

Maui County Department of Water Supply
 Maui Island Water Use & Development Plan
Community Workshop – Central/South
 November 29, 2016 – 6:00 p.m. to 9:00 p.m.

Meeting Summary

This was the 3rd workshop in the 3rd round of workshops scheduled in 2016 on the Maui Island Water Use and Development Plan (WUDP) by Department of Water Supply (DWS) staff. Approximately 23 people attended in addition to DWS staff. This set of workshops is focused on WUDP strategies to address the key issue, while two earlier set of public meetings in 2016 were focused on issues and preliminary strategies.

Written materials provided by DWS staff included the Agenda, Central/South Region description, Strategies Matrix, and Summary of Central/South Meetings and Surveys. All prior materials are online at www.mauewater.org – click on Water Use and Development Plan. DWS staff reviewed the Central/South Region handout, and then reviewed the strategies identified at prior Central/South meetings and the matrix with the group as a whole. The following questions and comments were noted by DWS staff at the meeting. DWS comments are provided as indicated.

Subject	Comment	Response
Wells and sustainable yield	There is a significant variation in winter versus summer pumpage reports for Wailea. Usage is up to 4 mgd, close to sustainable yield.	<i>(Post meeting note: sustainable yield of the Kamole aquifer system is 11 mgd).</i>
WUDP preparation	Add titles to tables, define abbreviations, unit of water, etc.	The handout is not a finished product; we will do so.
Wells	Is there a private well serving lands around Maui Highlands?	There are no domestic production wells according to the CWRM (Commission on Water Resource Management) well index.
Wells	DWS Maui Lani wells are actually in Wailuku and Central aquifer sectors, not just Wailuku sector.	We will make a correction.
Wells and sustainable yield	Who controls irrigation wells?	Monthly reporting to CWRM is required, but some wells are not reported. Unless wells are within a groundwater management area designated by CWRM, there is no allocated limit on water use although approved pump size permitted in well construction and pump installation permit limits maximum use .

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		Pumpage close to 90% of sustainable yield, among other factors, is a criterion considered in a petition to CWRM to establish a groundwater management area.
Public trust resource	Does the county pay for surface water, which is a public trust resource? 'Iao Tunnel is owned by Wailuku Water Company.	No, the county pays to use the conveyance (ditch) not for the water itself.
Projected demand	Rather than using annual average demand, a range would better show low and high demands.	The WUDP will address this.
Projected demand	Population based demand is misleading since it does not include visitors; tourist growth is concentrated in south Maui and west side. Should use de facto population.	The WUDP bases future demand on the projected community plan growth rates applied to 2014 water consumption, which accounts for defacto population. The preliminary Introduction online explains why we used resident population. <i>(Post meeting note: Defacto growth rates are not defined in the Socio-Economic Forecast, but growth rates take into account economic growth which reflects visitor growth.)</i>
Projected demand	Will demand be broken down by DWS, private water systems, etc.?	Yes
Drought	In drought years who has control over over pumping?	See above response regarding monthly reporting to CWRM. CWRM could also consider declaring a water shortage in a designated management area <i>(Hawai'i Administrative Rules §13-171-42(c))</i> , but it has never done so.
Water management area	Does it take long to designate a water management area?	It can take several years. (It has taken over 10 years and in some cases longer to designate water management areas.)
Wells	Private well owners are notorious for not submitting reports to CWRM. How does this relate to the WUDP and efforts to characterize water use?	CWRM is making an effort to improve reporting. We may follow up with some larger well owners if reports are not submitted. The WUDP includes use assumptions about small

