process begins. Individuals or community groups concerned about their water resources should regularly review pending Water Use Permit Applications, which are noticed both in newspapers of general circulation in the affected area, as well as in the Commission's Water Resource Bulletin. The Bulletin is published each month and is available on the Water Commission's website. Appendix A includes the website and other contact information for the Commission.

Contact the Water Commission for email notification when the Bulletin is posted. The Bulletin contains information on the applications, including the deadline for any

comments or objections. Review periods are often short, so each Bulletin must be reviewed promptly. Individuals may also file a written request with the Commission for notification of any pending applications affecting a particular designated Water Management Area. See Haw. Rev. Stat. § 174C-52(a).

Individuals and community groups have successfully used this process to raise concerns about the impacts of proposed new wells on their ground water resources. For example, two cases on Moloka'i, Wai'ola o Moloka'i, 103 Hawai'i 401, 83 P.3d 664 (2004), and Kukui Moloka'i Inc., 116 Hawai'i 481, 174 P.3d 320 (2007), involved contested case hearings that were ultimately appealed to the Hawai'i Supreme Court over the impacts that new wells or expanded ground water pumping would have on the discharge of fresh water into the nearshore marine area. In particular, Native Hawaiian practitioners were concerned that if Water Use Permits for these wells were issued, less fresh water would flow from coastal springs, negatively impacting limu (seaweed) and other resources necessary for subsistence purposes. In both cases, the Hawai'i Supreme Court vacated the permits the Water Commission had issued for the wells due to potential impacts on public trust purposes, including Native Hawaiian traditional and customary rights and practices and reservations for the Department of Hawaiian Home Lands. At the time of this primer's publication, the remanded hearings for both the Kukui and Wai'ola cases have not been initiated, and both cases remained unresolved.

3. Citizen Complaint

In addition to Ground Water Management Area Designation and Water Use Permits, the Water Commission has several other tools to address issues of water use. For example, if someone interferes with your water rights or uses – such as wasting or polluting water, or pumping a well without a permit – any individual can file a Citizen Complaint. See Haw. Rev. Stat. § 174C-13; Haw. Admin. R. § 13-167-82. Citizen Complaints may be submitted on Water Commission forms regardless of whether the problem takes places in a Water Management Area. Haw. Admin. R. § 13-167-82. Once a Citizen Complaint is filed, the Water Commission must notify the complainant and conduct an investigation. Haw. Admin. R. § 13-167-82. Complaints regarding water quality, however, must be filed with the Department of Health. Haw. Admin. R. § 13-167-82. Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules.

4. Petition for Declaratory Ruling

Any interested person may also seek clarification from the Water Commission regarding any question of law or fact. See Haw. Admin. R. § 13-167-81. This can be used, for example, to determine whether a provision of the Water Code applies, whether a

particular ground water use is existing or new, or whether a water shortage must be declared. Petitions "shall state clearly and concisely the controversy or uncertainty, shall cite the statutory authority involved, shall include a complete statement of the facts, reasons, or grounds prompting the petition together with full disclosure of petitioner's interest[.]" Haw. Admin. R. § 13-167-81(a). Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules.

The Water Commission may also require additional information to resolve a declaratory ruling. Haw. Admin. R. § 13-167-81(b). Although the Commission is not required to hold a hearing on a Petition for Declaratory Ruling, it may do so. Haw. Admin. R. §§ 13-167-81(c), (d). Petitioners or other interested parties may also request a hearing, which will be held in accordance with Haw. Rev. Stat. ch. 91. Haw. Admin. R. § 13-167-81(d).

5. Reservation of Water

In designated Water Management Areas, the Water Commission has the discretion to "reserve water in such locations and quantities and for such seasons of the year as in its judgment may be necessary." Haw. Rev. Stat. § 174C-49(d). Such reservations must be made by rule and are subject to periodic review. Haw. Rev. Stat. § 174C-49(d); Haw. Admin R. § 13-171-60.

The Code also directs the Water Commission to "incorporate and protect adequate reserves of water for current and foreseeable development and use of Hawaiian home lands as set forth in section 221 of the Hawaiian Homes Commission Act." Haw. Rev. Stat. § 174C-101(a). The Code's mandate to reserve and protect water for Department of Hawaiian Home Lands' use operates independently of any Water Management Area designation. Currently, reservations have been made for future Hawaiian Home Land developments for various amounts on different islands. See, e.g., Haw. Admin. R. §§ 13-171-61; -62. Specific formatting requirements are provided in section 13-167-25 of the Water Commission's Administrative Rules.

