

Government Relations, Ethics, and Transparency Committee

October 31, 2023

Meeting Testimony: Susan A. Pcola-Davis

Infrastructure: WATER

Description: The Committee is in receipt of Resolution 23-194, entitled “DEVELOPING A COMPREHENSIVE RECOVERY AND RESILIENCY PLAN IN RESPONSE TO THE ISLAND OF MAUI’S TRAGIC WILDFIRES OF AUGUST 2023.” Resolution 23-194’s purpose is to develop and facilitate, through a series of complementary ordinances and resolutions, and as authorized by each of the eight Council standing committees within their subject-matter jurisdictions, a comprehensive recovery and resiliency plan in response to the island of Maui’s tragic wildfires of August 2023.

Begin Testimony:

If there is one thing the County of Maui has the opportunity to do is **FIX THE ACCESS TO WATER.**

Recovery and resiliency cannot happen without **WATER.** The Commission on Water Resource Management came to Maui on October 24, 2023, to listen to Lahaina. The Commission was attentive and respectful. The meeting started at 9:00 am and was still going at 4:00 pm. The topic was **WATER!**

Without the water infrastructure, you can talk and meet all you want, Lahaina, Kula, Olinda are HOSTAGES. In fact, the Island of Maui is also a hostage to the past management on WAI.

No more! It’s not a secret anymore and it is a form of discrimination. If I hear one more time that people cannot get water flow/pressure on weekends or even NOT having water, THAT IS WRONG! DIVERTING WATER IS WRONG. IT IS A BASIC HUMAN NEED.

I started doing my research a couple of weeks ago, trying to learn all about Maui and the Water. I only touched the tip of the iceberg but stated with Ordinance 5335; **Water Use and Development Plan for the Island of Maui.**

My testimony relies on the recommendations of the Temporary Investigative Group that put together their findings and recommendations.

My biggest question is “Why wasn’t their recommendation adopted/implemented?”

“The TIG therefore recommends that the county of Maui take immediate steps to secure community ownership and control of the EMI Water Delivery System, or a partnership.”

I do not pretend to be an expert on Maui Water.

6. In Conclusion:

Determining the most efficient and effective way to ensure that the public water trust is managed and controlled by stakeholders is of the utmost urgency, given the current stressors on the water systems that serve Maui residents, residents' diverse needs, and the impending realities of the climate crisis.

Furthermore, because of the risks that will be borne by Maui residents and the County of Maui if a private entity controls the EMI Aqueduct for thirty years (which is the current stated goal of Mahi Pono/EMI), combined with the benefits of purchasing the system before any private owner has obtained a long-term water lease, the benefit of purchasing the EMI water delivery system in the near-term is much higher than it would be further in the future.

It is therefore incumbent on those who represent the interests of Maui residents to determine the most cost-effective way to achieve true control of access to water by the public as soon as possible.

This TIG believes that ownership of the EMI Water Delivery system by the people of Maui or a partnership – in the form that is most cost-effective, accountable, environmentally responsible, transparent, and meets the needs of the island’s diverse stakeholders, in particular native Hawaiians – will ultimately be the only way to guarantee that the public trust is maintained and remains safely in community hands.

The TIG therefore recommends that the County of Maui take immediate steps to secure community ownership and control of the EMI water delivery system, or a partnership.

WHAT HAPPENED WITH THIS?

06/15/22 – ENTIRE LAHAINA AQUIFER SECTOR AREA DESIGNATED AS SURFACE WATER & GROUND WATER MANAGEMENT AREA

Posted on Jun 15, 2022 in [Commission On Water Resource Management](#), [Commission On Water Resources Management](#), [Main](#), [News Releases](#), [slider](#)

DAVID Y. IGE GOVERNOR	SUZANNE D. CASE CHAIRPERSON
--	--

For Immediate News Release: June 15, 2022

ENTIRE LAHAINA AQUIFER SECTOR AREA DESIGNATED AS SURFACE WATER & GROUND WATER MANAGEMENT AREA

State Water Commission Approves Plan to Mitigate Disputes



To view meeting please click on photo or view at this link:

<https://www.youtube.com/watch?v=eNTZULELCdc>

(HONOLULU) – **The Lahaina Aquifer Sector Area provides water for everyone in west Maui, from Ukumehame in the south to Honokōhau in the north, comprising six ground water hydrologic units and eleven surface water hydrologic units.**

Tuesday, the Commission on Water Resource Management (CWRM) unanimously agreed to designate the entire Lahaina Aquifer Sector Area as both a Surface Water and Ground Water Management Area.

