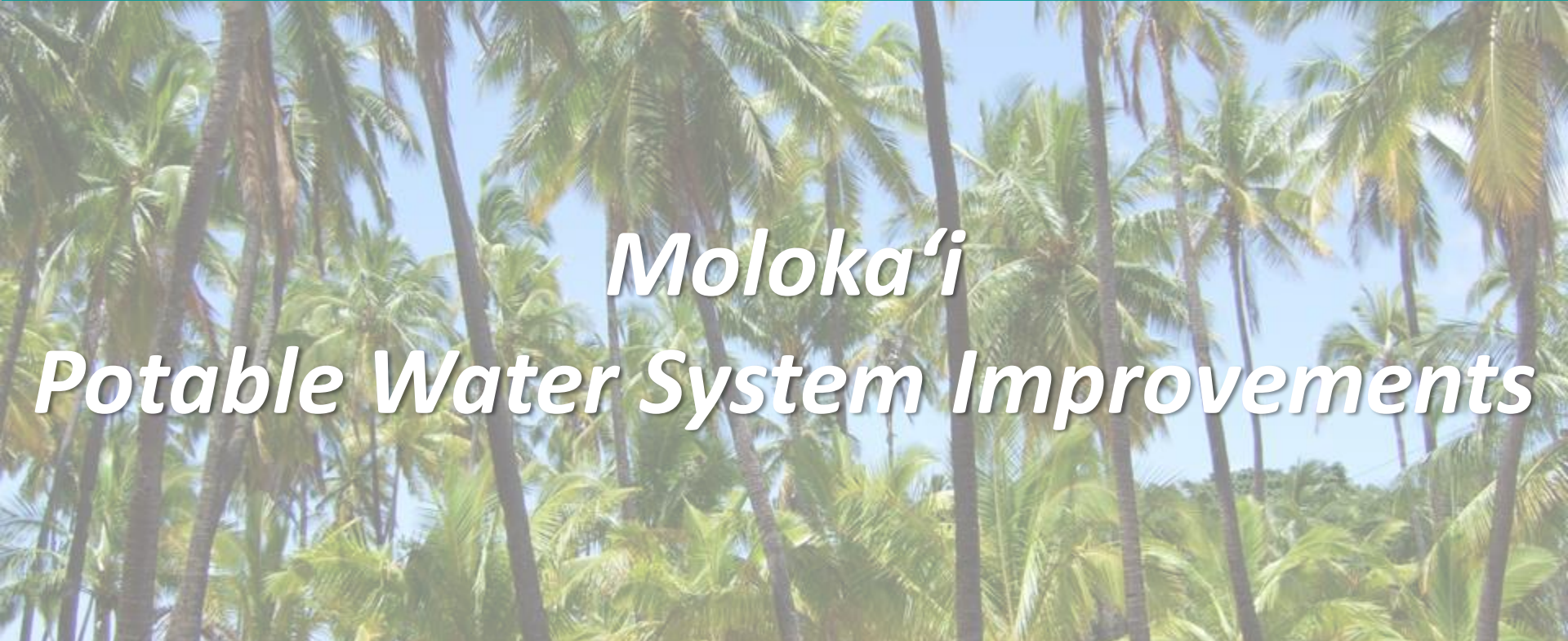




Department of Hawaiian Home Lands



Moloka'i Potable Water System Improvements

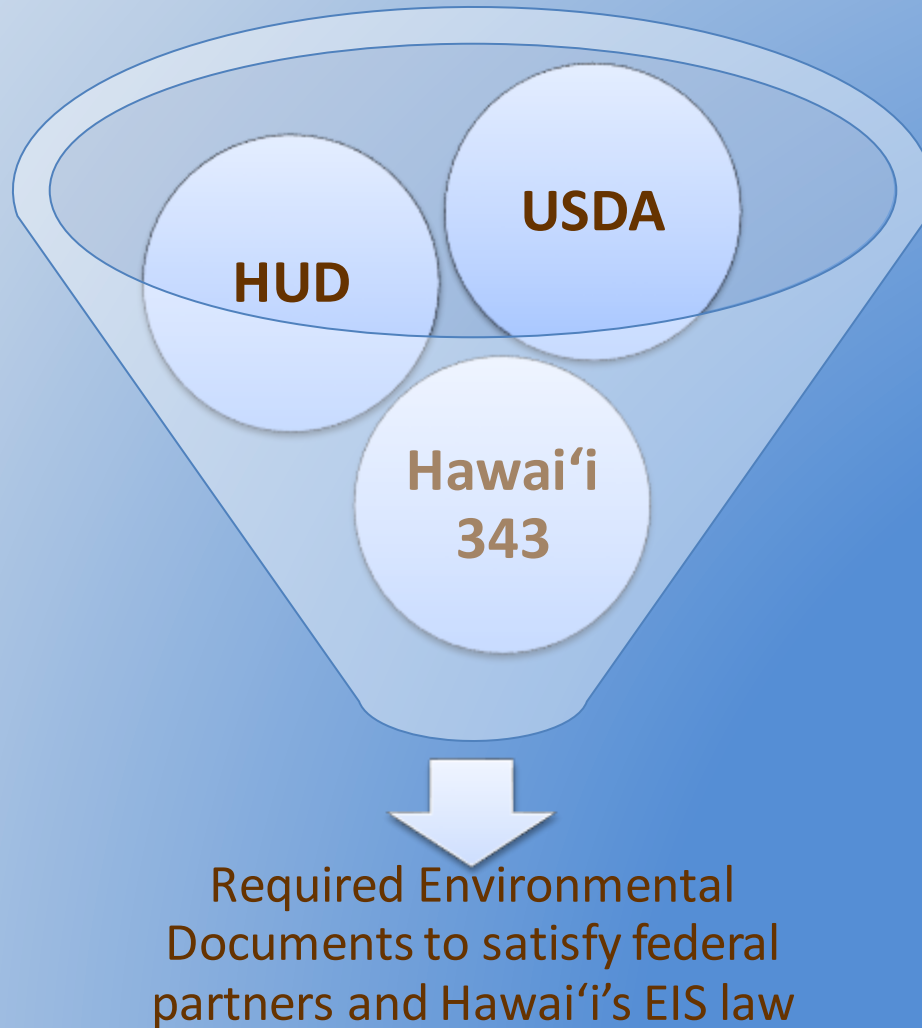
October 1-2, 2015

Proposed Potable Water Improvements

Objectives

- Improve reliability and functionality of water delivery
- Address Water Pressure issues
- Address Fire Protection Deficiencies
- Improve Water System Safety and Security
- Reduce Energy Cost

