

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

August 14, 2026

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

MAUI

Approval of:

- (1) The Sale of Lease (Water License) at Public Auction for the Development, Diversion, and Use of a Portion of Government Surface Waters Within the Nahiku, Keanae, Honomanu and Huelo Hydrologic Areas on the Island of Maui and Identified as Tax Map Keys (TMKs) (2) 1-1-001:044 & 050, 1-1-002: portion of 002, 1-2-004:005 & 007, and 2-9-014:005, 011, 012, & 017;
- (2) The Issuance of a Direct Lease (Water License) for a Portion of Government Waters to the County of Maui for Domestic, Municipal, and Agriculture Purposes, Within the Nahiku, Keanae, Honomanu and Huelo Hydrologic Areas on the Island of Maui and Identified as Tax Map Keys (TMKs) (2) 1-1-001:044 & 050, 1-1-002: portion of 002, 1-2-004:005 & 007, and 2-9-014:005, 011, 012, & 017; and
- (3) Delegation to the Chairperson to Negotiate and Enter Into a Subsequent Operations, Maintenance, on Monitoring Agreement Amongst the East Maui Water Licensees that Sets Forth Their Respective Roles, Rights, Responsibilities, and Obligations for the East Maui Irrigation System.

Pursuant to Section 92-5(a)(4), Hawaii Revised Statutes (HRS), as amended, the Board may go into Executive Session in order to consult with its attorney on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities.

This submittal seeks the Board's approval: (1) to dispose of a lease (water license) at public auction for the development, diversion, and use of a portion of government surface waters in East Maui; (2) to negotiate and enter into a direct water license with the County of Maui for domestic, municipal, and agricultural purposes; and (3) to delegate to the Chairperson the authority to negotiate and execute a subsequent operations, maintenance, and monitoring agreement among the parties to the East Maui water licenses. Because the proposed disposition concerns a water conveyance system that

has developed through successive government dispositions over more than a century, the following discussion provides historical background to place the proposed action in context.

1. HISTORICAL INFORMATION

1.1. TRADITIONAL HAWAIIAN IRRIGATION PRACTICES & WATER RIGHTS

Historical accounts describe the ahupuaa as the traditional framework within which land and water resources were managed. Within an ahupuaa, the konohiki generally oversaw the distribution of water, as well as the granting of homesites and loi kalo. Although the ahupuaa generally defined the area within which water resources were administered, geographic conditions occasionally complicated the practical administration of water resources where natural boundaries were less distinct.

Historical accounts further describe the development of traditional irrigation systems, or auwai, to convey water from streams to agricultural areas. Construction of an auwai was generally directed by the alii or konohiki and carried out through the collective labor of the makaainana. Construction typically began at the area to be irrigated and proceeded upstream toward the point of diversion.

Water use within an ahupuaa was regulated by the konohiki. Where an auwai served more than one ahupuaa, the konohiki allocated water between the participating communities in proportion to the labor contributed toward constructing the irrigation system. Historical accounts do not describe a single uniform method of allocation. Rather, water was generally distributed by rotation, with practices varying according to local custom and the needs of the lands being irrigated. In some communities, smaller tracts received the full flow of an auwai for several hours while larger tracts received water for several days. In others, water was delivered to one tract during the day and to another at night, or was supplied sequentially from one loi kalo to the next until each had received sufficient water. Despite these variations, historical accounts consistently describe water as being allocated through rotational use rather than continuous delivery.

Traditional water management also recognized the importance of preserving water for downstream users. Historical accounts describe customs that limited diversions so that sufficient water remained available below the point of diversion. Users of an auwai were also expected to participate in constructing, repairing, and maintaining the irrigation system when called upon by the konohiki. Failure to fulfill those maintenance obligations could result in the temporary loss of access to irrigation water.

1.2. THE MAHELE AND THE DEVELOPMENT OF PRIVATE WATER RIGHTS

The Mahele fundamentally transformed Hawaii's traditional system of land tenure. Prior to the Mahele, all land was held by the moi and managed through a hierarchical system of stewardship in which the alii and konohiki exercised authority over lands occupied and

cultivated by the makaainana. The Mahele divided these traditional interests into separately recognized property interests and divided traditional interests in land into separately recognized property interests thereby establishing the legal framework for fee simple ownership in the Hawaiian Kingdom. To implement this transformation, the Board of Commissioners to Quiet Land Titles (Land Commission), established pursuant to the Act of December 10, 1846, was charged with investigating and confirming claims to land. The Land Commission did not expressly address the water rights historically associated with the lands being divided and awarded. Historical accounts indicate that, notwithstanding the absence of express statutory provisions, the conveyance of land was generally understood to include the customary quantity of water from its usual source.

For more than a century following the Mahele, Hawaii courts generally understood water rights to arise from the interests created by the Mahele and subsequent Land Commission Awards. Under that understanding, lands awarded during the Mahele carried appurtenant rights to the quantity of water historically used for domestic purposes and the cultivation of *loi kalo*. The owners of the surrounding *ahupuaa* or *ili* were generally understood to possess rights to the remaining or surplus waters, subject to those appurtenant rights. Waters originating on Government lands were likewise understood to be subject to those appurtenant rights. Water rights were also generally understood to pass with the conveyance of land and, under certain circumstances, could be exercised on non-appurtenant lands, provided that the rights of other lawful users were not impaired.

Historical accounts from 1933 reflect that determining the quantity of water available for diversion required evaluating the established rights of downstream users. Those determinations were often based on local testimony, although direct measurement of the water necessary for satisfactory *kalo* cultivation under local conditions was becoming the more common method. Historical accounts also reflect that waters originating on Government lands were leased for definite terms through public auction.

1.3. MCBRYDE AND THE TRANSFORMATION OF HAWAII WATER LAW

In 1973, the Hawaii Supreme Court decided *McBryde Sugar Co. v. Robinson*, 54 Haw. 174, 504 P.2d 1330 (1973), modified on reh'g, 55 Haw. 260, 517 P.2d 26 (1973). After examining the historical development of land and water rights in the Hawaiian Kingdom, the Court held that

“by the Mahele and subsequent Land Commission Award and issuance of Royal Patent right to water was not intended to be, could not be, and was not transferred to the awardee, and the ownership of water in natural watercourses, streams and rivers remained in the people of Hawaii for their common good.” *Id.* at 186, 504 P.2d at 1337.

At the same time, the Court recognized that landowners retained two distinct rights to use water: appurtenant rights associated with particular lands and riparian rights arising from ownership of land adjoining a natural watercourse. The Court held that appurtenant rights remained with the lands for which they existed and could not be transferred for use on

other lands, while riparian rights entitled landowners to use water flowing in a natural watercourse without impairing the corresponding rights of other riparian owners. The Court also rejected prior decisions recognizing private ownership of surplus water

1.4. THE 1978 CONSTITUTIONAL CONVENTION AND THE STATE WATER CODE

Following *McBryde*, the 1978 Constitutional Convention established the constitutional framework governing the State's management of Hawaii's water resources. Rather than merely recognizing the State's authority to regulate water, the Convention explained that Article XI, section 7 of the Hawaii Constitution was intended to impose upon the State a fiduciary duty to "actively and affirmatively protect, control and regulate water resources, including the development, use and allocation of water." Comm. Whole Rep. No. 18, in 1 Proceedings of the Constitutional Convention of Hawaii of 1978, at 1026 (1980).

To carry out that responsibility, Article XI, section 7 of the Hawaii Constitution directs the Legislature to establish a water resources agency responsible for statewide water conservation, quality, and use policies, defining beneficial and reasonable uses, protecting water resources and natural stream environments, establishing water use priorities while assuring appurtenant rights and existing correlative and riparian uses, and regulating all uses of Hawaii's water resources. This constitutional framework provides the basis upon which the Legislature enacted the State Water Code and continues to guide the Board's exercise of its statutory authority in considering the disposition of State water rights

In 1982, the Hawaii Supreme Court further clarified the scope of appurtenant and riparian water rights in *Reppun v. Board of Water Supply*, 65 Haw. 531, 656 P.2d 57 (1982). While *McBryde* addressed the ownership of water and the nature of water rights, *Reppun* established the framework for resolving disputes between competing users. The Court held that competing claims to the use of water should be evaluated under a reasonable use standard, requiring a balancing of lawful uses rather than the strict application of the natural flow doctrine.

In 1987, the Legislature implemented the constitutional directives adopted at the 1978 Constitutional Convention through the enactment of the State Water Code, codified as Chapter 174C, HRS. The Water Code established a comprehensive statutory framework for the protection, conservation, management, and use of Hawai'i's water resources and created the Commission on Water Resource Management (CWRM) to administer the Water Code. The enactment of the Water Code fundamentally changed the legal framework governing the State's management of water resources. Although the Board retained its statutory authority under Chapter 171, HRS, to issue leases and licenses for the development, diversion, and use of State waters, those dispositions thereafter became subject to a comprehensive statewide system governing water resource management.

2. THE EAST MAUI IRRIGATION SYSTEM

2.1. HISTORY OF THE EMI SYSTEM

East Maui has long been recognized as one of Hawaii's most significant traditional agricultural regions. Historical accounts describe the Koolau region, including Keanae, Wailuanui, Honomanu, and Nahiku, as containing extensive loi kalo systems supported by perennial streams and interconnected auwai. During the Mahele, hundreds of Land Commission Award claims reflected the longstanding cultivation of kalo and the dependence of these communities on the continued flow of East Maui streams.

The East Maui Irrigation (EMI) system originated during the late nineteenth century as Hawaii's sugar industry expanded following the Reciprocity Treaty of 1875. The Reciprocity Treaty permitted sugar from Hawaii to enter into the United States duty-free, substantially increasing the demand for irrigation water to support plantation agriculture in Central Maui. In response, competing plantation interests began constructing large-scale water conveyance systems to transport water from the windward slopes of Haleakala to the drier lands of Central Maui. Samuel T. Alexander and Henry P. Baldwin developed the Old Hamakua Ditch in 1876, while Claus Spreckels simultaneously constructed the Haiku Ditch.

The Old Hamakua Ditch was completed and became operational in 1878. Originally consisting of approximately 17 miles of open ditch, it conveyed water to four plantations in Central Maui. Over the following decades, the system expanded through the construction of additional ditches, tunnels, and reservoirs. By 1923, the principal components of the modern EMI system had been completed, and the system has remained substantially unchanged since then.

As additional diversions, ditches, and conveyance facilities were constructed, ownership and operation of the system evolved alongside Maui's plantation industry. The irrigation facilities developed by Alexander & Baldwin, Hawaiian Commercial & Sugar Company (HC&S), Haiku Sugar Company, Paia Plantation, Maui Agricultural Company, and other affiliated plantation companies were ultimately consolidated under East Maui Irrigation Company (EMI), which later became a wholly owned subsidiary of Alexander & Baldwin, Inc. (A&B).

For much of the twentieth century, water conveyed through the EMI system primarily supported plantation agriculture in Central Maui, including the operations of HC&S. Following its closure in 2016, a 50% stake in ownership of the EMI system was sold to Mahi Pono, LLC in 2018 to support their diversified agriculture operations. In June 2025, the remaining 50% was transferred giving Mahi Pono full control of the system. Today, Mahi Pono continues to supply water to its Central Maui fields as well as to the County of Maui, Department of Water Supply's (DWS) Upcountry Maui Water System for municipal and agricultural purposes as well as for other authorized uses.

2.2. DESCRIPTION OF THE EMI SYSTEM AND HYDROLOGIC AREA

An understanding of the physical configuration of the EMI system is beneficial as water diverted from the East Maui streams is conveyed through an interconnected network of ditches, tunnels, reservoirs, pipelines, and hydropower facilities before reaching municipal and agricultural users. The proposed water licenses therefore concern the continued operation of an integrated conveyance system rather than isolated diversions from individual streams.

The EMI system collects water from the Nahiku, Keanae, Honomanu, and Huelo watersheds and traverses both State-owned and privately owned lands. The State-owned lands associated with the system comprise approximately 33,000 acres and are generally referred to as the Nahiku, Keanae, Honomanu, and Huelo license areas. These license areas contain many of the streams from which water is developed, diverted, and conveyed through the EMI system. Much of the license area is located within the Koolau Forest Reserve and includes portions of the Hanawi Natural Area Reserve.

The EMI system is a gravity fed irrigation system, that diverts surface water from higher elevation streams within the wetter, eastern portion of the Koolau watershed and transports the water to municipal and agricultural users in Upcountry and Central Maui. It consists of 388 separate intakes, 24 miles of open ditches, 50 miles of tunnels, numerous small dams, intakes, pipes, and flumes, and 13 inverted siphons, with an estimated delivery capacity of 450 million gallons per day (MGD).

With few exceptions, the diversions historically captured all of the stream's base flow¹. Many of the East Maui streams are considered gaining streams,² meaning that groundwater naturally reenters the stream channel as water flows downhill. As a result, some of the streams were diverted multiple times at different elevations. Approximately 70 percent of the water conveyed through the EMI system originates on State owned lands.

The current ditch system begins at Makapipi Stream in the east and ends at Maliko Gulch in the west. There are nine active ditches on the EMI System, some of which are essentially the same ditch that have had different names designated to different sections. An example of this is the Koolau/Wailoa Ditch. Koolau Ditch begins at Makapipi Stream and becomes Wailoa Ditch at Alo Stream. The Koolau/Wailoa ditch then terminates at Kamole Weir, where the water may continue to flow to the Hamakua Ditch via the Hamakua Hydropower Plant, the Kauhikoa Ditch via the Paia Hydropower Plant, or the Lowrie Ditch via the Kaheka Hydropower Plant.

1. Base flow is the water that enters a stream from persistent, slowly varying sources (such as the seepage of ground water), and maintains stream flow between water-input events (i.e., it is the flow that remains in a stream in times of little or no rainfall).

2. See discussion in Section 2.1 for more information on gaining and losing streams.

Koolau/Wailoa Ditch is situated at the highest elevation of all ditches in the EMI System, except the Spreckels Ditch which begins near the 1,700 foot altitude at Nuaailua Stream. Stream flow in the Spreckels main ditch is conveyed to the Koolau/Wailoa Ditch via Puohokamoa Stream and Alo Stream. The lower elevation Spreckels distribution ditch conveys water from Alo Stream to the Kolea Reservoir, and from Oopuola Stream to the Papaaea Reservoir, where water can also be dropped into the Lowrie Ditch via Nailiilihaele Stream.

New Hamakua Ditch begins at Alo Stream and the ditch water is ultimately conveyed to Kauhikoa Ditch via Makaa, Halehaku, and Opana streams. The Manuel Luis Ditch begins at Kolea Stream, transitions into Center Ditch at Waikamoi Stream, and then ultimately conveys water to the Lowrie Ditch via Nailiilihaele Stream. Haiku Ditch is situated at the lowest elevation of all ditches within the EMI System. Its first intake is at Nailiilihaele Stream after which the ditch continues through former HC&S plantation lands.

The physical characteristics of the EMI system are significant because the conveyance network consists of a variety of structures rather than a uniform system of open ditches. Understanding these different conveyance methods provides important context for evaluating how water is collected, transported, and delivered throughout the system.

In 2011, the U.S. Geological Survey (USGS) conducted a field study of the EMI system to document the locations of the tunnels and open-ditch sections. The study found that approximately 46 miles of the surveyed system are tunnels and 17 miles are open ditches, of which 3.5 miles are lined, 2.5 miles are partially lined, and 11 miles are unlined. Tunnels, either covered and/or underground, included culverts, siphons and pipes. Lined ditches were described as having concrete ditch bottoms and walls, steel ditch bottoms and walls, or concrete ditch bottoms and armored cut-stone walls. Partially lined ditches were described to consist of earthen material on the ditch bottom and one wall and lined on the other wall; earthen material on the ditch bottom and lines on both walls; or a lined ditch bottom and earthen material on both walls.

USGS further found that the Wailoa, Kauhikoa, and Haiku Ditches are mainly tunnels, whereas more than half of the Lowrie Ditch and Spreckels Ditch at Papaaea are open ditches. Lined open ditches are mostly located along the Koolau ditch and majority of the unlined open ditches are located along the Lowrie Ditch. Approximately half of the partially lined ditches are associated with the Spreckels Ditch.

Figure 2-1 has been provided for context as it is a historical map showing the entire EMI system in relationship to the historic license areas and the private lands owned by A&B as well as the streams that are impacted by the system.

2.3. COUNTY OF MAUI, DEPARTMENT OF WATER SUPPLY AND THE EMI SYSTEM

The County of Maui, Department of Water Supply (DWS) is one of the principal users of water conveyed throughout the EMI system and is a primary beneficiary of the proposed

water licenses. DWS operates and maintains five (5) separate, public water systems. Their second largest system is the Upcountry system which is comprised of three separate subsystems, the Upper Kula, the Lower Kula, and the Makawao system.

Water delivered through the EMI system is an essential component of the Upcountry Water system that supports both municipal and agricultural water needs in Upcountry Maui. Unlike many public water systems, DWS does not own or operate the EMI system. Rather, DWS relies upon a water delivery agreement to convey needed surface water through the EMI system. Because the Upcountry Water System has historically depended upon water conveyed through the EMI system, continued operation of that system remains an important component of municipal water service in Upcountry Maui.

Based on the 2026 revocable permit, DWS currently receives 6.5 MGD averaged monthly from the EMI system, a portion of which goes directly to the Kula Agricultural Park via the Hamakua Ditch (an extension of the Wailoa Ditch), and the remaining is transported to the DWS's Kamole Weir Water Treatment Facility (WTF) via the County's Makawao system which is served by the Wailoa Ditch.

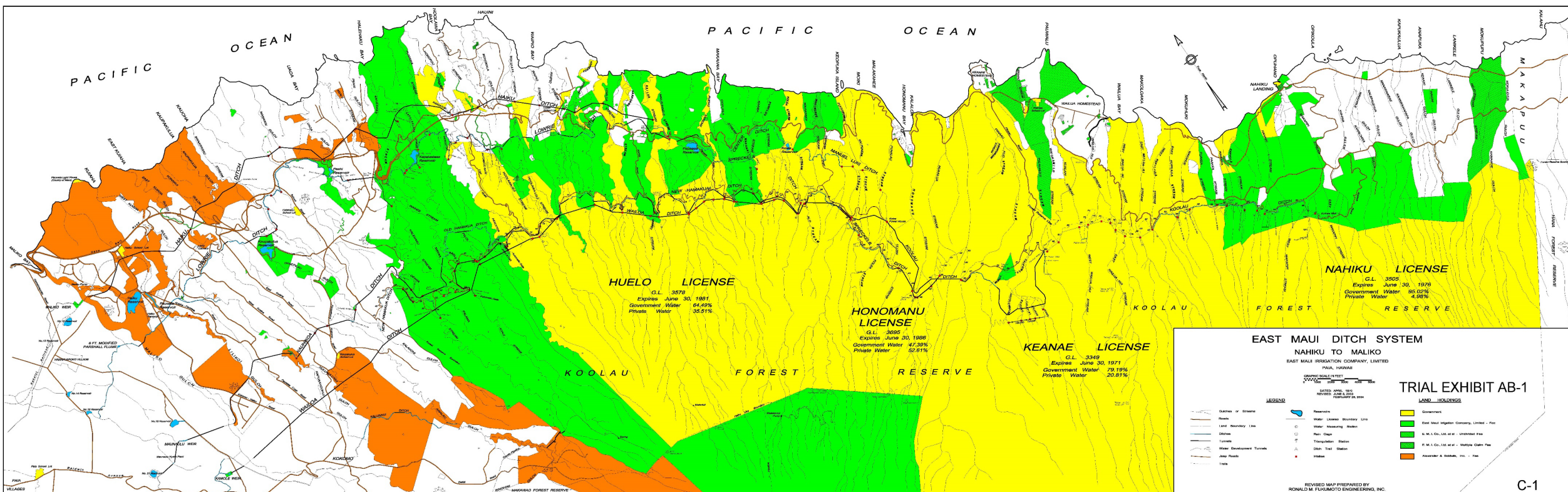
The Kula Agricultural Park is owned by the County of Maui and is managed by the County's Office of Economic Development. Surface water is supplied to the Kula Agricultural Park via Reservoir 40 which is fed by the Hamakua ditch. Under a water delivery agreement, EMI supplies the Park up to 1.5 MGD. In 2018, A&B sold 262 acres to the County for the expansion of the Park and agreed that irrigation water would be supplied from the EMI system subject to the continuation of the Revocable Permits or the issuance of a long-term lease for the EMI system.

Water delivered to and treated at the Kamole Weir Water Treatment Facility (WTF) services approximately 6,571 water service connections in the Hailiimaile, Makawao, and Pukalani regions. It also serves as backup for the Haiku region in the event of pump failures or repairs and maintenance. During drought conditions, water from this facility is capable of servicing the entire Upcountry region (9,708 connections) if necessary. This facility has an average daily production of 3.6 MGD and an estimated drought capacity of 4.5 MGD, but is capable of producing 8 MGD at maximum capacity.

The Kamole WTF currently has no storage capacity (i.e. reservoirs) making it difficult for DWS to store any excess allocated water for use during drought conditions. However, Staff acknowledges that DWS is currently in the process of developing two (2) reservoirs totaling approximately 140 MGD in order to increase their storage capacity.

Currently, water is delivered to DWS pursuant to a 2018 EMI Water Delivery Agreement that is renewed on an annual basis and is based upon a 1973 Memorandum of Agreement, often referred to as the 1973 Agreement, which provides that water be delivered to DWS at a rate of \$0.06 per 1,000 gallons.

FIGURE 2-1: HISTORICAL MAP OF EMI SYSTEM



Historical map showing the entire EMI system in relation to the historic license areas and the private lands owned by A&B as well as the streams that are affected by the system.

2.4. HISTORY OF WATER LICENSES/LEASES IN EAST MAUI

To understand how the water licenses for East Maui began, one has to understand that the capital needed to invest in sugar production amounted to \$2,000,000 in 1867. In addition, large amounts of land and water were needed. These requirements created a situation in which these large quantities of water and land were owned by a select few large companies. In addition to the capital mentioned above, sugar plantations also needed labor and commodities. This further concentrated the ownership of sugar plantations in the later part of the 19th century by what was known as the big 5 which included Alexander & Baldwin, American Factors, C. Brewer, Castle and Cooke, and T.H. Davies.

As the Mahele had given chiefs large amounts of land, the large, successful sugar plantations sought to purchase lands from the chiefs resulting in 5/6 of the land in Hawaii being owned by the western sugar interests by 1909. Around this same time, the government of the Kingdom of Hawaii was also having financial problems. It soon realized that it was in their economic best interest to encourage the development of the production of sugar, to lease lands of the Kingdom to plantations to provide additional income and to provide water to the plantations to develop more lands for the production of sugar.

The water licenses were made possible through the passing of the Reciprocity Treaty between the United States and the Hawaiian Kingdom on January 30, 1875, and the ratification of the treaty by King David Kalakaua on April 17, 1875. The Reciprocity Treaty allowed for sugar and other agricultural products to enter the U.S. duty-free in exchange for U.S. goods receiving the same privilege in Hawaii. By doing so, sugar became highly profitable thus triggering the boom in sugar plantations and subsequently the need for water to support the plantation.