In a presentation to the commission, CWRM hydrologist Dr. Ayrton Strauch shared the data, science, investigations and outreach around water resources, aquifer health, and climate conditions that have brought the Commission to this point in making this management decision.

“Since 1983, we have experienced a significant decline in rainfall in West Maui that has led to a real reduction in surface water to meet instream and non-instream uses. The integration of ground and surface water sources to meet both potable and non-potable demands across hydrologic units throughout Lahaina necessitates a holistic approach and **this designation brings everyone together to work collaboratively.**”

The submittal followed years of scoping and information gathering from users, several earlier public Water Commission briefings, advertised notice, and the formal public hearing.

CWRM Deputy Kaleo Manuel summarized the Commission’s obligation to protect the public trust and noted that designation criteria have been met and warrant the Commission’s proactive, precautionary, and holistic approach to management in this region. “As evident in the testimony received, serious disputes over water have and continue to occur in this region. We believe designation is the best tool to ensure the protection of water resources and the reasonable and beneficial uses of water.”

The Commission carefully listened to and balanced voluminous written and oral testimony received throughout the designation process including at the Commission meeting.

“Collaboration is a powerful tool. People who live in the same community, share an island, and who share resources need to work together,” said Commissioner Paul Meyer.

Both groundwater and surface water management fall under CWRM’s purview. These water resources are connected both hydrologically and via infrastructure throughout Lahaina and are used in an integrated fashion to serve the many water needs of Maui residents. The Commission has a kuleana to **support domestic uses including for affordable housing, Department of Hawaiian Home Lands’ uses and traditional and customary practices while protecting stream and nearshore ecosystems.**

Designation gives the Commission and CWRM staff the tools needed to identify actual uses, evaluate impacts and waste, address public trust priorities and balance needs, implement alternatives, and plan for drought conditions which the community is now experiencing more regularly. This process is integral to insure critical affordable housing projects have the domestic water supply they need to be successful and will support the integration of source development across the region to meet the goals of the County’s Water Use and Development Plan.

During final deliberations, Commissioner Michael Buck added, **“The State Supreme Court has held that the commission must not relegate itself to the role of a mere ‘umpire passively calling balls and strikes for adversaries appearing before it,’ but instead must take the**

initiative in considering, protecting, and advancing public rights in the resource at every stake of the planning and decision-making process.”

“The State Legislature also weighed in on the State Water Code, which directs CWRM to ensure the availability of the precious resource of water to meet the present and future needs of the people,” said Commission Chair Suzanne Case. “The designation of the entire Lahaina aquifer is in line with the water code, which is both a tool and incentive for planning the wise use of Hawai‘i’s water resources, rather than as a water crisis and shortage management mechanism.”

“E ‘ai kekahi, e kāpī kekahi” – eat some and salt some; the Commission’s action today ensures intergenerational water equity and takes proactive steps towards ensuring a sustainable and resilient water future,” Manuel stated.

The Commission will issue a public notice of the decision and staff will continue to collaborate and support the community, agencies, and stakeholders in the permitting process.

#

Media Contact:

Dan Dennison
Senior Communications Manager
Hawai‘i Dept. of Land and Natural Resources
Dlnr.comms@hawaii.gov

Why doesn’t Maui have its own “Maui Commission on Water Resource Management?”

Have you read Ordinance 5335? Bill #14 (2022)

Update to the Water Use and Development Plan for the Island of Maui, still has draft on it and dated 01-10-2022 Updated (See screenshot below, 1359 pages)

In a search of the 1359 pages, there were 976 instances of CWRM in this document.

attached as Exhibit "A", is adopted as an update to the County of Maui's Water Use and Development Plan.

SECTION 2. This Ordinance takes effect on approval.