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		domestic well and other populations not served by public water systems.
Growth boundaries	How and when are growth boundaries determined, and who makes the determination?	They are set forth in the Maui Island Plan's Directed Growth Plan, adopted by County Council in 2012
HC&S scenarios	Assuming the WUDP is adopted, what happens if HC&S's water use changes significantly from the assumptions in the plan?	The WUDP will present a range of scenarios; if there are major zoning changes from Agriculture to a different designation, then the WUDP would likely need to be amended. However, most of the cultivated lands are designated Important Agricultural Lands.
Land use full build-out scenario	Why does the land use based scenario—zoning including agriculture have such a high demand (handout page 14)?	Much of the undeveloped land is zoned for agriculture; applying a diversified ag water use rate to this acreage results in a high demand. Based on projected population and economic conditions this scenario is highly unlikely.
Agricultural use	Calling out water wasted by kuleana ditches bothers the meeting participant (handout page 17): "Even if access to stream water through an 'auwai is part of the customary Hawaiian practice of growing kalo on kuleana lands, if practicable measures are available to prevent or minimize waste of the surface water resource, they should be utilized. ..."	This language is from the Na Wai 'Eha Contested Case. CWRM concluded that much water is lost during conveyance and clarifies that despite customary practices, since lo'i kalo is not an instream use it must show a lack of practicable measures for mitigating losses. The reason for inclusion of the language is education.
Agricultural use	Where does Kula Ag Park get its water?	The East Maui Irrigation System Hamakua Ditch supplies nonpotable water.
Agricultural use	Will the WUDP include anything about creating irrigation districts?	An update of the State Agricultural Water Use and Development Plan is in progress and should address management of the irrigation systems. However, community input about issues and solutions can help guide the State in its update.
Ditch systems	The community agrees the WUDP needs to look at management of the	

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	ditch systems, which also supply the municipal system.	
Taro	In the Ke'anae aquifer system, there was 900 -1400 acres of taro around 1850, using 4-6 mgd	<i>Post meeting note: statement made at the meeting; source of information not provided.</i>
HC&S scenarios	Estimated demand for HC&S's Diversified Ag Plan (scenario 1 on handout page 20) is 107 mgd, while 100% of Important Ag Lands farmed (scenario 2) is 69-124 mgd. Why is scenario 2 higher? Why are the HC&S scenarios inconsistent with the HC&S 2016 submittal to CWRM?	Scenario 1 reflects HC&S's estimates for its Diversified Ag Plan by crop type. Scenario 2 is devised for the WUDP as stated and although fewer acres are cultivated, the mix of crops and water use rates are different from Scenario 1.
HC&S scenarios	It is confusing to sort out acreages farmed and water demands in the handout versus HC&S's 2016 filing. A&B calls for use of 32,000 acres.	HC&S owns 43,000 acres, 34,900 are under cultivation regardless of ownership, and IAL lands constitute 27,294 acres. HC&S's Diversified Ag Plan calls for use of full use of the cultivated acreage. HC&S's 2016 info is available on the CWRM website. Briefs for contested cases may reference only those lands associated with each contested case. We will sort this out and work on a clear presentation.
Drought scenario	The chart showing sustainable yield in relation to drought yield makes no sense (handout page 21).	The chart shows projected demand for the Wailuku and Central Sectors, and the total demand for both sectors, (Total Base Case, Total Low Growth and Total High Growth). Sustainable Yield and sustainable yield under Drought conditions (termed Drought Yield) are shown for comparison.
Alternative water sources	What is R-2 water produced by the Kahului wastewater reclamation plant used for? Can R-1 and R-2 water be used on fuel crops?	We do not know the answers. <i>(Post meeting note: A distribution system for R-2 water is not developed. It is used at the reclamation facility for landscape and industrial uses, with some sold for dust control. R-2 water is approved for use on sugarcane, so R-1 and R-2 water could be used for</i>