Beginning in 1876, these licenses and authorizations facilitated the construction and expansion of the Hamakua, Haiku, Lowrie, Koolau, and other ditch systems that ultimately evolved into the modern EMI system. Following annexation and the establishment of the Territory of Hawaii, the Kingdom's authorizations continued through a series of leases, licenses, and agreements administered by the territorial government. As the East Maui ditch system expanded during the late nineteenth and early twentieth centuries, the irrigation infrastructure developed by A&B and other plantation companies became increasingly interconnected. The continued operation of the EMI system required access to both public and private lands, as well as governmental authorization to divert and convey water originating from public lands through privately owned conveyance facilities.

Land Division's Archival Records begin with the issuance of General Lease (GL) 267-B to Claus Spreckels. That license and the other subsequent East Maui licenses that followed are highlighted below and a more detailed description of the leases (licenses) are provided in Exhibit A.

It should be noted that GL 267-B was “*deemed and considered to be for the benefit of the agricultural interests and the general welfare of the Hawaiian Kingdom.*” Further, it included an exclusion provision that protected the Kuleana and riparian rights of the makaainana. This exclusion provision carries forth in majority of the succeeding licenses, though the choice of language used to ensure the protection of such rights differs throughout the succeeding licenses. In 1902, GL 538 included a provision that specifically addressed Homesteaders and their rights to water for domestic or irrigation use.

Further, throughout the issuance of the various licenses, there has been a provision which required the licensee to protect the licensed areas, which were a part of the Koolau Forest Reserve, from harm and/or damage. As the licenses evolved, the concept of protecting the licensed areas in terms of being a watershed becomes more defined. Also monitoring of the streams and the water being diverted, though mostly used for calculation of rent, was also required throughout the history of the licenses and the data was required to be shared between the licensee and licensor. This data captured also begins to include volumes of “water wasted” for recharge of Central Maui groundwater as discussed later in this section.

GL 974, for what was known as the Hamakua License area, is the first license on file issued to the East Maui Irrigation Company, Limited (EMI). It is also the first time that the Licensee was allowed to sell Government water, construct power plants and install infrastructure to produce electricity for the Licensee’s operations or for sale. This was also the first license to include reservation provisions. In this case, the License reserved the right for the licensor to withdraw water from the license for “*reclamation, homestead or other public uses or purposes.*” It should be noted that all licenses hereafter issued were to EMI Co., Ltd.

It should be noted that GL 1706, GL 2656, and GL 2787, for the Keanae, Huelo, and Honomanu License Areas were impacted by World War II (WWII) as two licenses were issued to the U.S. Government for a Marine training area and other naval purposes over portions of these license areas. The two U.S. Government licenses included a provision that the lands would be returned six months after the end of WWII.

GL 2656 is the first Land License issued for what was to be known as the Huelo License Area and was the first license to be executed subsequent to the signing of the March 18, 1938 East Maui Water Agreement, corrected by Correction Agreement dated March 24, 1938 (1938 East Maui Agreement) between EMI and the Territory. The 1938 East Maui Agreement is a pivotal point in the history of the licenses as it recognized and allowed for multiple users of the EMI aqueduct system as it granted the Territory a perpetual easement across the portion of the system on private lands and it granted EMI a perpetual easement across the portion of the system on Government Lands for the diversion and conveyance of water. It also defined EMI’s role as the operator of the EMI system.

The next biggest change in the licenses came in 1950 when GL 3349 was issued for the Keanae License area. This license, as shown in the minutes of the Board of Public Lands,

was crafted with specific provisions regarding the use of surplus water during the rainy seasons to replenish the groundwater resources in Central Maui as it was thought to be a “waste” for the excess waters to runoff through the gulches and get discharged into the ocean. The meeting minutes regarding this discussion have been reproduced and included as Exhibit B. These provisions also carry forward in the succeeding licenses.

By 1961, the archival files reveal that the Hawaiian sugar industry is in financial trouble. There are also records in the file from the same time period documenting the negotiations between EMI and the County of Maui, Department of Water Supply (DWS) for water for DWS’s Upcountry system.

In 1962, GL 3695 for the Honomanu License area commences and is the first and only license to be issued by the Board. This is the last executed license on record.

Table 2-1 through 2-4 has been provided as a summary timeline of the licenses separated by the different historic license areas.

2.5. THE 1938 EAST MAUI WATER AGREEMENT

By the 1930s, the extensive network of ditches and tunnels that comprised the EMI system crossed both privately owned lands and lands owned by the Territory of Hawaii. Recognizing that continued operation of the EMI ditch system was dependent upon access to both public and private property, the Territory of Hawaii and EMI entered into the 1938 East Maui Agreement. The 1938 East Maui Agreement was intended to facilitate competitive bidding for future water licenses upon the expiration of existing licenses and to establish a framework for the continued operation of the ditch system.

To accomplish these objectives, the Territory of Hawaii and EMI granted one another reciprocal perpetual easements allowing water to be conveyed through portions of the aqueduct system located on their respective lands. The 1938 East Maui Agreement recognized that the integrated nature of the EMI system made joint use necessary and sought to ensure that future licensees would be able to transport water through the existing infrastructure.

The 1938 East Maui Agreement also established the framework for the future dispositions of water rights within Nahiku, Keanae, Honomanu, and Huelo. As existing licenses expired, the Territory contemplated offering new thirty-year licenses at public auction. The 1938 East Maui Water Agreement established a pricing methodology for water diverted from each license area, recognizing that the value of water declined as the cost of transporting it to Central Maui increased. Consequently, water originating from the Nahiku area was assigned a lower value than water diverted from areas closer to Central Maui.

TABLE 2-1 HUELO LICENSES

DISP. TYPE	FILE NO.	LICENSEE	TERM	START	END
Grant	GL 267-B	Claus Spreckels	30 years	July 8, 1978	~July 8, 1908 (not defined in doc.)
1938 East Maui Agreement Exp. Date					June 30, 1938
License	GL 974	EMI Co., Ltd.	21 years	Dec. 10, 1917	~Feb. 26, 1923 (not defined in doc.)
1938 East Maui Agreement Exp. Date					June 30, 1938
Land License	GL 2656	EMI Co., Ltd.	21 years	July 1, 1938	June 30, 1959
1-year Holdover				July 1, 1959	June 30, 1960
Land License	GL 3578	EMI Co., Ltd.	21 years	July 1, 1960	June 30, 1981
1-year Holdover				July 1, 1981	June 30, 1982

TABLE 2-2 NAHIKU LICENSES

DISP. TYPE	FILE NO.	LICENSEE	TERM	START	END
Land License	GL 520-B	H.P. Baldwin, W.F. Pogue, & A. Hocking on behalf of the proposed Nahiku Sugar Company	30 years	Aug. 2, 1898	~Aug. 8, 1928 (not defined in doc.)
Lease	GL 538	H.P. Baldwin	21 years	Feb. 26, 1902	~Feb 26, 1923 (not defined in doc.)
Land License	GL 2027	EMI Co., Ltd.	21 years	Jan 17, 1930	~Jan. 17, 1951 (not defined in doc.)
1938 East Maui Agreement Exp. Date					June 30, 1951
1-year Holdover				June 30, 1951	June 30, 1952
Land License	GL 3505	EMI Co., Ltd.	21 years	July 1, 1955	June 30, 1976
1-year Holdover				July 1, 1976	June 30, 1977

TABLE 2-3 KEANAE LICENSES

DISP. TYPE	FILE NO.	LICENSEE	TERM	START	END
Lease	GL 539	H.P. Baldwin	21 years	Feb. 26, 1902	~Feb. 26, 1923 (not defined in doc.)
Land License	GL 1706	EMI Co., Ltd.	21 years	June 22, 1925	~June 14, 1946 (not defined in doc.)
1938 East Maui Agreement Exp. Extension					June 30, 1946
1-year Holdover				June 30, 1946	June 30, 1947
Land License	GL 3349	EMI Co., Ltd.	21	July 1, 1950	June 30, 1971
6-month Holdover				July 1, 1971	Dec. 31, 1972
6-month Holdover				Jan. 1, 1972	June 30, 1972
	RP 4885	EMI Co., Ltd.	1 year	July 1, 1972	June 30, 1973
	RP (?)	EMI Co., Ltd.	1 year	July 1, 1973	June 30, 1974

TABLE 2-4 HONOMANU LICENSES

DISP. TYPE	FILE NO.	LICENSEE	TERM	START	END
License	GL 1134	EMI Co., Ltd	21 years	July 26, 1919	~July 26, 1940 (not defined in doc.)
1938 East Maui Agreement Exp. Extension					June 30, 1946
Land License	GL 2787	EMI Co., Ltd	21 years	July 1, 1940	June 30, 1961
6-month Holdover				July 1, 1961	Dec. 31, 1961
6-month Holdover				Jan. 1, 1962	June 30, 1962
Land License	GL 3695	EMI Co., Ltd	24 years	July 1, 1962	June 30, 1986
1-year Holdover				July 1, 1986	June 30, 1987
	RP 6504	EMI Co., Ltd.	1 year	July 1, 1987	June 30, 1988

2.6. TRANSITION TO REVOCABLE PERMITS

Following the expiration of the East Maui long-term water licenses between 1972 and 1986, BLNR continued to authorize the diversion and use of water from the East Maui license areas through holdover arrangements and annual revocable permits. The Board originally anticipated replacing the four historical licenses with a single long-term disposition covering the East Maui license areas.

In 2000, A&B requested that the Board resume consideration of a long-term water license. At its regular meeting on May 26, 2000, the Board approved the continued issuance of interim revocable permits while simultaneously directing the Department and staff to move forward with a long-term disposition and to address the legal and policy issues associated with such a disposition. As part of that action, the Board also imposed several additional conditions, including obtaining legal guidance regarding compliance with HRS Chapter 343.

At its regular meeting on May 25, 2001, the Board received a briefing on the proposed long-term disposition in conjunction with the continued issuance of interim revocable permits. Shortly thereafter, Na Moku Aupuni o Koolau Hui requested a contested case hearing challenging both the proposed long-term disposition and the continuation of the revocable permits. Although the contested case proceeding commenced, it was subsequently stayed pending completion of environmental review and proceedings to establish and amend interim instream flow standards for East Maui streams. The environmental impact statement was ultimately accepted in 2021, and interim instream flow standards were amended for most affected East Maui streams in 2018. As these proceedings remained pending for many years, the Board continued authorizing the diversion and use of water through annual revocable permits while the Department pursued a long-term disposition.

3. THE RELATIONSHIP BETWEEN CWRM & THE BOARD

As discussed in Section 1, the Legislature implemented Article XI, section 7 of the Hawaii Constitution by enacting the State Water Code, Chapter 174C, HRS, and creating CWRM. Although CWRM is administratively attached to the Department, the Legislature assigned CWRM and the Board separate statutory responsibilities. CWRM exercises exclusive jurisdiction and final authority over matters arising under the State Water Code, while the Board retains its authority under Chapter 171, HRS, to dispose of public lands and water rights. Accordingly, the Board's consideration of the proposed long-term water licenses occurs within the regulatory framework established by the State Water Code and administered by CWRM.

3.1. COMMISSION ON WATER RESOURCE MANAGEMENT

HRS § 26-15(a) expressly recognizes this division of authority. Although the Department is generally headed by the Board, the statute provides that “for matters relating to the

state water code the commission on water resource management shall have exclusive jurisdiction and final authority.” Consistent with HRS § 26-15(a), HRS § 174C-7(a) establishes CWRM within the Department and vests it with exclusive jurisdiction and final authority over implementation and administration of the State Water Code. Consistent with this statutory framework, the Hawaii Supreme Court has recognized CWRM as the “primary guardian of public rights under the public trust” with respect to the State’s water resources. *In re Water Use Permit Applications*, 94 Hawai’i 97, 143, 9 P.3d 409, 455 (2000). HRS § 174C-5 further provides that the general administration of the State Water Code rests with CWRM.

3.1.1. Instream Use Protection Program and Interim Instream Flow Standards

Pursuant to HRS § 174C-71, CWRM is responsible for establishing and administering a statewide instream use protection program. As part of that program, CWRM establishes both permanent and interim instream flow standards on a stream-by-stream basis whenever necessary to protect the public interest in the waters of the State. The State Water Code defines “instream use” as a beneficial use of stream water for purposes including the maintenance of fish and wildlife habitats, outdoor recreational activities, navigation, the maintenance of ecosystems and aesthetic values, the protection of water quality, the conveyance of irrigation and domestic water supplies, the protection of traditional and customary Hawaiian rights, and other instream benefits. HRS § 174C-3.

An instream flow standard establishes the quantity of water that must remain within a stream to protect instream uses. In establishing or modifying an instream flow standard, CWRM investigates the affected stream, consults with federal, state, and county agencies, considers the recommendations of agencies and persons with expertise regarding the stream, and weighs present and potential instream values against present and potential offstream uses, including the economic impacts of restricting those uses. HRS § 174C-71(1).

As the Hawaii Supreme Court recognized in *Waiahole I*, instream flow standards “serve as the primary mechanism by which the Commission is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon instream flows.” *In re Water Use Permit Applications*, 94 Hawai’i at 149, 9 P.3d at 461.

In addition to establishing and amending IIFS, CWRM regulates stream diversion works and the Water Code’s water use permitting program within designated water management areas (WMA), issues water use permits governing the withdrawal and use of water. See HRS §§ 174C-48, 174C-71, 174C-92 to -95.

Shortly after the enactment of HRS Chapter 174C, CWRM recognized the complexity of establishing stream-specific instream flow standards for Hawaii’s estimated 376 perennial streams. As an interim measure, CWRM adopted statewide “status quo” IIFS, defined as the amount of water flowing in each stream, taking into account the natural variability in stream flow and conditions, at the time the administrative rules were adopted in 1988 and

1989. CWRM adopted the status quo IIFS applicable to the East Maui streams on June 15, 1988. However, in *Waiahole*, the Hawaii Supreme Court concluded that the status quo IIFS were insufficient to satisfy CWRM's constitutional and statutory responsibilities and directed CWRM to develop stream-specific instream flow standards where appropriate.

3.1.2. East Maui Instream Flow Standards

The East Maui license areas are not located within a designated WMA under chapter 174C, HRS. Accordingly, the Water Code's water use permitting requirements do not apply to the diversion and use of water within the EMI system. Instead, CWRM regulates those diversions through the IIFS process established under HRS § 174C-71. Following *Waiahole*, CWRM conducted a contested in case and issued a Decision and Order in 2018, establishing amended IIFS for the affected East Maui streams. In 2022 CWRM approved the amended IIFS for remaining Huelo-Region streams. Those amended IIFS determine the quantity of water that must remain instream to protect public trust purposes and other beneficial instream uses.

As recognized in CWRM's 2018 Decision and Order, CWRM's role is to establish the quantity of water that must remain instream; the allocation and disposition of water available for offstream use falls within the Board's jurisdiction. Accordingly, the proposed long-term water licenses concern only the diversion and disposition of water available for offstream use after compliance with CWRM's applicable IIFS. The Board's role under HRS Chapter 171 is limited to determining whether, and under what terms, that water should be disposed of through long-term water licenses.

3.2. THE BOARD OF LAND AND NATURAL RESOURCES

Once CWRM establishes the applicable instream flow standards, the Board's responsibility is to determine whether, and under what terms, water available for offstream use should be disposed of pursuant to HRS Chapter 171. HRS § 171-1 defines "land" to include "all interests therein and natural resources including water, minerals, and all such things connected with land, unless otherwise expressly provided." Accordingly, chapter 171 governs not only the disposition of public lands, but also the disposition of water rights on public lands. HRS § 171-58(c) authorizes the Board to dispose of water rights by lease at public auction in accordance with HRS Chapter 171 or by revocable permit for temporary use. Except where otherwise specifically provided by law, leases of water rights must be sold at public auction following public notice. HRS §§ 171-14, 171-16, 171-58(c). In addition, any lease of water rights remains subject to legislative disapproval as provided in HRS § 171-58(c).

Unlike CWRM's responsibilities under HRS Chapter 174C, the Board's decision to dispose of water rights under HRS Chapter 171 requires compliance with numerous independent statutory requirements. Before a long-term water license may be offered at public auction, the Department must satisfy, among other things, the requirements of HRS

Chapter 343 and coordinate with the Department of Hawaiian Home Lands (DHHL) regarding any applicable water reservations. These statutory requirements demonstrate that the Board's responsibilities extend beyond CWRM's determination of the applicable instream flow standards.

Accordingly, although CWRM's IIFS establishes the quantity of water that must remain instream, the Board independently determines whether disposition of the remaining water is appropriate under HRS chapter 171. In making that determination, the Board considers the entire administrative record, including CWRM's applicable IIFS and Decisions and Orders, the environmental review conducted pursuant to HRS Chapter 343, staff recommendations, appraisal information, public testimony, and other information relevant to the proposed disposition. CWRM's IIFS provide the framework within which the Board exercises its independent statutory responsibilities. Within that framework, the Board must determine whether the proposed long-term water licenses satisfy the requirements of chapter 171, HRS, and whether the proposed disposition serves the interests of the State.

4. CONSIDERATIONS FOR THE BOARD

4.1. HYDROLOGICAL FRAMEWORK FOR THE PROPOSED WATER LICENSES

The proposed long-term water licenses concern surface water originating within the East Maui watershed. The quantity of water available for diversion is not constant, but varies in response to rainfall, groundwater recharge, and streamflow. Understanding the hydrologic processes that govern the movement and storage of water within the watershed provides important context for the Board's consideration of water available for disposition under HRS Chapter 171.

The East Maui watershed receives abundant precipitation through Hawaii's natural water cycle. Moisture from the surrounding ocean, surface waters, and vegetation returns to the atmosphere through evaporation and transpiration, the natural process by which plants release water vapor. The northeast trade winds carry this moisture toward East Maui. As the moisture-laden air rises along the windward slopes of Haleakala, it cools, condenses, and falls as rain (Figure 4-1).

At higher elevations, native cloud forests further increase water availability by capturing moisture directly from passing clouds and fog through a process known as cloud water interception (CWI) (Figure 4-2). As clouds and fog move through the forest canopy, water droplets collect on the leaves and branches of native vegetation before dripping to the forest floor or flowing down tree trunks. This additional moisture supplements rainfall, increases soil moisture, promotes groundwater recharge, and helps sustain streamflow during periods of lower rainfall.

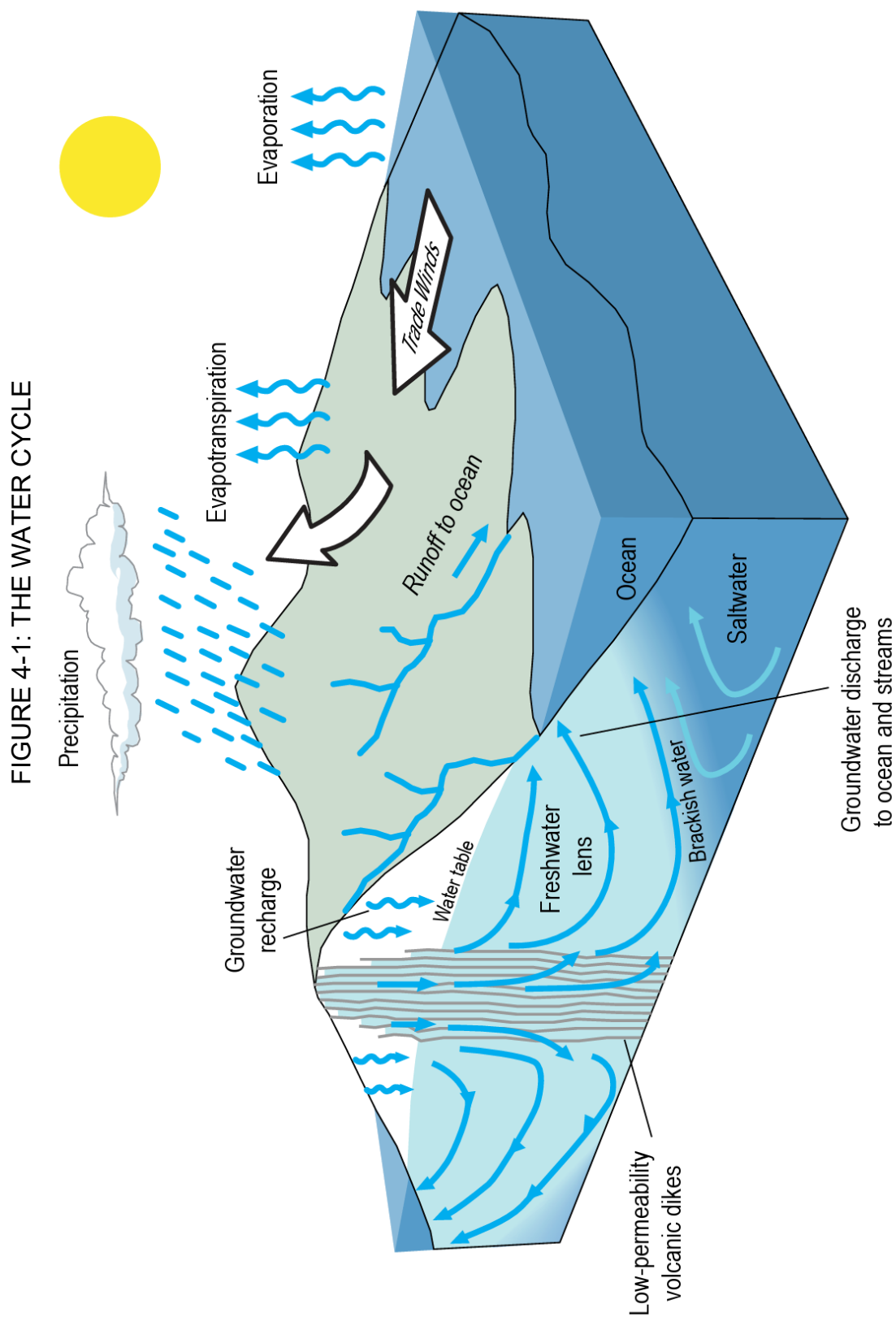


Figure 2. Relation of fresh groundwater to precipitation, evapotranspiration, runoff, and saltwater from the ocean in the Hawaiian Islands.