6. Water Shortage and Water Emergency

The Water Code also directs the Water Commission to prepare a plan to address periods of water shortage, and to publish criteria for determining when such a shortage exists. Haw. Rev. Stat. §§ 174C-62(a), (b). The Commission may declare a water shortage by rule for all or part of a Water Management Area "when insufficient water is available to meet the requirements of the permit system or when conditions are such as to require a temporary reduction in total water use within the area to protect water resources from serious harm." Haw. Rev. Stat. § 174C-62(b). A declaration of water emergency may be

made regardless of whether the area is a Water Management Area. Haw. Rev. Stat. § 174C-62(g).

During a water shortage, the Commission may impose restrictions "as may be necessary to protect the water resources of the area from serious harm and to restore them to their previous condition." Haw. Rev. Stat. § 174C-62(c). If the Commission's water shortage plan is "not sufficient to protect the public health, safety, or welfare, or the health of animals, fish, or aquatic life, or a public water supply, or recreational, municipal, agricultural, or other reasonable uses," the Commission may declare a water emergency and take action necessary to address the situation, "including but not limited to apportioning, rotating, limiting, or prohibiting the use of the water resources of the area." Haw. Rev. Stat. § 174C-62(g).

After declaring a shortage, the Commission must notify the general public by publication in a newspaper of general circulation in the affected area. Haw. Rev. Stat. § 174C-62(e). For the first week of the water shortage, notices are published each day; thereafter, notices are published once a week until the shortage is rescinded. Haw. Rev. Stat. § 174C-62(e). Individual permittees must also be notified by regular mail. Haw. Rev. Stat. § 174C-62(f). A water shortage may be rescinded by Commission rule. Haw. Rev. Stat. § 174C-62(d).

V. CONCLUSION

Hoʻi ka wai a ka puna noho mai.

The water returns to the spring and there remains.

This primer traces the journey from wai, to waiwai, to kānāwai: from fresh water, to wealth, to the fundamentals of law in Hawaiʻi. Although it is clear that Hawaiʻi's traditional laws and legal system evolved around the management and use of fresh water given the vital role that wai played in supporting all life in these islands, in contemporary times, much has changed. Today, as in the past, kānāwai alone cannot ensure that our wai will thrive and bring life to all that depends on it. Although the written law continues to mandate the protection and restoration of our life-giving waters, much remains to be done to ensure that these requirements do not remain solely on paper and will actually come to life in the streams, aquifers, and other public trust resources that rely both on wai and on each of us to ensure that the kānāwai is respected and implemented.

In addition to the law, kānāwai can be defined as the physical act of measuring and managing water resources. In much the same way, the law requires action to give it meaning. This primer aims to inspire action and bring all of us closer to ola i ka wai ola: life through the life-giving waters. After all, ola i ka wai ola, ola ē kuaʻāina: life through the life-giving waters brings life to the people of the land.

GLOSSARY OF TERMS

Abandoned Well

"[A]ny well that has been permanently discontinued. Any well shall be deemed abandoned which has been allowed to become unsealed, leaking, polluting, deteriorating in quality, uncontrollable, buried, or which is in such a state of disrepair that continued use for the purpose of obtaining ground water is impractical or unsafe." HAW. ADMIN. R. § 13-168-2.

Agricultural Use

"[T]he use of water for the growing, processing, and treating of crops, livestock, aquatic plants and animals, and ornamental flowers and similar foliage." HAW. REV. STAT. § 174C-3. Although agriculture is a public purpose, the Hawai'i Supreme Court ruled that agricultural uses do not rise to the level of public trust purposes such as environmental protection or appurtenant or traditional and customary Native Hawaiian rights. Waiāhole I, 94 Hawai'i at 136-138, 9 P.3d at 448-450.

Aho

"Line, cord, lashing, fishing line, thong, kite string." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 7 (1986 ed.).

Ahupua'a

"Land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (*ahu*) of stones surmounted by an image of a pig (*pua'a*), or because a pig or other tribute was laid on the altar as tax to the chief." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 9 (1986 ed.).

Akua

"God, goddess, spirit, ghost, devil, image, idol, corpse; divine, supernatural, godly." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 15 (1986 ed.).

Ali'i

"Chief, chiefess, officer, ruler, monarch, peer, headman, noble, aristocrat, king, queen, commander; royal, regal, aristocratic, kingly; to rule or act as a chief, govern, reign; to become a chief." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 20 (1986 ed.).

Appurtenant Rights

Rights that appertain or attach to parcels of land that were cultivated, usually in the traditional staple kalo, at the time of the Māhele of 1848. See Reppun v. Board of Water Supply, 65 Haw. at 564, 656 P.2d at 78-79.

