

# Update on Water Resources in the Lahaina Aquifer Sector Area

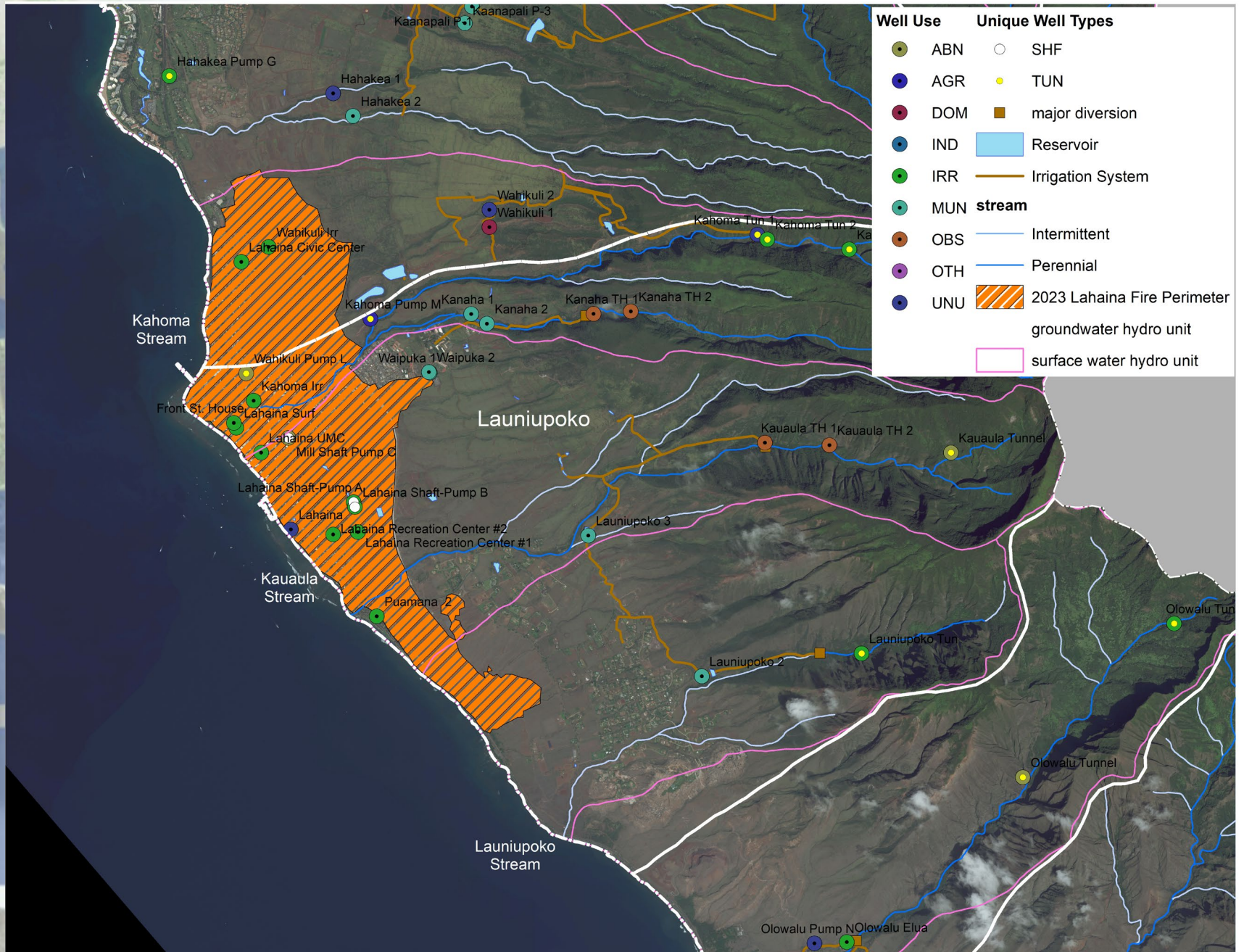
## Agenda Item B-2

### a. Wells in the Fire-Impacted Area



October 24, 2023

# Wells in the Fire-Impacted Area Map



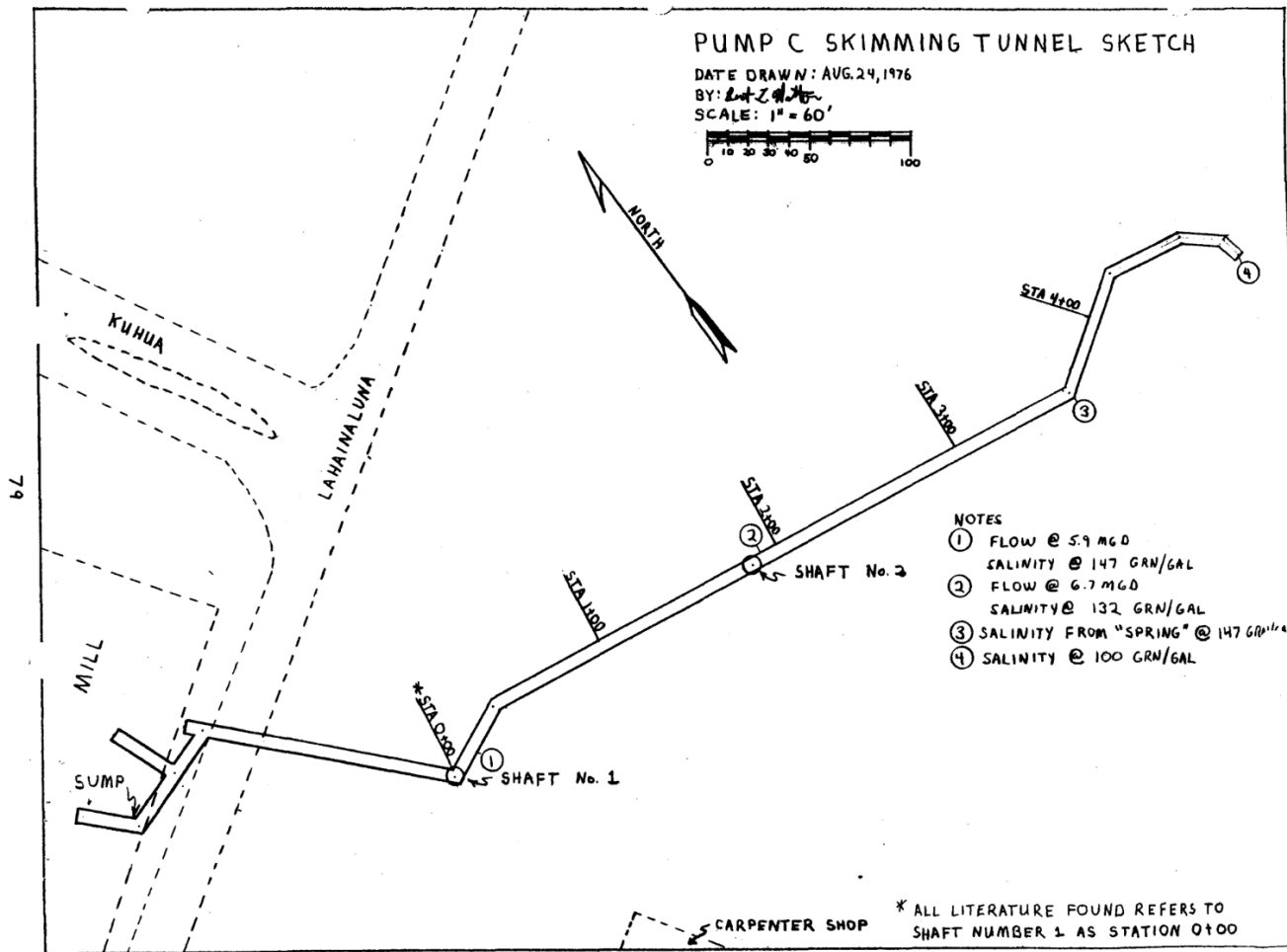
## Updates since September Commission Meeting

- In the late evening of September 18, 2023, Launiupoko Irrigation Company (LIC) provided CWRM staff with an update of the status of the well heads at Lahaina Shaft A and B.
- On October 4, 2023, DOH informed CWRM staff that Lahaina Shaft A was tested by LIC for volatile organic compounds (VOC). The laboratory report by Eurofins, dated October 2, 2023, from LIC indicated no VOCs detected.
- On October 17, 2023, CWRM ground water survey team conducted a site visit to wells in the fire-impacted zone for further investigation.
- LIC reported a use of 30.4 MG (0.981 MGD) for the month of August and 39.664 MG (1.322 MGD) for the month of September for Lahaina Shaft A.