Image courtesy of: <https://pubs.usgs.gov/sir/2015/5164/sir20155164v2.pdf> (Izuka et al, 2018)

FIGURE 4-2: CLOUD WATER INTERCEPTION DIAGRAM

Cloud water interception

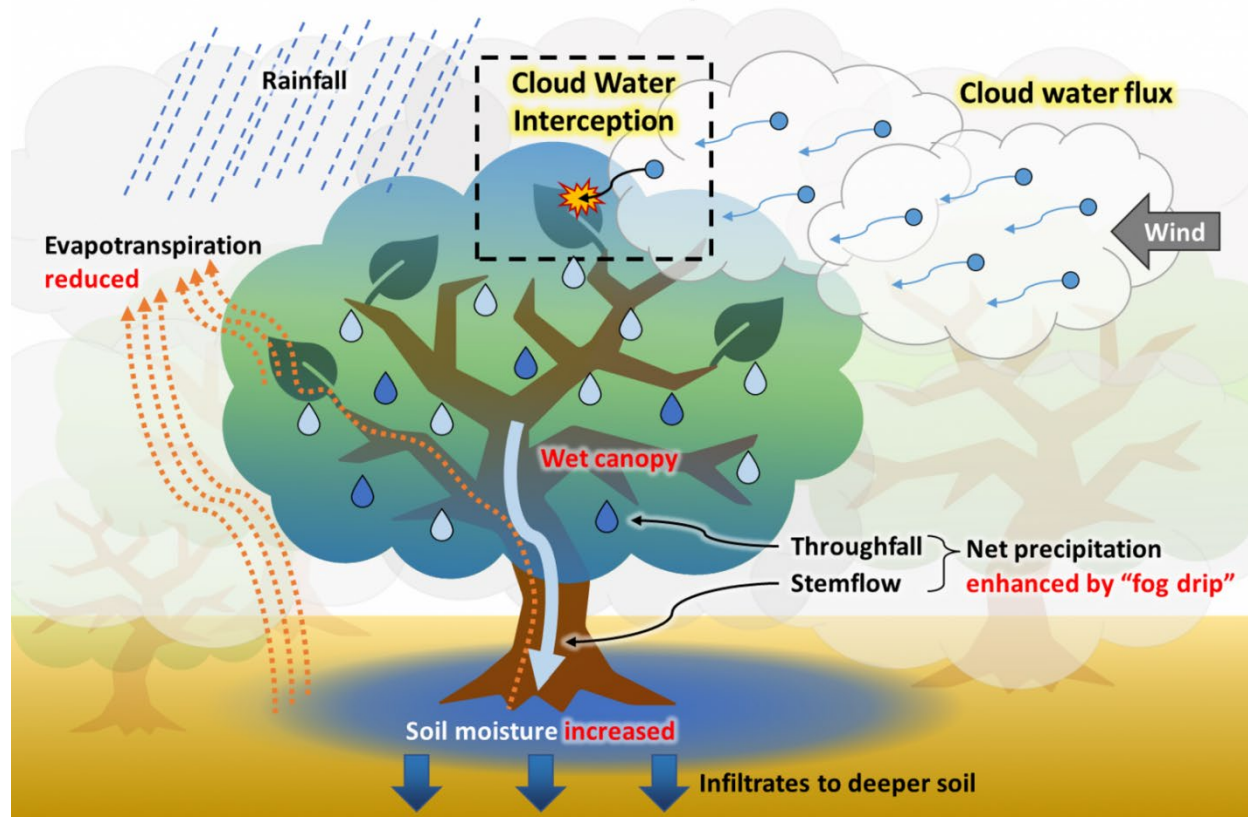


Image courtesy of: Han Tseng (tsenghan@hawaii.edu) from UH HCDP Website

East Maui is home to a unique high-altitude environment referred to as a tropical montane cloud forest. These native forests are dominated by ohia lehua tree canopies with dense understories of native ferns and shrubs that are particularly effective at capturing, storing, and gradually releasing water. In addition to enhancing CWI, these diverse forests help stabilize soils, reduce erosion, and help protect downstream water quality and nearshore ecosystems.

Once precipitation reaches the forest floor, it follows one of two primary pathways. Some water infiltrates the soil through percolation, moving through Hawaii's porous volcanic rock formations to recharge groundwater aquifers. These aquifers function as natural underground reservoirs, storing water and gradually releasing it to springs, streams, and coastal waters over time. Excess waters that are not absorbed contribute to surface runoff or shallow subsurface flow, contributing to total streamflow before eventually discharging into the ocean.

Groundwater and streams function as a single, interconnected hydrologic system (Figure 4-3). Water continuously moves between the groundwater aquifers and surface waters, such that changes affecting one component influence the other. There are three main aquifer types found in Hawaii:

- **Basal Aquifers:** A large, dome-shaped body of liquid fresh groundwater that floats on top of denser saltwater inside highly porous basaltic rock (also referred to as the freshwater lens). This type of aquifer supplies most of the drinking water for the islands and is fed directly by mountain rainfall.
- **Dike-Impounded Aquifers:** High-elevation groundwater systems that formed when vertical, impermeable volcanic sheets trap fresh water inside permeable lava rock compartments. They are basically hidden reservoirs that store a high volume of groundwater hundreds of feet above sea level within the rift zones and calderas of the Hawaii shield volcanoes which make them protected from saltwater intrusion.
- **Perched Water Aquifers:** Localized bodies of fresh groundwater trapped above the main regional water table by impermeable underground geologic layers. They are an important high-elevation water source, but store significantly less volume than the basal or dike-impounded aquifers.

Basal aquifers support streams normally as coastal discharge where low-elevation basal groundwater often emerges as major nearshore springs or in lower channels of streams right before reaching the ocean.

Dike-Impounded aquifers contribute high-elevation groundwater that slowly leaks through the rock barriers to maintain base flows for perennial mountain streams and springs. It also can flow down into lower basal lenses, thus supporting basal aquifers as well.

Perched water aquifers, though relatively smaller and shallower than the other two types, occurs at higher elevations and significantly feeds and sustains continuous base flows in many mountain streams through natural spring discharges which occurs when the edge of a perched water table intersects the side of a valley or mountain slope and the water comes to the surface in the form of a spring. This interaction between groundwater and surface water determines a stream's baseflow. Baseflow is the continuous discharge of groundwater from aquifers into streams that sustains perennial streamflow during periods of little or no rainfall.

Because groundwater and streams are interconnected, streamflow varies throughout a watershed. Depending on local geology and groundwater conditions, a stream may either gain water from surrounding aquifers or lose water to them. Whether a stream gains or loses water depends upon factors such as the permeability of the surrounding rock, the type of aquifer, and the elevation of the groundwater table.

FIGURE 4-3: CONCEPTUAL HAWAIIAN GROUNDWATER DIAGRAM

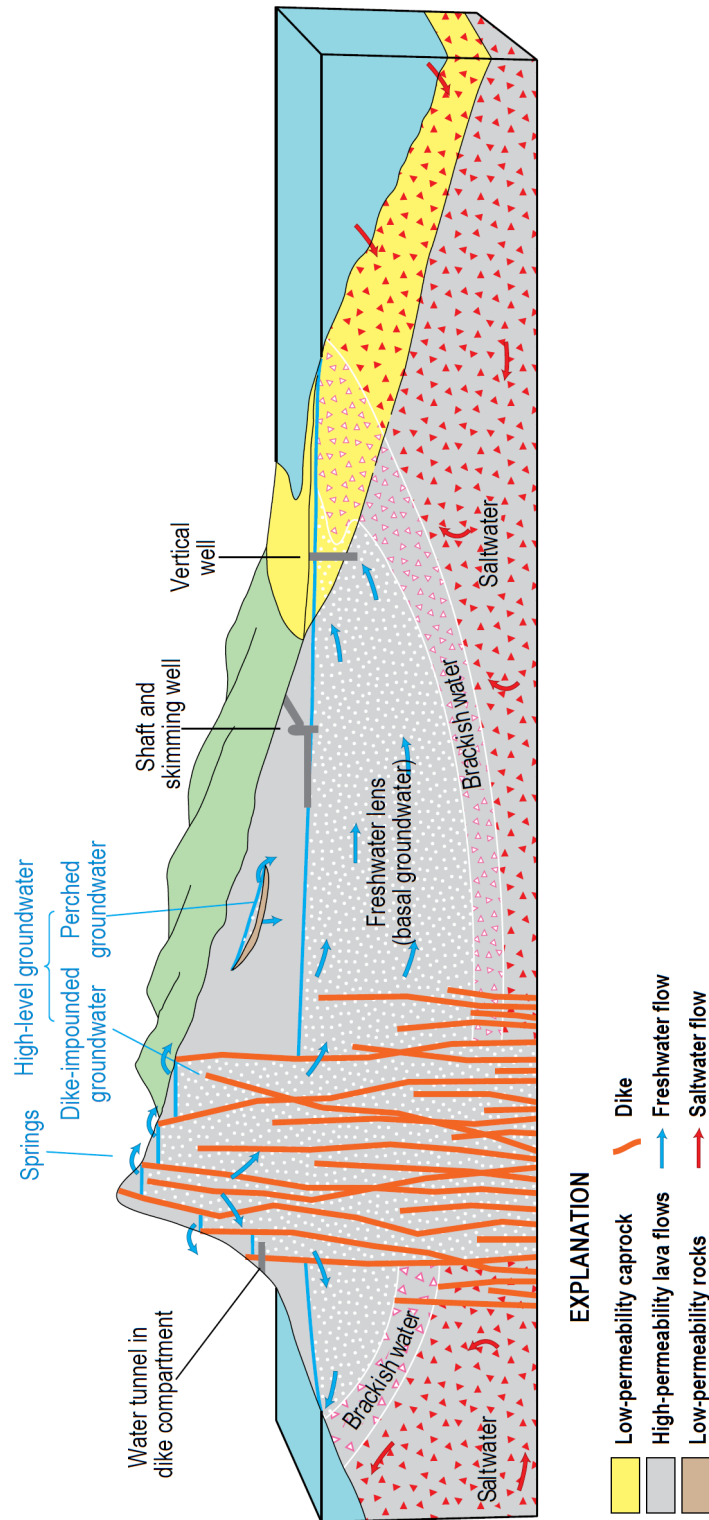


Figure 21. Conceptual model of groundwater occurrence and flow in Hawai'i, developed by about the middle of the 20th century. Modified from Oki and others, 1999a.

Image courtesy of: <https://pubs.usgs.gov/sir/2015/5164/sir20155164v2.pdf> (Izuka et al, 2018)

As a stream travels down slope, it can either gain water or lose water depending on the environmental conditions discussed above (see Figure 4-4). A stream loses water when the water table is below the streambed. However, as the stream continues downslope, it may encounter an aquifer which causes the water table to be higher than or above the stream bed. When this occurs, groundwater seeps into the stream bed creating a gaining stream.

FIGURE 4-4 DIAGRAM EXPLAINING LOSING AND GAINING STREAMS

Diagram of a conceptual stream flowing down slope. The stream is represented by the thicker, dark blue line and the thin light blue line indicates the top of the water table. The dashed portions of the dark blue line represent the stream's losing reaches where the stream bed is above the water table, and the solid portion of the dark blue line represents the stream's gaining reaches where the water table is "above" the stream bed.

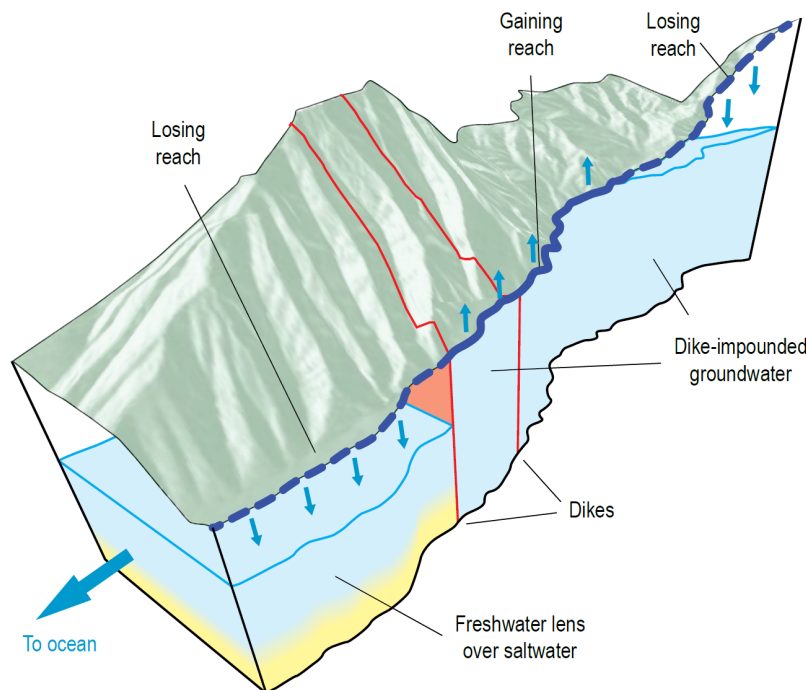


Figure 66. Block diagram, cut along the course of a stream, showing the relation between dike-impounded groundwater and losing reaches (dashed line and downward flow arrows) and gaining reaches (solid line and upward flow arrows) of a stream in Hawai'i. Modified from Oki and others (2010).

Image courtesy of: <https://pubs.usgs.gov/sir/2015/5164/sir20155164v2.pdf> (Izuka et al, 2018)

For those waters that end up discharging into the ocean, the freshwater mixes with saltwater to form a unique estuarine environment, or muliwai. These ecosystems provide important habitat for native aquatic species such as the amaama, oopu nakea, oopu nopili, and opae. Historically, loko ia were often constructed adjacent muliwai to take advantage of the nutrient-rich brackish waters created where streams meet the ocean.

Muliwai also act as natural retention and filtration basins that slow down freshwater runoff, trap suspended sediments and absorb pollutants before reaching Hawaii's nearshore coral reef ecosystems. These muliwai have long supported traditional and customary Native Hawaiian practices protected under Article XII, § 7 of the Hawaii Constitution.

4.2. EAST MAUI STREAMS IIFS

As discussed in Section 3, CWRM establishes the IIFS to determine the quantity of water that must remain in each stream to protect public trust purposes and other beneficial instream uses. For the East Maui stream system, CWRM has amended the applicable IIFS through two principal administrative proceedings. The first culminated in CWRM's 2018 Contested Case Decision and Order³, which established amended IIFS for the Nahiku, Keanae, Honomanu, Huelo, and Keanae hydrological regions. The second occurred in 2022, when CWRM approved amending the IIFS applicable to the remaining Huelo-Region streams⁴. Table 4-1 summarizes the applicable IIFS for streams affected by the EMI System.

4.2.1. Status of Diversion Modifications

The amended IIFS established through CWRM's 2018 Decision and Order and 2022 approval required substantial modifications to diversion structures throughout the EMI system to implement the stream-specific flow requirements adopted by CWRM. Rather than imposing a single system-wide diversion limit, CWRM required modifications to individual diversion structures so that each stream could achieve the instream flows established through the IIFS process while allowing diversion of water remaining available for offstream use. Because each East Maui stream has a different hydrologic regime, biological resources, and applicable IIFS, the required modifications vary from stream to stream. Accordingly, CWRM prescribed stream-specific operational and structural modifications rather than a uniform set of requirements applicable to every diversion.

The required modifications include restoring continuous flow to streams where diversions had previously dewatered stream reaches, raising or modifying diversion intakes and gates to allow the required instream flows to pass downstream, installing or modifying bypass structures and aquatic organism passage facilities to improve stream connectivity, permanently abandoning or sealing diversions where required, and implementing operational changes governing when and how water may be diverted. Collectively, these measures are intended to ensure that the EMI system operates consistently with CWRM's stream-specific IIFS.

3. [CWRM 2018 Contested Case Hearing D&O.pdf](#)

4. [Nov 15, 2022 - CWRM Submittal, Action Item No. 5](#)

TABLE 4-1: EAST MAUI STREAMS IIFS

HISTORIC LICENSE AREA	STREAM NAME	2018 D&O STREAM CLASSIFICATION	2018 D&O RESTORATION STATUS	2018 IIFS (cfs)	2022 IIFS (cfs)
Nahiku	Makapipi	Kalo & Community	Full	N/A	
Nahiku	Hanawi		Connectivity	0.92	
Nahiku	Kapaula		Connectivity	0.56	
Keanae	Waiaaka		None	0.77	
Keanae	Paakea		Connectivity	0.9	
Keanae	Waiohue	Habitat (reference)	Full	N/A	
Keanae	Kopiliula	Habitat	H90	3.2	
Keanae	East Wailuaiki	Habitat	H90	3.7	
Keanae	West Wailuaiki	Habitat (reference)	Full	N/A	
Keanae	Wailuanui	Kalo & Community	Full	N/A	
Keanae	Waiokamilo	Kalo & Community	Full	N/A	
Keanae	Palauhulu	Kalo & Community	Full	N/A	
Keanae	Piinaau	Kalo & Community	Full	N/A	
Honomanu	Nuaailua		Connectivity	2.2	
Honomanu	Honomanu	Habitat	H90	4.2	
Honomanu	Punalau	Habitat	H90	2.9	
Honomanu	Haipuaena		Connectivity	1.36	
Honomanu	Puohokamoa		Connectivity	1.1	
Huelo	Wahinepee		None	0.9	
Huelo	Waikamoi	Habitat	H90	3.8	
Huelo	Kolea				0.08
Huelo	Punaluu				0
Huelo	Kaaiea				1.8
Huelo	Oopuola				0.36
Huelo	Nailiilihaele				5.2
Huelo	Kailua				1.8
Huelo	Ohanui (Oanui)				0
Huelo	Hanawana				0.35
Huelo	Hoalua				0
Huelo	Hanehoi	Kalo & Community	Full	N/A	
Huelo	Huelo (Puolua)	Kalo & Community	Full	N/A	
Huelo	Waipio				N/A
Huelo	Hoolawailiili				0.7
Huelo	Hooalawanui				1.2
Huelo	Honopou	Kalo & Community	Full	N/A	

At its May 19, 2026 meeting, CWRM received implementation updates from both CWRM staff and Mahi Pono regarding the required diversion modifications⁵. The presentations addressed the status of each required diversion modification, progress toward implementing the amended IIFS, the regulatory permitting necessary before permanent in-stream construction could occur, the interim operational measures being implemented to maintain required instream flows pending completion of those modifications, and CWRM's continuing oversight and monitoring of implementation.

According to Mahi Pono, implementation of the amended IIFS requires modifications to 130 individual diversion structures. Work on 79 of these diversions have been completed (approximately 61 percent) and 51 (approximately 39 percent) are still pending permits from either the U.S. Army Corps of Engineers (Section 404 Clean Water Act Permit) and/or the State Office of Conservation and Coastal Lands (Conservation District Use Permit).

Implementation of these remaining modifications requires extensive coordination with multiple federal, state, and county agencies because many of the remaining projects involve construction within active stream channels, conservation district lands, or areas containing historic or cultural resources. Mahi Pono reported that it had submitted approximately 235 permit applications in connection with the required diversion modifications. As of May 2026, approximately 174 regulatory approvals had been obtained, while 61 approvals remained pending.

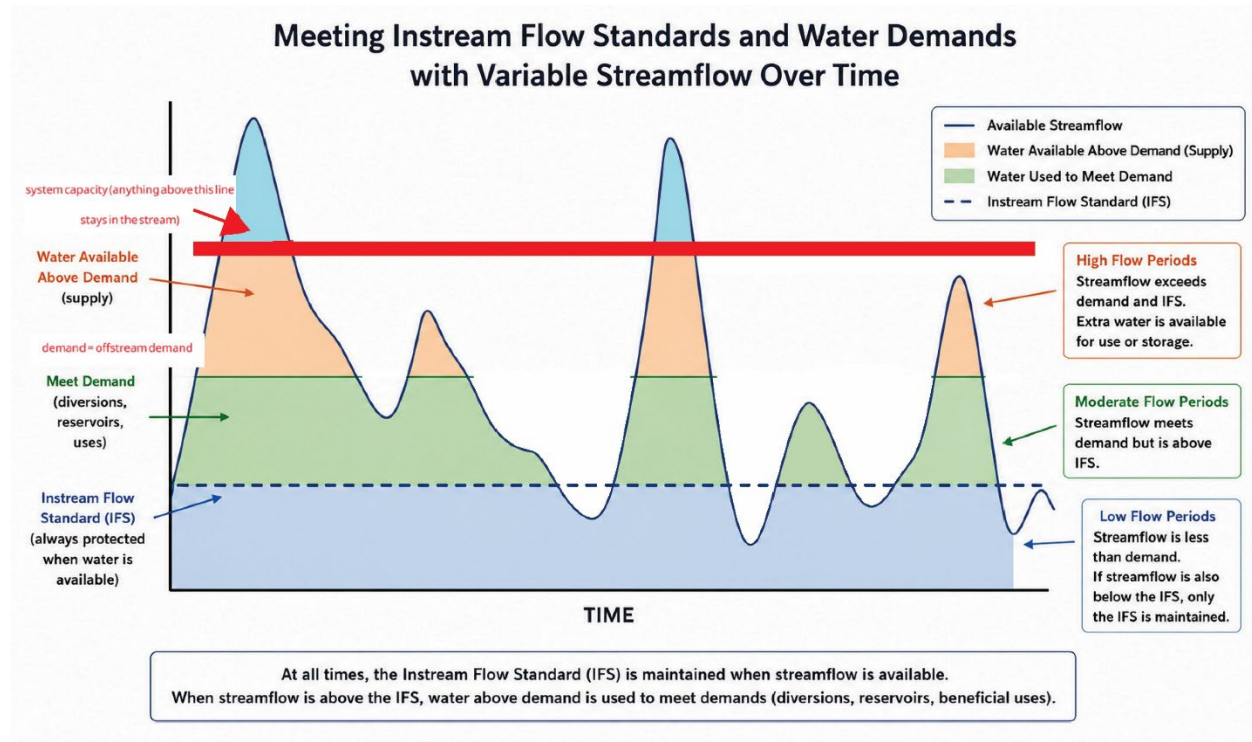
4.2.2. Management of Surface Waters for Non-Instream Uses

Surface water available for offstream use within the East Maui watershed naturally fluctuates over time in response to rainfall, groundwater recharge, seasonal weather patterns, and other hydrologic conditions discussed in Section 4.1. As a result, the quantity of water available for diversion after satisfaction of the applicable IIFS also varies over time. Unlike groundwater, which is stored within aquifers, streamflow changes continuously as hydrologic conditions change.

To illustrate the relationship between changing stream flow, the IIFS, and water available for offstream use, CWRM staff developed the conceptual diagram shown in Figure 4-5 as well as provided an example stream to show how this concept would apply to real stream. The figures demonstrates that, although streamflow naturally fluctuates over time, CWRM's stream-specific IIFS establishes the quantity of water that must remain instream to protect public trust purposes and other beneficial instream uses. Only after those instream requirements have been satisfied does water become available for potential offstream use, which the Board may then consider for disposition under Chapter 171, HRS.

