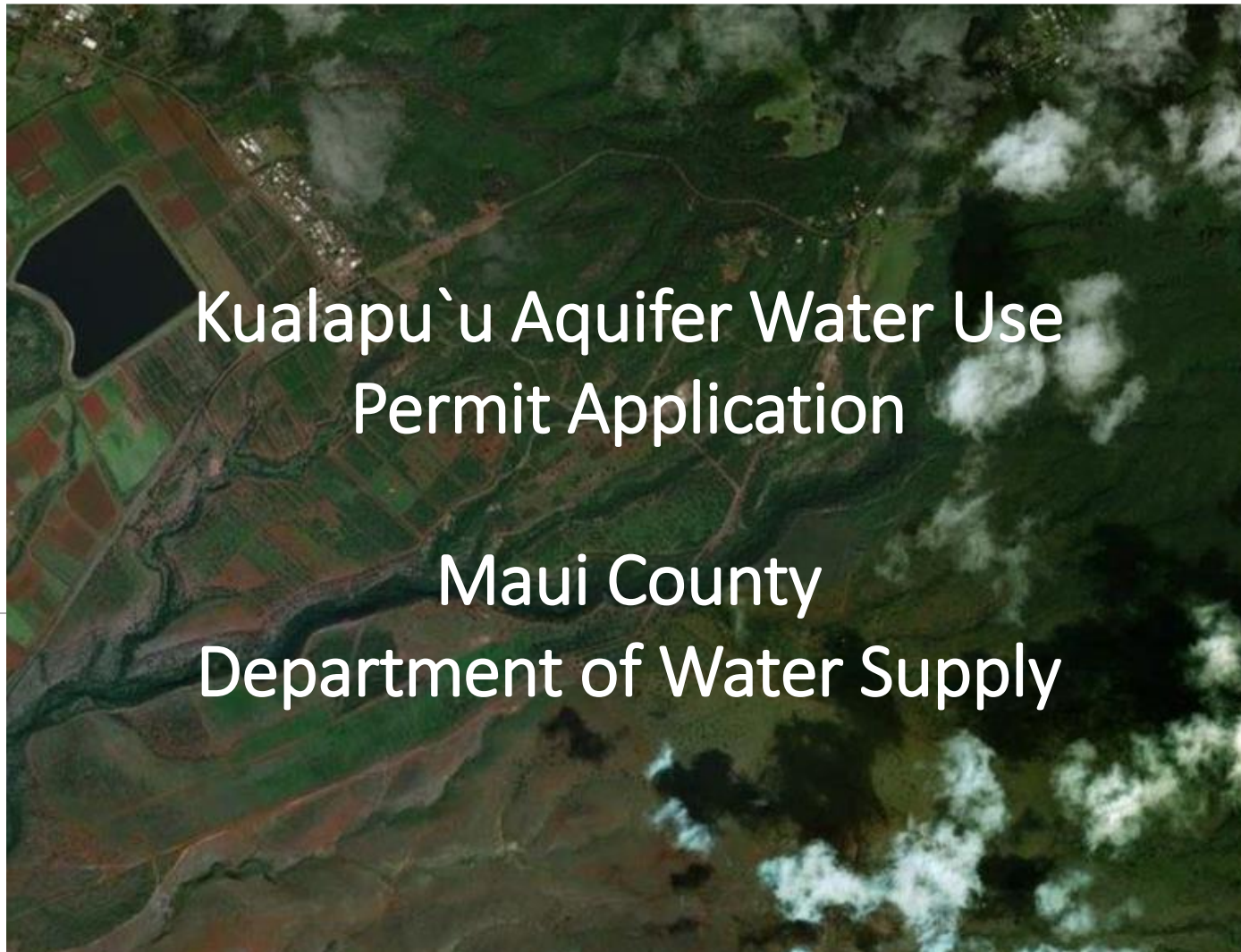


# Community Informational Meeting

## June 1, 2019



# U.S. Geological Survey 2008 Groundwater Study of Eastern Molokaʻi

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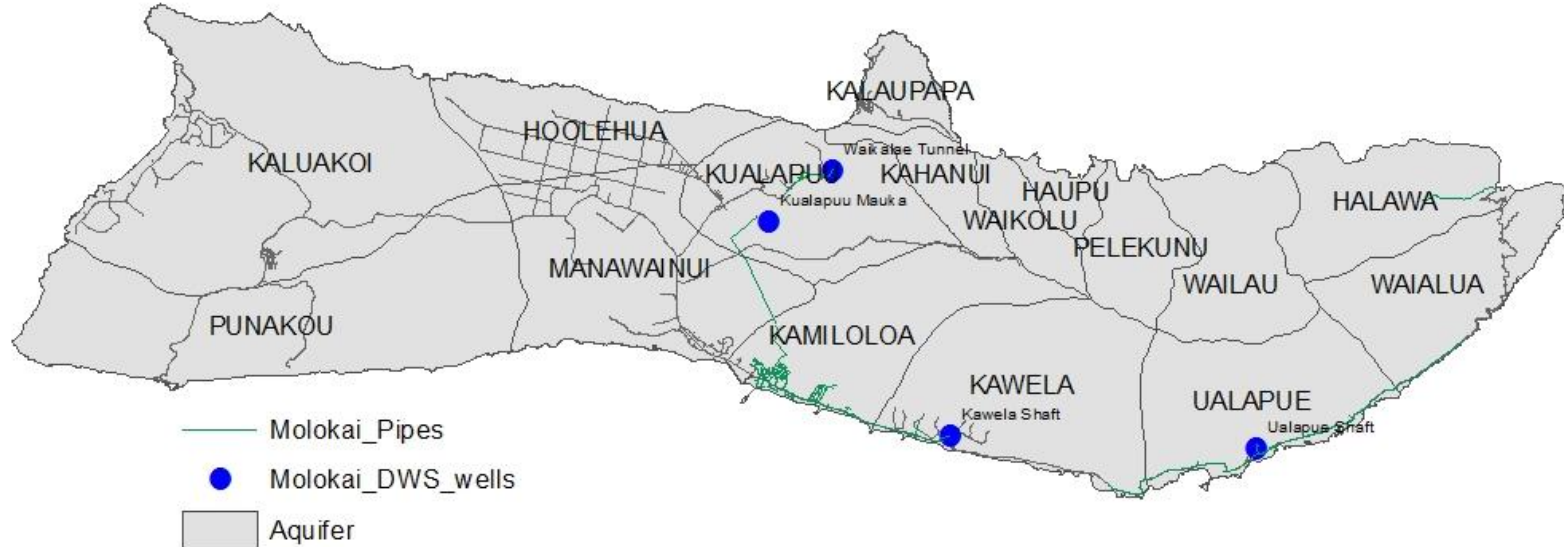
## **Concerns:**

- Rising salinity, declining water levels and rising brackish-water transition zone
- Cumulative effects of withdrawals
- Impact of additional and alternative pumpage scenarios

