

**From:** [Dylan Ramos](#)  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony - Agenda Item D-8  
**Date:** Wednesday, December 6, 2023 10:27:10 PM

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Aloha Chair Chang and members of the Board of Land and Natural Resources,

Thank you to DLNR staff for proposing, for the first time ever, to give A&B a reasonable amount of water based on its actual needs and uses. I urge the board to honor the staff's recommendation and approve setting the maximum diversion amount from East Maui's streams at 27.4 million gallons a day.

I also urge the board to reject the proposal to allow the Chair to increase this cap without giving the board or the public any notice, much less a chance to review and comment. As the board knows, we have been experiencing unprecedented and ongoing drought conditions, and yet there are current proposals to grow more thirsty citrus trees in Central Maui than East Maui's streams may be able to handle. Increasing stream diversions during a time when our streams may be seeing less water than ever before may have significant impacts on the public's many interests in our public trust water resources. The board must not abdicate its kuleana to conduct its own due diligence and independent review, informed by public and expert input, in its oversight of East Maui's public trust resources.

Finally, I urge the board to mandate as a condition of this permit that A&B and Mahi Pono fix their diversion infrastructure and to use lined reservoirs, so that we can finally stop the waste of millions of gallons of water per day. Again, our drought conditions only emphasize the preciousness of our water resources, and such massive amounts of water waste can no longer be tolerated. The use of lined reservoirs in particular will allow Mahi Pono to grow much more food using much less water from East Maui's streams, and provide a much more stable amount of available water during potential water shortages and to fight fires.

Thank you for your consideration of this important matter.

Mahalo,  
Dylan Ramos

**From:** [Michelei Kahae](#)  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony for agenda item D-8  
**Date:** Wednesday, December 6, 2023 8:13:34 PM

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Aloha Chair Chang and members of the Board of Land and Natural Resources,

Thank you to DLNR staff for proposing, for the first time ever, to give A&B a reasonable amount of water based on its actual needs and uses. I urge the board to honor the staff's recommendation and approve setting the maximum diversion amount from East Maui's streams at 27.4 million gallons a day.

I also urge the board to reject the proposal to allow the Chair to increase this cap without giving the board or the public any notice, much less a chance to review and comment. As the board knows, we have been experiencing unprecedented and ongoing drought conditions, and yet there are current proposals to grow more thirsty citrus trees in Central Maui than East Maui's streams may be able to handle. Increasing stream diversions during a time when our streams may be seeing less water than ever before may have significant impacts on the public's many interests in our public trust water resources. The board must not abdicate its kuleana to conduct its own due diligence and independent review, informed by public and expert input, in its oversight of East Maui's public trust resources.

Finally, I urge the board to mandate as a condition of this permit that A&B and Mahi Pono fix their diversion infrastructure and to use lined reservoirs, so that we can finally stop the waste of millions of gallons of water per day. Again, our drought conditions only emphasize the preciousness of our water resources, and such massive amounts of water waste can no longer be tolerated. The use of lined reservoirs in particular will allow Mahi Pono to grow much more food using much less water from East Maui's streams, and provide a much more stable amount of available water during potential water shortages and to fight fires.

Thank you for your consideration of this important matter.

Sincerely, Michelei Tancayo

Sent from my iPhone

**From:** [Alexis Brissette](#)  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony for agenda item D-8  
**Date:** Wednesday, December 6, 2023 10:16:36 PM

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urge the board to Aloha, my name is Alexis Brissette and would like to share testimony, apologies if this is too late.

I urge the board to honor the staff's recommendation and approve setting the maximum diversion amount from East Maui's streams at 27.4 million gallons a day.

In addition, please reject the proposal to allow the Chair to increase this cap without giving the board or the public any notice. In light of the west Maui fires I am sure I am not alone in finding this amount of unchecked resource management egregious.

Finally, I urge the board to mandate as a condition of this permit that A&B and Mahi Pono fix their diversion infrastructure and to use lined reservoirs, so that we can finally stop the waste of millions of gallons of water per day.