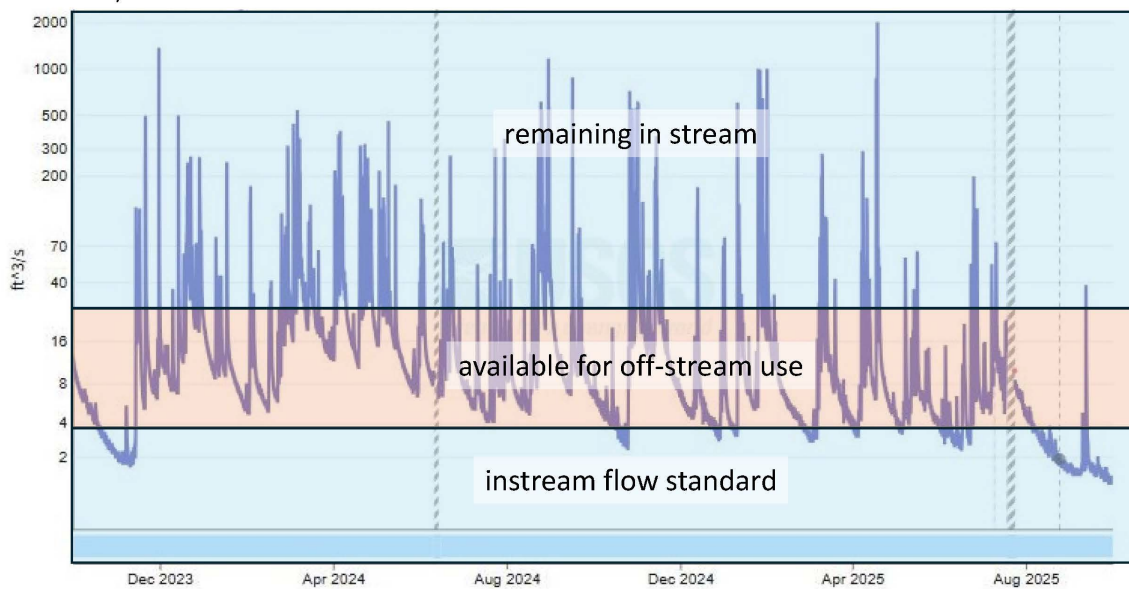
5. [May19, 2026 - CWRM Briefing Presentation](#) and [May 19, 2026 - Mahi Pono Briefing Presentation](#)

FIGURE 4-5: MEETING INSTREAM FLOW STANDARDS AND WATER DEMANDS
WITH VARIABLE STREAM FLOW OVER TIME



Example Stream

USGS 16570000 Nailiilihaele Stream near Huelo, Maui
Mean Daily Flow



The shaded blue portion of the figure represents the applicable instream flow standard or the IIFS. This water remains within the stream to protect public trust purposes and other beneficial instream uses. During periods of very low streamflow, the total amount of water present in a stream may fall below the applicable IIFS. During those periods, no water is available for offstream diversion because all available water remains within the stream.

When streamflow exceeds the applicable IIFS, water above the instream flow standard becomes available for potential offstream use. Whether all of that water may actually be diverted depends upon the authorized demand and the physical capacity of the diversion system. Figure 4-5 illustrates three general hydrologic conditions.

Water available above the IFS/IIFS can be split into three different tiers:

- Moderate Flow Periods (Tier 1 - green): During moderate flow periods, streamflow exceeds the applicable IIFS and is sufficient to satisfy the anticipated demand for authorized offstream uses, including domestic, municipal, agricultural, and DHHL water reservation purposes. Under these conditions, both the required instream flows and the anticipated offstream demands can be met.
- High Flow Periods (Tier 2 – orange): During periods of higher streamflow, water available above the IIFS exceeds anticipated demand. This additional water may either be used for other authorized beneficial purposes or stored within the existing water system for later use during periods of lower streamflow. Even during these periods, the physical capacity of the EMI diversion system limits the amount of water that may be diverted.
- Streamflow Exceeding Diversion Capacity (Tier 3 – light blue): During exceptionally high-flow events, streamflow may exceed both anticipated demand and the approximately 450 million gallon per day diversion capacity of the EMI system. Water exceeding that capacity cannot be diverted and therefore remains within the stream.

Figure 4-5 illustrates that the quantity of water available for offstream use is not constant, but instead varies in response to changing hydrologic conditions. Although the proposed long-term water licenses establish the maximum quantities of water that may be diverted for authorized offstream uses, the quantity of water available for diversion at any given time will continue to depend upon streamflow and compliance with CWRM's applicable IIFS. During periods of reduced streamflow, less water may be available for diversion, while during periods of higher streamflow additional water may be available, subject to the terms of the licenses and the physical capacity of the EMI system. Accordingly, the Board's consideration of the proposed licenses concerns the disposition of water that remains available after the applicable IIFS have been satisfied under the hydrologic conditions existing at any given time.

The quantity of water determined to be available for dispositions likewise excludes the quantity of water requested by DHHL pursuant to HRS § 171-58(g), as discussed in Section 4.5.

4.3. ALTERNATIVE WATER SOURCES

4.3.1. Recycled Water (R-1 and R-2)

In determining whether the proposed long-term water licenses are in the best interests of the State under HRS chapter 171, the Department independently considered whether recycled water provides a reasonable and practicable alternative source of water for the proposed offstream uses. In conducting that analysis, the Department reviewed, among other materials, CWRM's 2018 Decision and Order, CWRM's 2022 approval of the amended IIFS for the Huleo-Region streams, the underlying administrative record, Maui's existing recycled water infrastructure, applicable Department of Health (DOH) requirements governing recycled water use, and information regarding planned future recycled water facilities. Based upon that review, the Department has determined that although recycled water may serve as an important supplemental source of water in the future, it is not presently capable of replacing the East Maui surface water supplies necessary to support the proposed offstream uses.

The Department's conclusion is based upon both the present capabilities of Maui's recycled water infrastructure and the operational characteristics of the Central Maui irrigation system. Although recycled water is successfully used for many purposes throughout Maui, significant practical and regulatory limitations presently prevent it from replacing East Maui surface water for the proposed agricultural uses.

One limitation identified by the Department concerns the type of recycled water presently available. Recycled water is generally classified as either R-2 or R-1 based upon the level of treatment it receives. R-2 recycled water undergoes secondary treatment and disinfection but remains subject to significant DOH restrictions because it does not receive the same level of treatment as R-1 water. As a result, R-2 water generally may not be used through spray or sprinkler irrigation, on root crops or other crops where the edible portion comes into direct contact with the water, for washing agricultural products, or as drinking water for dairy animals producing milk for human consumption. Therefore, its agricultural use is generally limited to controlled applications, including drip irrigation for certain orchards, sod farms, ornamental landscaping, forage and fiber crops, and crops that undergo extensive commercial processing before human consumption. Because the existing irrigation system delivers a common source of water to multiple crop types through a single distribution system, it is not presently feasible to segregate R-2 recycled water for only those agricultural uses permitted under Department of Health regulations.

By contrast, R-1 recycled water receives additional filtration and high-level disinfection, allowing it to be used for a much broader range of agricultural purposes. Unlike R-2 water,

R-1 water may generally be used on commercial agricultural operations with few restrictions regarding crop type or irrigation method. It may also be used for livestock and poultry watering (subject to limited exceptions for dairy operations), washing agricultural equipment, and other nonpotable uses approved by the DOH.

Maui currently has five active wastewater reclamation facilities producing recycled water. Four of those facilities—the Kihei Wastewater Reclamation Facility, Lahaina Wastewater Reclamation Facility, Maalaea Regional Wastewater Reclamation System, and Pukalani Wastewater Reclamation Facility—produce R-1 recycled water. The Kahului Wastewater Reclamation Facility primarily produces R-2 recycled water.

In evaluating recycled water as a potential alternative to East Maui surface water, the Department reviewed Maui's existing recycled water infrastructure together with the administrative record developed before CWRM's 2018 Decision and Order and CWRM's 2022 approval of the amended IIFS for the Huelo-Region streams. During those proceedings, CWRM evaluated Maui's existing recycled water infrastructure and identified only two existing facilities—the Kahului Wastewater Reclamation Facility and the Pukalani Wastewater Reclamation Facility—as having the potential to supplement offstream water uses served by the EMI system. The remaining facilities primarily serve South Maui, West Maui, Upcountry Maui, or localized irrigation systems and are not presently connected to, or configured to serve, the Central Maui irrigation system supplied by the EMI system.

In evaluating these two facilities, the Department also considered the technical analysis contained in the 2022 CWRM staff submittal, which informed CWRM's consideration of recycled water during the Huelo-region IIFS proceedings. After independently reviewing the technical analysis contained in the 2022 CWRM staff submittal, the Department reaches the same conclusion. As explained in the submittal, the existing Central Maui irrigation system distributes a common source of irrigation water to both row crops and orchards. Because the Kahului Wastewater Reclamation Facility currently produces primarily R-2 recycled water, and because DOH regulations significantly restrict the agricultural uses of R-2 water, the Department concludes that R-2 water cannot presently be integrated into the existing irrigation system. Likewise, although the Pukalani Wastewater Reclamation Facility produces R-1 recycled water that is suitable for a much broader range of agricultural uses, the facility currently produces less than one million gallons per day, an amount is insufficient, in the Department's judgment, to meaningfully offset the East Maui surface water supplies necessary to support the proposed offstream uses.

The Department also recognizes that recycled water may become a more significant component of Maui's future water portfolio. Maui County has adopted Resolution 24-161 encouraging upgrades to the Kahului Wastewater Reclamation Facility to produce R-1 recycled water. If implemented, those upgrades would expand the availability of R-1 recycled water and could increase opportunities to supplement future non-instream water demand. Similarly, Maui County is planning to construct the Central Maui Wastewater

Reclamation Facility in Waikapu, which is anticipated to produce R-1 recycled water to serve the future Waikapu Country Town development, Wailuku, Waikapu generally, and State projects in Pulehunui. Although current planning anticipates that much of that recycled water will be needed to satisfy local development and irrigation demands, the Department recognizes that continued expansion of Maui's R-1 recycled water infrastructure may provide additional opportunities to supplement offstream water uses and reduce future demands on East Maui surface water.

Based upon its independent review, the Department concludes that recycled water is not presently a reasonable or practicable alternative capable of replacing the East Maui surface water necessary to satisfy the proposed offstream uses. Accordingly, recycled water does not presently eliminate the need for the proposed long-term water licenses, although continued expansion of Maui's recycled water infrastructure may reduce future demands on East Maui surface water.

4.3.2. Saline/Brackish Water

As part of its recommendation that the Board approve the proposed long-term water licenses, the Department independently evaluated whether brackish or saline water provides a reasonable and practicable alternative source of water for the proposed offstream uses.

Brackish water is groundwater containing higher concentrations of dissolved salts than freshwater, but substantially less than seawater. Saline water generally refers to water with higher salt concentrations, including seawater. Both sources may be treated through desalination or, in some circumstances, blended with freshwater to reduce salinity for agricultural use.

Brackish water is considered because it represents a potential alternative source that could supplement or reduce future demands on East Maui surface water. The Department considered brackish water because it represents one potential alternative source that could supplement or reduce future demands on East Maui surface water. As freshwater supplies become increasingly constrained, Maui County and other public agencies have evaluated whether brackish groundwater could supplement existing municipal and agricultural water supplies.

In conducting its evaluation, the Department reviewed the 2024 Central Maui Desalinization Feasibility Study prepared by Brown and Caldwell for the County of Maui. Although the study primarily evaluated the feasibility of developing desalinating brackish groundwater and seawater supplies to augment the County's Central Maui potable water supply, the Department also considered whether the identified sources could reasonably supplement or replace the East Maui surface water necessary to support the proposed offstream uses. The study identified the Waihee, Waikapu, Paia, and Kamaole Aquifers as potential sources of brackish water groundwater for future development.

However, significant practical limitations presently restrict that use of brackish water as a replacement for East Maui surface water. Agricultural crops vary considerably in their tolerance to salinity. While certain crops, including citrus, olives, sorghum, eucalyptus, and some pasture grasses, may tolerate elevated salt concentrations, many crops served by the Central Maui irrigation system require higher quality irrigation water. Continued irrigation with brackish water may also increase soil salinity, reduce soil permeability, and damage crop root systems unless additional freshwater is periodically applied to leach accumulated salts below the root zone. Consequently, successful long-term agricultural use of brackish water requires careful soil management and ongoing monitoring of salinity levels.

The Department also considered the use of blended water. Mixing brackish water with surface water or groundwater to reduce overall salinity is an established agricultural practice in Hawai'i and can expand the range of crops that may be irrigated. However, blending necessarily requires an additional source of freshwater. Accordingly, while blending may supplement existing irrigation supplies, it does not eliminate or materially replace the need for East Maui surface water.

Although brackish and saline water represent promising opportunities to diversify Maui's long-term water portfolio, the Department concludes that they do not presently constitute a reasonable or practicable alternative capable of replacing the East Maui surface water supply necessary to support the proposed offstream uses. The Department's review demonstrates that the current limitations associated with crop salt tolerance, long-term soil management, and the varying irrigation requirements of agricultural crops prevent brackish water from serving as a stand-alone replacement for the East Maui surface waters addressed by the proposed long-term water licenses.

The Department recognizes that continued advances in desalination technology, expansion of water treatment infrastructure, and future development of Maui's brackish groundwater resources may increase the role that brackish water plays in meeting the island's future water needs. At present, however, the available information demonstrates that brackish and saline water are more appropriately viewed as supplemental water sources that may reduce future demands on East Maui surface water rather than substitutes capable of replacing the East Maui surface water necessary to support the proposed offstream uses.

Accordingly, after independently evaluating the available information, the Department concludes that the existence of brackish and saline water resources does not constitute a reasonable or practicable alternative that would eliminate or materially reduce the present need for the East Maui surface water addressed by the proposed long-term water licenses. Therefore, the Department concludes that consideration of brackish and saline water does not alter its recommendation that the Board approve the proposed long-term water licenses.

4.3.3. Ground Water

As part of its recommendation that the Board approve the proposed long-term water licenses under HRS Chapter 171, the Department evaluated whether groundwater could presently provide a reasonable and practicable alternative capable of replacing the East Maui surface water necessary to support the proposed municipal, agricultural, and other authorized offstream uses. In conducting that evaluation, the Department considered whether sufficient groundwater is presently available to replace East Maui surface water, whether additional groundwater withdrawals could occur without impairing the affected aquifer systems, whether the existing groundwater and irrigation infrastructure could deliver replacement supplies to the agricultural lands historically served by the EMI system, whether groundwater quality is suitable for the proposed agricultural uses, and whether additional groundwater development is technically, environmentally, and economically feasible. The Department's evaluation was informed by CWRM's groundwater management framework under chapter 174C, HRS, the administrative records developed during the 2018 and 2022 IIFS proceedings, the Final Environmental Impact Statement, and CWRM testimony concerning the 2026 renewal of the EMI revocable permits.

Groundwater, like surface water, is a public water resource subject to regulation under the State Water Code. HRS § 174C-4(a) provides that “[a]ll waters of the State are subject to regulation under the provisions of this chapter unless specifically exempted.” HRS § 174C-3 defines “waters of the State” to include “water percolating, standing, or flowing beneath the surface of the ground,” thereby expressly including groundwater within CWRM's jurisdiction. Because CWRM is the agency charged by the Legislature with administering Hawaii's groundwater resources under HRS Chapter 174C, the Department appropriately relies upon CWRM's technical determinations and CWRM staff representations regarding groundwater availability, sustainable yield, and aquifer management while independently determining whether groundwater presently constitutes a reasonable and practicable alternative under HRS Chapter 171. Unlike the East Maui surface waters addressed by the proposed long-term water licenses, groundwater withdrawals are separately regulated under HRS Chapter 174C. Consequently, the Department cannot assume that additional groundwater is available simply because groundwater exists beneath Central Maui. Rather, any increase in groundwater withdrawals must be consistent with CWRM's statutory responsibility to allocate and protect groundwater resources. Therefore, the Department evaluates groundwater within the management framework established by CWRM rather than treating it as an unrestricted substitute for East Maui surface water.

The Department does not revisit or modify CWRM's technical determinations regarding groundwater availability, sustainable yield, or aquifer management. Rather, the Department relies upon those determinations and, where the record contains CWRM staff testimony rather than a Commission determination, upon that testimony as evidence in evaluating, for purposes of the proposed long-term water licenses under HRS Chapter 171, whether the administrative record demonstrates that groundwater presently

constitutes a reasonable and practicable alternative source of water for the proposed offstream uses. Nothing in this section is intended as an independent adjudication of groundwater availability or sustainable yield, matters reserved to CWRM under HRS Chapter 174C; the Department's recommendations are limited to the practicable-alternative inquiry under HRS Chapter 171.

The Department further distinguishes between the physical existence of groundwater and the legal and practical availability of groundwater for additional withdrawals. The mere existence of groundwater beneath Central Maui does not establish that additional groundwater may be withdrawn consistently with CWRM's sustainable-yield determinations or without impairing the affected aquifer systems. Accordingly, for purposes of evaluating reasonable and practicable alternatives under HRS Chapter 171, the Department evaluates groundwater based upon its present legal and hydrologic availability—not its mere physical presence.

The Central Maui agricultural lands historically irrigated by the EMI system are located above the Kahului and Paia Aquifer System Areas. These aquifers are among the principal groundwater reservoirs serving Central Maui, supplying water for drinking, agriculture, and other beneficial uses. Because they underlie the same area served by the EMI system, they are the groundwater sources most likely to be considered as an alternative to East Maui surface water.

Pursuant to HRS Chapter 174C, CWRM establishes a sustainable yield for each aquifer system. Sustainable yield is 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. CWRM has established a sustainable yield of 1 mgd for the Kahului Aquifer System Area and 7 mgd for the Paia Aquifer System Area. Exceeding sustainable yield increases the risk of declining groundwater levels, saltwater intrusion into freshwater aquifers, reduced groundwater available during prolonged drought, and diminished groundwater discharge to streams, wetlands, and nearshore ecosystems. Thus, increasing groundwater withdrawals beyond sustainable yield risks impairing the very groundwater resource proposed as an alternative. The Department notes that CWRM staff have acknowledged that the current sustainable-yield figures may not fully reflect present hydrologic conditions and that CWRM is developing an updated Central Maui groundwater model; the Department therefore treats the current figures as the best presently available basis for its Chapter 171 analysis rather than as fixed values.

The Department also considered existing groundwater demand. CWRM staff have testified that as of November 2025, the 12-month moving average groundwater withdrawals were approximately 6.562 mgd from the Kahului Aquifer System and 13.636 mgd from the Paia Aquifer System. CWRM further reported that withdrawals from the Kahului Aquifer System exceeded sustainable yield during every month between 2019 and 2024, while withdrawals from the Paia Aquifer System exceeded sustainable yield during eight of the 14 months preceding the testimony. The Department finds these data significant because they demonstrate that the aquifers most capable of supplying Central

Maui are already heavily relied upon to meet existing municipal, agricultural, and other beneficial water demands. As discussed below, the record indicates that this level of withdrawal has historically been sustained in part by incidental recharge from surface-water irrigation, which reinforces rather than undercuts the conclusion that the aquifers cannot be assumed to absorb substantial additional withdrawals as that recharge source diminishes. Therefore, the Department concludes that the relevant question is not whether groundwater physically exists beneath Central Maui, but whether additional groundwater may be withdrawn without impairing the aquifer and while remaining consistent with CWRM's sustainable-yield determinations. Based upon the existing administrative record, the Department concludes that the record does not support such a finding.

The Department considered the FEIS, which evaluated groundwater as a potential alternative to East Maui surface water. Based upon its review of the FEIS, the Department finds that the Central Maui agricultural system has historically relied upon the combined use of East Maui surface water and groundwater rather than groundwater alone. The 2018 CWRM Decision and Order indicates that during sugarcane cultivation, seepage and percolation from surface-water irrigation contributed incidental recharge to the Central Maui aquifers, which the CWRM Decision and Order indicates helped enable groundwater withdrawals in excess of published sustainable yields. The Department recognizes, however, that CWRM has found it "unclear what the direct relationship is of recharge from surface water importation to the underlying groundwater aquifer." 2018 CWRM D&O FOF 746. The Department therefore does not rely on any precise quantification of that recharge relationship. As East Maui diversions have decreased and irrigation practices have become more efficient, the 2018 CWRM Decision and Order indicates that these incidental recharge contributions can be expected to decline over time; as discussed below, any such decline may not yet be fully reflected in present aquifer conditions because of the extended time required for surface infiltration to reach the usable groundwater supply. Accordingly, the Department concludes that increasing groundwater withdrawals cannot be evaluated independently of changes to surface water management because the two resources remain hydrologically interconnected.

The Department also considered whether the existing groundwater infrastructure and groundwater quality are capable of serving the proposed agricultural operations. The FEIS demonstrates that many existing irrigation wells were historically developed to support sugarcane cultivation, a crop with relatively high tolerance for salinity. The proposed agricultural operations, however, include a broader variety of food crops that generally require higher-quality irrigation water. The FEIS further demonstrates that the existing groundwater system was not designed to replace the EMI surface water delivery system. Rather, groundwater historically functioned as a supplemental source, with higher-elevation agricultural fields continuing to depend primarily upon surface water. In addition, the FEIS evaluated construction of new groundwater wells outside the Kahului and Paia systems, within the Koolau Aquifer Sector, and identified substantial engineering, environmental, logistical, and economic constraints associated with developing additional groundwater supplies, including significant construction costs,

continued pumping and maintenance expenses, and potential impacts to surrounding natural resources.

The Department also considered the long-term effects of substantially reduced East Maui surface water deliveries on groundwater recharge within the Central Maui aquifer systems. The administrative record reflects that during the sugar era there was a practice of “dumping” surface water runoff that was considered as “waste” into the Central Maui gulches in addition to the approximate 114 to 126 MGD of East Maui surface water were transported to the Central Maui Plains for irrigation, whereas current average annual deliveries are approximately 35.22 MGD. The Department finds this reduction significant because the FEIS explains that irrigation historically contributed incidental recharge to the Central Maui aquifers through seepage and percolation. The Department further considered information provided by CWRM, the Board of Water Supply, and the Division of Forestry and Wildlife indicating that groundwater recharge occurs over extended periods and that water infiltrating from the surface may require decades before becoming part of the usable groundwater supply. Consequently, the present condition of the Central Maui aquifers may continue to reflect historical recharge associated with substantially greater irrigation deliveries than exist today. Under these circumstances, the Department concludes that the current administrative record does not support assuming that additional groundwater withdrawals could safely replace East Maui surface water without affecting the long-term sustainability of the groundwater resource.

Finally, the Department recognizes that groundwater already serves a critical role within Central Maui's integrated water supply system. During periods of reduced streamflow and drought, groundwater is routinely relied upon to supplement both potable and nonpotable water demands. Rather than representing an unused or surplus resource capable of replacing East Maui surface water, groundwater presently functions as a principal supplemental water source that enhances the reliability and resiliency of Maui's overall water supply during periods when surface water availability declines. Consequently, increasing groundwater pumping does not create a new source of water. Because groundwater and surface water are interconnected components of the same hydrologic system, increased pumping shifts demand within that system rather than adding an independent supply.

Accordingly, after independently evaluating the available information, the Department concludes that groundwater does not presently constitute a reasonable and practicable alternative capable of replacing the East Maui surface water necessary to support the proposed offstream uses. Existing groundwater withdrawals already place substantial demands on the Kahului and Paia Aquifer System Areas, and additional groundwater withdrawals would increase reliance on groundwater resources that are already managed under CWRM's sustainable-yield framework. Because groundwater is itself a public trust resource regulated under HRS Chapter 174C increasing groundwater withdrawals would not eliminate the need for East Maui surface water or reduce the State's responsibility to manage Hawai'i's water resources under the State Water Code. Instead, the record indicates that groundwater and surface water are complementary public water resources

that must be managed together to ensure the long-term protection and sustainable use of Hawai'i's water resources.

