



HAWAII WATER SERVICE

P.O. Box 384809

Waikoloa, HI 96738 **Tel:** (877) 886-7784 toll-free

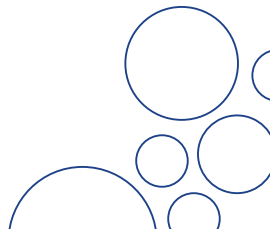
Appendix 3. Table 3: Alternative Analysis

	A. Analysis of potable alternatives	B. Analysis of Non-Potable Alternatives
Municipal Sources	The primary water source for the Kapalua area are two potable water wells. There is a possibility of an interconnect with the County of Maui but this option would need to be explored for feasibility.	The only non-potable source of water is water from the Honokohau Ditch, which is already being used for non-potable uses in the Kapalua area. County of Maui uses ditch water as a source of supply and water is treated at the Mahinahina Water Treatment Plant. In order to use this supply, Hawaii Water and County of Maui would need to construct an interconnect between the two systems.
Wastewater Reuse	Hawaii Water is not aware of any direct or indirect potable reuse projects in West Maui. the nearest wastewater treatment plant to the Kapalua service area is the Lahaina Wastewater treatment plant, approximately 4.5 miles to the south. If direct or indirect potable reuse became available as an option, a transmission system would need to be constructed for the source to be viable.	Recycled water is not available in the Kapalua service area. Maui County is currently working on a recycled water project to bring R-1 water to the Kaanapali area from the Lahaina Wastewater treatment plant. In order to bring R-1 water to Kapalua, a transmission pipeline approximately 4.5 miles would need to be constructed. Hawaii Water is not aware of the balance of R-1 water available from Lahaina Wastewater Treatment plant. However, if there is sufficient supply, R-1 could be a feasible alternative to ditch water.
Ditch System	There is an existing agreement between Hawaii Water and MLP to purchase water from the Honokohau Ditch for non-potable uses. Raw water from the ditch is not suitable for potable use. A water treatment plant would need to be constructed in order to use water from the ditch. A feasibility study has not been completed due to the likely high capital costs associated with the construction of a water treatment plant.	MLP diverts water from the Honokohau stream at diversion 770 deep in the mountains. This water is utilized for non-potable uses in the Kapalua service area. This offsets the need for well water for non-potable use. To the extent this is an alternative, it is already being used.
Desalinization	While desalinization is an option, it is not feasible for Hawaii Water to explore due	No feasibility studies have been completed for desalinized non-potable



HAWAII WATER SERVICE

	to the small customer base in Kapalua and Kaanapali. However, Hawaii Water is aware that Maui County has commissioned a consultant to deliver a desalinization feasibility study. Hawaii Water would be open to a partnership with the County if desalinization is feasible.	water. One alternative for non-potable use is brackish water wells. This is common for irrigation and other non-potable uses where appropriate.
Surface Water	There are no surface water options other than Honokohau Stream, which has already been discussed.	There are no surface water options other than Honokohau Stream, which has already been discussed.
Other		





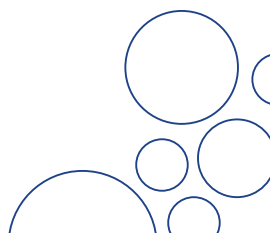
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Appendix 4. Public Interest.

Municipal water service is in the public interest because it ensures the health and safety of the Kapalua community. According to 174C-2(C) municipal and public water supply are in the public interest. Hawaii Water takes care to ensure water losses are minimized and that water is used economically in the community. Additionally, Hawaii Water operates the potable water wells in such a manner that minimizes environmental impact and preserves the proper ecological balance and scenic beauty.





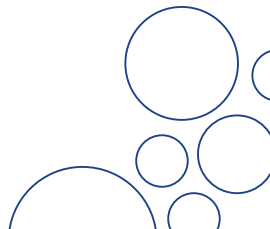
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Appendix 6. Efficiency

Hawaii Water participates in annual water loss audits pursuant to AWWA M36 standards. The audit is a level 1 validation. Hawaii Water actively responds to water leaks, proactively and routinely changes meters according to AWWA M6 standards. Hawaii Water is in the process of completing a conservation master plan for the Kapalua service area which would set goals and standards to reduce water use.





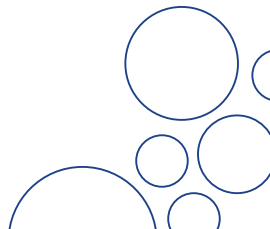
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Appendix 7. Table 4: 12-Month Average Calculation as of the Date of Designation for Existing Uses.

MM/YY	Well 1 [gallons]	Well 2 [gallons]	Days	Average Daily Pumpage for the Month (GPD)
Sep-21	7,306,000	6,637,000	30	464,767
Oct-21	7,695,000	7,220,000	31	481,129
Nov-21	7,598,000	6,839,000	30	481,233
Dec-21	6,201,000	5,683,000	31	383,355
Jan-22	5,414,000	4,763,000	31	328,290
Feb-22	6,135,000	5,374,000	28	411,036
Mar-22	9,966,000	8,990,000	31	611,484
Apr-22	6,646,000	6,051,000	30	423,233
May-22	7,089,000	6,727,000	31	445,677
Jun-22	6,742,000	6,507,000	30	441,633
Jul-22	8,109,000	7,752,000	31	511,645
Aug-22	7,850,000	6,975,000	31	478,226





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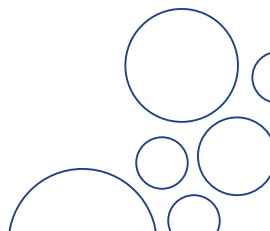
Appendix 8. Photos of source and meters.



Kapalua Well 1 Well Head.



Kapalua Well 1 Well Head





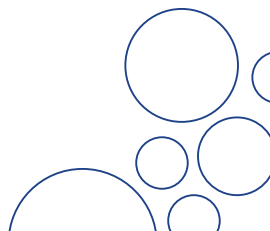
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Kapalua Well 1 Flow Meter



Kapalua Well 1 Flow Meter

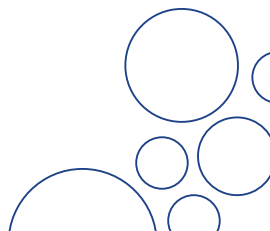




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Kapalua Well 2 Well Head

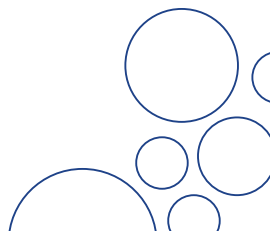




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Kapalua Well 2 Well Head





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Kapalua Well 2 Flow Meter



Kapalua Well 2 Flow Meter

