

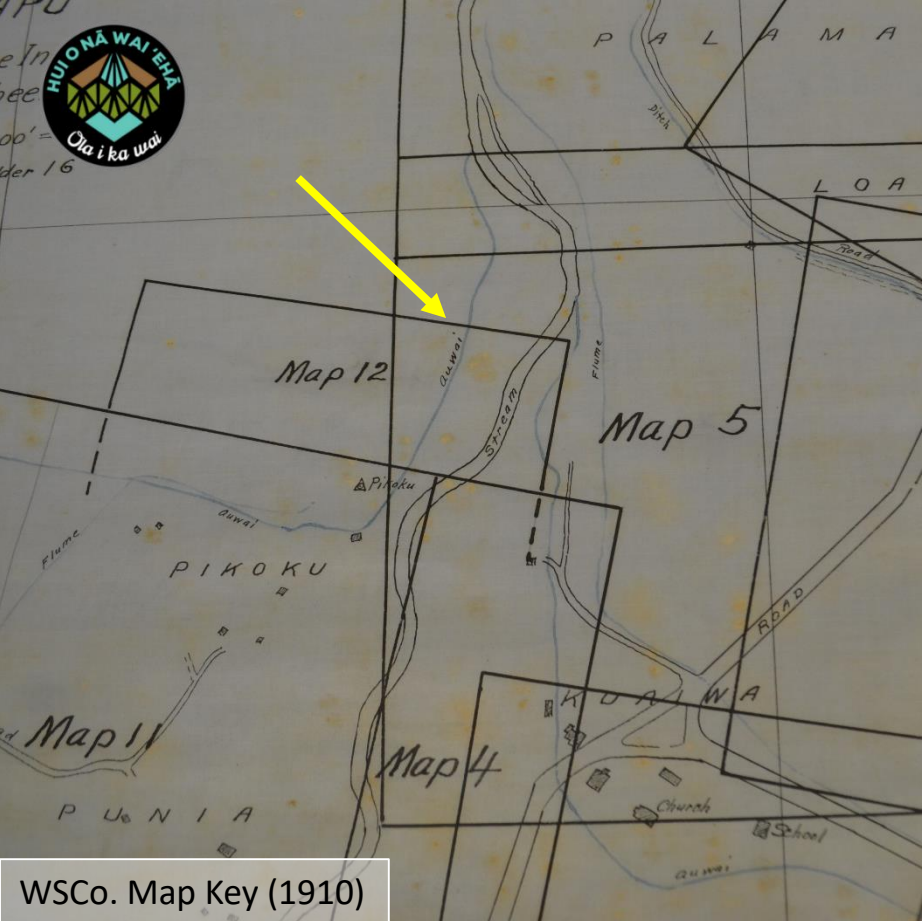


South Waikapū *Malau* Kuleana 'Auwai

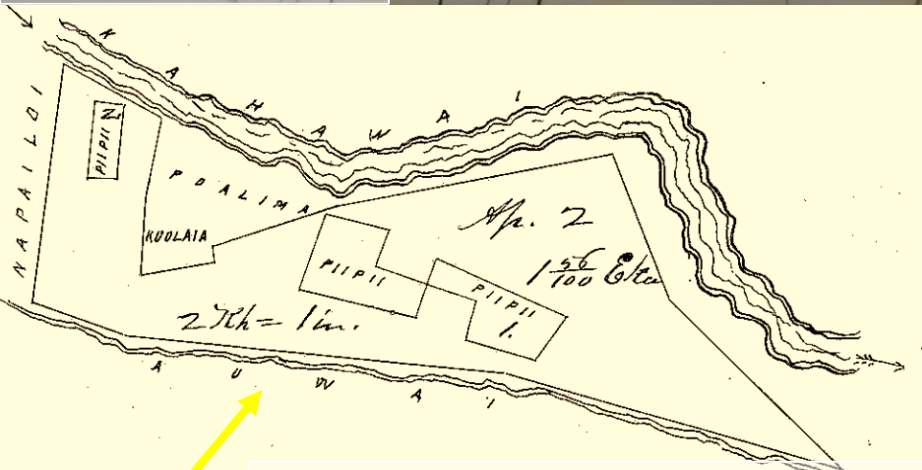
Historical Overview ~ Current State ~ Future Plans