4.3.4. Water Alternatives Analysis

In determining whether the proposed long-term water licenses satisfy the requirements of HRS chapter 171, the Department evaluated whether there are presently available reasonable and practicable alternative water sources capable of replacing the East Maui surface water necessary to support the proposed municipal, agricultural, and other authorized offstream uses. In conducting that evaluation, the Department assessed the present availability, operational feasibility, infrastructure requirements, regulatory constraints, environmental considerations, and long-term sustainability of the principal alternative water sources identified during the administrative proceedings. That evaluation was informed by the scientific, technical, engineering, and economic information contained in the administrative record, including CWRM's 2018 Decision and Order and 2022 approval of the amended IIFS for the Huelo-region streams, the Final Environmental Impact Statement (FEIS), current information regarding Maui's water infrastructure, and CWRM's groundwater management determinations under HRS Chapter 174C. The Department concludes that the administrative record does not demonstrate the existence of any presently available reasonable and practicable alternative(s) capable of replacing the East Maui surface water necessary to support the proposed municipal, agricultural, and other authorized offstream uses. Rather, the evidence demonstrates that each identified alternative presently serves, or may serve in the future, as a supplemental component of Maui's overall water portfolio, but none presently eliminates or materially reduces the need for the East Maui surface water addressed by the proposed long-term water licenses.

With respect to recycled water, the Department finds that recycled water presently offers the greatest long-term opportunity to reduce future demands on East Maui surface water for agricultural irrigation. However, the existing infrastructure is presently incapable of replacing the East Maui surface water necessary to support the proposed offstream uses.

As discussed in Section 4.3.1, the Kahului Wastewater Reclamation Facility primarily produces R-2 recycled water. Because the existing Central Maui irrigation system distributes a common source of irrigation water to both row crops and orchards, and because Department of Health regulations significantly restrict the agricultural uses of R-2 water, the Department concludes that R-2 water cannot presently be integrated into the existing irrigation system. The Department further finds that the Pukalani Wastewater Reclamation Facility presently produces less than one million gallons per day of R-1 recycled water, an amount insufficient to meaningfully offset the East Maui surface water supplies necessary to support the proposed agricultural operations. Although Maui County has initiated planning efforts to expand R-1 recycled water production through upgrades to the Kahului Wastewater Reclamation Facility and construction of the proposed Central Maui Wastewater Reclamation Facility, those projects remain prospective. Accordingly, while recycled water may substantially supplement future

agricultural demands, it does not presently provide a reasonable and practicable alternative capable of replacing the East Maui surface water addressed by the proposed licenses.

The Department likewise evaluated brackish and saline water as potential alternative sources. As discussed in Section 4.3.2, brackish water may provide an important supplemental source of irrigation water for certain agricultural operations. However, the Department finds that its present use remains constrained by crop-specific salinity tolerances, long-term soil management requirements, existing infrastructure limitations, and the practical limitations associated with transporting and treating brackish water. The Department further recognizes that desalination may become an increasingly important component of Maui's future potable water portfolio. However, the 2024 Central Maui Desalination Feasibility Study demonstrates that implementation of large-scale desalination infrastructure remains a long-term undertaking, and current County planning efforts are focused primarily upon South and West Maui rather than the Upcountry system supplied in part by East Maui surface water. Consequently, the Department concludes that brackish water, saline water, and desalination presently function as potential supplemental sources of water rather than reasonable and practicable replacements for the East Maui surface water addressed by the proposed long-term water licenses.

The Department also independently evaluated groundwater as a potential replacement source. As discussed in Section 4.3.3, groundwater differs fundamentally from recycled water or desalination because it is itself a public water resource regulated by CWRM pursuant to chapter 174C, HRS. The Department evaluated groundwater within CWRM's statutory groundwater management framework rather than treating groundwater as an unrestricted substitute for East Maui surface water. For the reasons set forth in Section 4.3.3, the Department concludes that the record does not demonstrate that additional groundwater may be withdrawn from the Kahului and Paia Aquifer System Areas consistent with CWRM's sustainable-yield framework, and that groundwater therefore does not presently constitute a reasonable and practicable alternative capable of replacing the East Maui surface water necessary to support the proposed offstream uses.

The Department further considered the hydrologic relationship between East Maui surface water and the Central Maui aquifer systems. Approximately 114 to 126 mgd of East Maui surface water was transported to the Central Maui Plains for irrigation during the sugar era. Today, average annual deliveries are approximately 35.22 mgd, representing only about thirty percent of historical deliveries. The FEIS explains that irrigation historically contributed substantial incidental recharge to the Central Maui aquifer systems through seepage and percolation. The Department also considered information presented by CWRM, the Board of Water Supply, and the Division of Forestry and Wildlife indicating that groundwater recharge occurs over extended periods and that, under certain conditions, water infiltrating from the surface may require approximately twenty-five years before becoming part of the usable groundwater supply. Consequently, the present condition of the Central Maui aquifer systems may continue to reflect historical recharge associated with substantially greater East Maui irrigation deliveries than

presently occur. Therefore, the Department concludes that the long-term response of the Central Maui aquifer systems to the significant reduction in irrigation recharge remains the subject of continuing evaluation by CWRM and that the present administrative record does not support assuming that additional groundwater withdrawals could safely replace East Maui surface water without affecting the long-term sustainability of the groundwater resource.

The Department further finds that groundwater presently serves a critical function within Maui's overall water supply system. During periods of reduced streamflow and drought, groundwater already serves as the principal supplemental source for municipal and other essential water demands. Increasing groundwater withdrawals to replace East Maui surface water would not eliminate demands on Hawai'i's public water resources, but instead shift those demands from one regulated public water resource to another that CWRM monitors under its sustainable-yield framework and has indicated must be carefully managed to ensure its long-term sustainability. Moreover, because groundwater and surface water remain hydrologically interconnected, increased groundwater withdrawals may reduce groundwater discharge that contributes to streamflow and thereby affect the very surface water resources that the proposed long-term water licenses seek to manage in accordance with CWRM's amended IIFS.

The Department also recognizes that the East Maui surface water system differs fundamentally from the identified alternatives because it has been the subject of decades of hydrologic investigation, multiple contested case proceedings, extensive scientific analysis, and continuing adaptive management by CWRM. The amended IIFS establish stream-specific flow requirements that protect instream public trust purposes before any remaining water may be diverted for authorized offstream uses. CWRM has further required extensive modifications to the EMI diversion system, continues to monitor implementation of those modifications, and retains continuing jurisdiction to modify instream flow standards should future conditions warrant. Accordingly, unlike the proposed alternatives, the East Maui surface water system is presently managed pursuant to a comprehensive regulatory framework specifically designed to balance the protection of instream public trust purposes with reasonable and beneficial offstream uses.

The Department recognizes that Maui's long-term water future will likely depend upon a diversified portfolio of water resources, including surface water, groundwater, recycled water, desalination, and other developing alternative supplies. Continued expansion of recycled water infrastructure, advances in desalination technology, and future groundwater management may reduce reliance upon East Maui surface water over time. Therefore, the Department does not conclude that these alternatives lack value. Rather, based upon the present administrative record, no alternative has developed to the point where it presently provides a reasonable and practicable replacement capable of eliminating or materially reducing the need for the East Maui surface water necessary to support the proposed municipal, agricultural, and other authorized offstream uses.

Accordingly, after independently evaluating all presently identified alternative water sources, the Department concludes that recycled water, brackish and saline water, groundwater, and other potential alternatives, whether considered individually or collectively, do not presently constitute reasonable and practicable alternatives capable of replacing the East Maui surface water addressed by the proposed long-term water licenses. The Department therefore concludes that consideration of these alternatives does not alter its recommendation that the Board approve the proposed long-term water licenses.

4.4. SYSTEM LOSS

The Department also evaluated whether additional reductions in system loss constitute a reasonable and practicable alternative capable of materially reducing the need for the proposed East Maui surface water uses. In conducting that evaluation, the Department considered CWRM staff's May 2026 testimony regarding renewal of the EMI revocable permits, USGS seepage measurements, and the remainder of the administrative record. System loss generally refers to water that is not ultimately delivered for its intended end use during the transport, storage, and distribution of East Maui surface water to the Central Maui Plains. Since the cessation of commercial sugar operations, almost all East Maui surface water conveyed to Central Maui has been transported through the Koolau-Wailoa Ditch system.

According to CWRM staff's May 2026 testimony, the principal conveyance facility within the EMI system is the Koolau-Wailoa Ditch, which has a reported maximum capacity of approximately 160 mgd. The Koolau Ditch extends approximately 10.2 miles, approximately seventy-five percent of which consists of tunnels, while the remaining portions consist of lined open ditches constructed of concrete or cut stone. The Wailoa Ditch extends approximately 9.6 miles and consists almost entirely of tunnels and concrete-lined flumes. CWRM staff further reported that USGS measurements of flow at successive locations along the open-channel portions of the Koolau-Wailoa Ditch showed little change in flow between measurement locations, supporting CWRM's conclusion that the principal conveyance system transports diverted water efficiently. Based upon its review of this information, the Department concludes that the administrative record does not demonstrate significant conveyance losses within the principal EMI ditch system and that the principal conveyance system appears to transport water efficiently.

Accordingly, the Department finds that the principal opportunities for reducing system loss occur after water has been delivered for storage or agricultural use rather than during conveyance through the EMI system itself. These losses include reservoir evaporation, reservoir seepage, infiltration into the underlying soils, and operational losses associated with agricultural water management. The Department recognizes that minimizing unnecessary system loss remains an important component of responsible water resource management. The administrative record identifies irrigation efficiency measures, including drip irrigation, subsurface irrigation, improved irrigation scheduling, leak detection, and other water conservation practices, as measures capable of reducing

operational losses. However, the record does not identify additional presently available and practicable operational measures that would materially reduce the need for the East Maui surface water addressed by the proposed long-term water licenses.

The Department also considered whether additional structural measures, including lining reservoirs to reduce seepage, should presently be required. The administrative record reflects that East Maui surface water is presently stored in unlined reservoirs to provide operational flexibility, drought storage, and water available for emergency uses, including fire protection. Although lining reservoirs could reduce seepage, the Department also considered evidence that seepage from unlined reservoirs may contribute incidental groundwater recharge to the Central Maui Aquifer System Areas.

As discussed in Section 4.3.3, groundwater and surface water are hydrologically interconnected, and groundwater is a public water resource subject to CWRM's jurisdiction and sustainable-yield determinations under HRS Chapter 174C. Consequently, reducing reservoir seepage may also reduce groundwater recharge. Because the present administrative record does not demonstrate that reservoir lining would result in a net increase in water available for beneficial use after accounting for its potential effects on groundwater recharge, the Department cannot conclude that requiring reservoir lining would materially increase the amount of water available for beneficial use. Accordingly, the Department concludes that the present administrative record does not establish that the benefits of requiring reservoir lining presently outweigh the potential effects on groundwater recharge, emergency water storage, and other operational considerations.

The Department further recognizes that reported system-loss percentages must be considered in context. Since the cessation of commercial sugar operations, substantially less East Maui surface water is conveyed through the EMI system than historically occurred. Consequently, relatively consistent seepage and evaporation losses constitute a larger percentage of a substantially smaller volume of diverted water. Accordingly, reported system-loss percentages, standing alone, do not establish that a greater volume of water is being lost or that the efficiency of the principal conveyance system has materially declined.

Accordingly, the Department finds that system loss should be minimized through the implementation of reasonable and beneficial water management practices. The proposed long-term water licenses require the licensees to annually report estimated system losses and the measures implemented to reduce those losses. The Department further finds there are no additional structural measures, including lining reservoirs, that would result in a net increase in water available for beneficial use. Rather, the record indicates that reducing reservoir seepage may also reduce groundwater recharge to the Central Maui Aquifer System Areas. Because the interaction between reservoir seepage, groundwater recharge, and long-term water availability is not yet fully understood, a precautionary approach is more appropriate. Accordingly, continued monitoring, implementation of best management practices to minimize unnecessary system loss, and further study before

requiring additional structural modifications to the reservoir system.

4.5. DEPARTMENT OF HAWAIIAN HOME LANDS WATER RESERVATION

Pursuant to HRS § 171-58(g), before executing a new lease of water rights, the Department is required to notify the Department of Hawaiian Home Lands (DHHL) of its intent to execute the proposed long-term water licenses. HRS § 171-58(g) further requires DLNR and DHHL, following consultation with affected beneficiaries, to jointly develop a reservation of water rights sufficient to support the current and future needs of Hawaiian home lands. The statute also expressly provides that any lease of water rights remains subject to DHHL's rights under section 221 of the Hawaiian Homes Commission Act, 1920, as amended (HHCA). Accordingly, the Department evaluated the status of DHHL's reservation request and its effect on the quantity of water available for disposition under the proposed long-term water licenses.

Consistent with HRS § 171-58(g), the Department notified DHHL of its intent to execute the proposed long-term water licenses. Thereafter, on May 30, 2019, the Hawaiian Homes Commission accepted the Beneficiary Consultation Report concerning a water reservation associated with the EMI System and authorized its Chairperson to formally request a water reservation from CWRM. Subsequently, on December 16, 2020, DHHL submitted a revised formal reservation request seeking approximately 11.1775 mgd of non-potable water to support current and future Hawaiian home land development. The revised request consisted of 9.85 mgd for the Keokea-Waiohuli lands and 1.3275 mg for the Pulehunui lands. These quantities were derived from updated acreage and water-duty calculations prepared in conjunction with the State Water Projects Plan.

The Department also considered the status of DHHL's reservation request before CWRM. At its meeting on November 15, 2022, CWRM considered the two components of DHHL's reservation request separately. Under Action Item No. 5, CWRM approved a reservation of approximately 1.3275 MGD of non-potable water for the Pulehunui lands in conjunction with amendments to the IIFS for nineteen streams in the Huelo region. Under Action Item No. 6⁶, CWRM considered DHHL's request for approximately 9.85 mgd of non-potable water for the Keokea-Waiohuli lands together with proposed amendments to the IIFS for five East Maui streams that had previously been amended through CWRM's 2018 Decision and Order. Following testimony and deliberation, however, CWRM deferred action on the Keokea-Waiohuli reservation request to allow additional discussions regarding the related IIFS proceedings and directed staff to return the matter to the Commission when those discussions were complete. In doing so, CWRM recognized that the DHHL reservation request and the related IIFS amendments need not proceed simultaneously and could be considered independently⁷. Thus, CWRM did not reject or

6. [Nov 12, 2022 CWRM Submittal Action Item No. 6.](#)

7. [Nov. 15, 2022 CWRM Meeting Minutes](#)

diminish DHHL's reservation request; rather, it deferred consideration of that portion of the request while continuing to recognize DHHL's reservation as a matter requiring future CWRM action.

Reservations for Hawaiian home lands constitute a protected public trust purpose under the State Water Code. HRS § 174C-101(a) requires CWRM to incorporate and protect adequate reserves of water for the current and foreseeable development and use of Hawaiian home lands. The Hawaii Supreme Court has also recognized that water reservations for DHHL constitute a public trust purpose entitled to constitutional protection and that CWRM must ensure that proposed allocations do not impair those reservation interests.

Although CWRM has not yet taken final action on the entirety of DHHL's reservation request, HRS § 171-58(g) expressly provides that any long-term water license remains subject to DHHL's rights under HHCA § 221. Thus, to determine the quantity of East Maui surface water available for disposition under the proposed long-term water licenses, the Department has excluded the full quantity of water requested by DHHL from the amount proposed for licensing. By doing so, the Department ensures that the proposed long-term water licenses do not impair DHHL's pending reservation request and preserves the availability of water necessary to satisfy any reservation ultimately established pursuant to HRS chapter 174C.

Accordingly, in determining the quantity of East Maui surface water available for disposition under the proposed long-term water licenses, the Department has excluded the full quantity of water requested by DHHL from the amount proposed for licensing. By conservatively excluding the entirety of the pending reservation request, the Department ensures that the proposed long-term water licenses remain subject to DHHL's rights under HRS § 171-58(g) and HHCA § 221, do not prejudice CWRM's authority to determine the appropriate reservation under HRS chapter 174C, and do not impair the availability of water necessary to satisfy any reservation ultimately approved by CWRM. Accordingly, the Department concludes that the proposed long-term water licenses adequately protect DHHL's reservation interests and are consistent with the requirements of HRS § 171-58(g), HRS chapter 174C, and the HHCA.

4.6. WATERSHED MANAGEMENT

4.6.1. Historical Perspective on Forests and Watershed Conservation

In evaluating the watershed management requirements of HRS § 171-58(e), the Department considered the historical relationship between Hawaii's forests and the protection of the State's water resources. The Department finds that the historical record demonstrates a longstanding recognition that healthy watershed forests are fundamental to maintaining the quantity and quality of Hawaii's freshwater resources.

Forests were traditionally regarded as the abode of the gods. Every elevational zone extending from the shoreline to the mountain summit was recognized and named within the traditional Hawaiian land management system. The upper forest region, or wao akua (realm of the gods) was understood to be the source of clouds, rainfall, and freshwater upon which the lower ahupuaa depended. The pattern of cloud cover and precipitation resting upon the mountain slopes was interpreted as concealing the activities of the gods, and traditional practices emphasized that the forests and their resources were to be entered and utilized with care and respect. This traditional understanding reflects a longstanding recognition that the health of the forests and the availability of freshwater are inextricably linked.

Historically, Native Hawaiians stewarded and relied upon the upland forests for hunting, gathering, particularly birds, and collecting wood, plants, and stone resources, all of which were integral to subsistence and traditional practices. This relationship changed significantly following Western contact, when forests increasingly became the subject of commercial exploitation rather than essential components of the natural systems upon which Hawaii's communities depended. Whereas traditional land management reflected the natural landscape and its ecological functions, post-contact land management increasingly emphasized the extraction and commercial use of natural resources. Following Western contact, Hawaii served as a source of provisions for visiting ships and forest resources, including iliahi (sandalwood) became significant export commodities. In 1778, Captain Cook introduced European boars, goats, rams, and ewes to Hawaii. Historical accounts indicate that one purpose of introducing these animals was to establish breeding populations capable of provisioning future voyages. In 1793, Captain George Vancouver introduced cattle to Hawaii by presenting them to King Kamehameha I. A ten-year kapu was imposed to protect the herd and allow it to reproduce. Between 1793 and 1811, additional livestock were introduced, and cattle populations increased dramatically, resulting in widespread degradation of native forests and watershed lands.

Recognizing the relationship between forest protection and the availability of freshwater, on September 19, 1876, David Kalakaua signed into law, an "Act for the Protection and Preservation of Woods and Forests" authorizing the Minister of the Interior to set aside government forest lands best suited for the protection of water resources. The enactment of this legislation reflects the Kingdom's recognition that protecting watershed forests is essential to protecting the State's water resources.

At the same time, other economic pursuits led to the clearing of large tracts of land. In the early 1800s, thousands of tons of sandalwood were cut from the forests around the islands for export to foreign ports. By the 1830s, the forests had nearly been stripped of sandalwood and many other plants of the forest were impacted by the clearing activities. In addition, large sections of forest were also cleared to develop lands for introduced agricultural crops, such as Irish potatoes, for eventual sale to visiting ships.

Collectively, the introduction of ungulates, commercial logging, and widespread clearing of native forests substantially altered Hawaii's watersheds. This history demonstrates a

direct relationship between the condition of watershed forests and the long-term health of Hawaii's water resources, including its streams. Accordingly, the watershed management requirements of HRS § 171-58(e) help protect and restore the watershed functions that sustain East Maui's surface water resources over the long term. The Department recognizes that the condition of watershed forests directly influences the long-term health of East Maui's streams and the availability of surface water. Accordingly, protection and restoration of watershed lands serves as an important component of maintaining both instream values and the continued availability of water for reasonable-beneficial offstream uses.

4.6.2. The Connection Between Native Forests and Water Availability

The Department also considered scientific information concerning the relationship between native forests and water availability. In 2018, the Department's Division of Forestry and Wildlife (DOFAW) presented the "The Importance of Forests for Freshwater" at the Fourth Joint Government Water Conference. Hawaii's history of watershed protection began in the early 1900s. Due to deforestation from the introduction of livestock as well as clearing activities, the loss of the forests resulted in an alarming decrease in water supply. Territorial foresters recognized the need to protect the mauka forests to provide water for agriculture, especially sugarcane. This recognition led to the enactment of Act 44 on April 25, 1903, under which hundreds of thousands of acres of both public and private lands were designated as Forest Reserves for watershed protection. It also led to landscape-scale reforestation projects. The primary purpose of the Forest Reserve System has not changed since its inception, and it currently protects approximately 700,000 acres of Hawaii's watersheds

The Department also considered a study by the University of Hawaii Economic Research Organization (UHERO) which used land cover scenarios to quantify groundwater recharge services in the absence of conservation activities. While the Waikamoi Preserve (approximately 9,000 acres) is currently under a high level of protection and management, the UHERO study evaluated the avoided loss associated with maintaining the native forest compared to allowing invasive species and non-native forest to be established. The study found that there is significant value in investing in the management of these forests for fresh water. The study found that continued investment in native forest management provides significant freshwater benefits because conversion of native forests to non-native forest diminishes groundwater recharge and reduces long-term water availability.

The Department further considered research demonstrating that strawberry guava trees evapotranspire approximately 27 to 53 percent more water than plants associated with native forests, thereby increasing evapotranspiration and reducing the amount of water available for groundwater recharge. The research attributes this difference to the biological characteristics of invasive vegetation. Invasive plants are fast growing and must keep their stomata open for longer periods of time which in turn allows for more water to escape during transpiration, thus leading to less water available for recharge. In addition, certain non-native species have smooth bark which promotes surface runoff more easily

and inhibits growth of epiphytes, which contribute to water interception and collection with native forest ecosystems.⁸

The Department finds that the scientific information contained in the administrative record demonstrates a direct relationship between the health of native watershed forests and the long-term availability of Hawaii's freshwater resources. The Department finds that protection and restoration of native watershed forests preserves the watershed functions that support groundwater recharge, streamflow, and long-term water availability, whereas degradation of those forests diminishes those functions. Accordingly, the Department concludes that watershed management is an important component of protecting both instream and offstream water resources and supports the inclusion of a watershed management plan as a condition of the proposed long-term water licenses pursuant to HRS § 171-58(e). The Department recognizes that long-term stream health depends upon multiple interconnected factors, including watershed condition, groundwater recharge, rainfall, and water allocation. The watershed management plan required by HRS § 171-58(e) addresses one of those fundamental factors by promoting the protection and restoration of the watershed itself.

4.6.3. Watershed Management Plan

The Department also evaluated whether the proposed long-term water licenses satisfy the watershed management requirements of HRS § 171-58(e). HRS § 171-58(e) states:

Any new lease of water rights shall contain a covenant that requires the lessee and the department of land and natural resources to jointly develop and implement a watershed management plan. The board shall not approve any new lease of water rights without the foregoing covenant or a watershed management plan. The board shall prescribe the minimum content of a watershed management plan; provided that the watershed management plan shall require the prevention of the degradation of surface water and ground water quality to the extent that degradation can be avoided using reasonable management practices.