Channel Alteration

"(1) to obstruct, diminish, destroy, modify, or relocate a stream channel; (2) to change the direction of flow of water in a stream channel; (3) to place any material or structures in a stream channel; and (4) to remove any material or structures from a stream channel." HAW. REV. STAT. § 174C-3.

Commission

The Commission on Water Resource Management. See HAW. REV. STAT. § 174C-3.

Contested Case

A legal proceeding similar to a trial "in which the legal rights, duties, or privileges of specific parties are required by law to be determined after an opportunity for agency hearing." HAW. REV. STAT. § 91-1 (5). For more information on contested case hearings before the Water Commission see HAW. REV. STAT. § 174C-60; HAW. ADMIN. R. §§ 13-167(51) - (65).

Continuous Flowing Water

"[A] sufficient flow of water that could provide for migration and movement of fish, and includes those reaches of streams which, in their natural state, normally go dry seasonally." HAW. REV. STAT. § 174C-3.

Correlative Rights

Rights of individuals who own land overlying a ground water source or aquifer to the water below it. See generally Reppun v. Board of Water Supply, 65 Haw. 531, 656 P.2d 57.

Designation

The public process of establishing Water Management Areas pursuant to HAW. REV. STAT. § 174C-41 "for the purpose of establishing administrative control over the withdrawals and diversions of ground and surface water in threatened areas to ensure the most beneficial use, development, or management of the water resources in the interest of the people of the state." HAW. ADMIN. R. § 13-171-1.

Domestic Use

"[A]ny use of water for individual personal needs and for household purposes such as drinking, bathing, heating, cooking, noncommercial gardening, and sanitation." HAW.

	REV. STAT. § 174C-3. Distinct from municipal water services provided by a county Board or Department of Water Supply.
Ground Water	"[A]ny 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." HAW. REV. STAT. § 174C-3.
GWMA	Ground Water Management Area.
Hawai'i Water Plan	Consisting of four sub-plans, it is "the guide for developing and implementing" "comprehensive water resources planning to address the problems of supply and conservation of water" in Hawai'i. HAW. REV. STAT. § 174C-2 (b).
Hīhīwai	Endemic grainy snail (*Neritina granosa* or wī) that lives in both fresh and brackish water. MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 68 (1986 ed.).
Hydrologic Unit	"[A] surface drainage area or a ground water basin or a combination of the two." HAW. REV. STAT. § 174C-3.
ʻIli	"Land section, next in importance to *ahupuaʻa* and usually a subdivision of an *ahupuaʻa*." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 97 (1986 ed.).
ʻIli Kūpono	"A nearly independent *ʻili* land division within an *ahupuaʻa*, paying tribute to the ruling chief and not to the chief of the *ahupuaʻa*." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 98 (1986 ed.).
Impoundment	"[A]ny lake, reservoir, pond, or other containment of surface water occupying a bed or depression in the earth's surface and having a discernible shoreline." HAW. REV. STAT. § 174C-3.
Instream Flow Standard	"[A] quantity or flow of water or depth of water which is 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." HAW. REV. STAT. § 174C-3.

Instream Use

"[B]eneficial uses of stream water for significant purposes which are located in the stream and which are achieved by leaving the water in the stream. Instream uses include, but are not limited to:
(1) Maintenance of fish and wildlife habitats;
(2) Outdoor recreational activities;
(3) Maintenance of ecosystems such as estuaries, wetlands, and stream vegetation;
(4) Aesthetic values such as waterfalls and scenic waterways;
(5) Navigation;
(6) Instream hydropower generation;
(7) Maintenance of water quality;
(8) The conveyance of irrigation and domestic water supplies to downstream points of diversion; and
(9) The protection of traditional and customary Hawaiian rights." HAW. REV. STAT. § 174C-3.

Interim Instream Flow Standards

"[A] temporary instream flow standard of immediate applicability, adopted by the commission without the necessity of a public hearing, and terminating upon the establishment of an instream flow standard." HAW. REV. STAT. § 174C-3.

Kalo

"Taro (*Colocasia esculenta*), a kind of aroid cultivated since ancient times for food, spreading widely from the tropics of the Old World. In Hawai'i, taro has been the staple from earliest times to the present, and here its culture developed greatly, including more than 300 forms." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 123 (1986 ed.).

Kāne

One of the four principal Hawaiian gods, often associated with procreation and water. See MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 128 (1986 ed.). Sometimes referred to as Kāneikawaiola, or Kāne of the life-giving waters.