## Wells Inspected on CWRM Site Visit on October 17, 2023

Well #	Well Name	Well Owner/User	Year Drilled	Well Use	Well Type	Fire Impact
6-5240-001	Mill Shaft Pump C	Pioneer Mill Company, LLC c/o Kaanapali Land Management Corp.	1897	ABN	SHF	Open side shafts discovered
6-5240-002	Lahaina Shaft-Pump B	Wainee Land & Homes, LLC	1897	UNU	SHF	Fire damage sustained, but repaired
6-5240-003	Lahaina Shaft-Pump A	Wainee Land & Homes, LLC/LIC	1897	INDMI	SHF	Fire damage sustained, but repaired
6-5240-005	Lahaina UMC	Lahaina United Methodist Church	1989	IRRLA	ROT	Fire damage sustained
6-5241-001	Lahaina Surf	Hale Mahaolu-Lahaina Surf	1985	IRRLA	ROT	Fire damage sustained
6-5341-001	Wahikuli Pump L	Pioneer Mill Company, LLC c/o Kaanapali Land Management Corp.	1897	UNU	SHF	Not impacted

# Mill Shaft Pump C



- The sump and vault of Pump C next to the mill's smokestack were sealed and filled in 2006 by Kaanapali Land Management Corp.
- DOCARE photos were of Maui DWS water lines.
- CWRM staff found Shaft 1 and Shaft 2 on neighboring property.
- Shaft 1 and 2 are located on TMK 460270230000 owned by Wainee Land & Homes, LLC

# Mill Shaft Pump C



## Shaft 1

- Metal cover of vertical access portal with hole
- Groundwater exposed



## Shaft 2

- Fenced in open vertical access portal
- CWRM couldn't determine if groundwater is exposed