At the Board meeting of March 22, 2019, under agenda item D-11, staff proposed a watershed management cost share formula and contribution for leases of water rights pursuant to HRS § 171-58(e). The Board directed Staff to develop proposed minimum content requirements for watershed management plans. In doing so, the Department recognized that watershed management plans already existed for many of the affected lease areas and concluded that implementation of HRS § 171-58(e) should build upon those existing plans rather than require lessees to duplicate planning efforts. The

8. Non-parasitic plants that grow on top of other plants—common examples include orchids, bromeliads, and mosses. They use host trees only for physical support and do not steal food or water from them. Instead, they get moisture from the air, rain, and fog, and gather nutrients from surrounding dust and decaying debris.

Department further recognized that existing watershed partners and DOFAW possess the personnel, expertise, and field capacity necessary to implement watershed management activities, making coordinated implementation of existing watershed management plans the most effective approach. Rather than duplicating existing watershed planning efforts, the Department determined that implementation of HRS § 171-58(e) should build upon existing watershed management plans while identifying the commitments necessary to support the proposed licenses.

At its meeting of October 11, 2019, under agenda item D-2⁹, the Board approved the minimum content requirements for a watershed management plan and delegated authority to the Department to jointly develop watershed management plans with water lessees to ensure plans align with the goal of watershed protection to maintain watershed function and water yield and to restore and maintain the biological integrity necessary to support a healthy watershed.

Before recommending these minimum content requirements, the Department reviewed existing watershed management plans throughout Hawaii, consulted subject matter experts, and incorporated the expertise of DOFAW resource managers to identify the essential components of an effective watershed management plan. The Department found that these minimum content requirements ensure that each watershed management plan identifies existing watershed conditions, evaluates threats and vulnerabilities, establishes measurable management objectives, incorporates adaptive management, and identifies the implementation measures and funding necessary to achieve long-term watershed protection.

The Department further finds that watershed management plans are necessarily site-specific because individual watersheds present different ecological conditions, threats, and management needs. Although every watershed management plan must satisfy the Board's prescribed minimum content requirements, the specific management actions are developed jointly with the lessee based upon the conditions of the affected watershed. Existing watershed management plans, including the East Maui Watershed Partnership (EMWP) Management Plan, provide the scientific and management foundation for those efforts. Therefore, the watershed management plan required by HRS § 171-58(e) builds upon existing watershed management efforts while identifying the management commitments, implementation responsibilities, monitoring activities, and funding appropriate for the proposed long-term water licenses.

As proposed by staff and approved by the Board, the minimum content established is as follows:

1. Purpose, mission, or vision statement
2. Watershed inventory

⁹ [BLNR Meeting - October 11, 2019, Item D-2](#)

3. Threat and vulnerability assessment
4. Goals
5. Objectives
6. Methods
7. Adaptive management
8. Budget
9. References, Sources and Appendices

Collectively, these minimum content requirements establish a comprehensive framework for protecting watershed resources throughout the term of the proposed long-term water licenses. The Department finds that each watershed management plan should establish baseline watershed conditions, identifies threats to watershed function, prescribes management actions to address those threats, establishes measurable management objectives, incorporates adaptive management, and identifies the funding and implementation responsibilities necessary to carry out the plan. Adaptive management is particularly appropriate because watershed conditions, invasive species, forest health, and available scientific information may change over the term of the proposed licenses. Accordingly, the watershed management plan provides a framework for evaluating management effectiveness and modifying management actions as additional information becomes available while remaining consistent with the objectives of HRS § 171-58(e).

The Department further finds that the watershed management plan should identify the management actions, implementation responsibilities, monitoring commitments, and funding necessary to achieve its objectives. Depending upon the needs of the affected watershed, the plan may identify and allocate funding for activities including invasive species control, ungulate management, native forest restoration, monitoring by USGS, scientific monitoring and studies, or contributions to the Water Resource Management Fund to support studies, technical expertise, or additional staffing by CWRM necessary to implement the watershed management plan. These activities provide the information and resources necessary to evaluate watershed conditions, assess the effectiveness of management measures, and inform adaptive management throughout the term of the proposed long-term water licenses. By incorporating these commitments into the proposed long-term water licenses, implementation of the watershed management plan becomes an enforceable obligation of the lessee rather than a voluntary management objective.

Accordingly, the Department concludes that incorporation of the watershed management plan into the proposed long-term water licenses satisfies the requirements of HRS § 171-58(e) and provides the mechanism through which the watershed protection principles discussed in Sections 4.6.1 and 4.6.2 are translated into site-specific management actions. Therefore, the Department concludes that the watershed management plan promotes accountability by making implementation of the watershed management plan an enforceable obligation of the licenses, supports the long-term sustainability of East

Maui's watershed resources, and protects the surface water resources made available under the proposed long-term water licenses. The Department recommends that the watershed management plan be incorporated into and made a condition of each proposed long-term water license.

4.7. CULTURAL AND HISTORICAL CONSIDERATIONS

4.7.1. Kuelana in Hamakua Poko, Hamakua Loa, and Koolau

The Department considered the historical and contemporary evidence regarding kuleana agriculture and appurtenant water uses within Hamakua Poko, Hamakua Loa, and Koolau. Keanae and Wailuanui are adjacent areas located on the northeast flank of Haleakala and Hana, located further eastward along the coastline supported chiefly by fields of dry taro cultivation and sweet potato, with the small steep-valley called Wailua being almost the only area of wet taro nearby. This also coincides with the historical licenses which recognize the kuleana and homestead lots associated with the makai sections of the Keanae and Nahiku license areas. The Department finds that these historical records demonstrate the longstanding dependence of East Maui communities upon reliable streamflow for agricultural, domestic, and cultural purposes.

The Department also considered the historical research prepared by Kepa Maly, who in 2001, prepared a study that provided a wide range of important historical documentation pertaining to some of the significant traditions, and cultural and natural features in the Hamakua-Koolau region of Maui Hikina. As a part of his study, Maly reviewed all original claims submitted to the Land Commission.¹⁰ Where no description of cultivation is given in the records, at least one cultivated field and one house for each kuleana was reasonably assumed. Many other claimants reported that some sort of cultivation was occurring, but gave no specific description of the type (e.g., wet land, dry land, or types of crops). Thus, in addition to the more than 1,032 cultivated fields (both wet and dry land) for which specific documentation was given, there are, at a minimum, another 133 poalima parcels, and 34 individual gardens of varying sizes that could be reasonably added to the total number of cultivated fields within the three districts.¹¹ The Department finds that this historical evidence demonstrates the extensive agricultural use of East Maui and confirms that cultivation dependent upon East Maui's streams historically occurred throughout the region.

The Department further considered CWRM's 2018 Decision and Order addressing kuleana water claims during the East Maui contested case proceedings. There were eight streams identified as kalo and community streams. See Table 4-1. In evaluating those claims, the Commission considered the historical evidence presented by the claimants and, where historical documentation was limited, relied upon the available historical

10. [Chapter 4 of Volume I - Wai O Ke Ola: He Wahi Moololeo No Maui Hikina](#)

11. Plots that tenants farmed or worked on Fridays as a labor tax or tribute to support the local chief (konohiki) or landlord.

record to estimate kuleana water needs. Using a standard irrigation duty of 130,000 to 150,000 gallons per acre per day of lo'i kalo, CWRM quantified the water necessary to protect existing and historically documented kuleana uses. The Department finds that the Commission's analysis reflects an extensive evaluation of historical kuleana and appurtenant uses and confirms that those water needs have already been incorporated into the existing IIFS governing the East Maui streams.

The Department also considered the Cultural Impact Assessment (CIA) prepared in conjunction with the 2021 Final EIS. Cultural Survey Hawaii (CSH) conducted two separate rounds of community consultation; one prior to the publication of the June 2019 Draft Environmental Impact Statement (EIS) and the second in response to comments received on the Draft EIS. Through those interviews, additional streams were identified as kalo streams:

- | | |
|---|---|
| 1. Punalau (Kolea and Ulunui Tributaries) | 7. Haipuaena |
| 2. Honomanu | 8. Naailua |
| 3. Kopiliula | 9. Paakea |
| 4. Wakamoi (Alo Tributary) | 10. Kapaula |
| 5. East Wailuaiki | 11. Hanwi |
| 6. Puohokamoa | 12. Puaakaa (a tributary of Kopiliula stream) |

The Department considered this information together with the Commission's findings in the 2018 Decision and Order. Although these streams were identified by CIA participants as historically associated with kalo cultivation, the Commission found that none had registered diversions for taro cultivation and that taro cultivation was not known to occur on those streams based upon the evidence presented during the contested case proceedings. The Department further notes that the subsequent CIA consultations did not identify additional evidence demonstrating existing taro diversions on those streams. Accordingly, the Department finds that the CIA supplements the historical record by documenting community knowledge of traditional cultivation practices but does not alter the Commission's findings regarding existing kuleana diversions.

The Department also considered the 2022 CWRM IIFS amendments for the Huelo-region streams. During those proceedings, Waipio Stream was the only stream identified as having one known location where kalo cultivation occurs. While the stream has not yet been restored, CWRM staff reported that the diversion modifications needed to restore flow are located downstream from the area identified for kalo cultivation. The stream naturally goes dry upstream of any EMI diversion which is also upstream of the kalo farm. Accordingly, streamflow is dependent on groundwater gains and therefore, under low-flow conditions, operation of the EMI system cannot materially affect water availability at the existing loi.

The Department further finds that the historical evidence, the Maly study, the CIA, and CWRM's 2018 Decision and Order collectively demonstrate the longstanding importance

of East Maui's streams to kuleana agriculture and traditional Native Hawaiian practices. The Department also recognizes that CWRM has already undertaken an extensive adjudicatory evaluation of kuleana and appurtenant water needs through the establishment and amendment of the IIFS. The proposed long-term water licenses do not modify those standards or diminish the protections afforded to kuleana and appurtenant uses, but instead operate within the regulatory framework established by CWRM while remaining subject to the conditions recommended in this submittal.

4.7.2. Cultural Considerations

The Department also considered the oral history interviews compiled by Kepa and Onaona Maly as part of their study, *Wai o ke Ola: He Wahi Mo'olelo no Maui Hikina*. Between April 11 and November 8, 2001, Maly conducted twelve oral history interviews, including site visits and follow-up discussions with seventeen participants. The study was prepared to document the historical relationship between East Maui communities and their land and water resources and to preserve community knowledge regarding traditional and customary practices. The Department recognizes that the oral history study records the personal knowledge, observations, and perspectives of the interview participants and provides important cultural context regarding the relationship between East Maui's streams and Native Hawaiian practices. The Department considered the following recurring themes identified by the interview participants, among others:¹²

- There is a great traditional/cultural significance of water in Hawaiian beliefs and cultural practices.
- The health of the land, including forests, streams, and marine fisheries, is integral to the health of the people, and the right of continuing traditional and customary practices.

For the people of a koolau facing landscape, the flow of water from mountain to sea is integral to the health of the land. A healthy land supports healthy people, and healthy people are able to sustain themselves.

- Water flowing from mountain to shore was not “wasted” water, but is instead, the indication of a healthy watershed and stream system.
- Interview participants observed changes in weather patterns and forest composition over time.
- Interview participants expressed the view that even though the EMI ditch and tunnel systems have historically functioned effectively, watershed productivity has diminished over their lifetimes while demands for water from residential and

12. [Volume II Wai o Ke Ola: He Wahi Moolelo No Maui Hikina](#)

agricultural uses have increased.

- Interview participants expressed concern that increasing demands upon East Maui's water resources have reduced the water available to Native Hawaiian families residing on kuleana and Royal Patent Grant lands who have historically depended upon streamflow for loi kalo cultivation and domestic use.
- Elder interviewees recalled that streams historically flowed mauka to makai in all of the streams, whereas many streams no longer exhibit those flow conditions. This is not the case today.
- Some interview participants recalled generally positive historical relationships between EMI and the surrounding communities, notwithstanding periodic disputes regarding water access.
- Interview participants observed that families historically worked together to maintain stream channels, auwai, and loi kalo, but that these cooperative practices have diminished over time.
- Interview participants emphasized the importance of maintaining the existing ditch and tunnel system and expressed the view that continued maintenance is necessary for reliable water delivery.

Interview participants recommended continued developments of methods to improve the efficiency of transporting water to its continued uses.

- Interview participants expressed concern that the present system of "throwing" water out of the ditches and tunnel system during periods of heavy rainfall (wherein most times there is very limited flow) causes amplified erosion of stream beds. Participants further expressed concern that the discharge of large amounts of water in short periods damages, and at times destroys, features such as auwai, loi kalo, and kuauna (taro pond fields and banks), and kumano (instream water catchments or small dams) that have been constructed to manage the native subsistence agricultural system. As reflected in the oral histories, the continual destruction of these features gives community members the sense of "kill fight!" and "Why waste the time?"
- Interview participants also expressed the view that diminished streamflow has led to the "warming" of the remaining waters which trickle over rocks heated by the sun. According to the interviewees, warmer water adversely affects native stream species, including oopu, opae, and pupu, and causes kalo to rot in the field. Participants emphasized that an adequate level of water flow should be restored to the kahawai to support the restoration of both cultural and natural systems.

- Finally, interview participants recognized that Maui's water needs are important but expressed the view that the lands and families of Maui Hikina should not bear the environmental and cultural costs associated with meeting those needs.

The Department finds that the oral history study provides important context regarding the cultural significance of East Maui's streams and documents the continuing relationship between Native Hawaiian families and the land and water resources of East Maui. Although the oral history interviews reflect the personal observations and perspectives of the participants, they consistently identify the interconnected nature of watershed forests, streamflow, traditional agricultural practices, gathering rights, and the continued exercise of traditional and customary Native Hawaiian practices.

The Department further considered CWRM's 2018 Decision and Order, which likewise recognized the continuing exercise of traditional and customary Native Hawaiian practices throughout East Maui. Following an extensive contested case hearing, CWRM found that Native Hawaiians have traditionally gathered, and continue to gather, native and introduced plants, freshwater aquatic resources, and other materials throughout East Maui, and have traditionally fished, and continue to fish, in and near the mouths of the East Maui streams. CWRM further found that increased streamflow would enhance the continued exercise of these traditional and customary practices. The Department finds that these adjudicated findings are consistent with the observations documented in the Maly study and further demonstrate the close relationship between healthy streams and the continued exercise of traditional and customary Native Hawaiian rights.

The Department also considered the Cultural Impact Assessment (CIA) prepared in support of the Final Environmental Impact Statement. Consistent with the Maly study and CWRM's 2018 Decision and Order, the CIA documents the continuing exercise of traditional and customary Native Hawaiian practices throughout East Maui and identifies the following cultural resources and practices as being of continuing importance to community members:

- Foraging, traditional, and generational gathering of freshwater species for personal consumption. Species include, but are not limited to opae, oopu, pupuloi (also known as pupu Pake or Chinese snail), crayfish, prawns, and hihiwai. Some of the species listed are considered to be introduced species.
- Foraging, traditional, and generational gathering of plants located within or adjacent to streams and tributaries for personal consumption, including but not limited to pohole and watercress.
- Foraging, traditional, and generational gathering of introduced plants that can be cultivated or foraged. These species include, but are not limited to ulu, bananas, wild kalo, wild luau, guava, uala, awapuhi, ti, oranges, haha, avocado, puakenikeni, and medicinal plants for laau lapaa.

- Traditional and generational gathering of plants that can only be foraged which includes, but is not limited to pepeiao, various types of ferns (ornamental), and hau.
- Traditional and generational gathering of rocks that are used for traditional food preparation. These activities included, but are not limited to imu and production of stone tools for traditional food preparation such as pohaku kui ai.
- Traditional and generational fishing and gathering methods utilized for the shoreline and offshore. Species gathered include, but are not limited to limu, opihi, lobster, enenue, kole, ulua, moi, aholehole, anae, kumu, tako, moanakali, omilu, uu/menpachi, aweoweo, papio, paananu, oio, uhu, lae, kala, black crab, haukeuke, and kupipi.

The CIA also provided several mitigation measures for consideration which include:

1. Continue monitoring and public reporting of stream flow volumes through maintenance and upgrades to the existing system of optical encoders with float tape and data loggers within the EMI Aqueduct System;
2. Notify and ensure appropriate training of any persons required to enter the License Area as part of the Proposed Action or alternatives regarding the potential for discovery of undocumented cultural sites and the procedures for reporting such finds; and
3. Facilitate access via an appropriate access policy and procedure for cultural practitioners who wish to enter the License Area to practice their traditional and customary Native Hawaiian rights in accordance with applicable law and also consider signage that encourages cultural use pursuant to the State of Hawaii Constitution, Article XII.

Additional mitigation measures were suggested in the CIA to address impacts to native forests and species, however the Department finds that they may be more appropriately addressed and/or identified as best management practices (BMPs) in the OMM and have been included in Appendix C.

The Department finds that the CIA demonstrates the continuing exercise of traditional and customary Native Hawaiian practices throughout East Maui and confirms that these practices extend beyond stream diversions and loi kalo cultivation to include the gathering of freshwater resources, native and introduced plants, shoreline and nearshore fisheries, and other resources relied upon for subsistence, cultural, and customary purposes. Taken together, the Maly study, the CIA, and CWRM's 2018 Decision and Order consistently demonstrate that East Maui's streams continue to support the exercise of traditional and customary Native Hawaiian practices and that the health of those streams remains closely

connected to the health of the surrounding watershed.

The Department also recognizes that many of these traditional and customary practices depend not only upon adequate streamflow, but also upon healthy watershed forests and functioning watershed ecosystems. As discussed in Section 4.6, watershed management is therefore an important component of protecting the natural and cultural resources upon which these practices depend. Accordingly, the Department has considered the Maly study, the CIA, CWRM's adjudicated findings, and the remainder of the administrative record in evaluating the proposed long-term water licenses and the watershed management measures recommended in this submittal.

4.7.3. Archaeological and Historical Considerations

The Department also considered the Archaeological Literature Review and Field Inspection (LRFI) prepared by CSH to support the FEIS. The literature review documents many moolelo associated with the lands of East Maui, including legends of the gods Kane and Kanaloa visiting the region which caused fresh water to spring up, leaving their mark on the area. The LRFI further documents that Maui chose to ascend to the top of Haleakala to snare the sun so that his mother Hina could dry her kapa. The famous shark god of Koolau, Hiu, is also said to reside in a cave near Keanae Wharf. The Department finds that these traditions reflect the longstanding cultural significance of East Maui's landscape and freshwater resources.

CSH also identified over 150 place names documented throughout the East Maui region. According to the LRFI, these place names reflect the intimate relationship between the Native Hawaiians and the natural environment. The documented place names further indicated that East Maui was widely used for multiple purposes relevant to Native Hawaiian subsistence, habitation, and history. There are also names associated with agriculture, domestic, and recreational uses of the local streams and pools. The Department finds that the documented place names provide additional evidence of the longstanding relationship between East Maui communities and the region's streams and natural resources.

There are also 39 heiau recorded in 1931 in the East Maui Region, but only one, Puukohola Heiau, was located in the historic license area of Honomanu. However, the site was never observed and thus there is no record of its structure, size, or ceremonial purposes.

The Department finds that the abundance of documented land divisions, place names, and heiau indicates extensive Native Hawaiian occupation and use of East Maui prior to Western contact. Evidence further suggests that although the region's steep gulches limited the widespread construction of loi kalo, taro terraces were cultivated where topography permitted, particularly in Keanae. The archaeological literature further indicates that many stream beds were lined with stream-fed kalo well into the uplands and that dryland agriculture was practiced above the coastal areas on the slopes of

Haleakala. These findings are consistent with the historical and cultural evidence discussed in Sections 4.7.1 and 4.7.2 regarding the longstanding dependence of East Maui communities upon both streamflow and agricultural resources.

As part of the LRFI, CSH conducted field investigations that included inspection of the access road network, pedestrian inspection of the various ditch trails, and areas surrounding 21 sluice gates throughout the system. In addition, field investigations of the Waihinepee area in response to public comments concerning the possible location of a legendary pohaku.

According to CSH's research, historical sources suggested that the pohaku could be located either within the Garden of Eden Arboretum or in its immediate vicinity. Further research also suggests that the pohaku could be near the path of the old Government road to Hana which is mauka of the current Hana Highway in this area. However, the property owner of the Arboretum nor the Arboretum staff had any knowledge of the pohaku. CSH also could not locate the pohaku during their pedestrian inspection.

Based upon the literature review and filed investigations, the LRFI concluded that no previous historic properties have been recorded in the vicinity of the ditch system or the associated access roads and trails and apart from the infrastructure related to the system itself no other historic properties were observed during the field inspection. The Department has considered these findings in evaluating the potential effects of the proposed long-term water licenses on historic and archaeological resources.

The Department also considered the Historic Structure Assessment (HSA) prepared support of the FEIS. The HSA determined that the EMI system is eligible for listing on the National Register of Historic Places under National Register Criterion A, for its role in supporting the development of the sugar industry on Maui, and Criterion C, as an extensive engineering design that exemplifies the characteristics, technology, and pattern or features common to irrigation ditch systems in Hawaii.

The HSA further recognizes that irrigation systems such as the EMI system are susceptible to cumulative impacts on integrity due to numerous repairs and modifications and therefore, the system's integrity was not assessed. However, the sluice gates demonstrated they have the tendency to retain their historic integrity and retain much of their historic materials (concrete and stone). In addition, their overall original design and workmanship appear intact and integrity of feeling and association were also retained. The Department finds that the EMI system itself constitutes an important historic engineering resource and that its continued operation should remain consistent with applicable historic preservation requirements.

4.7.4. Cultural and Historical Considerations Analysis

The Department considered the cultural and historical concerns, including but not limited to those identified in the Maly study, the CIA, the Archaeological Literature Review and

Field Inspection, the HSA, CWRM's 2018 Decision and Order, the 2022 IIFS amendments for the Huelo-region streams, and the *2026 Macrofauna Survey Results Following Streamflow Restoration from West Wailuaiki to Hanawi, East Maui, Hawai'i*. The Department finds that East Maui's streams possess longstanding cultural, historical, and spiritual significance to Native Hawaiian communities. Many of the concerns identified by East Maui community members have been, and continue to be, addressed through CWRM's establishment and subsequent amendment of the IIFS, while recognizing that watershed conditions, groundwater interactions, climatic variability, invasive species, and other environmental factors also influence stream conditions throughout East Maui.

The Department further finds that CWRM has extensively evaluated kuleana and appurtenant water uses through the East Maui contested case proceedings and the subsequent Huelo-region IIFS amendments. As discussed in Section 4.7.1, the streams identified by CWRM as "kalo and community streams" have had their diversions removed or closed, resulting in restoration of streamflow to those systems. Accordingly, operation of the EMI diversion system no longer affects streamflow within those restored streams. To the extent streamflow conditions continue to vary, the record demonstrates that such conditions may be influenced by hydrologic, climatic, groundwater, and other environmental factors independent of the former diversions.