Identifying and Addressing Environmental Issues



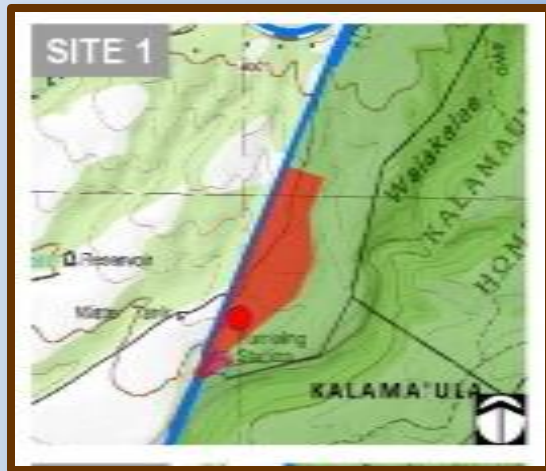
Proposed Potable Water Improvements



Multiple Improvement Projects
Proposed In Seven Areas

Proposed Potable Water Improvements

Site 1- Well Site Compound



Five Projects

1A: New 200,000 Gallon Water Tank

Additional storage for Kalama'ula

1B: INstall Fuel Tank

Provide fuel supply for emergency generator

1C: Modifications to Compound

1D: Replace Booster Pump

1E: Install Photovoltaic Energy System

Proposed Potable Water Improvements

Site 2- Improvements within Kalama'ula

Five Projects

2A: Replace Access Road

To ensure access to existing 200,000 gallon Kalama'ula reservoir

2B: Install Additional Water Line

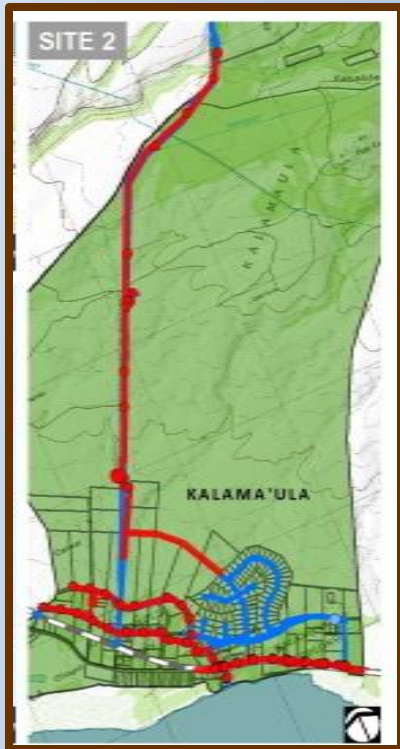
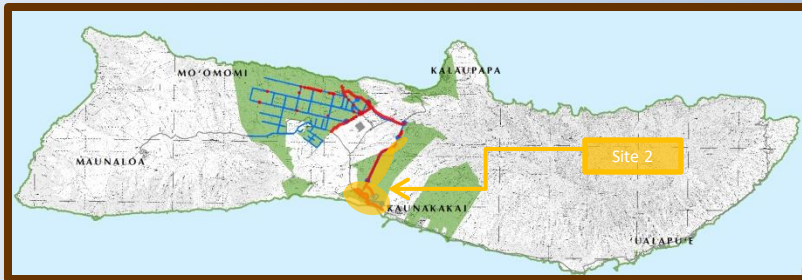
Existing system does not loop. The new 12-inch main will extend along the mauka side of the lots along Hā'ena Street.

2C: Replace Valves

30 valves have reached end of useful life in part due to harsh environmental conditions. The valves and associated equipment will be replaced.

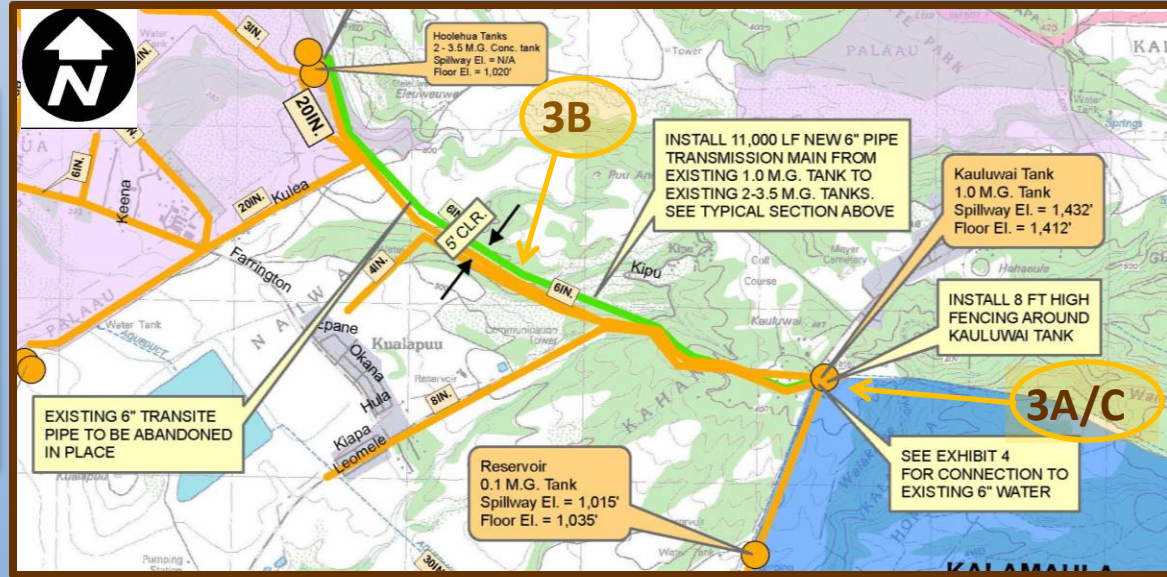
2D Fire Hydrants

30 fire hydrants that have reached end of useful life in part due to harsh environmental conditions will be replaced.