Presented by Hui o Nā Wai 'Ehā for CWRM Commission Mtg. April 19, 2022





W.S.Co. Map Key (1910)



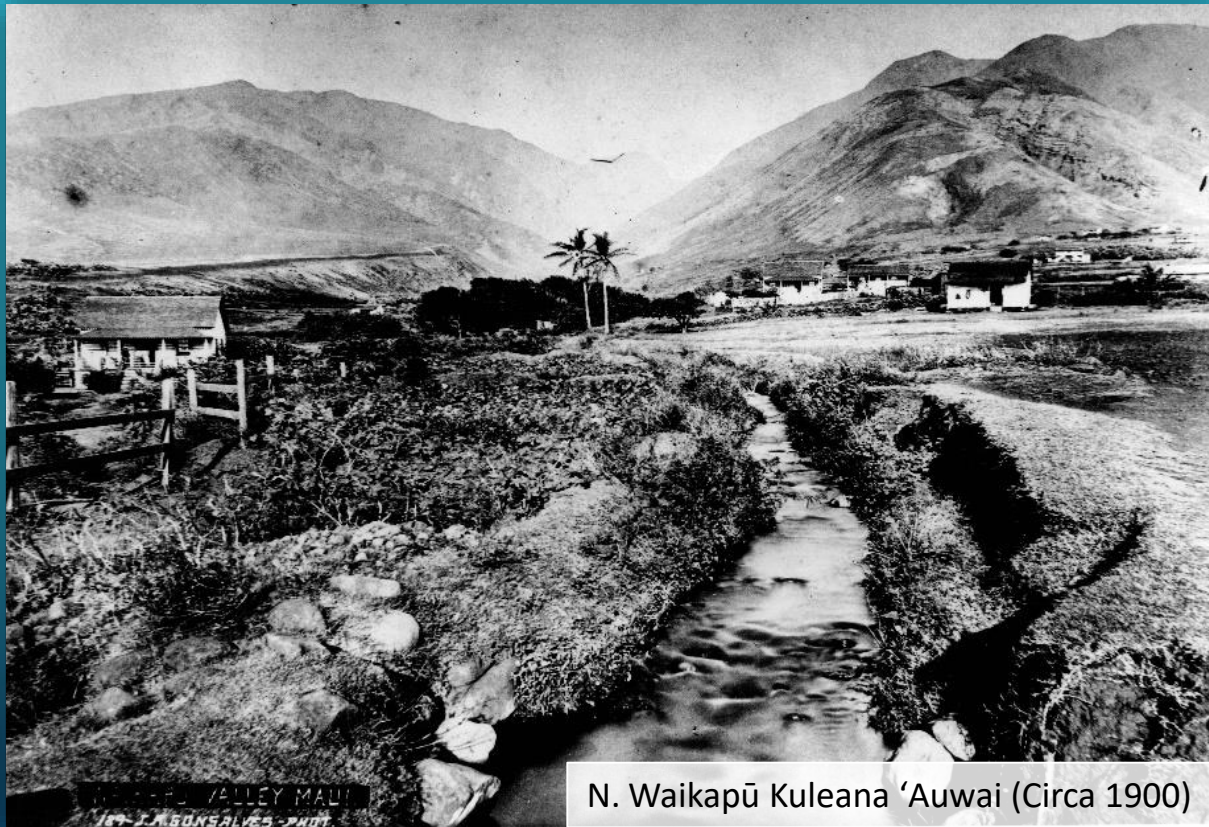
Māhele Survey Map re LCA 2528:2 to Koa (1852)



M.D. Monsarrat Map (1888)



Historical Overview



N. Waikapū Kuleana 'Auwai (Circa 1900)

5 documented pre-western contact 'auwai systems in Waikapū

Pālolo: Begins upper valley on the north side of Waikapū Stream at an elevation of 900' in the 'ili of Puhau o Kamehame on LCA 3549:2 to Keaka. Wailuku Sugar Co. later altered the 'auwai to become a plantation ditch and renamed it Everett Ditch. 'Auwai/Ditch is currently abandoned.

Unnamed 'Auwai 1: Begins below Pālolo 'Auwai on the north side of Waikapū Stream in the 'ili of 'Ōlohe on LCA 3549:3 to Keaka. 'Auwai is currently not in use. Mostly destroyed by Wailuku Sugar Co.