Kānaka Maoli

Historically meant "[f]ull-blooded Hawaiian person." In modern times, this term is inclusive of all Native Hawaiians, regardless of blood quantum. See MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 127 (1986 ed.).

Kanaloa	One of the four principal Hawaiian gods, often associated with the ocean and healing. See MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 127 (1986 ed.).
Kānāwai	"Law, code, rule, statute, act, regulation, ordinance, decree, edict; legal; to obey a law; to be prohibited; to learn from experience." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 127 (1986 ed.).
Konohiki	"Headman of an *ahupua'a* land division under the chief." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 166 (1986 ed.).
Kū	Shortened form of 'ili kūpono.
Kuleana	"Right, privilege, concern, responsibility[.]" MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 179 (1986 ed.).
Limu	"A general name for all kinds of plants living under water, both fresh and salt, also algae growing in any damp place in the air, as on the grounds, on rocks, and on other plants; also mosses, liverworts, lichens." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 207 (1986 ed.).
Lo'i	"Irrigated terrace, especially for taro, but also for rice; paddy." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 209 (1986 ed.).
Lunawai	"Water master, one in charge of water distribution." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 216 (1986 ed.).
Maka'āinana	"Commoner, populace, people in general; citizen, subject." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 224 (1986 ed.).
Makai	Towards the ocean. See MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 225 (1986 ed.).
Mauka	Towards the mountains. See MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 242 (1986 ed.).

MGD	Million Gallons per Day; generally used to refer to an amount of water.
Mōʻī	"King, sovereign, monarch, majesty, ruler, queen." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 251 (1986 ed.).
Moʻolelo	"Story, tale, myth, history, tradition, literature, legend, journal, log, yarn, fable, essay, chronicle, record, article; minutes, as of a meeting." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 254 (1986 ed.).
Municipal Use	"[T]he domestic, industrial, and commercial use of water through public services available to persons of a county for the promotion and protection of their health, comfort, and safety, for the protection of property from fire, and for the purposes listed under the term 'domestic use.'" HAW. REV. STAT. § 174C-3.
Native Hawaiian Water Rights	Native Hawaiian "rights or entitlements to water" codified in Hawai'i law to ensure water for use by Hawaiian Home Lands, traditional and customary rights, and appurtenant water rights of kuleana and taro lands. HAW. REV. STAT. §174C-101. See also HAW. CONST. art. XII, § 7, HAW. REV. STAT. § 1-1, and HAW. REV. STAT. § 7-1.
Noninstream Use	"[T]he use of stream water that is diverted or removed from its stream channel and includes the use of stream water outside of the channel for domestic, agricultural and industrial purposes." HAW. REV. STAT. § 174C-3.
ʻOʻopu	Native fish; "[g]eneral name for fishes included in the families Eleotridae, Gobiidae, and Blennidae. Some are in salt water near the shore, others in fresh water, and some said to be in either fresh or salt water." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 290 (1986 ed.).
ʻŌpae	"General name for shrimp." MARY KAWENA PUKUʻI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 291 (1986 ed.).
Public Trust Doctrine	Principle embedded in Hawai'i law that recognizes that water is held in trust by the State of Hawai'i for its present and future generations. "For the benefit of present and future

	generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, 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. All public natural resources are held in trust by the State for the benefit of the people." HAW. CONST. art. XI, § 1.
RAM	Robust Analytical Model, which was used to calculate variations of basal aquifer head in response to forced draft. It was first developed by John Mink in the early 1980s to determine the Sustainable Yield of the Pearl Harbor aquifer.
Reasonable-Beneficial Use	"[T]he use of water in such a quantity as is necessary for economic and efficient utilization, for a purpose, and in a manner which is both reasonable and consistent with the state and county land use plans and the public interest." HAW. REV. STAT. § 174C-3.
Repairs	"[A]ny replacement, change, or modification of any well, pump or pumping equipment, or stream diversion works. Routine maintenance is not included in this definition." HAW. ADMIN. R. § 13-168-2.
Reservation	When the commission, pursuant to HAW. REV. STAT. § 174C-49 (d), adopts "specific reservations of water in water management areas in such quantities as are deemed necessary for purposes which are consistent with the public interest, including the provision of water for current and foreseeable development and use of Hawaiian home lands[.]" HAW. ADMIN. R. § 13-171-60 (b).
Riparian Rights	Rights that protect the interests of people who live along the banks of rivers or streams to the reasonable use of water from that stream or river on the riparian land. These rights are subject to other rights of equal or greater value, such as appurtenant, traditional and customary Native Hawaiian, or other riparian rights. See Reppun v. Board of Water Supply, 65 Haw. at 563-564, P.2d 57 at 78-79.
State Water Projects Plan	One of four major components of the Hawai'i Water Plan, this plan is prepared by the State Department of Agriculture and

