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LAND USE COMMISSION  
STATE OF HAWAII

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BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of	)	DOCKET NO. A89-649
	)	
LANA'I RESORT PARTNERS	)	<b>OFFICE OF PLANNING'S POSITION</b>
	)	<b>STATEMENT; CERTIFICATE OF</b>
To consider an Order to Show Cause as to	)	<b>SERVICE</b>
whether certain land located at Manele,	)	
Lana'i, should revert to its former	)	
Agricultural and/or Rural land use	)	
classification or be changed to a more	)	
appropriate classification due to Petitioner's	)	
failure to comply with Condition No. 10 of	)	
the Land Use Commission's Findings of	)	
Fact, Conclusions of Law, and Decision and	)	
Order filed April 16, 1991. Tax Map Key	)	
No.: 4-9-02: Por. 49 Formerly Tax Map	)	
Key No. 4-9-02: Por. 1	)	
	)	

**OFFICE OF PLANNING'S POSITION STATEMENT**

The Office of Planning ("OP")'s position is that Condition 10 allows Petitioner Lana'i

Resorts Partners ("Petitioner") to use brackish water to irrigate the Manele Golf Course.

**I. PROCEDURAL HISTORY**

The Land Use Commission ("LUC") may take judicial notice of its own records to establish the following procedural history. On November 29, 1989, Lana'i Resort Partners ("Petitioner") filed a request for a district boundary amendment. On February 23, 1990, the

Office of Hawaiian Affairs and the Lanaians for Sensible Growth (“LSG”) were allowed to intervene. From March 8, 1990 through January 10, 1991, the LUC held six days of public hearings on the district boundary amendment. On April 16, 1991, the LUC issued its Findings of Fact, Conclusions of Law, and Decision and Order (“Decision and Order”) in this case.

On October 13, 1993, the LUC issued an Order to Show Cause, which raised the question of whether Lana‘i Resort Partners was violating Condition 10 of the Decision and Order. On December 29, 1993 and August 9, 1995, Lana‘i Resort Partners filed a Motion for Order Modifying Condition No. 10 of the Decision and Order and an Amendment to Motion for Order Modifying Condition No. 10 of the Decision and Order (collectively referred to as the “Motions to Modify”). Between June 16, 1994 and February 2, 1996, the LUC held various hearings on the Order to Show Cause and the Motions to Modify.

On May 17, 1996, the LUC issued its Findings of Fact, Conclusions of Law, and Decision and Order on the OSC (“OSC Order”). The OSC Order essentially found that Lana‘i Resort Partners had violated Condition 10 of the Decision and Order because it had been using water from the high level aquifer. On May 17, 1996, the LUC issued its Order Denying Amendment to Motion for Order Modifying Condition No. 10 of the Decision and Order Dated April 16, 1991.

The OSC Order was appealed to Circuit Court. On September 17, 2004, thirteen years after the Decision and Order and eight years after the OSC Order, the Hawaii Supreme Court found that the LUC’s interpretation of Condition 10 was incorrect. The Supreme Court found that Condition 10 did not prohibit the use of all water from the high level aquifer, but only potable water from the high level aquifer. The Court remanded the matter back to the LUC for their further interpretation of Condition 10, including a definition of the term “potable.”

In 2006, the LUC denied dispositive motions from both LSG and Petitioner, and began evidentiary hearings on the definition of “potable water” as used in Condition 10 (“definition hearings”). The 2006 definition hearings were halted in order to allow the parties to negotiate a settlement. In November of 2006, the LUC was informed that negotiations were unsuccessful.

In 2007, both the Office of Planning and Petitioner filed separate motions to amend Condition No. 10 of the 1991 Decision and Order. Both motions recommended the adoption of a numerical chloride standard as a means of defining the term “brackish water.” LSG objected, arguing among other things, that the evidentiary hearings on the definition of “potable water” needed to be concluded. On December 15, 2009, the Office of Planning filed a revised motion to amend the 1991 Decision and Order.