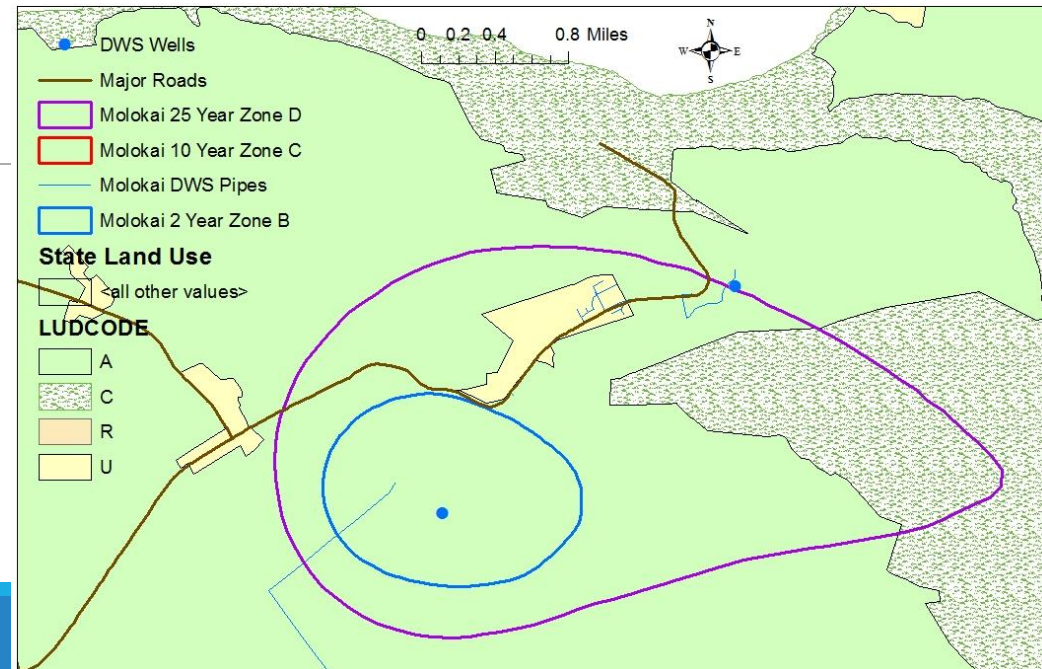
## **Objectives:**

- Manage current withdrawals
- Select appropriate site and withdrawal rates to meet future needs