Central-Maui-Soil-&-Water-Conservation-District-¶  
77-Hookele-St.,-Suite-202¶  
Kahului,-HI-96732¶

December 7, 2023

TESTIMONY BEFORE THE

Board of Land and Natural Resources

**Issuance of Revocable Permit to Alexander & Baldwin, Inc. 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 on the Island of Maui; Tax Map Keys: (2) 1-1-001:044 and 050, 1-1-002:002 (por.), 1-2- 004:005 & 007, 2-9-014:001, 005, 011, 012 & 017.**

DATE December 7, 2023 (anticipated continuation on  
December 8, 2023, at 9:00 a.m.)

TIME: 9:15 A.M.

LOCATION: In person at 1151 Punchbowl St. Room 132  
(Kalanimoku Building),

Chair Chang and Members of the Board:

My name is Mae Nakahata, Chair of the Central Maui Soil and Water Conservation District. We support the issuance of the proposed revocable permit with suggestions to better address the region's resource needs. Actively managed agriculture has shown to serve communities as the best fire protection.

The Soil and Water Conservation Districts created as an aftermath of the Dust Bowl by the Federal Government, and in Hawaii by the Territory of Hawaii in 1948, it continues today as an entity associated with the Department of Land and Natural Resources. Our mission seeks to protect Hawaii's soil and water resources, especially focused on incentivizing farmers and ranchers to have soil and water conservation as a core ethic for a successful enterprise.

I was motivated to come before you today as a result of the August fire that in addition to impacts to homes, destroyed nearly 7000 acres of ranchlands. This has resulted in an increased risk of life and property to those downhill of the fire areas.

Kihei, already prone to flooding is in danger from fire caused debris and sediments sure to flow with stormwaters.

As SWCD, we have agreed to sponsor fire recovery efforts on these lands in cooperation with USDA, NRCS. for Emergency Watershed Protection efforts. Our primary goal is to minimize erosion from these bare lands by removing debris and stabilizing the lands including revegetation. The Upcountry Maui lands we are working on is under extreme drought. It is additionally challenged by the axis deer. Any vegetation regrowth is eaten by the hungry deer so to date there is hardly any vegetation in the Pulehu-Kihei fire encompassing about 5700 acres. These are the lands that are sure to cause severe flooding in Kihei during the next storm event. Agriculture is the best protection from fire. Yes these lands burned because the grass was dry .. Other than cacti, these lands would have burned regardless due to the extreme weather. However, community impacts were minimized due to the presence of responsible landowners .. after all this was an active ranch. Over 12 miles of firebreaks were constructed overnight along with water tankers to slow the fire. It took weeks to bring the fires under control and to this day, occasional flareups continue in the Olinda area. However, again, active ranchland owners are containing these outbreaks.

These are unirrigated pastures, so we do not expect waters associated with these hearings to be used for growing of forage. However, it would be valuable to have access to water to fight these fires as well as assist with revegetation efforts. Former HC&S reservoirs are in the vicinity. Having them kept reasonably full would provide valuable fire protection and any seepage would serve to recharge the aquifer. Experts stated that HC&S's groundwater use far exceeded the calculated sustainable yield. Why? Because there was recharge occurring via reservoirs or ditches. Non evaporative water loss were not losses but deposits to the groundwater that was then pumped during dry periods.

Timely access to water is critical during fire events. Every trip that needs to double the distance to water source translates to a reduction in fire extinction efforts. After the fire, timely revegetation is critical to protect the land. We explored creating oasis of green using irrigation in the burnt area to herd the deer and allow the rest of the land to regrow. Our efforts to obtain water was in vain so I am here before you today to implore that this valuable use of water be considered in your permit conditions. If we could get most of these lands to naturally regrow, the flood risk to Kihei would have been reduced. As it is, we need to fence the land to protect the land from deer and then rely on rain for revegetation. We are

hoping to create some oasis but will need to truck recycled water from treatment plants that are located far from the burn site.