Proposed Potable Water Improvements

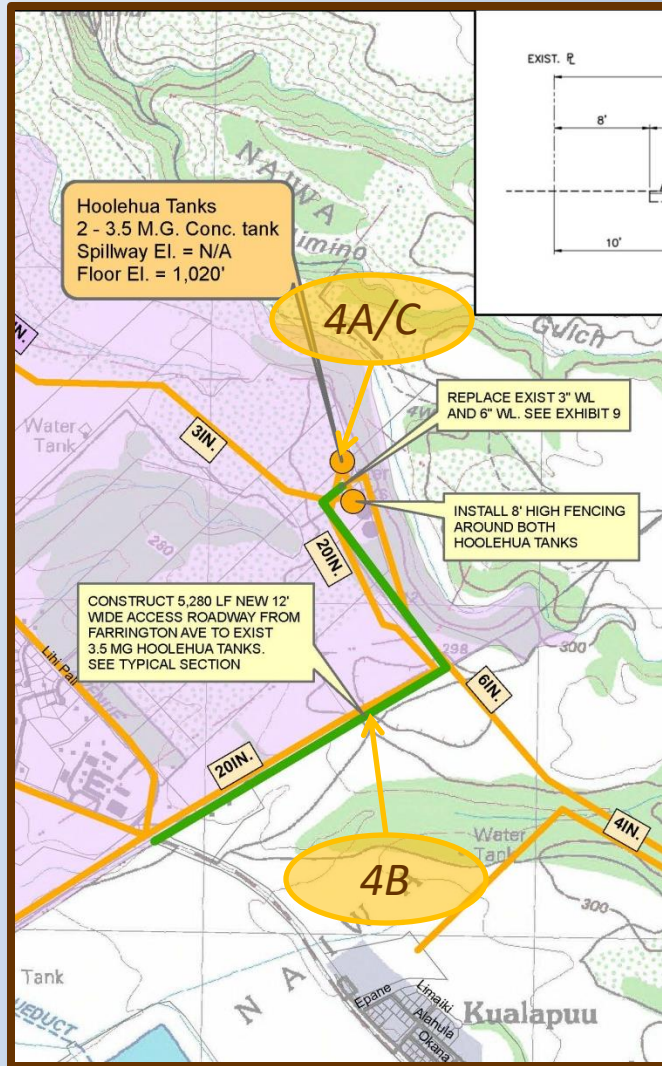
Site 3- Kauluwai Tank Site



- 3A:** Redesign above ground transmission line to maximize use of water stored in tanks
- 3B:** Replace Main Transmission Line from Kauluwai Tank to Ho'olehua
- 3C:** Install Deer Deterrent Fencing around water storage tank facility and Kauluwai

Proposed Potable Water Improvements

Site 4- Ho'olehua Tank Site



Three Projects

4A: Tank Improvements at Ho'olehua

- Automate level and flow control valves
- Replace exposed, corroded pipes and valves
- Replace exterior ladder
- Repair tanks rebar and concrete