# Department of Water Supply Molokai System

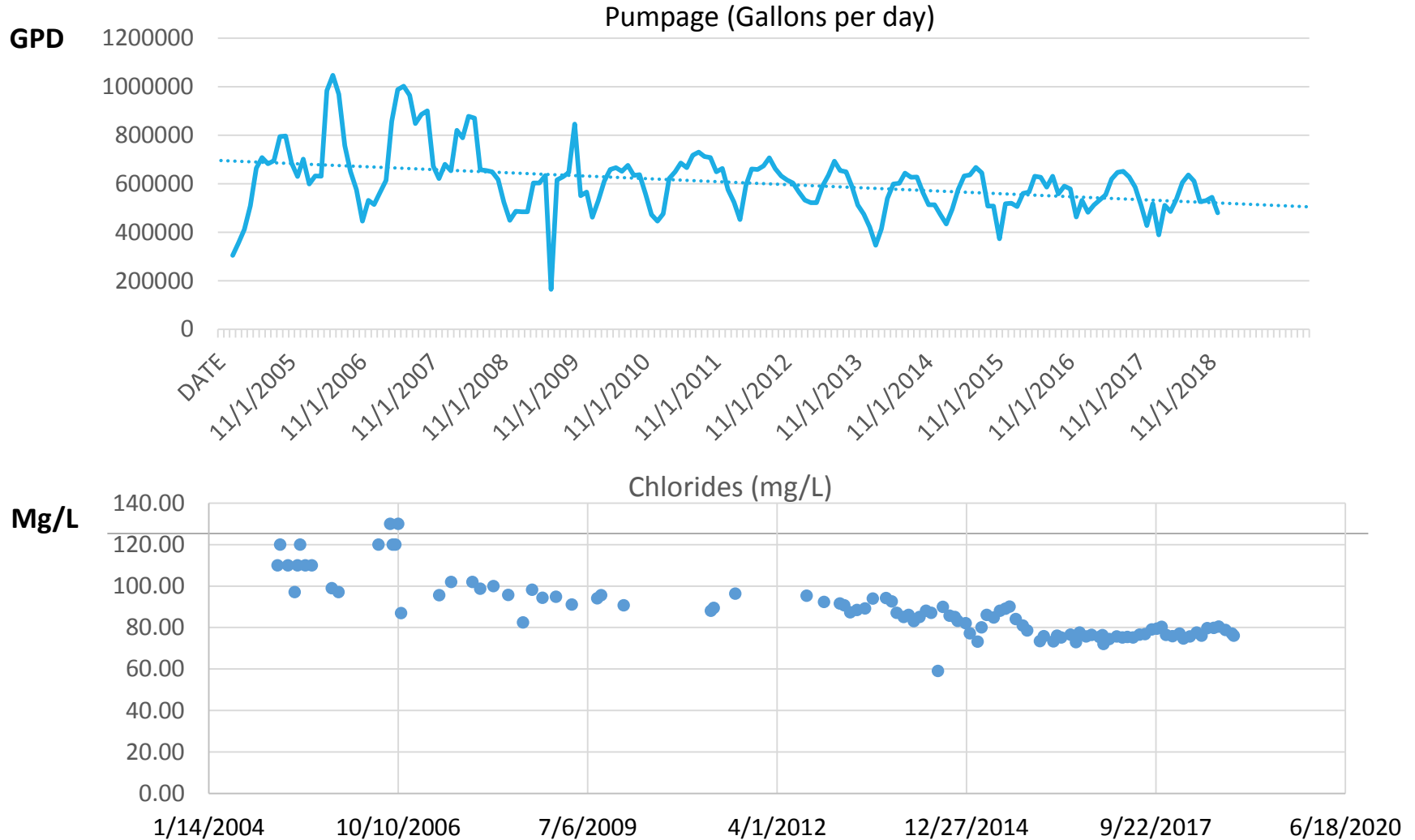


- Kawela-Kaunakakai system: 1,169 services, about 518,000 gallons per day
- Kualapu`u Mauka Well: well depth 1136 ft AMSL, pump capacity 1000 gallons per minute
- Kualapu`u Aquifer: Basal (Freshwater in contact with seawater); Unconfined (water table is upper surface of saturated aquifer); High vulnerability (to contaminants)