In closing, SWCD respectfully requests

- **inclusion of water for reservoirs in strategic locations to be kept near full for use during fires and,**
- **the use of water for post fire recovery efforts to prevent further natural resource damage that threaten life and property.**

Thank you for this opportunity to provide our opinion on this important matter.

Mae Nakahata, Chair  
Central Maui Soil and Water Conservation District  
[mnakahata@gmail.com](mailto:mnakahata@gmail.com)  
8082819716

**RICHARD T. BISSEN, JR.**  
Mayor

**KEKUHAUPIO R. AKANA**  
Managing Director

**JOHN STUFFLEBEAN, P.E.**  
Director

**JAMES A. LANDGRAF**  
Deputy Director



**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
<http://www.mauicounty.gov/water>

December 6, 2023

## **BOARD OF LAND AND NATURAL RESOURCES**

**December 7, 2023**

**Testimony on D-8: Issuance of Revocable Permit to Alexander & Baldwin, Inc. 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 on the Island of Maui; Tax Map Keys: (2) 1-1-001:044 and 050, 1-1-002:002 (por.), 1-2-004:005 & 007, 2-9-014:001, 005, 011, 012 & 017**

Rainfall and stream flow supplying the surface water intakes and reservoirs that serve Upper Kula and Lower Kula are increasingly less predictable. Until in recent years, the Department of Water Supply (DWS) has managed to meet supply with the available mixed surface water and well supply during periods of low rainfall and streamflow. Since 2014, DWS has proposed and implemented multiple actions to mitigate drought periods, including development of additional wells, requesting additional funding to pump well water and surface water from the Kamole Water Treatment Facility uphill, instituting drought rates, implementing an ordinance that allows the DWS Director to temporarily increase upper rate tiers and impose use restrictions to limit demand peaks, and requesting capital improvement project funds to develop raw water reservoir at the Kamole Water Treatment Facility.

In late October and through mid-November this year, the DWS had less than 70 million gallons of storage in the Upper Kula and Lower Kula reservoirs for 23 days. The record low storage levels with no inflow to the reservoirs and available wells operating at capacity would have been depleted in 35 days. During this period the DWS had multiple operational challenges boosting water uphill from Kamole, which prevented full use of the 6 million gallons per day (mgd) treatment plant capacity. However, over 4 mgd was

*“By Water All Things Find Life”*

consistently produced during this time period at Kamole to supplement supply at higher elevations. In the five-month period from mid-June through mid-November, over 4 mgd was produced and boosted uphill from Kamole for 108 days and over 5 mgd was produced for 18 days. Limiting production at Kamole to 4 mgd on a monthly basis, as proposed by Land Division staff, would severally diminish the reliable capacity of the Upcountry System.

Additional water is diverted to the Kamole forebay to maintain sufficient pressurization for water to enter the plant and to prevent taking in debris. The forebay is owned and maintained by the East Maui Irrigation Company (EMI). DWS has proposed that EMI explore reducing the forebay capacity to mitigate the amount diverted but not utilized by the treatment plant. DWS notifies EMI of anticipated draw from Wailoa Ditch to assist in managing diversions efficiently for the Upcountry System, Kula Agricultural Park and the EMI field system.

In this coming fiscal year, capital funds will be sought for design and construction of the planned raw water reservoirs at Kamole. Additional storage will increase efficient use of the treatment facility, allowing withdrawals from storage at times when high turbidity precludes direct intake from the Wailoa Ditch. This fiscal year, we are commissioning installation of higher capacity membrane filters at the Kamole facility to improve production capacity to 10 mgd at a cost of approximately \$5M. We anticipate that these investments will significantly improve reliable supply in droughts.

DWS services the infrastructure and billing for the Kula Agricultural Park but has limited insight into irrigation technology and needs for cultivated crops, and timing of park expansion. The DWS has supported the County Department of Agriculture (DOA) to improve the booster pump station efficiency at the Hamakua Ditch and reservoir to mitigate water losses. Construction to relocate the current booster pump station at reservoir #40 is anticipated to be contracted by the County DOA in the spring of 2024.