	must include "a master irrigation inventory plan" pursuant to HAW. REV. STAT. § 174C-31(e).
Stream	"[A]ny river, creek, slough, or natural watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted. The fact that some parts of the bed or channel have been dredged or improved does not prevent the watercourse from being a stream." HAW. REV. STAT. § 174C-3.
Stream Channel	"A natural or artificial watercourse with a definite bed and banks which periodically or continuously contains flowing water. The channel referred to is that which exists at the present time, regardless of where the channel may have been located at any time in the past." HAW. REV. STAT. § 174C-3.
Stream Diversion	"[T]he act of removing water from a stream into a channel, pipeline, or other conduit." HAW. REV. STAT. § 174C-3.
Stream Diversion Works	"[A]ny artificial structure, excavation, pipeline, or other conduit constructed singly or in combination, for the purpose of diverting or otherwise removing water from a stream into a channel, ditch, tunnel, pipeline, etc." HAW. ADMIN. R. § 13-168-2.
Stream System	"[T]he aggregate of water features comprising or associated with a stream, including the stream itself and its tributaries, headwaters, ponds, wetlands, and estuary." HAW. REV. STAT. § 174C-3.
Surface Water	"[B]oth contained surface water – that is, water upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other watercourses, lakes, reservoirs, and coastal waters subject to state jurisdiction – and diffused surface water – that is, water occurring upon the surface of the ground other than in contained waterbodies. Water from natural springs is surface water when it exits from the spring onto the earth's surface." HAW. REV. STAT. § 174C-3.
SWMA	Surface Water Management Area.

Sustainable Yield	"[T]he maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the commission." HAW. REV. STAT. § 174C-3.
Ti	Also known as kī, "a woody plant (*Cordyline terminalis*) in the lily family, native to tropical Asia and Australia … The leaves were put to many uses by the Hawaiians, as for house thatch, food wrappers, hula skirts, sandals; the thick, sweet roots were baked for food or distilled for brandy." MARY KAWENA PUKUI & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 145 (1986 ed.).
Wai	Fresh water; "[w]ater, liquid or liquor of any kind other than sea water[.]" MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 377 (1986 ed.).
Waiwai	"Goods, property, assets, valuables, value, worth, wealth, importance, benefit, estate, use; useful, valuable, rich, costly, financial." MARY KAWENA PUKU'I & SAMUEL H. ELBERT, HAWAIIAN DICTIONARY 380 (1986 ed.).
Water	Also known as "waters of the State"; "any and all water on or beneath the surface of the ground, including natural or artificial watercourses, lakes, ponds, or diffused surface water and water percolating, standing, or flowing beneath the surface of the ground. HAW. REV. STAT. § 174C-3.
Watercourse	"[A] stream and any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted." HAW. REV. STAT. § 174C-3.
Water Emergency	"[T]he absence of a sufficient quantity and quality of water in any area whether designated or not which threatens the public health, safety, and welfare as determined by the commission." Haw. Rev. Stat. § 174C-3.
Water Management Area	"[A] geographic area which has been designated pursuant to section 174C-41 as requiring management of the ground or surface water resource, or both." HAW. REV. STAT. § 174C-3.

Water Quality Plan

One of four major components of the Hawai'i Water Plan, this plan is prepared by the State Department of Health to address "all existing and potential sources of drinking water." HAW. ADMIN. R. § 13-170-50.

Water Resource Protection Plan

One of four major components of the Hawai'i Water Plan, this plan is prepared by the Commission to address numerous mandates pursuant to HAW. REV. STAT. § 174C-31(c), (d).

Water Shortage Declaration

When "the commission has found and publicly declared that it is necessary to regulate the uses of water because in its opinion that usage has caused or may cause within the foreseeable future:

(1) Withdrawals that exceed the recharge;
(2) Declining water levels or heads;
(3) Deterioration in the quality of water due to increasing chloride content;
(4) Excessive waste of water which can be prevented; or
(5) A situation in which any further water development would endanger the ground water aquifer or the existing sources of supply." HAW. ADMIN. R. § 13-171-41.

Water Source

"[A] place within or from which water is or may be developed, including but not limited to: (1) generally, an area such as a watershed defined by topographic boundaries, or a definitive ground water body; and (2) specifically, a particular stream, other surface water body, spring, tunnel, or well or related combination thereof." HAW. REV. STAT. § 174C-3.