On January 25, 2010, the LUC issued its Order Vacating 1996 Cease and Desist Order; Denying Office of Planning’s Revised Motion to Amend Findings of Fact, Conclusions of Law, and Decision and Order Filed April 16, 1991; and Granting Petitioner’s Motion for Modification of Condition No. 10, with Modifications (“2010 Decision and Order”). The 2010 Decision and Order granted Petitioner’s motion to amend with modifications, denied OP’s motion to amend, and vacated the 1996 Cease and Desist Order as moot. The LUC restated Condition No. 10 so that it now included a chloride standard and testing requirements as requested by Petitioner, set a maximum amount of water that could be used for golf course irrigation, and clarified that Petitioner was still subject to regulation by other agencies, such as the Commission on Water Resource Management and the County of Maui. A chloride standard was an objective definition of brackish water. The definition hearings were then halted as moot. The decision was timely appealed. The Hawaii Intermediate Court of Appeals reversed the 2010 Decision and Order and remanded the matter for further hearings.

This case was then assigned to a hearings officer to conduct a contested case evidentiary hearing on the definition of potable water as used in Condition 10.

## **II. FACTUAL SUMMARY**

Often, when one refers to the underground aquifer, one refers to the basal lens of fresh water which “floats” on top of the denser seawater below the island. Much of the freshwater comes from rainfall which soaks into the ground, and eventually percolates to the basal lens. On Lana‘i, however, there is a significant amount of groundwater which is trapped within a multitude of interconnected, compartmentalized volcanic partitions called dikes. In addition to rainfall, a significant portion of the groundwater within this dike system comes from fog drip which occurs when passing cloud moisture gathers on forest vegetation, coalesces into larger drops, and falls onto the forest floor. Like rainfall, fog-drip soaks into the soil and percolates into the dike system below the ground. Although some water leaks through these dikes, the rate of water feeding into these dikes is higher than the rate of water leaking out of these dikes so that substantial amounts are kept within these dikes sufficient to supply drinking water for the island of Lana‘i.

These dikes can cause groundwater levels to occur at relatively high elevations, far above sea level. Accordingly, on Lana‘i, the aquifer defined by this dike system is called the “high level aquifer.” This is not to say that groundwater within this dike system is separated from the ocean. Although normally not subject to saltwater intrusion from the ocean, some wells in the high-level aquifer on Lana‘i show evidence of geothermal warming and contain water that has mixed with warmer and rising ocean water, thereby becoming brackish.

At this time, brackish water wells are being used for irrigation. All of these wells are within the high-level aquifer.

On the island of Lana‘i, the best available estimate is that Lanai’s sustainable yield is 6 millions of gallons per day (“mgd”). The yield does not take into account infrastructure or cost restrictions. A recent study that analyzed climate change impacts has indicated that the sustainable yield does not need to be lowered at this time.

On March 29, 1990, the Commission on Water Resource Management (“CWRM”) considered a petition to designate the island of Lanai as a Ground Water Management Area. Although CWRM denied the designation request, it did order, among other things, additional monitoring and required CWRM to re-institute water management proceedings if usage increased to 4.3 mgd based on a 12-month moving average. Water usage significantly decreased when Dole Plantation went out of pineapple production. Currently, the island of Lana‘i pumps approximately 1.5 mgd (12-MAV as of April 2016).

CWRM also monitors chloride levels and well ground water heights. The irrigation of Manele Golf Course with brackish water has not prevented the continuous and normal functioning of the potable water wells on Lana‘i considering chloride levels and well ground water heights. Given the sustainable yield and the amount of water currently being used, the use of brackish water wells to irrigate the Manele Golf Course do not appear to be causing problems with the availability of water from current drinking water wells. Based upon the inclusion of brackish water wells within the Lana‘i Water Use and Development Plan, OP does not foresee future problems with the use of brackish water wells for golf course irrigation.

### III. ARGUMENT

#### A. Condition 10

Based upon the wording of Condition 10 and the transcripts of the district boundary amendment hearing, Petitioner was specifically required to use “alternative non-potable water . . . for golf course irrigation,” and brackish water was an example of “alternative non-potable water.”