Pālama: Begins below Unnamed 'Auwai 1 on the north side of Waikapū Stream in the 'ili of Pālama. Unsure what LCA it derives on. Completely destroyed by Wailuku Sugar Co.

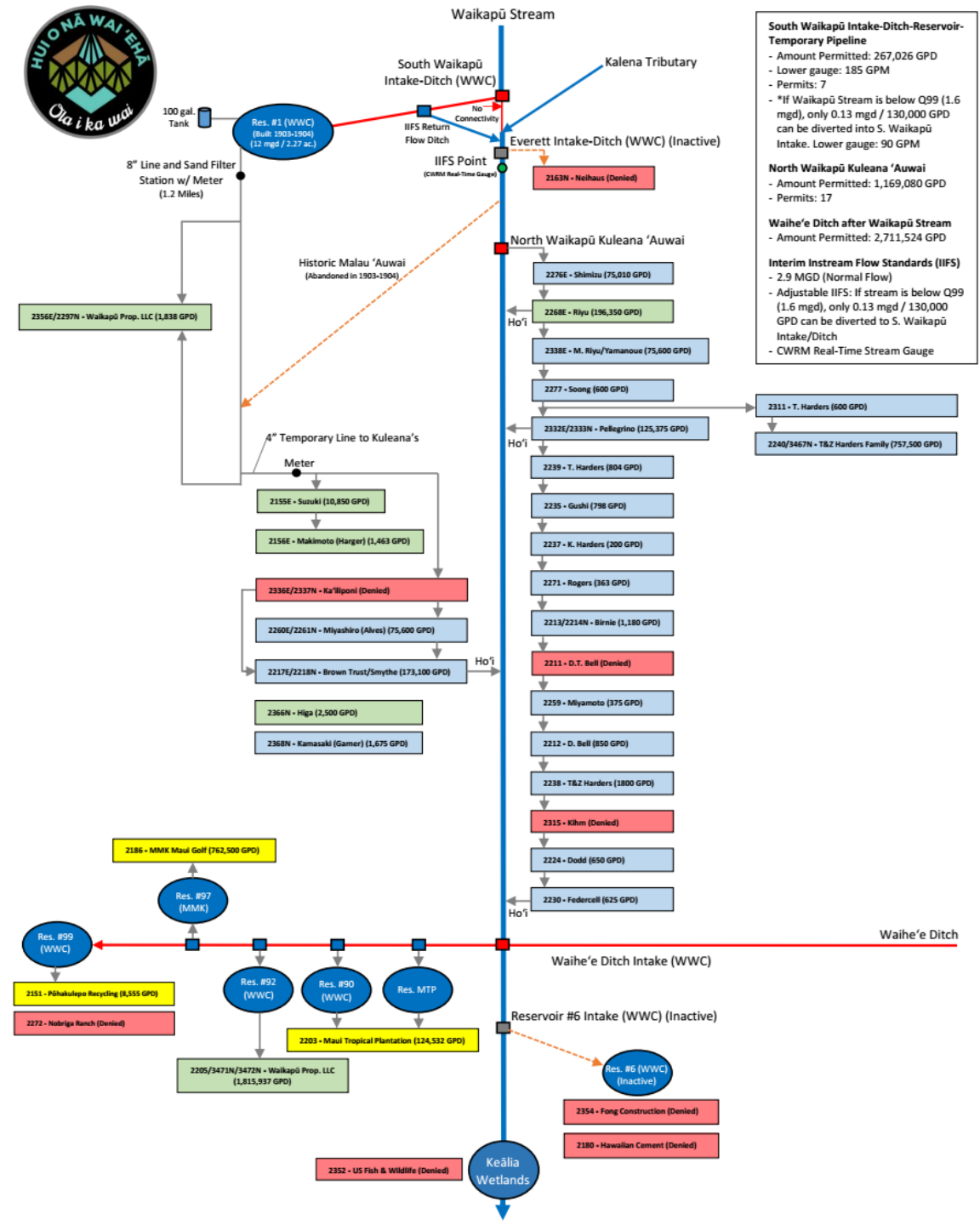
Malau: Begins on the south side of Waikapū Stream at an elevation of 635' in the 'ili of 'Ōlohe on LCA 2394:2 to Kaeha and Grant 1844:3 to Joseph Sylva. Known today as South Waikapū Kuleana 'Auwai. Use of upper portion connecting to Waikapū Stream discontinued following the construction of the WSCo. South Waikapū Diversion, Ditch and Emmesly Reservoir (Res. 1) between 1903-1904. Lower portion in use, however water is derived via South Waikapū Ditch & Res. 1 Great potential to restore entire traditional 'auwai system. Managed by WWC / Waikapū Properties / kuleana kalo farmers.