Water Use and Development Plan

One of four major components of the Hawai'i Water Plan, this plan is "prepared by each separate county and adopted by ordinance, setting forth the allocation of water to land use in that county." HAW. ADMIN. R. § 13-170-30.

Well

"[A]n artificial excavation or opening into the ground, or an artificial enlargement of a natural opening by which ground water is drawn or is or may be used or can be made to be usable to supply reasonable and beneficial uses within the State." HAW. REV. STAT. § 174C-3.

APPENDIX A: RESOURCES

LEGAL RESOURCES

Earthjustice – Mid-Pacific Office
223 South King Street
Suite 400
Honolulu, Hawai'i 96813
(808)599-2436
Email: mpoffice@earthjustice.org
http://www.earthjustice.org

Ka Huli Ao Center for Excellence in Native Hawaiian Law
William S. Richardson School of Law
2515 Dole Street
Room 207
Honolulu, Hawai'i 96822-2328
(808)956-8411
http://www.kahuliao.org

Native Hawaiian Legal Corporation
1164 Bishop Street
Suite 1205
Honolulu, Hawai'i 96813
(808)521-2302
(808)537-4268 (fax)
Email: info@nhlchi.org
http://nhlchi.org

COUNTY AGENCIES

CITY & COUNTY OF HONOLULU
City Hall
Honolulu, Hawai'i 96813
http://www.honolulu.gov

Mayor	(808)523-4141
	(808)527-5552 (fax)
Managing Director	(808)527-6634
	(808)523-4242 (fax)

Department of Environmental Services
Director (808)768-3486
(808)768-3487 (fax)

Department of Planning & Permitting
Director (808)768-8000
(808)768-6041 (fax)

Office of Council Services
Director (808)768-3809
(808)550-6149 (fax)

COUNTY OF HAWAI'I

Physical address:
Ben Franklin Building
333 Kilauea Avenue
2nd Floor
Hilo, Hawai'i 96720

Mailing address:
25 Aupuni Street
Hilo, Hawai'i 96720

http://www.co.hawaii.hi.us
Mayor (808)961-8211
(808)961-6553 (fax)
Managing Director (808)961-8211

Department of Environmental Management
Director (808)981-8313
(808)961-8086 (fax)

Planning Department
Director (808)961-8288
(808)961-8742 (fax)

Department of Water Supply
345 Kekuanaoa Street
Suite 20
Hilo, Hawai'i 96720
Manager (808)961-8060
(808)961-8657 (fax)

COUNTY OF KAUA'I

4396 Rice Street
Līhu'e, Hawai'i 96766
http://www.kauai.gov
Mayor (808)241-4900
(808)241-6877 (fax)

Department of Planning
Director (808)241-6677
(808)241-6699 (fax)

Department of Water
4398 Pualoke Street
Līhu'e, Hawai'i 96766
Manager & Chief Engineer (808)245-5408
(808)246-8628 (fax)

COUNTY OF MAUI
200 South High Street
Wailuku, Hawai'i 96793
http://www.co.maui.hi.us
Mayor (808)270-7855
(808)270-7870 (fax)

Department of Environmental Management
Director (808)270-8230
(808)270-7955 (fax)

Department of Planning
Director (808)270-7735
(808)270-7634 (fax)

Office of Council Services (808)270-7838

Department of Water Supply
Director (808)270-7816
(808)270-7951 (fax)

STATE AGENCIES

DEPARTMENT OF AGRICULTURE (DOA)
1428 South King Street
Honolulu, Hawai'i 96814
http://www.hawaii.gov/hdoa
Chair (808)973-9550
(808)973-9613 (fax)

Public Information Officer (808)973-9560

Agribusiness Development Corporation (ADC)
Leiopapa a Kamehameha Building

State Office Tower
235 South Beretania Street
Suite 702
Honolulu, Hawai'i 96813
http://hawaii.gov/hdoa/adc/adc
Executive Director (808)586-0186
(808)586-0189 (fax)

Agricultural Development Division
http://hawaii.gov/hdoa/addc
Administrator (808)973-9576
Hawai'i Agricultural Statistics Branch
Director (808)973-9588
(808)973-2909 (fax)
Market Analysis and News Branch
Branch Chief (808)973-9593
Market Development
Branch Chief (808)973-9594

Agricultural Loan Division (808)973-9460
http://hawaii.gov/hdoa/agl (808)973-9455 (fax)

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM (DBEDT)

Physical address:
No. 1 Capitol District
250 South Hotel Street
Honolulu, Hawai'i 96813
http://www.hawaii.gov/dbedt/