We respectfully ask that the Board in their disposition of this Revocable Permit:

1. Accommodate 6 mgd for treatment at the Kamole Water Treatment Facility on an average monthly basis until
  - a. Expansion of filter infrastructure is completed to facilitate 10 mgd production at the plant;
  - b. Modification to the Kamole forebay, if feasible, is completed to mitigate the amount needed to maintain sufficient pressurization of water and prevent debris from entering the treatment plant;
2. Accommodate 1 mgd on an average monthly basis for use at the Kula Agricultural Park to allow for sufficient supply in peak summer months until

system improvements are completed to mitigate losses and seasonal irrigation demand is verified the County DOA.

Sincerely,

For John Stufflebean, P.E., Director



PO Box 148, Kula, HI 96790  
mauicountyfarmbureau.org

December 6, 2023

TESTIMONY BEFORE THE

Board of Land and Natural Resources

**Issuance of Revocable Permit to Alexander & Baldwin, Inc. 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 on the Island of Maui; Tax Map Keys: (2) 1-1-001:044 and 050, 1-1-002:002 (por.), 1-2- 004:005 & 007, 2-9-014:001, 005, 011, 012 & 017.**

DATE December 7, 2023 (anticipated continuation on  
December 8, 2023, at 9:00 a.m.)

TIME: 9:15 A.M.

LOCATION: 1151 Punchbowl St. Room 132  
(Kalanimoku Building),

Chair Chang and Members of the Board:

My name is Warren Watanabe, Executive Director of Maui County Farm Bureau. I am here on behalf of our member farmers, ranchers and agricultural organizations on Maui. MCFB appreciates this opportunity to provide support with comments on the continued issuance of a revocable permit to A&B and EMI for the continued diversion and use of East Maui Waters for Upcountry and Central agriculture.

The catastrophic fire in August that destroyed communities also had a severe impact on agricultural lands. At the same time there were clear cases that demonstrated that actively managed agricultural lands served to stop fires. The fires that burned on agricultural lands were caused by severe drought and so the landscape was extremely dry. Coupled with extreme winds, management was difficult. HOWEVER, being active ranchlands, landowners and others immediately stepped in to create firebreaks and fight the fire. If they were not there, communities such as Kihei would have been another disaster site.

The value of active agriculture cannot be denied. And, active agriculture depends on reliable water supplies.

Without water, we cannot have successful agriculture. We are appreciative of your continued allocation of water for agriculture. When preparing the allocation quantities, we respectfully request that there be significant attention paid to the evolving weather conditions, resulting in extreme drought conditions. It should also be recognized that drought conditions do not uniformly occur. There are areas such as the Omaopio and Kula districts in Upcountry that are undergoing a major change. Dr. Thomas Giambelluca from the Department of Geography and Environment can be consulted for further verification.

Due to this weather anomaly, Farm Bureau would appreciate specific clarification of whether water use assumptions consider the needs of the Kula Ag Park and producers in the Pulehu-Omaopio area. Farmers in this district have chronically been plagued with drought of increasing intensity during the past few years. Forecasters warn that this is a continuing trend. In addition, we have been told and it has proven true that trade and Kona wind patterns no longer meet leaving the Pulehu-Omaopio areas generally dry during storm events. Heavy trade storms or Kona storms do not reach this area. Therefore, the annual water needs of this area are expected to be beyond the historical trend. The Farm Bureau respectfully requests your consideration of using the findings of the CTAHR 2019 Ag Water Use and Development Plan for the Lower Kula District when determining the water needs of the Kula Ag Park. The chart demonstrates the unique needs of various areas. Lower Kula is representative of the Kula Ag Park area.