The Department likewise considered the 2022 IIFS amendments for the Huelo-region streams. During those proceedings, Waipio Stream was identified as containing an existing loi kalo. CWRM determined that the identified cultivation area is located downstream of the point where the stream naturally gains groundwater and downstream of the location where the stream naturally becomes intermittent. Consequently, CWRM concluded that, under low-flow conditions, operation of the EMI diversion system would not materially affect water availability at the existing loi. The Department finds that these proceedings further demonstrate that CWRM has already evaluated site-specific kuleana concerns within the East Maui stream system. Should additional claims concerning streamflow or appurtenant uses arise in the future, those matters may be addressed through the existing statutory procedures governing amendments to the Interim Instream Flow Standards.

The Department also considered the February 2026 report prepared by CWRM in partnership with the Division of Aquatic Resources entitled *Macrofauna Survey Results Following Streamflow Restoration from West Wailuaiki to Hanawi, East Maui, Hawai'i*. The report evaluated stream habitat availability, aquatic macrofauna populations, juvenile recruitment, and community composition within streams managed under both partial and full streamflow restoration. The Department finds that the report concluded habitat availability, species abundance, juvenile recruitment, and overall community composition within streams subject to existing partial restoration were generally comparable to those observed within streams restored to full flow. The report further concluded that downstream ecological conditions are influenced not only by the quantity of water restored past the Koolau Ditch, but also by groundwater gains, storm events, channel morphology, and other hydrologic and biological processes operating independently of the diversion system. The Department finds that these conclusions are consistent with

the broader administrative record demonstrating that the health of East Maui's streams is influenced by multiple interacting environmental factors.

The Department further finds that implementation of the existing IIFS provides important protections for stream habitat, native aquatic species, and the freshwater resources upon which many traditional and customary Native Hawaiian practices depend. As discussed throughout Sections 4.6 and 4.7, healthy watershed forests, functioning stream systems, and adequate streamflow are interconnected components of the same hydrologic system. Accordingly, the Department finds that watershed protection and stream restoration are complementary measures that collectively support the continued exercise of traditional and customary practices identified throughout the administrative record.

The Department also considered the recommendations contained in the CIA concerning cultural access. Consistent with those recommendations, the Department recommends that the Operations, Maintenance, and Monitoring Agreement include procedures addressing cultural access and appropriate signage recognizing the exercise of traditional and customary Native Hawaiian rights consistent with Article XII of the Hawaii Constitution, protocols for any persons required to access the EMI system for operation and maintenance regarding the potential for discovery of undocumented cultural sites and the procedures for reporting such finds; and best management practices to mitigate potential impacts to the environment during operation and maintenance activities.

Finally, the Department recognizes the concerns expressed by East Maui residents regarding the long-term health of the region's streams, watershed forests, and traditional and customary Native Hawaiian practices. The administrative record demonstrates that many of those concerns arise from the cumulative effects of historical land use, watershed degradation, invasive species, climatic variability, groundwater interactions, and streamflow management occurring over many decades. The Department finds that the proposed long-term water licenses do not alter the IIFS established by CWRM but instead operate within that existing regulatory framework established by CWRM while incorporating additional watershed management requirements and operational conditions intended to further protect East Maui's natural, cultural, and historic resources. When considered together with the watershed management requirements of HRS § 171-58(e), the recommended license conditions, and the continued authority of CWRM to modify the IIFS as appropriate, the Department finds that the proposed long-term water licenses appropriately recognize and protect the cultural, historical, and natural resources identified throughout the administrative record while providing for the continued beneficial use of East Maui surface waters pursuant to HRS § 171-58.

5. LONG-TERM DISPOSITIONS FOR CONSIDERATION

To date, the Department has received two requests for the right, privilege and authority to develop, divert, and use Government surface waters within the historic Nahiku, Keanae, Honomanu and Huelo areas within in the Koolau and Hamakualoa ahupuaas on the island of Maui:

1. A request dated May 14, 2021 from Alexander & Baldwin, and its subsidiary East Maui Irrigation Company, Limited, whose interest in the EMI system was subsequently sold to Mahi Pono in 2018, for a sale of water license by public auction; and
2. A request dated April 4, 2026 from the County of Maui for a set-aside for State held interests in the EMI system and surface water from the Koolau Forest Reserve for domestic, municipal, and agricultural use to be under the control and management of the County of Maui.

After reviewing both requests, Chapter 171, HRS, and the still effective 1938 East Maui Agreement (Agreement)¹³, Staff has determined that the best path forward would be the issuance of two separate licenses. The basis of Staff's recommendation is the 1938 Agreement, pursuant to the portions that are still legally permissible and/or applicable, for the following reasons:

1. Through Staff's research, there is no evidence of an explicit request by either the Company (EMI or now Mahi Pono) or the Territory (now State of Hawaii) to cancel the 1938 Agreement. In addition, the easements granted under Sections I and II of the Agreement are expressly made "perpetual (except as to cancellation as hereinafter provided)," and the Agreement was recorded in the Bureau of Conveyances (Liber 1435, Pages 1–12, as corrected at Pages 269–271), such that its easements run with the land and provided constructive notice to all subsequent successors-in-interest, including the current parties.

Section VI of the Agreement specifically does not provide provisions that would automatically and/or unilaterally cancel the Agreement. Rather, cancellation is only presented as an option to either party should certain conditions not be met. Further, to Staff's knowledge, there has been no court order or decision that officially voids the Agreement.

Thus, the legally permissible and/or applicable provisions of the 1938 Agreement are still contractually obligated between the State and Mahi Pono, as the successors to the Territory and EMI Co., respectively.

2. The 1938 Agreement was written with the intent and acknowledgement by EMI that there may be other users of the EMI system other than just EMI.

Specifically, in the recitals section, the Agreement states:

*WHEREAS, it is the desire of the Territory to have competitive bidding on **licenses** to divert water from government lands situated in East Maui; and*

13. [1938 East Maui Agreement](#)

*WHEREAS the joint use **by any future Licensees of the Territory** and by the Company of the aqueduct system on East Maui...extending from Nahiku to Honopou, inclusive, which system is partly on government land and partly on Company land, will make competitive bidding possible.*

Further, Section VII contemplates shared costs for operation and maintenance of the EMI system in the event that the EMI is not the sole user of the system. Of note, Section VII states:

The cost of operation and maintenance of said aqueduct system shall be borne by the Territory and the Company in direct proportion to the use made thereof; that is to say, so long as the Territory has not granted a license to any one other than the company to take and use water from any of said land or otherwise made use of said water, the Company shall be deemed to be the sole user of said aqueduct system and the total cost of operation and maintenance of said aqueduct system shall be borne by the Company. If, however, one other than the Company should become the purchaser of one or more of the licenses, or otherwise become the user of any of said water, then, and in that event the cost of operation and maintenance shall be borne by the Territory and Company in direct proportion to the product of the water conveyed, and the distance through which it is conveyed through the artificial channels of said aqueduct system by each party respectively.

3. The perpetual easements and rights to use the aqueducts for the conveyance and diversion of surface waters in the Historic License Areas, as provided by the 1938 Agreement, run between the Territory (now State of Hawaii) and the Company (EMI now Mahi Pono). Under Section VIII of the Agreement, the term “Territory” is expressly defined to include the Territory’s “representatives, successors, assigns, licensees and lessees,” and the term “Company” to include its “representatives, successors and assigns.” Accordingly, the easements run to and are held by the successors and assigns of each party—which is how the Company’s easement is presently held by Mahi Pono—and a licensee of the State takes its authorized use of the aqueduct system within the scope of the easement already granted to the Territory.

Because the term “Territory” is defined to include the Territory’s licensees, the County’s use of the aqueduct system, once it holds a State license, falls within the scope of the easement already granted to the Territory across the Company’s lands, and no separate set aside or assignment of the State’s easement interest is required. Accordingly, the issuance of a separate license to the County, under the provisions allowed to the State pursuant to the 1938 Agreement, appears to be the best way to satisfy the County’s request.

Therefore, staff is proposing the following dispositions:

1. The Issuance of a Direct Lease (Water License) for a Portion of Government Waters to the County of Maui for Domestic, Municipal, and Agriculture Purposes, Within the Historic Nahiku, Keanae, Honomanu and Huelo License Areas Serving the Kamole Weir and the Kula Agricultural Park; and
2. Sale of Lease (Water License) at Public Auction for the for the Development, Diversion, and Use of a Portion of Government Surface Waters Within the Historic Nahiku, Keanae, Honomanū, and Huelo License Areas

6. PUBLIC TRUST DOCTRINE

The *Waiāhole* Ditch water case is the key case for setting the public trust doctrine for water. In *Waiāhole*, the Hawaii Supreme Court found that:

Under the Code, therefore, instream flow standards serve as the primary mechanism by which the Commission is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon instream flows.

In *re Water Use Permit Applications*, 94 Hawai'i 97, 148, 9 P.3d 409, 460 (2000). While the specific holdings in *Waiahole* addressed the setting of instream flow standards and the issuance of surface water use permits by CWRM and which the Board has no jurisdiction over, the public trust principles articulated in *Waiahole* related to reasonable-beneficial use of offstream water govern the State's disposition of water resources generally, including the Board's exercise of its authority under Chapter 171, HRS. The Board therefore must independently satisfy its public trust obligations in approving the proposed dispositions. Water remains a public trust resource in which the State holds both the authority and the affirmative duty to protect public trust purposes.

The State lands (water) at issue in the present submittal is part ceded land subject to section 5(b) of the Admission Act (P.L. 83-3, 73 Stat 4), held by the State as part of the public land trust and subject to the public trust principles of Article XI of the Hawai'i Constitution. Because these waters are a public trust resource, the Board must approach any disposition that would authorize their appropriation for private commercial use with corresponding care: the public's interest in the resource is considered first; a private applicant bears the burden of demonstrating that its proposed use is reasonable and beneficial and consistent with the trust; and the Board must weigh the available alternatives and set forth the basis for its decision. See *In re Water Use Permit Applications*, 94 Hawai'i 97, 9 P.3d 409 (2000). Because the proposed disposition of a water license by public auction would authorize a private party to divert these public trust waters for private commercial agricultural use, the Board's analysis of that disposition follows.

The waters and the revenues derived therefrom constitute the public land trust, which shall be used for the support of public schools and public educational institutions, the betterment of the conditions of native Hawaiians, as defined in the Hawaiian Homes Commission Act, 1920, as amended, the development of farm and home ownership on as widespread a basis as possible, the making of public improvements, and the provision of land for public use, pursuant to Section 5(f) of the Admission Act.

A portion of the revenues derived from the proposed action will go to the Office of Hawaiian Affairs (OHA) and the Department of Hawaiian Home Lands (DHHL) to support the betterment of the conditions of native Hawaiians. The DHHL reservations discussed in section 4.5 will be reserved to ensure availability to DHHL.

In addition, the proposed action before the Board is to provide surface waters for non-instream uses including domestic, municipal, and agricultural uses, which supports both the development of farm and home ownership on as widespread a basis as possible and the provision of land (water) for public use.

Further, the Board has a constitutional duty to promote diversified agriculture pursuant to Article XI, Section 3 of the Hawaii State Constitution:

The State shall conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands.

The proposed action supports the long-term viability and security of local agricultural operations. It also allows for the local production of food, supporting the goal of food sustainability and food security for Hawaii. It may also translate into lower prices for consumers when meat and produce do not have to be shipped to Hawaii from outside of the state.

6.1. PUBLIC TRUST CONSIDERATIONS FOR LICENSE BY PUBLIC AUCTION

The analysis begins from the public's interest in the resource. The public interests in these waters are substantial and include the maintenance of instream flows and the stream ecosystems dependent upon them, the exercise of traditional and customary Native Hawaiian rights, appurtenant and kalo cultivation uses, the water reservation of DHHL, and the domestic and municipal supply of water to Upcountry residents through the County of Maui.

The proposed disposition is structured so that these public uses are preserved and take priority over the private use: the quantity available for auction is limited to that analyzed in the 2021 Final EIS; no water may be diverted at or below the applicable Interim Instream Flow Standards; the DHHL reservation is excluded from the licensed quantity and reserved to DHHL; the County's domestic, municipal, and Kula Agricultural Park allocation is provided through a separate direct license. The applicant for the private

commercial license bears the burden of demonstrating that its use is reasonable and beneficial; here, the record reflects that the private use is limited in quantity and term and itself advances recognized public purposes, including revenue to the public land trust in which OHA and DHHL share on a pro rata basis under Section 10-13.5, HRS, established at fair value through competitive auction; the continued viability of Central Maui agriculture and the State's constitutional interests in diversified agriculture, food security, and agricultural self-sufficiency; the preservation of Important Agricultural Lands; the reduction of wildfire risk associated with fallow lands; and the operation, maintenance, and watershed monitoring secured through the license conditions.

The Department has also considered the alternatives to the proposed private use. The agricultural lands served are Central Maui Important Agricultural Lands dependent on surface water conveyed from East Maui through the existing aqueduct system; the water originates from State lands, and no alternative source has been identified that could fully meet the agricultural need without comparable reliance on public trust resources. Substitution by increased groundwater development would shift demand onto the underlying aquifer and has not been shown to be practicable or less burdensome on public trust resources.

The Board has further considered whether public use can be accommodated together with the private use and finds that it can and does: the disposition authorizes private diversion only of offstream water above the IIFS and outside the DHHL reservation and the County's public allocation, so that instream public trust uses, Native Hawaiian rights, DHHL's reservation, and public domestic and municipal supply continue concurrently with, and are not displaced by, the private agricultural use. Disposition by competitive public auction, rather than by gratis or below-value grant, is also the alternative that best realizes the public value of the resource for the benefit of the trust.

Weighing the foregoing, and mindful that these are ceded public trust waters and that the proposed use is private and commercial in nature, Staff recommends that the Board find the balancing of public and private interests supports the proposed disposition. The public trust uses of the resource are preserved and prioritized; the private commercial use is limited in quantity and term and subject to conditions protecting the public interest; the disposition affirmatively advances public trust purposes, including revenue for the betterment of the conditions of native Hawaiians and the State's interests in diversified agriculture and food security; and no identified alternative would better serve the public interest while meeting the agricultural need. The separate direct license to the County of Maui is a disposition to a public body for public domestic, municipal, and agricultural purposes and is itself a public use consistent with the foregoing.

6.2. PUBLIC TRUST CONSIDERATIONS OF COUNTY OF MAUI'S REQUEST FOR A SET-ASIDE

By letter dated April 6, 2026, the County of Maui, through its Department of the East Maui Water Authority, requested that the Board support an executive order setting aside the

water emanating from State lands and assigning to the County the State's perpetual rights in the transmission system under the 1938 Agreement, and asked that this request be considered prior to any disposition of a water license by public auction. Staff has evaluated the request under the public trust principles set forth above. While the Board may set aside water under Section 171-11, HRS, Staff recommends that the County's interest instead be addressed through a direct license by negotiation under Section 171-95, HRS, for the following reasons.

The public trust requires the State to retain both the authority to allocate the water resource and the responsibility to steward it. An executive-order, set-aside of the water, coupled with an assignment of the State's perpetual rights in the system, would transfer both the use of the resource and the control of its allocation and delivery to a single consumptive user. Under the County's proposal, the County would simultaneously manage the resource, take water for its own domestic, municipal, and agricultural purposes, and serve as the purveyor of water to a private commercial agricultural user under a water delivery agreement.

Concentrating the allocation function, consumptive use, and the sale of water to a private entity in a single beneficiary is in tension with the State's continuing public trust obligations, because the entity controlling allocation would be one whose own demand competes with the other public trust uses the resource must serve, including traditional and customary Native Hawaiian rights, the water reservations of DHHL, and instream values. A direct license confines the County to a defined quantity for identified public purposes while the State retains title to the water, the allocation function, and stewardship of the resource — the arrangement most consistent with the trust.

The County's cited authorities do not alter this analysis. Sections 46-1.5(16), (19), and (23)(F), HRS, authorize the County to acquire, hold, operate, and assume control of waterworks systems and related water rights for public use. Those provisions address the County's capacity to own and operate infrastructure; they do not plainly authorize the County to sell or wholesale raw, untreated surface water to a private for-profit entity, which is a central feature of the County's proposed model, and the authority to "assume control" of a waterworks system is not authority for the State to divest its perpetual rights under the 1938 Agreement or its public trust-allocation role. The scope of the County's authority to act as a purveyor of water to private agricultural users, and the terms on which it would do so, remain unresolved.

As trustee, the Board must satisfy itself, on the record before it, as to how the resource would be conveyed and managed before transferring control of the resource and the State's rights in the system. The County's April 6, 2026 report reflects meaningful planning and substantial fiscal capacity, but describes an operational capability that is prospective and contingent: the operational plan is still being developed, operations are anticipated to begin only by the end of the year, and the County remains in discussions with Mahi Pono and East Maui Irrigation regarding contracting services. The report further states that the County would need to coordinate with Mahi Pono for access and/or

ownership rights to the portion of the Wailoa Ditch between Honopou Gulch and the Kamole treatment plant, a segment of the works the County does not presently control. On this record, the Department concludes that the record does support a divestiture of the resource and the State's perpetual rights. This is not a determination that the County is incapable of operating the system; it is a determination that the present record does not support a set-aside, and that a direct license is the disposition the Board can responsibly approve at this time.

A direct license also better serves the revenue purposes of the public land trust. Disposition of the water license by public auction establishes the value of the resource through competition and generates revenue in which OHA and DHHL share on a pro rata basis under Section 10-13.5, HRS, and Section 5(f) of the Admission Act. A gratis set-aside of the entire resource would forgo that competitively established value and the associated trust revenue. The County's proposal to continue existing revenue shares through memoranda of understanding tied to a revocable-permit fee is not a substitute for the trust revenue a competitive disposition would realize, and the adequacy of such arrangements to satisfy the pro rata revenue obligation is unresolved.

The recommended disposition also substantively addresses the County's underlying interest. The County's stated objectives—continued service to Upcountry residents, continued delivery of water for Central Maui agriculture, and watershed stewardship—are met by a direct license providing the County a defined quantity for those purposes, without transferring management of the resource. To the extent the County relies on prior statements by Department representatives regarding the sequencing of a set-aside before a public auction, including remarks at the November 16, 2021 County Council committee meeting and testimony before the House Committee on Water and Land on February 12, 2026, such statements reflect general practice and do not bind the Board or vest a right in the County. The Board's obligations under Chapter 171, HRS, and its independent public trust duty govern the disposition and are satisfied here by addressing the County's interest through a direct license.

7. PROPOSED TERMS AND CONDITIONS OF LICENSES

LEGAL REFERENCE:

Public Auction:

Section 171-58, Hawaii Revised Statutes (HRS), as amended and other sections of Chapter 171, HRS as applicable.

Direct License to County of Maui:

Section 171-95, HRS, as amended.

TRUST LAND STATUS:

Section 5(b) lands of the Hawaii Admission Act

DHHL 30% entitlement lands pursuant to the Hawaii State Constitution: YES

CURRENT USE STATUS:

Currently encumbered by a Revocable Permit to Mahi Pono, LLC and East Maui Irrigation Company, LLC for the Development, Diversion, and Use of Surface Water for Diversified Agriculture, Currently Existing Historical Industrial and Non-Agricultural Uses, Reservoir, Fire Protection, Hydroelectric, and County of Maui Department of Water Supply and Kula Agricultural Park Purposes

CHARACTER OF USE:

License by Public Auction:

Right, privilege and authority to develop, divert, and use of a portion of Government surface water to the extent that such waters within the hydrological areas are owned by the State.

Direct License to County of Maui:

Right, privilege, and authority to use of a portion of Government surface water for domestic, municipal, and agriculture purposes.

LICENSE TERM:

Both licenses to run concurrently for thirty (30) years¹⁴.

LICENSE QUANTITIES & RATIONALE:

License by Public Auction:

Staff is of the belief, that setting a cap for water is not good water management as water is “fluid” and is always in a constant state of change due to variability caused by outside factors such as weather (including extreme events such as drought and storm conditions), ground water seepage, evaporation, and the basic water cycle itself. Due to the inconstant nature of water availability, a cap could either be grossly overestimated or underestimated. Moreso, the cap doesn’t provide any additional value to instream uses as the IIFS is the more appropriate mechanism to ensure instream uses are protected. Currently, it is staff’s understanding that

¹⁴ The 1938 Agreement is based on a 30-year term for any license issued by public auction (see page 5 of the Agreement). The concurrent thirty (30)-year term for the direct license to the County is established under Chapter 171, HRS, and not by the 1938 Agreement.

compliance of the IIFS is through modifications of the existing diversions which are only meant to allow for water above the IIFS to be diverted.

Nevertheless, in order for the Board to understand how much water the East Maui streams are capable of producing for non-instream uses, CWRM staff created Table 5-1 which provides the mean (average) annual flow for EMI system over a thirty (30) year period (1990-2019) and concluded that there was approximately 197 MGD available for non-instream uses. After subtracting DHHL's water reservation requests (both approved and pending), there is still approximately 185 MGD remaining/available for offstream uses. These figures describe the total hydrologic availability of the system for offstream uses and are provided for context; they do not represent the quantity proposed to be licensed, which is limited as set forth below.

The quantity for the Public Auction License is limited to the amount that the EIS contemplated, which is **87.95 MGD**.

Direct License to the County:

6.5 MGD averaged annually

The quantity for the direct license to the County is the maximum quantity authorized to be diverted from Government surface waters for the County's benefit, measured at the point(s) of diversion and averaged annually, and are inclusive of all system losses (including evaporation, seepage, leakage, and other conveyance losses) incurred in transporting the water through the EMI system, whether such losses are incurred by the County or by the diverting party. Because the County is not the diverter, any system loss attributable to conveyance of the County's water shall be counted against the quantities allocated to the County and not against any other license.

COMMENCEMENT DATE:

The date of sale if the current permittee is the successful bidder, otherwise, sixty (60) days after the date of sale; provided that if such date is not on the first day of any month, the commencement date shall be the first day of the month following such date; and further provided that the Chairperson may amend the commencement date.

Commencement date for the County is contingent upon and will run simultaneously with the license sold at public auction.