Mailing address:
P. O. Box 2359
Honolulu, Hawai'i 96804

Land Use Commission (LUC)
Physical address:
Leiopapa a Kamehameha Building
State Office Tower
235 South Beretania Street
Suite 406
Honolulu, Hawai'i 96813
http://luc.state.hi.us
Executive Officer (808)587-3822
(808)587-3827 (fax)

Mailing Address:
P.O. Box 2359
Honolulu, Hawai'i 96804-2359

DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL)

Physical address:	Mailing address:
91-5420 Kapolei Parkway	P. O. Box 1879
Kapolei, Hawai'i 96707	Honolulu, Hawai'i 96805
http://www.hawaii.gov/dhhl	
Chairman	(808)620-9501
	(808)620-9529 (fax)
Public Information Specialist	(808)620-9592
	(808)620-9599 (fax)

DEPARTMENT OF HEALTH (DOH)

Physical address:	Mailing Address:
Kina'u Hale	P.O. Box 3378
1250 Punchbowl Street	Honolulu, Hawai'i 96801
Honolulu, Hawai'i 96813	
http://www.hawaii.gov/health	
Director	(808)586-4410
	(808)586-4444 (fax)
Communication Office	(808)586-4442

Office of Environmental Quality Control (OEQC)
Leiopapa a Kamehameha Building
235 South Beretania Street
Suite 702
Honolulu, Hawai'i 96813
Email: oeqc@doh.hawaii.gov
http://www.hawaii.gov/health/environmental/oeqc

OEQC Director	(808)586-4185
	(808)586-4186 (fax)
Neighbor Islands Toll-Free	
Kaua'i	(808)274-3141 ext. 64185
Moloka'i/Lāna'i	1(800)468-4644 ext. 64185
Maui	(808)984-2400 ext. 64185
Hawai'i	(808)974-4000 ext. 64185

Environmental Health Administration (EHA)
http://www.hawaii.gov/health/environmental/

Deputy Director	(808)586-4424
	(808)586-4368 (fax)

Environmental Ombudsman	(808)586-4528
	(808)586-7236 (fax)
Environmental Planning Office	
Manager	(808)586-4337
	(808)586-4370 (fax)
Environmental Resources Office	
Manager	(808)586-4575
	(808)586-7236(fax)
Hazard Evaluation & Emergency Response Office	
Manager	(808)586-4249
	(808)586-7537 (fax)

Environmental Management Division (EMD)
919 Ala Moana Boulevard
Room 300
Honolulu, Hawai'i 96814

Main Line	(808)586-4304
	(808)586-4352 (fax)
Clean Water Branch	(808)586-4309
	(808)586-4352 (fax)
Safe Drinking Water Branch	(808)586-4258
	(808)586-4351 (fax)

DEPARTMENT OF LAND AND NATURAL RESOURCES (DLNR)

Physical address:	Mailing Address:
Kalanimoku Building	P.O. Box 621
1151 Punchbowl Street	Honolulu, Hawai'i 96809
Honolulu, Hawai'i 96813	
http://www.hawaii.gov/dlnr	
Office of the Chairperson	(808)587-0400
	(808)587-0390 (fax)
Public Information Officer	(808)587-0320

Commission on Water Resource Management (CWRM)
http://www.hawaii.gov/cwrm

Deputy Director	(808)587-0214
	(808)587-0219 (fax)
Stream Protection & Management	
Branch Chief	(808)587-0234

Ground Water Regulation	
Branch Chief	(808)587-0225
Survey Branch	(808)587-0263
Planning Branch Chief	(808)587-0216

Division of Aquatic Resources (DAR)
http://www.hawaii.gov/dar

Administrator	(808)587-0100
	(808)587-0115 (fax)
Aquatic Resources & Environmental Protection	
Program Manager	(808)974-6201
Contracts Specialist	(808)587-0096
Aquatic Education	(808)587-0111
Hawai'i Office	
Aquatic Biologist (Kona)	(808)326-6226
Aquatic Biologist (Hilo)	(808)974-6201
Aquatic Resources	(808)974-6201
Kaua'i Office	
Aquatic Biologist	(808)274-3345
Aquatic Resources	(808)274-3346
Maui Office	
Aquatic Biologist	(808)243-5834
Aquatic Resources	(808)243-5832
Moloka'i Office	
Aquatic Biologist	(808)567-6696

Division of Conservation & Resources Enforcement (DOCARE)
http://www.hawaii.gov/docare