APPROVED AS TO FORM AND LEGALITY:

Stephanie Chen

STÉPHANIE M. CHEN
Deputy Corporation Counsel
Department of the Corporation Counsel
County of Maui

2021-0010
2022-01-10 Ord Updating WUDP.docx

apt:misc:057abill01:kmatt

This Appendix is an exhibit in Ordinance 5335

BILL NO. 14 (2022)

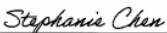
A BILL FOR AN ORDINANCE ADOPTING AN UPDATE TO THE WATER USE AND DEVELOPMENT PLAN FOR THE ISLAND OF MAUI

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. In accordance with Chapter 14.02, Maui County Code, the document entitled "Maui Island Water Use and Development Plan Draft", attached as Exhibit "A", is adopted as an update to the County of Maui's Water Use and Development Plan.

SECTION 2. This Ordinance takes effect on approval.

APPROVED AS TO FORM AND LEGALITY:


STÉPHANIE M. CHEN
Deputy Corporation Counsel
Department of the Corporation Counsel
County of Maui

ACKNOWLEDGEMENTS Michael P. Victorino, Mayor Sandy Baz, Managing Director Jeffrey T. Pearson, P.E., Water Director DEPARTMENT OF WATER SUPPLY, WATER RESOURCES & PLANNING DIVISION Eva Blumenstein, Planning Program Manager Pam Townsend, Water Resource Planner B. Alex Buttaro, Water Resource Planner Alexander de Roode, Water Resource Planner Lori Delbello, Secretary

As part of the development of this ordinance, a Temporary Investigative Group was stood up to:

I. TIG Investigation Background:

Stated Purpose of the Investigation:

Explore the Feasibility of Purchasing and Maintaining the EMI Water Delivery System and Examine Other Alternatives for Ensuring That The People of Maui County Have Authority Over the Delivery of Water, Which is A Public Trust

I can only do screenshots due to the method this document was posted.

APPENDIX 18 Board of Water Supply

Temporary Investigative Group

October 17, 2019, as Amended & Approved December 19, 2019

Feasibility of Purchasing and Maintaining the EMI Water Delivery System

Summary and Report

Comments: What happened to implementing the recommendations in this report?

The Mayor at the time was Mayor Victorino, is he culpable?

I am putting this part first so that the reader will understand the Temporary Investigative Group.

XI. Recommendations and Conclusion:

At the conclusion of its investigation, the Temporary Investigative Group shall:

- a. Present recommendations to the Board of Water Supply regarding the feasibility of the purchasing or condemnation of the EMI Water Delivery System and, if necessary, the purchase or condemnation of relevant Mahi Pono lands, including the structure of the governing entity that would have authority over the system, and/or
- b. Other strategies for ensuring that the people of Maui County have authority over the delivery of water, which is a public trust.

1. *Primary Considerations with Regard to the Public Trust:*

As noted in the Scope of the Temporary Investigating Group, the primary objective of this body was to determine how best to ensure that the people of Maui have authority over the delivery of water, which is a public trust.

It was determined that in order to ensure that all of these considerations are taken into account and integrated into a comprehensive, binding, and well-funded water plan that balances source development, surface water use, support of Hawaiian communities, and long-term maintenance of the aquifer, the following principles need to be followed:

- **Communication among and within government entities;**
- **Utilization of existing research and data, as well as funding of additional up to date research;**
- **Transparency by all government and private entities involved in water production and delivery;**
- **Accountability of all government and private entities involved in water production and delivery;**
- **Mechanisms that ensure accountability to ALL stakeholders, including decision-making in and by affected communities.**

3. Recommended Immediate Actions:

Based on all the information available to the TIG at this time, the Temporary Investigative Group is convinced that in order to protect the public's health, safety, and well-being in the short- and long-terms, actions need to be taken immediately to utilize legal and financial vehicles to secure the public's control of the EMI Water Delivery System.

A. County Application for a Long-Term Lease:

Maui County should immediately apply for a long-term (Water Lease) for the Nāhiku, Ke'anae, Honomanū, and Huelo License Areas, situated at TMK Nos. (2) 1-2- 004:005, 007 (por.), 1-1-002:002, 1-1-001:044, 1-1-001:050, 2-9-014:001, 005, 011, 012, 017 in the Makawao and Hana Districts, on the island of Maui.

The above action would be valuable on its own, in terms of supporting the next step, as well as working in tandem with "Recommended Near-Term Actions" below.