Unnamed 'Auwai 2: Begins on the north side of Waikapū Stream at an elevation of 565' in the 'ili of Hale Pālalahala on LCA 205 to Anthony Catalena. Known to day as the North Waikapū Kuleana 'Auwai. The system is completely intact, in use and managed by the kuleana kalo farmers.



Malau 'Auwai Use Timeline

Pre-Western Contact – Abt. 1910	Malau 'Auwai (South Waikapū Kuleana 'Auwai) in use and maintained and managed by kuleana kalo farmers.
1903-2004	South Waikapū Diversion, Ditch and Emmsley Reservoir (Res. 1) constructed and managed by Wailuku Sugar Co. Upper portion of Malau 'Auwai that connects to Waikapū Stream no longer in use due to lack of stream flow in Waikapū. Plantation constructs a 1 mile open ditch system that comes off South Waikapū Ditch and Reservoir 1 to deliver water to South Waikapū Kuleana Kalo Farmers.
2004-2022	South Waikapū Diversion/Ditch/Res. 1 and irrigation pipeline managed by Wailuku Water Co. and Waikapū Properties LLC. Lower portion managed by kuleana kalo farmers.
October 2020	South Waikapū Kuleana 'Auwai via Reservoir 1 was severely reduced or shut off completely via an installed valve and lock by WWC. Hui o Nā Wai 'Ehā notified CWRM on numerous occasion between October 2020 and July 2021 with no relief.
June 28, 2021	Nā Wai 'Ehā Contested Case Decision & Order Finalized. Water Use Permit Allocations Established.
July 30, 2021	Hui o Nā Wai 'Ehā filed a formal complaint to CWRM regarding South Waikapū Kuleana 'Auwai/WUPA Permittees having no water. WWC in violation due to water going to Kumu Farms via Reservoir 1.
January 2022	Kumu Farms transitioned off Reservoir 1 to using a reservoir fed by (Waihe'e Ditch). Waikapū Properties LLC & Hana'ula Ranch assist South Waikapū Kuleana kalo farmers by creating a short-term solution by installing 800' of 4" pvc pipe from clay valve distribution box (via Reservoir 1) to lower portion of original Malau 'Auwai.
February 11, 2022	Hui o Nā Wai 'Ehā on behalf of South Waikapū Kuleana Kalo Farmers / Landowners, recognized appurtenant rights holders / Water Use Permittees, sent a certified letter to Mr. & Mrs. Chumbley requesting to exercise their appurtenant rights and their traditional and customary rights as Native Hawaiians to access and use Waikapū Stream water to cultivate kalo on their kuleana land. Formally request permission for Ms. Alves, Ms. Smythe, and their agents to access their property (TMK 2-3-6-004-002) to restore the traditional 'auwai course that historically irrigated their kuleana lands now designated as TMK Nos. 2-3-6-006-027, 2-3-6-006-029, 2-3-6-006-025. No response as of 4/19/2022.
March 9, 2022	New 4" waterline went live delivering 75% of total allocated amount to kuleana kalo farmers.
March 15, 2022	Hui o Nā Wai 'Ehā installed an additional 80' of 4" pipe within lower Mālau 'Auwai to reduce waste and saturation.