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		<i>fuel crops, restricting human contact with R-2 water.)</i>
Alternative water sources	What are the costs of reclaimed water?	Higher than potable water. They are summarized in the strategy matrix.
HC&S scenarios	When HC&S changes over, it will impact the ability to manage resource; management will be fragmented.	Availability of surface and ground water, EMI system, contested cases - the WUDP should acknowledge and provide scenarios to address these uncertainties.
WUDP preparation	The plan needs costs, responsibility, prioritization, funding sources, and relation to county budget.	While the WUDP is not a CIP program it will provide an implementation plan at a plan level.
WUDP Meetings	The document handed out is not a plan and should not say it is a plan.	We agree; the meetings were not advertised as a review of a draft plan but rather discussion of solutions to address the key issue.
WUDP preparation	The community plan update process has been frustrating and is not well staffed. The WUDP should provide reasonable scenarios for different parts of the island and this information will be available to support preparation of the community plans. Timeline, cost and how implemented would provide a complete workable WUDP.	We are working with the Planning Department.
Strategies		
WUDP preparation	Impressed with principles. Confusion as to when this becomes a plan. Will the list of strategies become condensed into a strategy for each region?	Some strategies will apply island-wide, which others will more specifically address the region. This is just a generalized list.
WUDP preparation	WUDP needs to talk about how we can work within the State Water Code. It needs to be easier to designate water management areas.	
WUDP preparation	Where costs are higher than revenues then the WUDP should provide an indication that rates will need to be increased.	The WUDP would generally address costs but not be specific about rates.
WUDP preparation	Lists of strategies should have prioritizations.	Priorities will be addressed.
WUDP preparation	There is a gap or lack of connection between goals and values versus	

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	strategies. A value is to protect public trust uses but the strategies do not necessarily support this value.	
WUDP preparation	Do we know which are the cheapest sources of water- is surface water for municipal uses cheapest? Need more information as a basis for comparing strategies. What is the timeline?	We are looking for input about the strategies from a policy perspective- are they acceptable. If not acceptable on their face, we want to know that.
Alternative water sources	We've been talking increasing raw water storage for years – there is a 2008 Bureau of Reclamation study on reuse.	<i>An Appraisal of Stormwater Reclamation and Reuse (An Appraisal of Stormwater Reclamation and Reuse Opportunities in Hawai'i.</i> http://files.hawaii.gov/dlnr/cwrm/planning/hsrar_element3.pdf
WUDP preparation	How are we defining the column Implementation Risk?	Generally, how viable based on constraints.
WUDP preparation	Add a column for Environmental Risk	
WUDP preparation	It is inevitable that water rates are going to increase. Support for increased DWS funding needs to be based on facts. Provide scientific background for each strategy and consequences of not implementing it.	
WUDP preparation	Need info on relation of strategies to values, principles, science in order to compare them.	
Conservation	Water conservation should be put into context- the more conservation is needed, the more aggressive conservation needs to be. Always need adequate streamflow.	Up to 70% of water used in south Maui is outdoor use. Water use restrictions such as watering times has limited support.
WUDP preparation	Who is using the WUDP? The WUDP should provide information to assist community plan process- amount of water needed, where from, strategies, costs to develop resources and revenues, conservation, etc.	DWS, County Council, CWRM, community planning process.

Review of Strategies

The Strategy matrix (page 33 of the handout) was reviewed to see if participants agreed or not, and additional thoughts on solutions, as provided below. Comments on strategies generally are summarized above.

Type	Strategy
Water management	Collaborate with and support the CWRM. It does not have resources to do everything.
Water management	Amend the State Water Code to facilitate designation of water management areas to increase controls over resources.
Availability of water	Provide a vision for long-term management of the major ditch systems.
Water management	Move to a one-water system (similar to Honolulu), working toward replacement of freshwater with reclaimed water.
Surface water use	Stormwater reuse and adding raw surface water storage (Kamole, Olinda or Pi'iholo WTPs).
Groundwater use	Eastward basal groundwater development, 1000 foot elevation (Ha'iku aquifer): This is a young geologic formation- how much supply is built up?
Conservation	Conservation actions and education are supported. The more water that needs to be conserved, the more aggressive the methods used. Always need adequate streamflow. Incentives are preferable; restrictions on new development landscaping may be acceptable.
Conservation	Do not use potable water for south Maui resort landscape needs.
Water quality	All support wellhead protection.
Management, conservation	Ongoing education is necessary.

Summary prepared by DWS staff, November 30, 2016