

Lanai Resort
Docket No. A89-649

Testimony of W. Roy Hardy
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Commission on Water Resource Management
State of Hawaii Department of Land and Natural Resources
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A. Definition of "Potable."

The Commission on Water Resource Management ("CWRM") does not specifically define the term "potable." Hawaii Revised Statutes do not define the term "potable water" nor does the WRPP define the term, and the Water Code HRS §174C-66 specifically identifies the Department of Health as having the jurisdiction to exercise the powers and duties vested in it for the administration of the State's water quality control program as provided by law. However, the common understanding of the term can be found in the Oxford and Merriam-Webster dictionaries which define potable as water that is safe to drink. Also, one of the four public trust uses the Commission is tasked to protect is domestic use, which is defined in 174C as:

§174C-3 Definitions - "Domestic use" means any use of water for individual personal needs and for household purposes such as drinking (emphasis added), bathing, heating, cooking, noncommercial gardening, and sanitation. Hydrology

I have read and concur with the Office of Planning's ("OP") testimony of Lanai's hydrology in general terms. The main source of ground water is high-level via vertically intrusive volcanic dikes found throughout the island along the three major rift zones extending away from the Palawai caldera. Current sustainable yield, which under chapter 174C, Hawaii Revised Statutes, means the maximum rate at which water may be withdrawn from a water source (in Lanai's case, the Central Aquifer Sector) without

impairing the utility or quality of the water source as determined by the Commission, is 6 mgd. The single significant surface water feature on Lanai is on the windward side from Maunalei valley.

B. The Water Resource Protection Plan.

The Water Resource Protection Plan (WRPP) is part of the larger Hawaii Water Plan (HWP) that sets the protection constraint criteria on surface and ground water natural sustainability. A general summary of this protection constraint criteria are the sustainable yields for ground water and instream flow standards for surface water. Lanai has a sustainable yield of 6 mgd. The number does not differentiate between fresh and brackish, potable or non-potable water. Seawater is not part of the sustainable yield but does act to limit the utility of ground water by making it too salty for untreated irrigation use or safe human consumption. The WRPP uses chloride concentrations to define fresh, brackish, and seawater for purposes of managing the resource in the use of ground water counted against sustainable yield and for the proper construction of wells in accordance with the Hawaii Well Construction and Pump Installation Standards. The definitions of fresh, brackish, and seawater are discussed in the WRPP. Fresh water has a chloride content limit up to 250 ppm, which is based on the U.S. EPA secondary guideline and on the practices of the county department of water supplies. Brackish water has chloride concentrations between 250 – 16,999 ppm. Seawater has chloride concentrations of 17,000 ppm or greater.

C. The Water Use and Development Plan

The Lanai Water Use and Development Plan (“Lanai WUDP”) is also a part of the larger HWP and is where the development plans of the county and the water use to meet those plans merge at the county level. The Lanai WUDP adopted in 2011 involved extensive review by the Lanai Water Advisory Committee and the Maui Department of Water Supply, and was approved by the Maui Board of Water Supply, the Maui County Council, and the Commission on Water Resource Management. The Lanai WUDP identifies Wells 1, 9, and 14 as sources for landscaping at Manele, which would include the golf course. According to the plan, reclaimed effluent is also blended into the ground water from these wells for the golf course irrigation.

D. Water Management Areas

HRS § 174C-41 authorizes CWRM to designate areas as "water management areas." In designated water management areas, HRS § 174C-51.5 authorizes CWRM to require permittees to implement dual-water systems with both potable and non-potable sources of water to make efficient use of non-potable sources of water to and minimize the use of potable water for non-potable needs such as irrigation.

A request to designate the island of Lanai as a water management area was denied on March 29, 1990.