South Waikapū Intake-Ditch-Reservoir-Temporary Pipeline

- Amount Permitted: 267,026 GPD
- Lower gauge: 185 GPM
- Permits: 7
- *If Waikapū Stream is below Q99 (1.6 mgd), only 0.13 mgd / 130,000 GPD can be diverted into S. Waikapū Intake. Lower gauge: 90 GPM

North Waikapū Kuleana 'Auwai

- Amount Permitted: 1,169,080 GPD
- Permits: 17

Waihe'e Ditch after Waikapū Stream

- Amount Permitted: 2,711,524 GPD

Interim Instream Flow Standards (IIFS)

- 2.9 MGD (Normal Flow)
- Adjustable IIFS: If stream is below Q99 (1.6 mgd), only 0.13 mgd / 130,000 GPD can be diverted to S. Waikapū Intake/Ditch
- CWRM Real-Time Stream Gauge

Waikapū Stream WUPA Schematic Map

CWRM June 28, 2021 D&O Table (Not in User Order):

#	User	WUPA	Appurtenant	Domestic	T&C	Priority	Amount (GPD)
1	Waikapū Properties LLC	2356E/2297N	No	No	No	3	1,838
2	Colin Ka'iliponi	2336E/2337N	Denied	Denied	Denied	N/A	0
3	Alves (Miyashiro)	2260E/2261N	Yes	Yes	Yes	1	75,600
4	J. Minamina Brown (Smythe)	2217E/2218N	Yes	Yes	Yes	1	173,100
5	George & Yoneko Higa	2366N	Yes	Yes	No	1	2,500
6	Robyn Garner (Kamasaki)	2368N	Yes	Yes	No	1	1,675
7	Clayton Suzuki	2155E	Extinguished	Yes	No	1 or 2	10,850
8	Brad Harger (Makimoto)	2156E	Yes	Yes	No	1	1,463
TOTAL							267,026 GPD



Installation of new 4" Pipeline (Short-term Solution)

January 24 – March 10, 2022





Challenges w/ 4" Line (Short-Term Solution)

Community-Based Monitoring Data

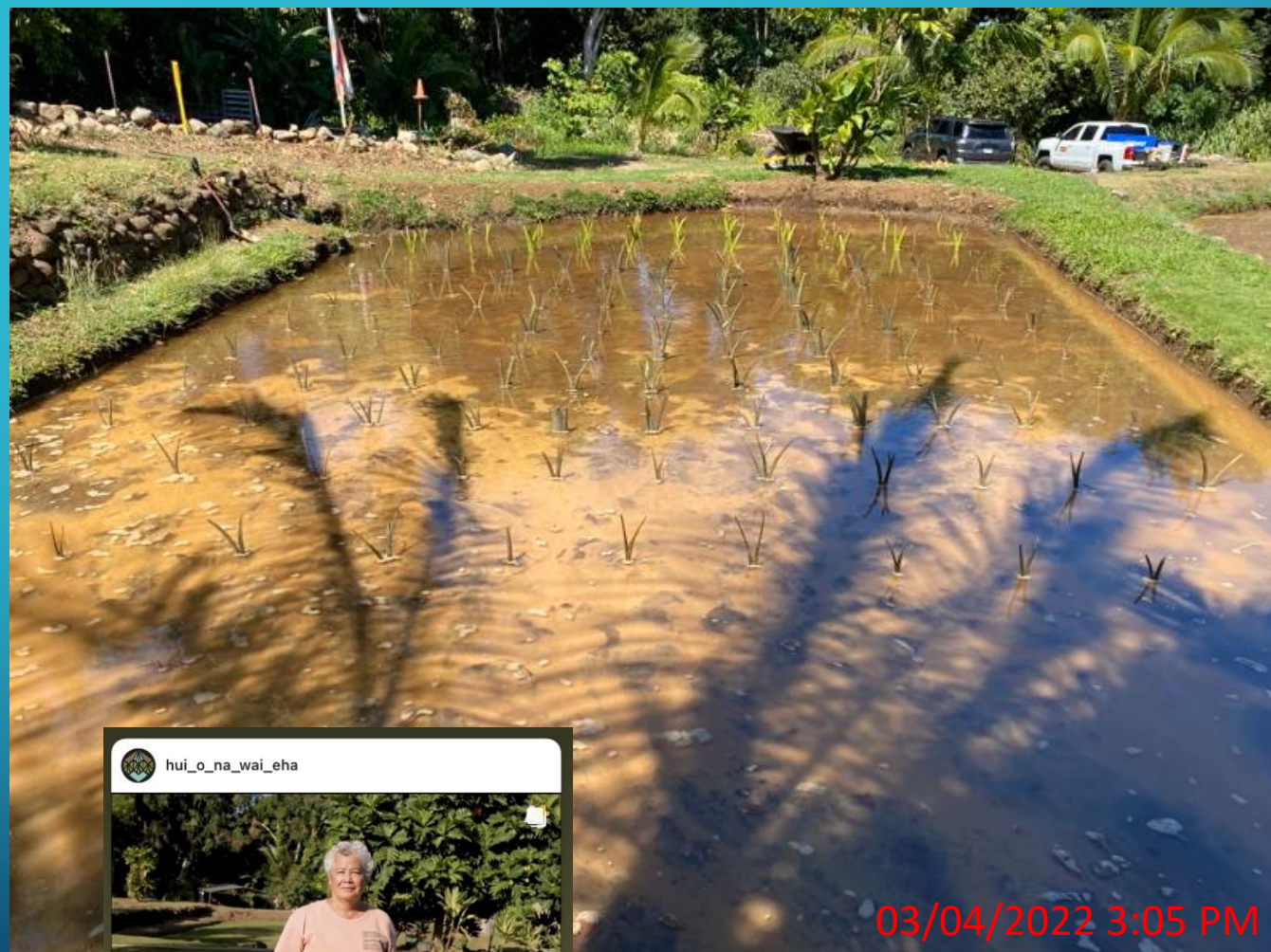
Date	Time	GPM (Gauge)	Amount (MGD)	Difference (MGD)
2-19-22	9:58 am	90	129,600	-135,588
2-23-22	11:56 am	130	187,200	-77,988
3-2-22	10:30 am	140	201,600	-63,588
3-3-22	2:57 pm	100	144,000	-121,188
3-4-22	10:41 am	100	144,000	-121,188
3-7-22	2:12 pm	120	172,800	-92,388
3-9-22	12:58 pm	110	158,400	-106,788
3-12-22	2:38 pm	140	201,600	-63,588
3-14-22	1:23 pm	140	201,600	-63,588
3-16-22	9:35 am	110	158,400	-106,788
3-19-22	11:44 am	120	172,800	-92,388
3-21-22	10:28 am	120	172,800	-92,388
3-25-22	9:21 am	120	172,800	-92,388
3-29-22	12:34 pm	120	172,800	-92,388
4-7-22	3:49 pm	100	144,000	-121,188
4-11-22	12:29 pm	120	172,800	-92,388
4-12-22	6:35 am	120	172,800	-92,388
4-13-22	10:22 am	120	172,800	-92,388
4-18-22	1:02 pm	120	172,800	-92,388