TABLE 5-1: 30-YEAR AVERAGE MEAN ANNUAL FLOW AVAILABLE

Stream	Location	Stream Category (2018 D&O)	Mean Annual Flow		Median Baseflow		Current IIFS		Mean Annual Available Water	
			cfs	mgd	cfs	mgd	cfs	mgd	cfs	mgd
Makapipi	Nahiku	Kalo & Community	Full Restoration				n/a	n/a	0	0
Hanawi	Nahiku	Habitat	22	14	4.6	3.0	0.9	0.6	21	14
Kapaula	Nahiku	Habitat	18	12	2.8	1.8	0.6	0.4	17	11
Paakea	Keanae	Habitat	3.0	1.9	0.9	0.6	0.9	0.6	2.1	1.4
Waiohue	Keanae	Habitat	18	12	5.0	3.2	full	full	0	0
Kopiliula	Keanae	Habitat	16	10	5.0	3.2	3.2	2.1	13	8.0
East Wailuaiki	Keanae	Habitat	23	15	5.8	3.7	3.7	2.4	19	13
West Wailuaiki	Keanae	Habitat	28	18	6.0	3.9	full	full	0	0
East Wailuanui	Keanae	Kalo & Community	Full Restoration				n/a	n/a	0	0
West Wailuanui	Keanae	Kalo & Community	Full Restoration				n/a	n/a	0	0
Waiokamilo	Keanae	Kalo & Community	Full Restoration				n/a	n/a	0	0
Palauhulu	Keanae	Kalo & Community	Full Restoration				n/a	n/a	0	0
Piinaau	Keanae	Kalo & Community	Full Restoration				n/a	n/a	0	0
Honomanu	Honomanu	Habitat	15	9.7	2.8	1.8	4.2	2.7	11	7.0
Haipuaena	Honomanu	Habitat	11	7.1	3.6	2.3	1.4	0.9	10	6.2
Puohokamoa	Honomanu	Habitat	25	16	6.4	4.1	1.1	0.7	24	15
Waikamoi	Honomanu	Habitat	22	14	5.0	3.2	3.8	2.5	18	12
Kolea	Huelo		0.95	0.65	0.4	0.3	0.08	0.05	0.87	0.6

TABLE 5-1 (CONTINUED): 30-YEAR AVERAGE MEAN ANNUAL FLOW AVAILABLE

Stream	Location	Stream Category (2018 D&O)	Mean Annual Flow		Median Baseflow		Current IIFS		Mean Annual Available Water	
			cfs	mgd	cfs	mgd	cfs	mgd	cfs	mgd
Punaluu	Huelo		0.48	0.31	0.3	0.2	0	0	0.48	0.31
Kaaiea	Huelo		12	7.8	1.8	1.2	1.8	1.1	10	6.7
Oopuola	Huelo		8.0	5.2	1.0	0.6	0.4	0.3	7.6	4.9
Nailiilihaele	Huelo		49	32	7.3	4.7	5.2	3.4	44	28
Kailua	Huelo		45	29	5.6	3.6	1.8	1.1	43	28
Oanui	Huelo		9.0	5.8	0.9	0.6	0	0	9.0	5.8
Hanawana	Huelo		2.2	1.4	0.3	0.2	0.2	0.2	1.8	1.2
Hoalua	Huelo		7.0	4.5	1.5	1.0	0	0	7.0	4.5
Hanehoi	Huelo	Kalo & Community	Full Restoration				n/a	n/a	0	0
Waipio	Huelo		0.5	0.3	0.11	0.07	n/a	n/a	0.5	0.3
Hoolawaliilii	Huelo		7.0	4.5	2.6	1.7	0.7	0.5	6.3	4.0
Hoolawanui	Huelo		13	8.4	6.6	4.3	1.2	0.8	12	7.6
Honopou	Huelo	Kalo & Community	Full Restoration				n/a	n/a	0	0
			Mean Annual Flow				Mean Annual Flow Available			
			cfs		mgd		cfs		mgd	
	Huelo		155		100		143		92	
	Non- Huelo		270		174		181		105	
	Total		425		274		305		197	
	DHHL Reservation						17.3		11.2	
	Remaining						287.7		185.8	

MINIMUM UPSET ANNUAL RENT:

License by Public Auction:

To be determined by an independent appraisal establishing fair market rent, subject to the submission and approval of a Water Use Plan by the Chairperson and the Chairperson's review and approval of the appraisal.

Direct License to County:

Not Applicable

ANNUAL RENT:

License by Public Auction: The rate amount of the successful bid at public auction.

Direct License to County: Gratis

METHOD OF PAYMENT:

Annual rent to be paid by January 31st of each year following the first year of the license.

RENTAL REOPENINGS:

10th and 20th years of the license

PERFORMANCE BOND OR SECURITY DEPOSIT:

Equal to two times the annual rental then payable or in the alternative, Licensee may deposit a security deposit, in the amount equal to two times the base rent then payable.

CHAPTER 343, HRS - ENVIRONMENTAL ASSESSMENT:

A Final Environmental Impact Statement (FEIS) was reviewed and approved by the Board of Land and Natural Resources at its meeting of September 24, 2021, under agenda item D-7. The FEIS notice of acceptance was published in The Environmental Review Program's October 23, 2021 edition of *The Environmental Notice*. For reference, links to the Final EIS documents are provided below:

https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2021-09-08-MA-FEIS-corrected-East-Maui-Water-Lease-Vol-3.pdf

https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2021-09-08-MA-FEIS-corrected-East-Maui-Water-Lease-Vol-4.pdf

https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2021-09-08-MA-FEIS-corrected-East-Maui-Water-Lease-Vol-5.pdf

Any additional water in excess of or any proposed uses of the water resource not included for analysis in the 2021 Final EIS will not be considered for Board action until a supplemental EIS has been prepared and accepted by the Board.

SPECIAL PROVISIONS PROPOSED:

The proposed licenses, if approved by the Board, will be subject to the standard terms and conditions of the most current lease and/or water license form, as may be amended from time to time, however, there are additional provisions that are recommended for the Board's consideration:

1. Licensors reserves the right to withdraw the Water Resource or any portion thereof to meet the following requirements as the Licensors in its sole discretion may determine:
 - a. Constitutionally protected water rights; reservations, including but not limited to the 11,455,510 gallons per day reserved by the Department of Hawaiian Home Lands from Koolau Forest Reserve to meet the Department of Hawaiian Home Lands' rights under Section 221 of the Hawaiian Homes Commission Act; as well as other statutorily or judicially recognized interests relating to the right to withdraw water for the purposes of and in accordance with the provisions of Section 171-58(d), Hawaii Revised Statutes;
 - b. Amounts of water necessary to remain in Koolau Forest Reserve to satisfy instream flow standards, as set by the Commission on Water Resource Management; and
 - c. Amounts of water for use by the Licensors or a county water authority, provided such use is reasonable and beneficial.

Provided, however, that if any portion of the Water Resource should be withdrawn for any purpose, where the portion withdrawn renders the remainder unsuitable or of inadequate quantity or flow for the use or uses for which the Water Resource was licensed, the determination of unsuitability being within Licensees' sole discretion, the Licensees shall have the option to surrender these Licenses and be discharged and relieved from any further liability.

2. In using the Water Resource, the Licensees shall do all things reasonably necessary to prevent the degradation by Licensees of the quality of the water in the Koolau Forest Reserve and Licensee is expressly prohibited from engaging in any acts or omissions that may endanger the public health, safety, and welfare

with respect to the use of the Water Resource.

3. The Licensees shall not commit, suffer or permit to be committed any waste, nuisance, strip, or unlawful, improper or offensive use of the Water Resource or any part.
4. The Licensee acknowledges that the diversion works, the diversion and use of the Water Resource, and the maintenance of instream flow standards are subject to the monitoring, inspection, investigation, and enforcement authority of the Commission on Water Resource Management under Chapter 174C, HRS, and the Licensee shall comply and cooperate with the Commission in the exercise of that authority and shall not impede the Commission's lawful access to the diversion works and facility.
5. For the purpose of confirming the Licensee's compliance with the terms and conditions of this License, including that the diversion and use of the Water Resource remain within the quantity, sources, and purposes authorized, the Licensee shall ensure that the Licensors and its agents may, at reasonable times and upon at least seventy-two (72) hours' prior written notice, conduct examinations reasonably related to this License and access the works used to divert, convey, or store the Water Resource, as follows:
 - a. To the extent the Licensee owns or controls such works, the Licensee shall permit the Licensors and its agents such access directly.
 - b. To the extent the Licensee obtains the diversion, conveyance, or delivery of the Water Resource through works owned or controlled by another party, the Licensee shall not divert or receive the Water Resource through those works unless the agreement or arrangement under which it does so secures for the Licensors a right of access and inspection for the purpose stated above and expressly names the Licensors as a beneficiary entitled to enforce that right. The Licensee shall provide the Licensors with the provisions of that agreement establishing the right (which may otherwise be redacted of commercial terms) and shall maintain the right in effect for the term of this License.
 - c. The Licensors shall not interfere unreasonably with the use and enjoyment of the Water Resource. Nothing in this provision requires the Licensee to provide access to works it does not own or control beyond securing the right described in subsection (b), or is intended to exercise, duplicate, or supersede the authority of the Commission under Chapter 174C, HRS.
6. The Licensees shall give the Licensors prior written notice of any proposed expansion or modification of the works used to divert the Water Resource. The Licensees remain responsible for obtaining any stream diversion works permit,

water use permit, instream flow standard determination, and all other approvals required by the Commission on Water Resource Management or any other governmental authority. Nothing in this provision is intended to exercise, duplicate, or supersede the jurisdiction of the Commission on Water Resource Management over stream diversion works, water use, or instream flow standards.

7. The Licensees shall be responsible for obtaining all necessary federal, state or county clearances.
8. The Licensees shall, at all reasonable times, permit the Licensor or its authorized agents and employees, upon reasonable notice of at least seventy-two (72) hours given by the Licensor, to audit, examine and to make copies of information relating to Licensees' use of the Water Resource existing at the time of the execution of the Licenses, and reservoir, fire protection and hydroelectric purposes, and any measurements collected by the Licensees relating to the use of the Water Resource for these purposes. Licensor shall not have the right under this Paragraph, to audit any other records of Licensees.
9. Licensees shall comply with all applicable federal, state and county environmental impact regulations, including but not limited to chapter 343, Hawaii Revised Statutes, as amended, and regulations governing historic preservation.
10. The Licensees shall be allowed to assign the License to the trustee for the bondholders subject to the prior approval of the Board.
11. Pursuant to section 171-58(d), Hawai'i Revised Statutes, as amended, Licensees shall provide from the Water Resource to any farmer or rancher engaged in irrigated pasture operations, crop farming, pen feeding operations, or raising of grain and forage crops, or to those public uses and purposes as may be determined by the Board, at the same rental price paid under these Licenses, plus the proportionate actual costs, as determined by the Board, to make this Water Resource available, so much of the Water Resource as is determined by the Board to be surplus to Licensees' needs and for that minimum period as the Board shall accordingly determine; provided, however, that in lieu of the payment for the Water Resource or such portion as may be taken for public uses and purposes, the Board may elect to reduce the rental price under this License in proportion to the value of the Water Resource and the proportionate actual costs of making the water available. Licensees may have the option to surrender Licenses and be discharged and relieved from any further liability except for those responsibilities, obligations, liabilities, and claims that accrued prior to the effective date of cancellation, or that are intended to survive the termination or cancellation of the Licenses, or as otherwise agreed, if the portion withdrawn renders the remainder unsuitable or of inadequate quantity for the use or uses for which the Water Resource was licensed. If the Licensees exercises Licensees' option to cancel the Licenses, the parties shall execute a cancellation of License.

12. The licensees are subject to any and all amendments to the Interim Instream Flow Standards as set forth by the Commission of Water and Resource Management for any of the impacted streams for the term of the licenses.
13. The Licenses are subject to the rights of the Department of Hawaiian Home Lands as provided by Section 221 of the Hawaiian Homes Commission Act and to the water reservation for Hawaiian home lands identified herein. That reservation is superior to the rights of the Licensee under the public auction License. Upon a determination by the Commission on Water Resource Management or the Board that reserved water is required to be delivered, the Licensee under the public auction License shall forbear from diverting, and shall take such operational measures as are necessary to make available, up to the full reserved quantity; such water shall not be counted against or credited to the Licensee. The Licensee's use of any portion of the reserved quantity that the Department has not called upon is subordinate and non-vesting and creates no right to continued use of any water the Department subsequently requires.
14. In any period in which the Water Resource lawfully available for diversion is insufficient to satisfy all authorized uses—whether by reason of drought or natural variability, amendment of or compliance with the Interim Instream Flow Standards, physical or system capacity limitations, or a withdrawal of water by the Licensor—the available Water Resource shall be allocated in the following order of priority, and the Licensee under the public auction License shall reduce or cease its diversions as necessary to give effect to this order: (a) first, water required to satisfy the applicable Interim Instream Flow Standards and other public trust purposes, which shall not be diverted; (b) second, the water reservation of the Department of Hawaiian Home Lands; (c) third, the quantity allocated to the County of Maui under its direct License for domestic and municipal use and for the Kula Agricultural Park; (d) fourth, other public uses and purposes as determined by the Board; and (e) last, the quantity diverted under the public auction License. A reduction required under this provision shall not give rise to any claim for damages, offset, or credit against rent except as the Board may otherwise determine.
15. Within 30 days of the Board's approval, each Licensee must submit a Water Use Plan to be approved by the Chairperson. If water use is proposed for agricultural crops, Licensee is required to estimate and provide the amount of water required for each crop per acre per day.
16. If the Board finds that a use of water is not reasonable and beneficial and does not comply with the license uses, Licensee shall cease such use within a timeframe as determined by the Department.
 - a. The public auction License conveys the right to divert and use the Water

Resource only for actual, reasonable, and beneficial use in accordance with the approved Water Use Plan and the purposes authorized by this License. The Licensee shall place the Water Resource to beneficial use with reasonable diligence and shall not divert, hold, or reserve any portion of the Water Resource for purposes of resale, speculation, or to prevent its use by others. Water that the Licensee does not place to actual beneficial use is not vested in the Licensee and may be made available by the Board to other users; and the Board may, after notice and a reasonable opportunity to cure, reduce the quantity authorized under this License to the quantity the Licensee demonstrates it is placing to beneficial use.

- b. Except for an assignment to the trustee for bondholders as provided herein, the Licensee shall not sell, assign, transfer, sublicense, or otherwise convey this License or any interest in the Water Resource, in whole or in part, nor transfer any controlling interest in the Licensee, without the prior written approval of the Board, which the Board may condition or withhold consistent with its public trust duties. Any purported transfer in violation of this provision is void and is grounds for cancellation of this License.
17. Within 180 days of the execution of both licenses, the Licensees and the State, acting through the Chairperson and subject to approval as to form by the Department of the Attorney General, shall enter into a subsequent Operations, Maintenance, and Monitoring Agreement (OMM), defining the roles responsibilities, and financial commitments of each party and referencing or incorporating any applicable water delivery agreements. Cost allocation under the OMM shall be consistent with Section VII of the 1938 East Maui Agreement, which apportions the cost of operation and maintenance of the aqueduct system among users in direct proportion to the product of the quantity of water conveyed and the distance through which it is conveyed; nothing in the OMM shall diminish or supersede any party's rights or obligations under the 1938 Agreement except by the express written agreement of the parties to that Agreement. The State's financial commitments under the OMM are subject to the availability of appropriated funds.

The operator of the system may bill the parties from the date of license execution rather than the date of OMM execution, provided that all such billings remain subject to reconciliation upon execution of the OMM. If the parties do not execute an OMM within the 180-day period, cost allocation shall be governed by the Section VII formula on an interim basis until an OMM is executed, and any disputed term shall be resolved by the Chairperson. The OMM shall be incorporated by reference into, and appended to, each license upon execution; the absence of a fully executed OMM at the time of license execution shall not delay or impair the effectiveness of the licenses.

The OMM shall address:

- a. Cost sharing for routine operation and maintenance obligations, allocated consistent with Section VII of the 1938 Agreement, and including the proportionate share attributable to the County's direct license;
- b. Cost sharing for monitoring conducted by the U.S. Geological Survey;
- c. Responsibility and cost allocation for any capital upgrades and modernizations to the East Maui Irrigation system or monitoring system for the term of the license, and ownership of any resulting improvements;
- d. A protocol requiring any person accessing the EMI system for operation or maintenance of the system be made aware of the potential for discovery of undocumented surface historic properties such as walls, trails, terraces, mounds, and/or caves. These structures should be avoided, protected, and reported to the SHPD. The SHPD will then determine if additional mitigation measures are required.

In the event that human skeletal remains are identified within the vicinity of the EMI system, of the Proposed Action, any work in the immediate vicinity of the remains will be stopped and the discovery will be immediately reported to the SHPD (during regular business hours) or to DOCARE (outside of regular business hours) and to the Maui Police Department (to include notification to the medical examiner) in accordance with HAR § 13-300-40.

In the event that a historic property other than a burial is inadvertently discovered with the vicinity of the EMI system, any work in the immediate area will be halted and the SHPD will be notified as soon as possible in accordance with HAR § 13-280-3. The SHPD shall gather sufficient information to evaluate the significance of the historic property.

- e. An appropriate access policy and procedure for cultural practitioners who wish to enter the License Area to practice their traditional and customary Native Hawaiian rights in accordance with applicable law and also consider signage that encourages cultural use pursuant to the State of Hawaii Constitution, Article XII.
- f. Appropriate Best Management Practices (BMPs) to be implemented during operation and maintenance of the EMI system to address potential impacts to the environment.

18. Licensees shall cleanup trash and debris from areas that are accessible and close to streams that the Water Resource may be diverted from under this License;

“trash and debris” shall be defined as “any loose or dislodged diversion material such as concrete, rebar, steel grating, corrugated metals, railroad ties, etc., that can be removed by hand (or by light equipment that can access the stream as is)”. For purposes of clean-up, debris shall not include any structure or equipment that is either currently used for the water diversions, or for which the Commission on Water Resource Management has not required removal.

19. No later than one hundred and eighty (180) days following the effective date of this License, Licensees shall enter into written agreement with the Licensor for the implementation of a watershed management plan (“Plan”) which shall include, but not be limited to, the prevention of degradation of surface water quality of the Koolau Forest Reserve to the extent that degradation can be avoided using reasonable management practices. The Licensee shall be solely responsible to pay for its monetary or in-kind contribution(s), if any, under the Plan.
20. All waters in excess of the amounts permitted to the licensees shall remain in their streams of origin in order promote healthier habitats and watersheds or otherwise contribute to aquifer recharge in the watershed of origin.
21. It is an essential component to the Licensor’s stewardship of the Water Resource to understand how much water is being diverted. Licensees shall therefore provide annual written reports to the Licensor containing at a minimum the following information:
 - a) The amount of water actually used on a monthly basis, including the monthly amount of water delivered for: the County of Maui Department of Water Supply and the County of Maui Kula Agricultural Park; general agriculture; reservoir storage; fire protection; hydroelectric uses; and other uses as approved in the Water Use Plan. Descriptions of agricultural uses shall also provide information as to location, crop, and use of the water. Non-agricultural uses shall specify the character and purpose of water use and the user of the water.
 - b) The estimated amount of water required for each crop per acre for the previous year and how much water is projected to be required per acre per day for the forthcoming year;
 - c) An estimate of the system loss for all water systems under the ownership, management and control of the Licensees that divert, transmit, receive and store water diverted under these Licenses on an annual basis.
 - d) For each stream from which the Water Resource may be diverted that is subject to an order from the Commission on Water Resource Management, that may be amended from time to time, a status update as to the degree to which the flow of each stream has been restored, and which artificial

structures have been modified or removed as required by CWRM until the completion of the modification or removal of all such structures.

- e) Update on removal of trash, unused man-made structures, equipment and debris that serve no useful purpose, including documenting any reports of such items that Licensees has received from the Licensor, other public or private entities and members of the general public and the action(s) taken by Licensees, if any, to remove the reported items.
- f) A listing of all privately owned reservoirs that receive water diverted under this License, with the following information provided for each:
 - i. The capacity of each such reservoir;
 - ii. The surface area of each such reservoir;
 - iii. The agricultural fields that are irrigated by each such reservoir, or in the alternative, which reservoirs service the County of Maui's domestic needs, Kula Agricultural Park farmers, and Department of Hawaiian Home Lands;
 - iv. Which reservoirs are lined, and with what material, and which are not;
 - v. Information on any reservoirs planned to be taken out of service.
- g) The number, location, timing, and approximate acreage of fires fought during the year using water from reservoirs supplied with water from these Licenses.
- h) The names and locations of the reservoirs from which water was drawn to fight fires during the year.
- i) For each irrigation well that is hydraulically or operationally integrated with the water system that receives water diverted under this License, meaning a well whose production supplies, supplements, or substitutes for water delivered through that system, a listing of the well together with, for any such well in active use during the reporting year, its measured water level and chloride concentration. "Active use" means a well from which water was withdrawn at any time during the reporting year. Where the Licensee already reports water-level or chloride data for a well to the Commission on Water Resource Management, the Licensee may satisfy this subparagraph by providing that data or a reference to it, reported on the same basis and for the same period; nothing in this subparagraph requires monitoring beyond that required by the Commission or authorizes the Licensor to

regulate the Licensee's groundwater use.

- j) Each annual report shall be submitted in a format with tracked changes that clearly show the differences/ updates from the prior quarter.
 - k) Such annual reports shall be due to the Licensor no later than one month after the last calendar day of the subject year (January 30 of the following year).
 - l) Licensees shall also comply with all conditions required by the Commission on Water Resource Management regarding the streams that the Water Resource may be diverted from under this License.
 - m) Licensees shall cooperate with the Commission on Water Resource Management and the Department of Land and Natural Resources Division of Aquatic Resources (DAR) in facilitating studies, site inspections and other actions as necessary to address the streams that the Water Resource may be diverted from under these Licenses.
 - n) If the Licensor determines that any "Special Conditions" are no longer applicable or conflict with other obligations of the Licensee under this License, the Licensor in its sole discretion may amend the License to remove such provision.
22. Notwithstanding the quantity limitation applicable to the license issued at public auction, the Licensee of the public auction license may divert and use that portion of the water allocated to the County of Maui that the County does not divert or use, provided that: (a) the combined diversions under both licenses shall not at any time exceed the maximum quantity analyzed in the 2021 Final EIS, averaged annually; (b) all such use remains subject to the Interim Instream Flow Standards, and nothing in this provision authorizes the diversion of water at or below the applicable Interim Instream Flow Standards; (c) the County's right to divert and use its full allocation is superior and uninterruptible, and the public auction Licensee's use under this provision is subordinate, non-vesting, and creates no right to the continued use of any water the County later elects to take; and (d) water used by the public auction Licensee under this provision shall be counted as diversions under the public auction license.

8. **RECOMMENDATION**

That the Board:

1. Find, based on the record before it, that the requested dispositions are consistent with the public trust and the public land trust. Contingent upon the Board making that finding, the Board is recommended to approve the following:

2. Authorize the sale of a lease (water license) at public auction for the development, diversion, and use of a portion of government surface waters in East Maui under the terms and conditions cite above, which are by this reference incorporated herein and further subject to the following:
 - A. The standard terms and conditions of the most current lease and/or water license document form, as may be amended from time to time;
 - B. Review and approval by the Department of the Attorney General; and
 - C. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.
3. Authorize the Chairperson to negotiate and enter into a direct water license with the County of Maui for domestic, municipal, and agricultural purposes under the terms and conditions cite above, which are by this reference incorporated herein and further subject to the following:
 - A. The standard terms and conditions of the most current lease and/or water license document form, as may be amended from time to time;
 - B. Review and approval by the Department of the Attorney General; and
 - C. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.
4. Delegate to the Chairperson, the authority to negotiate and execute a subsequent operations, maintenance, and monitoring agreement among the parties to the East Maui water licenses.

Respectfully Submitted,



Lauren Yasaka,
Acting Assistant Administrator

APPROVED FOR SUBMITTAL:



Ryan K. P. Kanaka'ole, Interim Chairperson