B. Re-negotiate Current Contracts with EMI/Mahi Pono

Maui County should immediately re-negotiate a new contract with EMI/Mahi Pono that does not require that EMI/Mahi Pono obtain a Revocable Permit or Lease in order for the Kamole Treatment Plant to access Wailoa Ditch waters. This lease could also include requirements that address the various issues raised in this document from repair and maintenance of the system to native Hawaiian stream rights to investment in watershed protection and addressing liability issues.

By applying for a long-term lease, the County would be better positioned to re-negotiate the contract with EMI/Mahi Pono. Excluding corporation counsel personnel costs, this option would be relatively straightforward and would not be cost prohibitive. (See current Lease Appendix 13.)

However, this option would require enforcement on the part of the County, which would only be realistic if the County were willing to fully utilize its powers and responsibilities to protect the public interest. Furthermore, long-term solutions are needed to ensure the well-being of Maui residents.

6. In Conclusion:

Determining the most efficient and effective way to ensure that the public water trust is managed and controlled by stakeholders is of the utmost urgency, given the current stressors on the water systems that serve Maui residents, residents' diverse needs, and the impending realities of the climate crisis.

Furthermore, because of the risks that will be borne by Maui residents and the County of Maui if a private entity controls the EMI Aqueduct for thirty years (which is the current stated goal of Mahi Pono/EMI), combined with the benefits of purchasing the system before any private owner has obtained a long-term water lease, the benefit of purchasing the EMI water delivery system in the near-term is much higher than it would be further in the future.

It is therefore incumbent on those who represent the interests of Maui residents to determine the most cost-effective way to achieve true control of access to water by the public as soon as possible.

This TIG believes that ownership of the EMI Water Delivery system by the people of Maui or a partnership – in the form that is most cost-effective, accountable, environmentally responsible, transparent, and meets the needs of the island's diverse stakeholders, in particular native Hawaiians – will ultimately be the only way to guarantee that the public trust is maintained and remains safely in community hands.

The TIG therefore recommends that the County of Maui take immediate steps to secure community ownership and control of the EMI water delivery system, or a partnership.

PIECES OF THE ORDINANCE THAT DREW MY ATTENTION

INTRODUCTION AND TECHNICAL APPROACH

8.0 EXISTING WATER USE

8.1 Water Use by Type

CWRM has established water use categories based on categories of water use for the purposes of water use permitting and reporting. State, MDWS (County), and private public water systems as defined by Department of Health are classified as Municipal. The MDWS billing classes are provided for comparison and reference.

Table 8-1 CWRM Water Use Categories, MDWS Billing Categories

Table 8-1 CWRM Water Use Categories, MDWS Billing Categories

Well Operator	CWRM Category	CWRM Sub-Category	MDWS Billing Classes
	Agriculture	<ul style="list-style-type: none"> • Aquatic plants and animals • Crops irrigation and processing • Livestock water, pasture irrigation, and processing • Ornamental and nursery plants • Taro • Other agricultural applications 	Agricultural
Individual Operator	Domestic Residential Domestic, includes potable and non-potable water needs Nonresidential Domestic, includes potable (and non-potable) water needs	<ul style="list-style-type: none"> • Single and Multi-Family households, including noncommercial gardening • Commercial businesses, office buildings • Hotels • Schools • Religious facilities 	<ul style="list-style-type: none"> • Single Family • Multi-Family • Multi-Family-Low Rise • Multi-Family High Rise, • Housing-County • Commercial • Religious • School-State/Private • Mixed Use • Hotel • Irrigation-Private
Individual Operator	Industrial	<ul style="list-style-type: none"> • Fire protection • Mining, dust control • Geothermal, thermoelectric cooling, power development, hydroelectric power • Other industrial applications 	<ul style="list-style-type: none"> • Industrial
	Irrigation	<ul style="list-style-type: none"> • Golf course • Hotels • Landscape and water features • Parks • Schools • Habitat maintenance 	•

INTRODUCTION AND TECHNICAL APPROACH

Well Operator	CWRM Category	CWRM Sub-Category	MDWS Billing Classes
Agency Operator	Military	<ul style="list-style-type: none"> All military use 	<ul style="list-style-type: none"> US Military Facility
	Municipal	<ul style="list-style-type: none"> State County Private 	<ul style="list-style-type: none"> City Facility State Facility Parks-County/State Irrigation-State/County US Non-Military Facility

CWRM requires a monthly report of water use from well operators. CWRM data includes only reported data and therefore is not complete, but it is the best available. In 2014, 63 percent of pumpage was for agricultural use and 28 percent was for municipal use.