- 1.65 mile long antiquated system (South Waikapū Diversion/Ditch, Reservoir 1) which incurs loss and saturation
- New 4" line not delivering allocated amount of 184 GPM / 265,188 mgd to kuleana users
- Difficulty calibrating and regulating high pressure in system. Clay valves may be problematic
- Upper gauge inoperable. Unable to know actual amount flowing from ditch into system prior to ensure proper allocation to all users.
- Kuleana kalo farmers with highest priority receiving their water last after all non-appurtenant right users
- Pipeline and infrastructure expensive to maintain
- Kuleana kalo farmers appreciative of short-term solution provided by Mike Atherton of Waikapū Properties and Duane Ting of Hana'ula Ranch



Future Needs & Plans (Long-term Solution)

1. Complete independence from Wailuku Water Co. Plantation Era Diversion/Ditch/Reservoir System and Waikapū Properties LLC's short-term pipeline.
2. Access to kuleana lands and 'auwai system owned by Mr. & Mrs. Chumbley to restore the entire traditional Malau 'Auwai that connects directly to Waikapū Stream.
3. CWRM support needed for long-term solution regarding T&C access to 'auwai.
4. Management and maintenance of system to be conducted by South Waikapū Kuleana Kalo Farmers.



hui_o_na_wai_eha Aunty Crystal Smythe and her 'ohana are one of the last remaining kalo farmers with lineal ties to...

03/04/2022 3:05 PM



Benefits of Kuleana-Based 'Auwai Management

1. Efficiency! Reduce loss! Eliminate expensive maintenance of antiquated plantation and piping system that spans **2.65 miles versus 0.39 miles.**
2. No longer controlled by Wailuku Water Co.
3. Community-based management and monitoring.
4. Recognition of traditional practices and customary rights and access.
5. Waikapū would be first ahupua'a in Nā Wai 'Ehā in which kuleana kalo farmers will be completely independent of plantation era diversion/ditch systems and control.