Condition 10 of the Decision and Order reads as follows:

10. Petitioner shall not utilize the potable water from the high-level groundwater aquifer for golf course irrigation use, and shall instead develop and utilize only alternative non-potable sources of water (e.g., brackish water, reclaimed sewage effluent) for golf course irrigation requirements.

In addition, Petitioner shall comply with the requirements imposed upon the Petitioner by the State Commission on Water Resource Management as outlined in the State Commission on Water Resource Management's Resubmittal – Petition for Designating the Island of Lana'i as a Water Management Area, dated March 29, 1990.

Condition 10 was stipulated to by both Petitioner and OP. See Tr. 4/11/91, page 13, lines 5-6. OP's interpretation of Condition 10 in which “alternative non-potable water” includes brackish water is consistent with the transcripts where OP questioned Mr. Thomas Leppert as to whether Petitioner would agree to utilize “only alternative sources of water, in other words, brackish or effluent for golf course irrigation purposes,” and Petitioner's affirmative response. See Tr. 6/12/90 at page 82, line 25 through page 83, line 3. This interpretation is also consistent with the County of Maui's position “[t]hat unclaimed storm runoff, brackish water, reclaimed sewage effluent should be encouraged for use towards the irrigation of the golf course,” and Petitioner's concurrence with that position. Tr. 3/9/90, page 27, line 25 through page 28, line 3.

#### B. Definition of Potable Water

There are different ways in which one may define the term “potable water.” What is essential for this case is how the term was used in Condition 10. The use of general definitions or

definitions intended for specific and different purposes are of limited use in this analysis. For example, Miriam Webster defines “potable” as “suitable for drinking.” The Oxford Dictionaries defines the term as “Safe to drink; drinkable.” Hawaii Administrative Rules chapter 11-20 establishes maximum containment levels (“MCL”) for various chemicals and other parameters for regulating drinking water quality for public water systems. Notably, the Department of Health has not established an MCL for chloride concentrations in drinking water. These definitions, however, are of limited use in understanding the term as used in Condition 10.

In its Water Resources Protection Plan (June 2008, page 10-1), CWRM does not define “potable,” but does define “brackish” as follows:

While CWRM defers to DOH on most water quality related matters, CWRM management principles utilize operational water quality definitions based on chloride concentration as follows:

- Fresh Water: Chloride concentrations from 0 to 250 milligrams per liter (mg/L)
- Brackish Water: Chloride concentrations from 251 to 16,999 mg/L
- Seawater: Chloride concentrations of 17,000 mg/L and higher.

The term “brackish” is also used in Condition 10.

OP’s position statement focuses on Condition 10’s reference to “alternative non-potable sources of water (e.g., brackish water...)” because one can only understand what “potable” means in Condition 10 if one understands what “alternative non-potable” means. In addition to the language of Condition 10, OP reviewed the testimony at the 1990 district boundary amendment hearings and the Findings of Fact at the 1996 Order to Show Cause decision. OP also reviewed relevant provisions outside of the LUC context and the practical experiences on Lana‘i as a validation and confirmation of our conclusions. Based on this analysis, OP concludes that the brackish water being used for irrigation of the Manele Golf Course is not potable water as the

term is used in Condition 10, and Petitioner is not violating Condition 10 as alleged in the Order to Show Cause.

**C. Testimony at the District Boundary Amendment**

The record of the initial district boundary amendment demonstrates that people used the term “non-potable” and the term “brackish” interchangeably. For example, Thomas Leppert of Lana‘i Resort Partners indicated that it was their intention to utilize brackish water, and not potable water. Tr. 3/9/90, page 77, lines 1-6.

The LUC Chair, Renton Nip, equated the terms “non-potable” and “brackish” when asking: “With respect to the potential for using nonpotable sources, or brackish water, easier put, where else do they use brackish water, and to what success.” Tr. 7/13/90, page 31, lines 2-4.