Farm Bureau also requests reconsideration of water allocation specifically to the County for the Kula Ag Park. Occupancy and acres cultivated in the Ag Park varies independent of demand for lease or market demand. Use of historical use data can be misleading especially since parcel occupancy in the recent past was low due to management concerns that required time for resolution. Calculation of total demand should assume total occupancy that has happened in the past. This results in a daily demand of (4371 \* 440 acres) 1.945 mgd during the summer. While it is reasonable to assume that the stated Kula Ag Park allocation of 1.5 is an average, is it allowable that the higher amount be used during peak grown in this drought prone area. As mentioned above, the rest of the island may not be in a drought while Omaopio will be in a drought condition. Will irrigation water be available to these farmers?

## Table 118 –Comparison of Agricultural Water Demand

Year	Water Demand (gpd/acre)	Comment
1953 (Reference 41)	5,325	Kailua and Kāne'ohe, O'ahu
1956 (Reference 15)	1,131	Waimānalo
	2,277	Waimānalo - dry
1959 (Reference 13)	7,140 to 8,035	Sugar cane
	1,000,000	Wet crops (rice, taro, etc.)
	1,340 to 4,465	Diversified agriculture (excluding sugar cane and pineapple)
1984 (Reference 64)	6,000	Kahuku - nursery
	4,000	Kahuku - truck orchard
1995 (Reference 46)	7,722	Sugar cane
1999 (Reference 51)	4,700	Reference Crop - normal rainfall for elevations under 500 feet
	5,300	Reference Crop - low rainfall for elevations under 500 feet
	3,500	Reference Crop - normal rainfall for elevations above 500 feet
	4,200	Reference Crop - low rainfall for elevations above 500 feet
2004 AWUDP	3,400	Lāiāmilo
2011 (Reference 34)	2,577	Upper Kula - average rainfall
	3,029	Upper Kula - drought
	3,221	Upper Kula - severe drought
	3,889	Lower Kula - average rainfall
	4,371	Lower Kula - drought
	4,577	Lower Kula - severe drought

Weather patterns are increasingly variable with significant differences over small areas. There may be days in which East Maui has abundant rainfall while Upcountry and the Central Valley are dry. El Nino and La Nina conditions bring about anomalies from historical weather patterns. Averages can be used for landscape level projections, however, successful agriculture does not exist on averages. Agriculture is alive and unlike production of a computer depends on a range of variables each of which tend to vary. Weather patterns not only affect plant water requirements but affect growth rates and plant health. Lack of water not only reduces growth rates but exacerbate plant insect and disease issues. Agriculture producers dependent on production for livelihood of families and workers face failure. Current rules requiring curtailment of water use during droughts is cutting their hands and repeated occurrences result in failure .. we have seen too many such cases in Upcountry Maui.

Truck crops are inflexible of water timing. Sugarcane could withstand periods without water and recover. If water is not available during critical periods such as flowering, crop failure will result. Many leafy crops have short growing cycles ..30-60 days. Lack of water during this period will mean no crop. Livestock cannot survive without water. Asking ranchers to curtail water to cattle is not possible. There is a major demand for local production. Water access is needed to meet this demand.

**Farm Bureau respectfully requests your support for**

- **Careful evaluation of how water allocations are calculated, allowing for greater use during high evapotranspiration times and lower when rates are reduced.**
- **Consider weather anomalies and recognize that average water use over large areas without consideration of regional variations will harm agriculture.**
- **Sufficient allocation of water for Upcountry from the Wailoa Ditch system. Upcountry water systems depend on Kamole for reliable water delivery. The extensive collection system of Wailoa Ditch is a tremendous benefit when weather patterns are erratic. The shorter County collection system is less reliable and therefore must depend on pumping from Wailoa Ditch.**
- **Consider the obligation of providing for Hawaii's increased level of self sufficiency when making decisions on allocation of water for agricultural use.**

MCFB appreciates the opportunity to voice our concerns and respectfully request your support on this matter.

Warren K. Watanabe  
Executive Director  
[Warrenmcfb@gmail.com](mailto:Warrenmcfb@gmail.com)  
8082819718