# Lahaina Shaft B - August 9, 2023



# Lahaina Shaft B - September 18, 2023

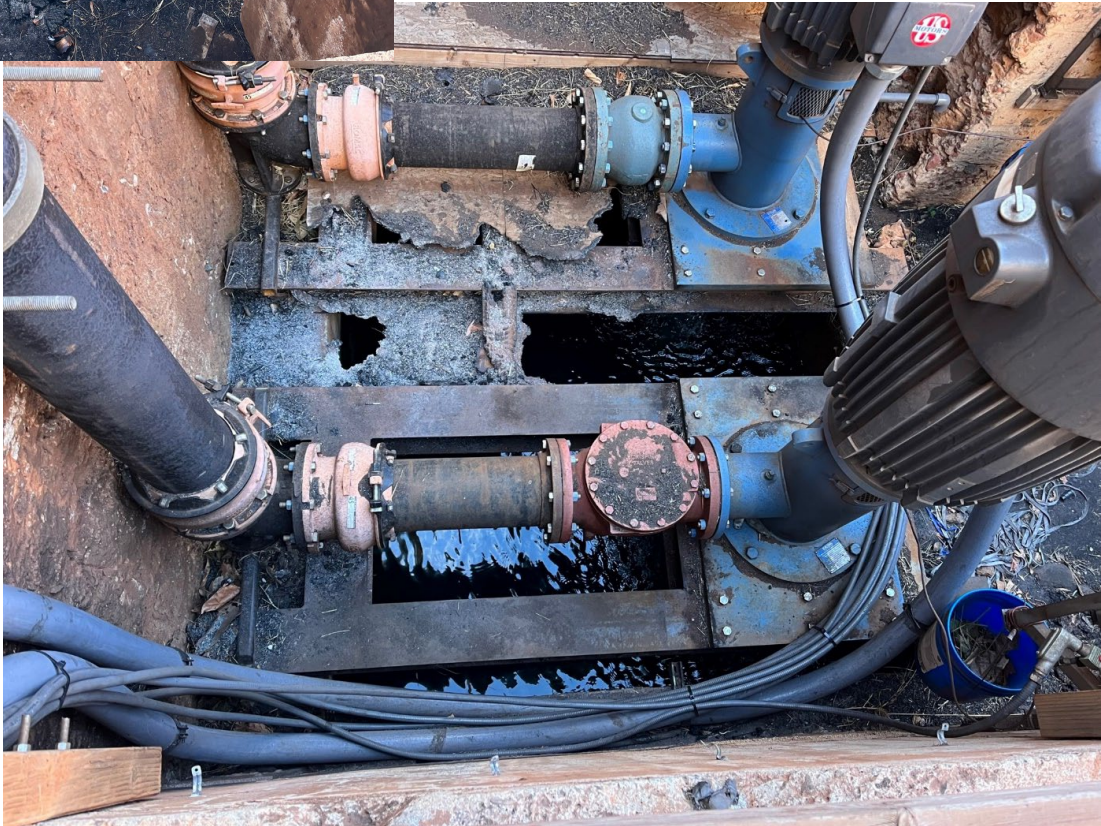




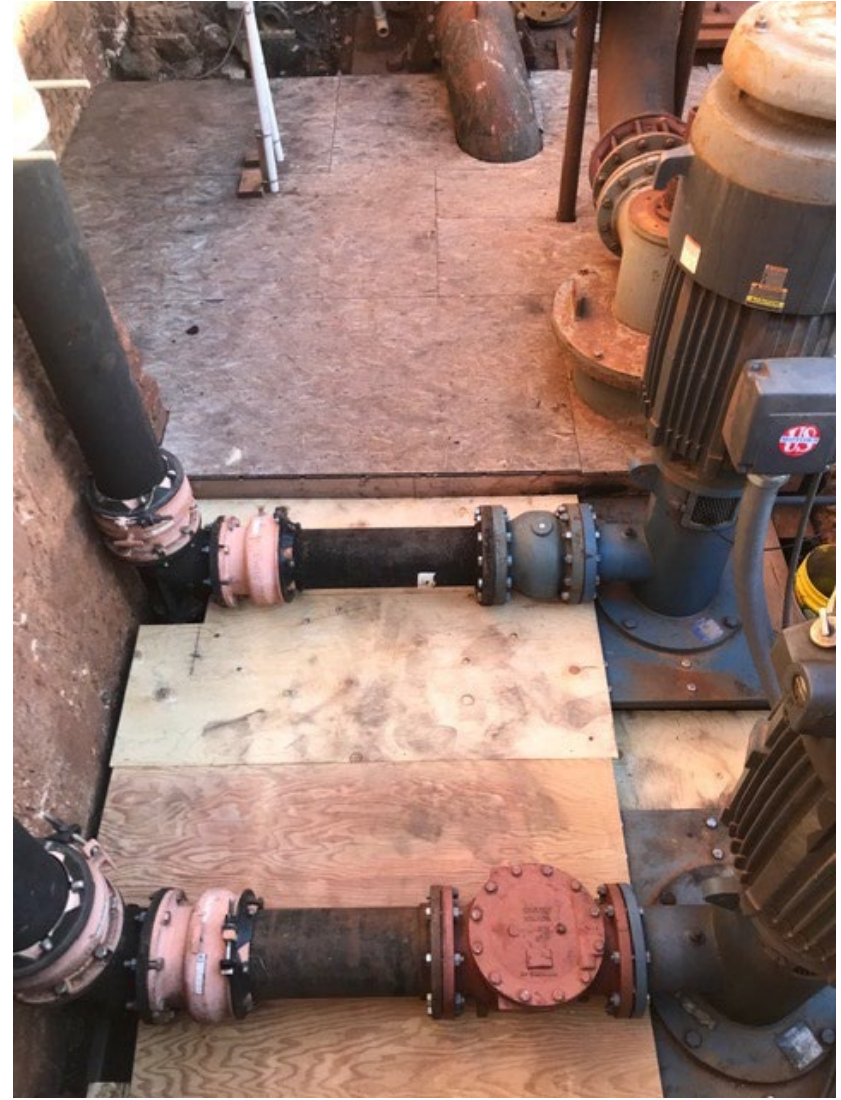
# Lahaina Shaft A - August 9, 2023



# Lahaina Shaft A - August 9, 2023



# Lahaina Shaft A - September 18, 2023



# Lahaina Shaft A - September 18, 2023



# Lahaina Shaft A Vertical Access Portal Shaft - September 18, 2023



# Lahaina UMC



- Well location (red arrow)
- Top of well (note pump wires in red circle)
- Casing has burned, leaving an open hole and surface contamination pathway to the basal aquifer