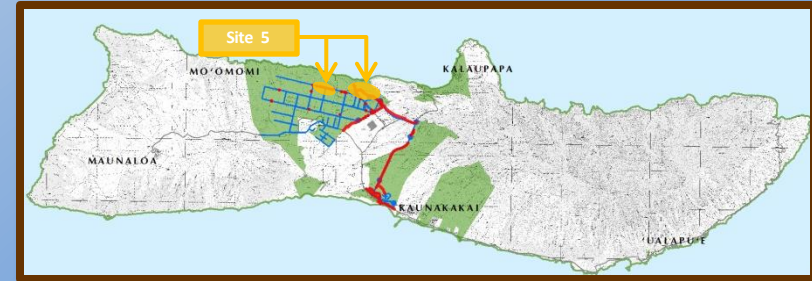
4B: Install Access Road

- Install all-weather roadway located on DHHL lands

4C: Install 8-foot high fencing

Proposed Potable Water Improvements

Site 5- Ho'olehua/Veteran's Cemetery



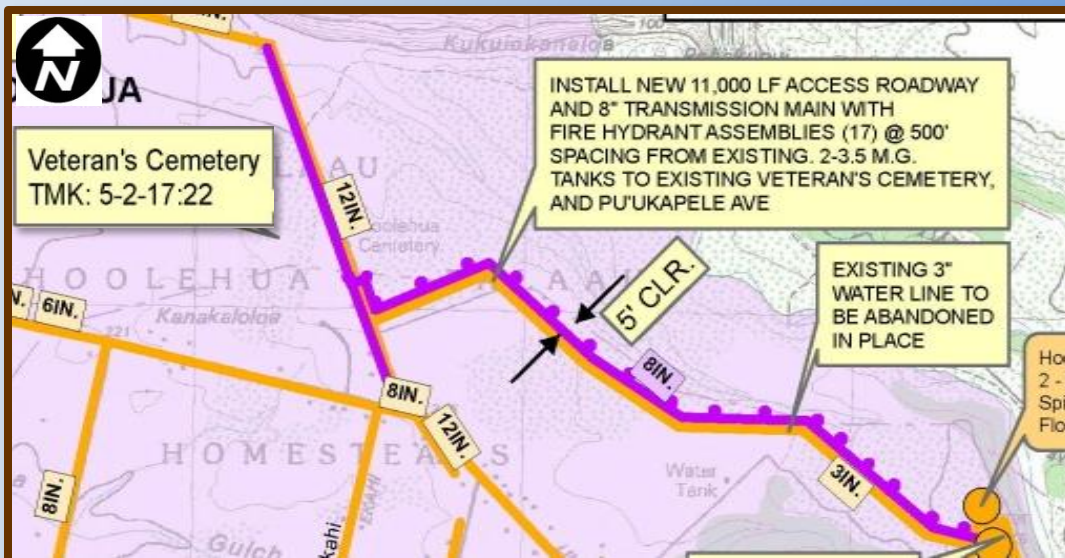
Three Projects

5A: Install new water line from Ho'olehua tanks to Veteran's Cemetery and then on to Lihi Pali Avenue

5B: Fire Protection

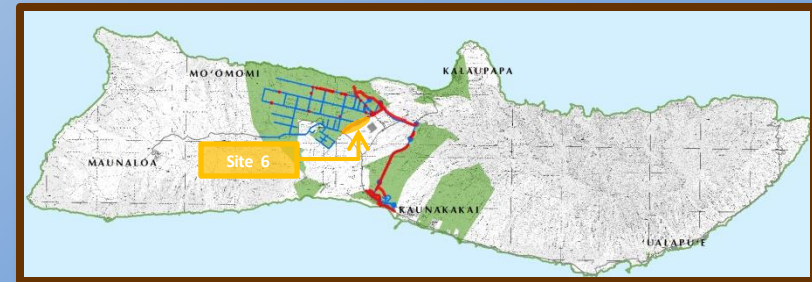
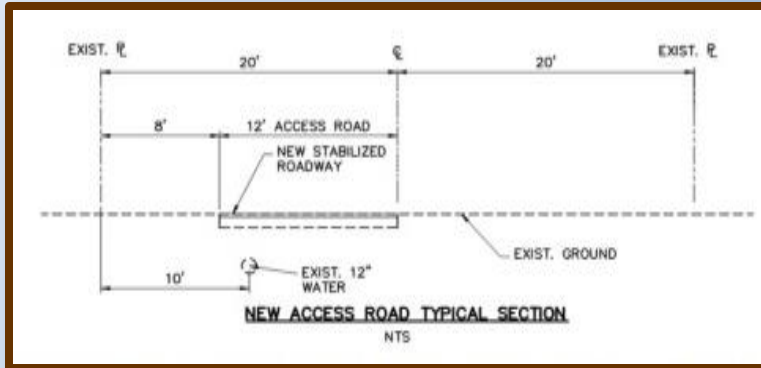
Install approximately 16 fire hydrants