Table 8-2 Well Pumpage by CWRM Use Category, 2014 (mgd)

Pumpage	Domestic	Industrial	Agriculture	Irrigation	Municipal	Municipal		Total
						MDWS	Private	
Total	0.024	0.208	57.333	4.357	25.126	25.126	4.163	91.213
Percent	0.03%	0.23%	62.86%	4.78%	27.55%	27.55%	4.56%	100.00%

CWRM Well Database, 2014

Domestic Use

Domestic use includes potable and non-potable water use by individual households, commercial uses and quasi-public uses such as religious facilities or schools. These consist of use of individual wells or other sources and include small water systems that fall outside the Department of Health definition of public water systems.¹⁰⁶ Owners and operators are responsible for water quality and maintenance of these systems. Information on private wells is collected through CWRM well construction and pump installation permitting processes. The owner or operator of any well or stream diversion works is required to measure and report monthly usage to CWRM.¹⁰⁷ It is likely that domestic use is underreported. Industrial Use Industrial use can be potable or non-potable water use for fire protection, mining, thermoelectric cooling, and geothermal uses. Industrial use accounts for less than five percent of total water use.

¹⁰⁶ A public water system is a system which provides water for human consumption, through pipes or other constructed conveyances if the system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year.

107 HAR 13-168-7

Industrial Use

Industrial use can be potable or non-potable water use for fire protection, mining, thermoelectric cooling, and geothermal uses. Industrial use accounts for less than five percent of total water use.

Irrigation Use

The irrigation use category as defined by CWRM consists of non-potable water uses including irrigation for **golf courses, hotels, landscape,** parks, schools, and dust control. Irrigation use is determined from CWRM well pumpage data for irrigation wells.

Agricultural Use

Agricultural use includes water use for aquatic plants and animals, crops/processing, livestock and pasture, and ornamental/nursery. As used here, diversified agriculture encompasses **all agricultural activities excluding sugarcane and pineapple.** On Maui this includes harvesting vegetables, melons, fruits, taro, flowers and nursery products, seed crops, coffee, and macadamia nuts. Livestock and aquaculture also contribute to diversified agriculture on Maui. The majority of diversified agriculture is located within the MDWS Upcountry District and utilizes potable MDWS water. The CWRM well database provides the following information on well pumpage and pump capacities for agricultural wells, with the **preponderance of pumpage in Central Maui supporting sugar cane production.**

Table 8-3 Pumpage and Pump Capacity of Reported Agriculture Wells (mgd)

Aquifer	Pumpage, 2014 Ave (mgd)	Pump Capacity				
		Total	Crops & Processing	Livestock & Processing, and Pasture	Ornamental & Nursery Plants	Aquatic Plants & Animals
Wailuku	0.001	1.036	0.172	0.864	0	0
Lahaina	0	19.886	19.829	0	0.057	0
Central	57.319	236.508	236.148	0	0	0.36
Ko'olau	0.014	8.858	8.019	0.036	0.681	0.122
Hāna	0	0.504	0.36	0.144	0	0
Kahikinui	0	0	0.036	0	0	0
Total	57.333	266.792	264.564	1.044	0.738	0.482

CWRM Well Database; pump capacity of AGR use types 5/29/2015; pumpage, 2014.

In the Ko'olau sector, 0.08 mgd of pump capacity listed as Agriculture has been allocated to crops and processing.

Military Use

According to the Hawai'i Military Land Use Master Plan, July 1995, on the island of Maui there are six acres of land owned by the Department of Defense and nine acres of secondary military use of non-DOD lands¹⁰⁸. These lands are served by MDWS; billed consumption for 2014 was an average of 20,126 gallons per day.