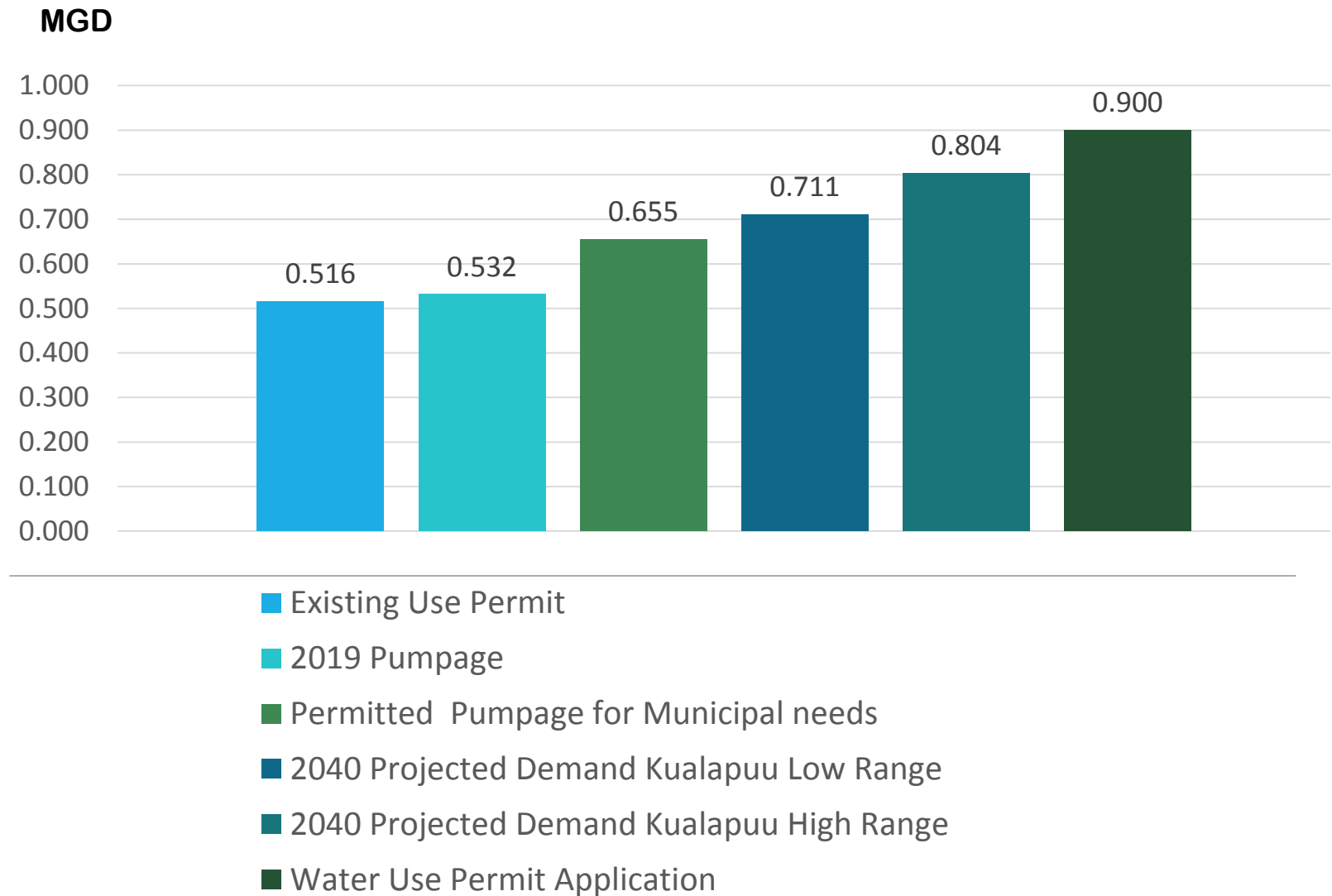
# DWS Kualapu`u

## Historic Demand and Chlorides



# DWS Kualapu`u

## Permitted Use