5C: Install new water line along a portion of Pu'ukapele



Proposed Potable Water Improvements

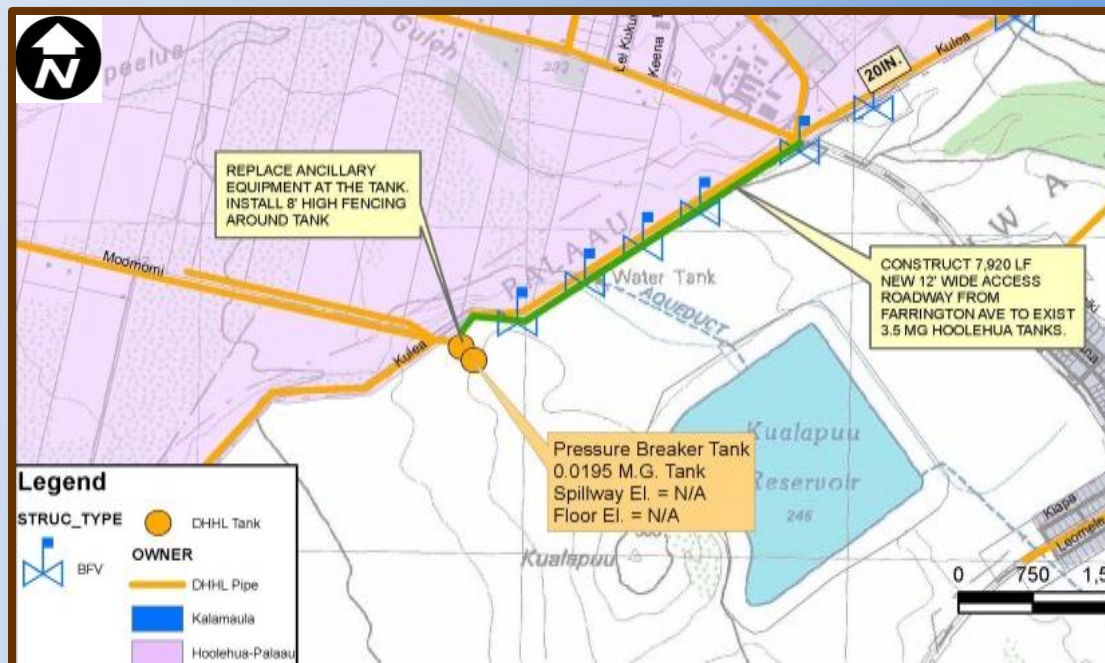
Site 6- Ho'olehua Pressure Breaker Tank Facility



Two Projects

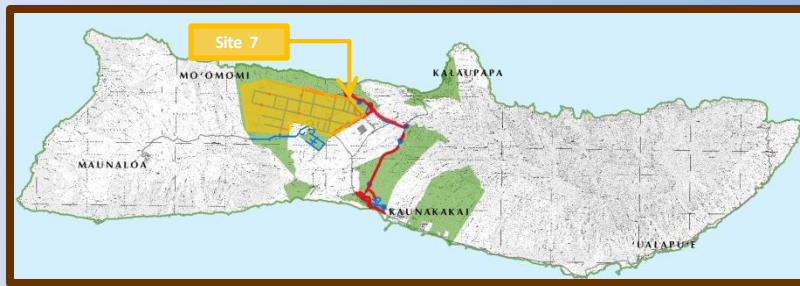
6A: Construct All-Weather Roadway to Pressure Breaker Tank on DHHL land

6B: Replace Valves and Other Worn Equipment



Proposed Potable Water Improvements

Site 7- Ho'olehua Maintenance Yard Improvements and Scattered Valve /Hydrant Replacements



2 Projects

7A: Replace Valves/Hydrants

- Replace 30 valves
- Replace 5 fire hydrants

7B: Repair Maintenance Building Facility

- Construct 4,800 ft² Building
- Install 2,400 ft² concrete pad
- Install new fire hydrant
- Install new water meter



Cultural Resources Identified

- Archaeological Inventory Survey
 - 17 sites identified, primarily within Project Area 1- Well Site and Area 2- Kalama'ula
 - AIS prepared and submitted to SHPD, Jan 2016
 - No response from SHPD, April 6, 2016
 - OHA response regarding significance criteria for 2 sites. Consultation with OHA is on-going

Cultural Resources Identified

- Cultural Resources in Project Vicinity
(not directly impacted)
 - Near Site 4- Ho'olehua 3.5 MG tanks
 - Nā'iwa- Makahiki Grounds
 - Kalama'ula
 - Kapuaiwa
 - Pōhaku along Kalaniana'ole by Auntie Vivian Arakaki

Biological Survey

- **Vegetation-** No endangered/threatened observed-mitigations in place to reduce invasive species introduction
- **Animals-**Endangered/threatened in vicinity, not directly observed
 - ‘ōpe‘ape‘a and Nēnē- breeding season construction mitigations
 - ‘A‘o, ‘Alae kea, ‘Ae‘o, ‘Io- night-time construction mitigations and lighting design mitigations.

Resource Protection

- Ground Water Protection-
 - EPA
 - State CWB
- Farm Lands
 - NRCS
 - State DOA
- Flood zones/Wetlands
 - Army Corp of Engineers
 - State CWB

Consultation Opportunities

- » Estimated Public Comment Periods for Environmental Documentation
 - State Draft EA- DONE- Feb 23- March 24
 - State Final EA- Anticipated release: May 8
 - USDA ER- Early May 2016- 18 days
 - HUD ERR- Early June 2016- 18 days