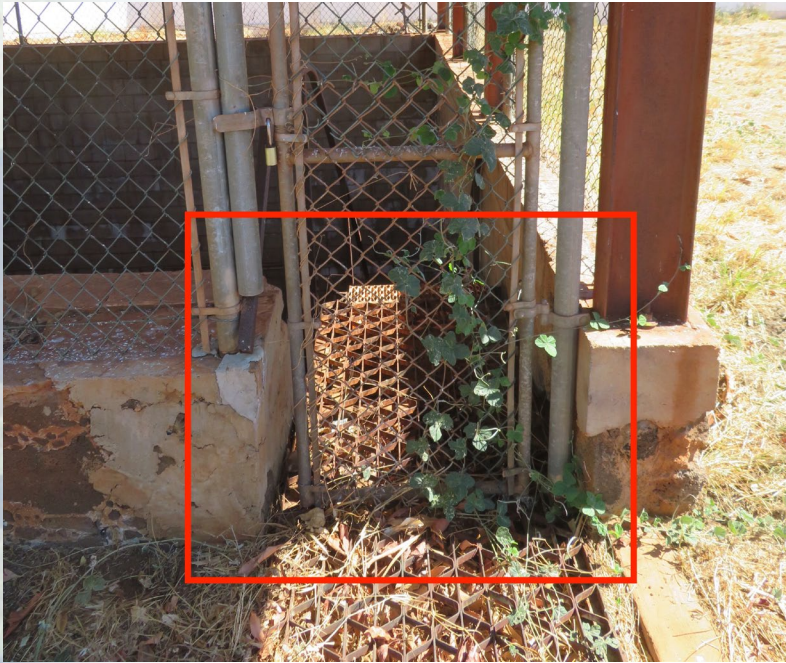


## Lahaina Surf

- Well 6-5241-0001 location was not observed during site visit. It is presumably buried beneath the incinerated debris adjacent to the remains of the water (red circle). It is likely the casing has burned, leaving an open hole for surface contamination pathway to the basal aquifer.



# Wahikuli Pump L



- Runoff protection for the open vault has been constructed with a low CMU wall, however protection is compromised by the lack of a berm or wall where the chain link fence gate accesses the vault.





# Recommended Actions

## Mill Shaft Pump C Options:

1. Proper Abandonment via Well Abandonment Permit
  - Clean, backfill, and properly seal vertical shafts.
  - Remove existing surface structures following permitted abandonment and sealing.
2. Upgrade for Future Use
  - Assess, clean, and upgrade surface structures to ensure the vertical shafts, and the aquifer, are protected from surface contamination and vandalism.
  - Land/well owner to investigate and document condition of horizontal shaft.
  - Submit water use permit application.

# Recommended Actions



## Lahaina Shaft A&B

1. While the potential for a storm event of sufficient intensity to produce sheet flow is low, the open vaults are vulnerable to sheet runoff potentially transporting surface debris and contamination into the vault, and into direct contact with ground water.
2. Low soil berms should be placed on the mauka, north, and south sides of both vaults to direct runoff away from the vaults.

# Recommended Actions

## Lahaina UMC

1. Remove incinerated debris from around the open hole to reduce potential for ash and small objects from falling into the open well shaft.
2. Plug the open hole, and pour a cement/concrete plug over the plug to secure the boring until the well can be properly abandoned and sealed.

## Lahaina Surf

1. Remove incinerated debris carefully to reduce potential for ash and small objects from falling into the open well shaft.
2. Once the well boring is located, plug the open hole, and pour a cement/concrete plug over the plug to secure the boring until the well can be properly abandoned and sealed.

## Wahikuli Pump L

1. Construct a low wall at the chain-link gate to match height of the CMU wall surrounding the open vault in a manner that doesn't restrict the usage of the gate.