and Demand





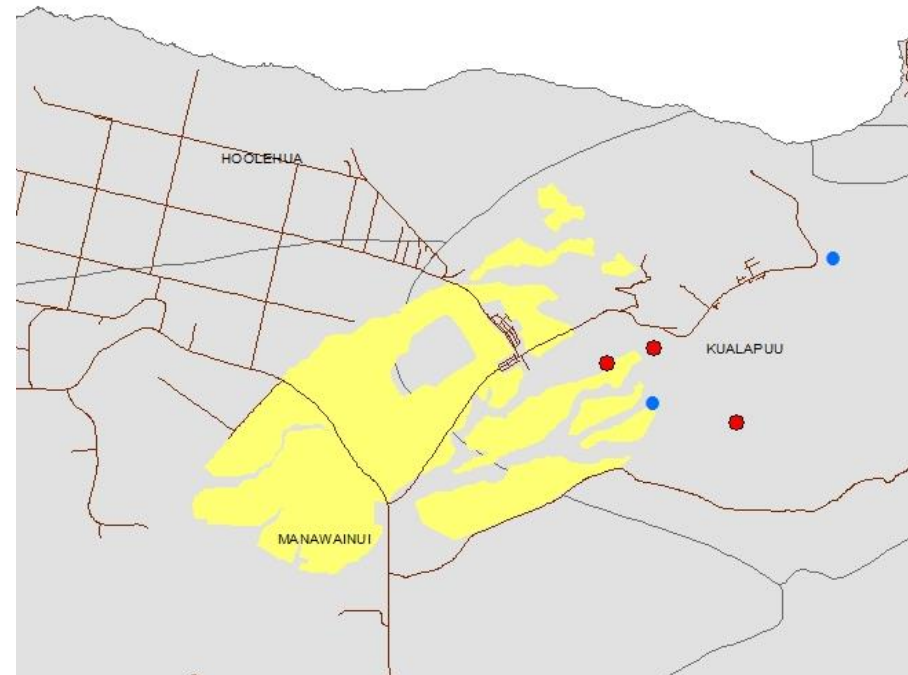
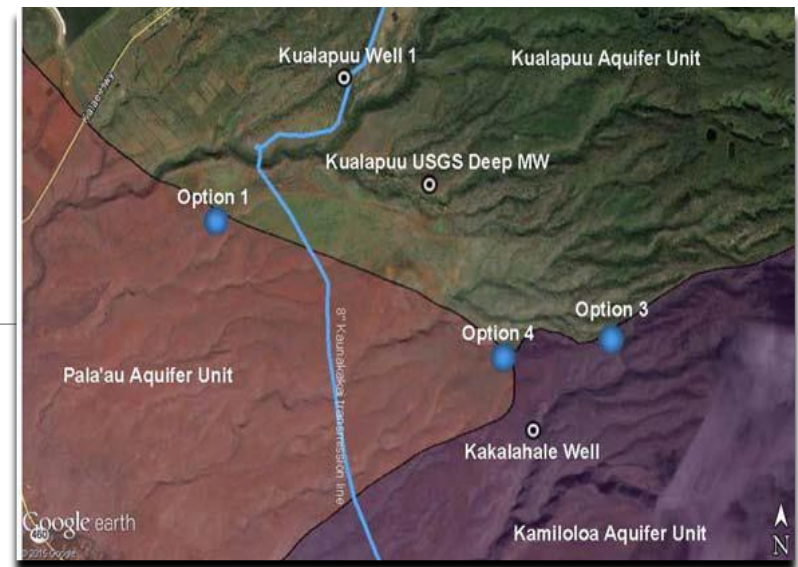
# DWS Kualapu`u Well Exploration