Administrator	(808)587-0068
	(808)587-0080 (fax)
Hawai'i Branch Chief	(808)974-6208
Kaua'i Branch Chief	(808)274-3521
Maui Branch Chief	(808)873-3990
O'ahu Branch Chief	(808)587-0077

OFFICE OF HAWAIIAN AFFAIRS (OHA)
711 Kapi'olani Boulevard
Suite 500
Honolulu, Hawai'i 96813
http://www.oha.org

Administrator	(808)594-1892
Director, Board Services	(808)594-1974
Public Information Officer	(808)594-1983
Director, Economic Development	(808)594-1911
Director, Native Rights, Land & Culture	(808)594-1945

Island of Hawai'i
162-A Baker Avenue
Hilo, Hawai'i 96720-4869

Hilo Community Resource Coordinator	(808)920-6418
	(808)920-6421 (fax)

75-5706 Hanama Place
Suite 107
Kailua-Kona, Hawai'i 96740

Kona Community Resource Coordinator	(808)327-9525
	(808)327-9528 (fax)

Island of Kaua'i
2970 Kele Street
Suite 113
Līhu'e, Kaua'i 96766

Community Resource Coordinator	(808)241-3390
	(808)241-3508 (fax)

Island of Maui
360 Papa Place
Suite 105
Kahului, Maui 96732

Community Resource Coordinator	(808)873-3364
	(808)873-3361 (fax)

Island of Moloka'i
P.O. Box 1717
Kaunakakai, Hawai'i 96748

Community Resource Coordinator	(808)560-3611
	(808)560-3968 (fax)

Island of Lāna'i
P.O. Box 631413
Lāna'i City, Lāna'i 96763
Community Resource Coordinator (808)565-7930
(808)565-7931 (fax)

UNIVERSITY OF HAWAI'I AT MĀNOA (UH)
College of Tropical Agriculture & Human Resources (CTAHR)
3050 Maile Way
Gilmore 211
Honolulu, Hawai'i 96822
http://www.ctahr.hawaii.edu
Dean and Director (808)956-8234
(808)956-9105 (fax)

Environmental Center
2540 Dole Street
Holmes Hall 283
Honolulu, Hawai'i 96822
http://www.hawaii.edu/envctr
Director (808)956-7847
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Room 207
Honolulu, Hawai'i 96822-2328
http://www.law.hawaii.edu/kahuliao
Director (808)956-8411

School of Ocean & Earth Science & Technology (SOEST)
1680 East-West Road
Pacific Ocean Science & Technology 802
Honolulu, Hawai'i 96822
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Dean (808)956-6182
(808)956-9152 (fax)

FEDERAL AGENCIES

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)
Prince Jonah Kūhiō Kalaniana'ole Federal Building
300 Ala Moana Boulevard
Honolulu, Hawai'i 96850

Farm Service Agency	(808)441-2704 (808)441-2705 (fax)

National Agricultural Statistics Service
Hawai'i Field Office
1428 South King Street
Honolulu, Hawai'i 96814

Director	(808)973-2907 (808)973-2909 (fax)

Natural Resources Conservation Service
Pacific Islands Area
P.O. Box 50004
Honolulu, Hawai'i 96850

Director	(808)541-2600 ext. 354 (808)541-1335 (fax)

Rural Development, Hawai'i State Office
Federal Building
Room 331
154 Waiānuenue Avenue
Hilo, Hawai'i 96720-2452

Director	(808)933-8380 (808)933-8327 (fax)

AREA I OFFICE
Honolulu, Oahu
99-193 'Aiea Heights Drive
Suite 156
'Aiea, Hawai'i 96701-3911

Area Director	(808)483-8600 (808)483-8605 (fax)

SUBAREA I OFFICE
Kaunakakai, Moloka'i
Moloka'i Kahua Huina Center, #4
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SATELLITE OFFICES
Hilo, Hawai'i
Federal Building
Room 327
154 Waiānuenue Avenue,
Hilo, Hawai'i 96720-2452
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Līhu'e, Kaua'i
4334 Rice Street,
Room 106
Līhu'e, Hawai'i 96766-1365
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Wailuku, Maui
77 Ho'okele Street
Kahului, Hawai'i 96732
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(808)873-6185 (fax)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)
Pacific Southwest Region 9
Water Division
75 Hawthorne Street
San Francisco, California 94105
Public Affairs Specialist (808)541-2710
(808)216-9787 (cell)
(808)541-2712 (fax)

UNITED STATES GEOLOGICAL SURVEY (USGS)
Pacific Islands Water Science Center
677 Ala Moana Boulevard
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Honolulu, Hawai'i 96813
Center Director (808)587-2400
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