Municipal Use

Municipal use includes **County, State and Federal** water uses served by potable public water systems and privately owned public water systems (private public water systems). **The State Department of Health (DOH) regulates public systems. Maui's ground and surface water sources must meet Federal Safe Drinking Water Act quality standards administered by the EPA through the DOH. There are 16 public systems as shown in the table below.** Most of these systems are community systems while five serve specific non-residential projects or facilities. As shown in the subsequent table, **MDWS systems served 90% of the population.** Maps in this WUDP generally display the general location of water systems or their facilities rather than service areas. Groundwater supplies most public water system customers, with the exception of MDWS which also treats surface water. The Haleakalā National Park relies entirely on catchment. The figure below provides the general locations of the public water systems on the island.

Table 8-4 Public Water Systems on Maui Island, 2013

PWS No.	Name	Owner	Type	Population Served	No. of Connections	Average Daily Flow (gpd)	Source
Wailuku Aquifer Sector Area							
212	Wailuku	MDWS	C	68,976	20,287	19,611,000	Ground/ Surface
215	Upper Kula	MDWS	C	7,038	2,346	1,231,000	Surface
240	Hawai'i Nature Center	Hawai'i Nature Center	NC	75	3	300	Ground
249	Kahakuloa	Kahakuloa Acres Water Co.	C	150	48	20,000	Ground
Lahaina Aquifer Sector Area							
204	Kapalua*	Kapalua Water Co., Ltd.	C	4,200	555	450,000	Ground
205	Kā'anapali*	Hawai'i Water Service Company	C	8,000	700	2,800,000	Ground
209	Olowalu*	Olowalu Elua Associates	C	100	38	52,000	Ground
214	Lahaina	MDWS	C	18,122	3,236	5,522,000	54% Surface 46% Ground

INTRODUCTION AND TECHNICAL APPROACH

PWS No.	Name	Owner	Type	Population Served	No. of Connections	Average Daily Flow (gpd)	Source
218	Honokōhau	MDWS	C	42	15	13,000	Purchased Ground (PWS 204)
251	Mahānalua Nui Subdivison	Launiupoko Water Co., Inc.	C	587	275	100,000	Ground
Central Aquifer Sector Area							
247	Lower Kula	MDWS	C	3,192	1,064	3,431,000	Surface
254	Maunaolu Plantation	Maunaolu Plant HOA	C	100	37	19,000	Ground
255	Kula Nani	Kula Nani Estates Community Association	C	80	34	-	Purchased Surface (PWS 215)
256	Maui Highlands	Highland Services, LLC	C	26	53	10,000	Ground
258	Consolidated Baseyards	Consolidated Baseyards Association	NT	69	35	83,000	Ground
261	Maui Business Park Phase II	Maui Business Park Phase II Association	NT	65	1	5,000	Ground
213	Makawao**	MDWS	C	28,702	6,675	3,580,000	80% Surface/ 20% Ground
219	Ke'anae**	MDWS	C	270	90	44,000	Ground

Ko'olau Aquifer Sector Area							
203	Kailua	Ohanui Corporation	C	90	27	10,500	Ground
222	Haleakalā National Park	National Park Service	C	1,200	17	4,000	Catchment
252	West Kailua Meadows	W. Kuiaha Meadows HOA	C	45	15	6,000	Ground
Hāna Aquifer Sector Area							
217	Hāna	MDWS	C	1,101	367	319,000	Ground
201	Hāna Water Resources*	Hāna Ranch Partners, L.L.C.	C	816	81	120,000	Ground
220	Nāhiku	MDWS	C	107	43	41,000	Ground
243	Hāna Water Company*	Hāna Ranch Partners, L.L.C.	C	160	88	54,426	Ground
260	Kīpahulu	National Park Service	NC	2,000	4	3,000	Ground
				145,313	36,134	37,529,226	

INTRODUCTION AND TECHNICAL APPROACH

Table 8- 6 Consumption of Public Water Systems by Aquifer Sector on Maui Island, 2014 (gpd)

Aquifer Sector Areas	MDWS	Other Private Public Systems	Other Non-Large Ag Pumpage
Wailuku	4,202,663	0	407,035
Lahaina	5,388,402	3,757,309	271,146
Central	22,234,989	234,761	3,898,093
Ko'olau	995,203	14,908	27,433
Hāna	132,936	156,223	0
Kahikinui	5,222	0	5,111
Total	32,959,415	4,163,201	4,608,818

MDWS: billed consumption calendar year 2014. Other pumpage: CWRM Reports, Excluding Large Ag/Kula Ag

Federal Water Systems

The National Park Service owns the Haleakalā National Park system. The catchment system utilizes a 50,000 gallon water system tank and serves a population of about 1,200 people per day, including visitors.