## Objectives

- Meet demand for DWS Kaunakakai Service Area 0.9 mgd based on 2014 Socio-Economic Forecast
- Minimize negative impact on existing wells and Kualapu`u aquifer.
- Reliable quality (chlorides and chemical) and quantity (production and backup)

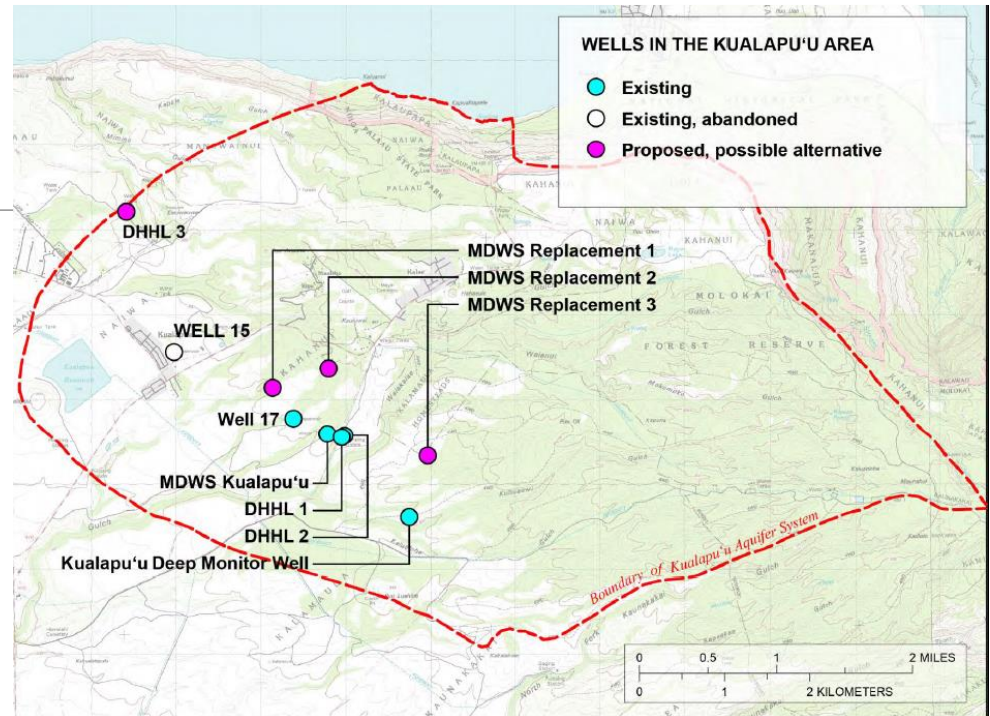
## Site Selection Criteria

- Hydrogeologic Conditions
- Accessibility, Terrain
- Costs - Capital & Operational
- Environmental Considerations
- Land Ownership, Obtainability,
- Zone of Contribution: Water Quality



# Groundwater Model Withdrawal Scenarios

- 0.9 mgd at DWS existing OR alternative site
- Backup at existing OR alternative site
- Collaborative well development with DHHL an option



Scenario	DHHL 1	DHHL 2	MDWS Kualapu'u	Well 17	MDWS Alt 1	MDWS Alt 2	MDWS Alt 3	DHHL Proposed	Total
#16	-	0.5950	-	0.1380	0.7926*	-	0.9500	-	2.4756
#18	-	0.5950	-	0.1380	0.9500	-	0.7926*	-	2.4756
#29	-	0.5950	0.9000	0.1380	-	-	0.7926	-	2.4256

\*DHHL using

# DWS Water Use Permit Application

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- New Ground Water Use Permit Application accepted as complete in 2015
- Burden on applicant that proposed use is reasonable and beneficial and consistent with the public interest
- DWS serves municipal needs, of which 78% are residential uses
- Requested amount to meet projected growth consistent with Community Plan forecast
- Not interfere with DHHL rights or other existing legal uses of water
- Groundwater model results to guide continued use of existing Kualapu`u Mauka well site and selection of alternative well site
- New well site requires new Water Use Permit Application



# Mahalo!



[www.mauiwater.org](http://www.mauiwater.org)

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Credit: Daniel Odroniec