Counsel for LSG, Arnold Lum, also used the terms “nonpotable” and “brackish” interchangeable when asking: “The statement that, in response to his question was something to the effect, statement by Dr. Kumagai, that with extraordinary effort, it would be possible to obtain a nonpotable or brackish water source for the golf course in time to use that water for the golf course when its built.” Tr. 7/13/90, page 35, lines 8-13.

A number of other references to brackish water being used for golf course irrigation also support this conclusion that brackish water could be used for golf course irrigation. Tr. 3/9/90, page 77, line 17 to page 78, line 4; page 141, lines 2-5; Tr. 6/12/90, page 113, line 21-25; and Tr. 8/30/90, page 63, lines 11-21.

**D. The Order to Show Cause Decision and Order**

On May 17, 1996, the LUC issued its Findings of Fact, Conclusions of Law, and Decision and Order on the Order to Show Cause (“OSC Order”). The OSC Order found that brackish water or effluent was being used to irrigate the Manele Golf Course. In Finding of Facts 15 and



16, the LUC specifically found that Wells 1 and 9 provided non-potable, brackish water for golf course irrigation, and that Well 12 provided brackish water mixed with effluent for golf course irrigation. It stated as follows:

15. Irrigation for the (golf course) is currently being supplied primarily from brackish Wells No. 1 and 9, located in the Palawai Basin, which are within the high level aquifer. Treated waste water effluent and brackish Well No. 12 provide minor amounts of the irrigation supply.

16. Petitioner has completed an extended pump test of Wells No. 1 and 9, which are within the high level aquifer and provide non-potable, brackish water.

Petitioner has completed an extended pump test of Wells No. 1 and 9, which are within the high level aquifer and provide non-potable, brackish water. The extended pump test found no anomalous behavior in the wells, and no deterioration of the quality of the wells. Petitioner found no evidence of impact upon the quality or water level of the potable water wells located at a higher elevation within the high level aquifer.

**E. Terms Outside of the LUC**

The definition of brackish water as an example of alternative non-potable water is consistent with EPA secondary guidelines which recommend against using water above 250 milligrams per liter (mg/l) of chlorides for drinking water and with Hawaii's 2008 Water Resource Protection Plan that states:

Water exhibiting chloride concentrations greater than 250 milligrams per liter (mg/L) is generally considered unacceptable for drinking purposes. The county water departments generally limit chloride levels of water within their municipal system to less than 160 ppm.

**F. Plans and Practices**

The definition of brackish water as an example of alternative non-potable water is also consistent with Lanai's Water Use and Development Plan which includes the use of brackish

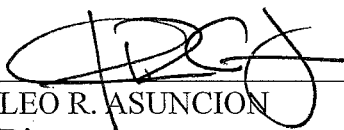
water wells as sources for golf course irrigation. The inclusion of brackish water wells to irrigate the Manele Golf Course in the Water Use and Development Plan is not only the considered judgment of water use decision-makers, but is also based upon objective tests and practical experience. Decades-long measurements of Lanai's water system show that chloride levels of these brackish water wells have been relatively stable, and that potable water wells chlorides have remained stable and functional as well. These results are what would be expected given the 6.0 mgd sustainable yield and the current pumpage of approximately 1.5 mgd use of water on Lana'i.

#### **IV. CONCLUSION**

For all the aforementioned reasons, OP believes "potable water" as used in Condition 10 excludes alternative water such as brackish water, that Condition 10 allows Petitioner to use brackish water to irrigate the Manele Golf Course, and that Petitioner is using brackish water consistent with Condition 10 to irrigate the Manele Golf Course.

DATED: Honolulu, Hawaii, August 12, 2016.

OFFICE OF PLANNING  
STATE OF HAWAII

  
LEO R. ASUNCION  
Director

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**CERTIFICATE OF SERVICE**

I hereby certify that on the date below a true and correct copy of the foregoing OFFICE OF PLANNING'S POSITION STATEMENT was duly served on the following parties at their last known addresses via United States mail, postage prepaid:


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DATED: Honolulu, Hawaii, August 12, 2016.

  
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