State Water Systems

A State water system is defined as a water system owned and/or operated by the State that provides water service to State projects or facilities, provides source water and treatment of source water, stores water in storage reservoirs, provides booster pump capacity, conveys water through a distribution system, and distributes water to service connections. **A State water system is also defined as when a County or private source supplies a State owned and/or operated water service serving State facilities.**

On Maui, there are four state water systems owned and operated by the Department of Land and Natural Resources (DLNR), Division of State Parks.

There were 23 State owned wells and **four stream diversions** including those in the table below and the Pokakaekane Stream diversion as of 2003.¹⁰⁹ The streamflows supplying the State Parks systems are not gauged or measured and they were not evaluated for surplus source capacity. Future demands were not reported in the State Water Projects Plan.

Privately Owned Public Water Systems

There are 16 privately owned public water systems on Maui. The largest private water purveyor is the Hawai'i Water Service Company which serves several large resorts, commercial and residential properties near Kā'anapali in West Maui. Private public water system data is based primarily on reported pumpage or average daily flow data derived from the Department of Health. More information is provided in the Aquifer Sector Area Reports. Water system operators were queried regarding existing conditions and future service projections; however, only limited data was received. Most data provided by private public water systems is not categorized by use. **Privately owned public water systems present an alternative to the MDWS systems when new developments are built outside MDWS service areas consistent with County land use policies and directed growth strategies. Issues of concern include management and monitoring of private water systems to ensure the long-term sustainability of the island's water resources, competition for water resources, proper well maintenance and abandonment as related to water quality.**

8.2 Water Use by Resource

Existing water resources include *groundwater, surface water, rainwater, reused rainwater (stormwater, catchment), recycled wastewater and greywater, and desalinated water*. Fresh water is defined as water that contains less than 1,000 milligrams per liter (mg/L) of dissolved solids. Maui has exhibited the highest freshwater use of the Hawaiian Islands. ¹¹³

8.2.1 GroundWater

"Well" is defined by the Water Code as, *"an artificial excavation or opening into the ground, or an artificial enlargement of a natural opening by which groundwater is drawn or is or may be used or can be made usable to supply reasonable and beneficial uses within the State.* The inventory of wells was obtained from the CWRM database which was developed with information received from the Well Registration program and since 1988 has been supplemented with well construction and pump installation permitting information. The database is the best available information and was used to evaluate the existing groundwater resources. However, it is not complete and lacks information pertinent to the WUDP for many of the wells, such as installed

pump capacity. On January 22, 2014, the Commission required all wells in the State of Hawai'i to report monthly groundwater use including quantity pumped, chloride (and/or conductivity) concentrations, temperature, and (pump off) water-level data. *Continued exemptions include the following, "UNLESS the Commission determines a specific need for this data to resolve disputes, establish instream flow standards, or quantify the amount of water for a water use permit in a water management area, or for similar needs:*

- (a) Passive agricultural consumption (e.g. when crops are planted in or adjacent to natural springs and natural wetland areas);
- (b) Livestock drinking from dug wells or stream channels;
- (c) In non-surface water management areas, individuals on multi-user ditch systems where IFS or water use permits are not an issue;
- (d) Salt-water wells may continue to report monthly estimates of pumpage and monthly actual measured water-levels and salinity on an annual basis."¹¹⁴

8.2.2 Surface Water

Surface water use is difficult to quantify due to a **lack of surface water use data and information on stream diversions, changes in water use by large-scale agricultural systems, and difficulties associated with measuring diverted flow.** The major ditch and flume systems constructed by the historical plantations remain in use today, supplying agricultural, municipal and other uses, including kuleana uses. Due to increasing concern regarding surface water issues CWRM on January 22, 2014 **amended its policy allowing exemptions from the requirement to measure and report monthly water use to Stream Protection and Management Branch. Continued exemptions are the same as for groundwater described in the previous section.** ¹¹⁵