

AGENDA ITEM J-2, HHC MEETING, SEPT. 16, 2019

The Critical Need for Direct Ditch Water Access for the Pu'u Opae Farm and Irrigation Project

PRESENTER: PU'U OPAE COMMITTEE MEMBERS

Purpose of Today's Presentation:

1. To provide a brief progress report on the Pu'u Opae Farm and Irrigation Project (POFIP).
2. To inform Hawaiian Homes Commissioners that the Pu'u Opae Committee requires the continued existence of the Western Branch of the Koke'e Ditch from Pu'u Moe Divide to the Pu'u Opae Reservoir.
Currently there is no written provision for paying for any system (pipes, pump, maintenance, electricity) to bring water to the Pu'u Opae Farm Plan and Makahoa Ridge home lands.

Brief History of Pu'u Opae Farm and Irrigation Plan:

1. This is a large scale Land and Water Stewardship Project demonstrating ahupua'a principles.
2. 2012: Right of Entry granted to develop and assess the Pu'u Opae Plan.
3. November 2017: License granted to KHHA citing the 7-phases of the Pu'u Opae Master Plan as a key Exhibit to the license.
4. May 21, 2018: ROE and Lease to KIUC for implementation of pumped storage hydropower project on Pu'u Opae home lands. Project is proposed as supporting the water needs and ahupua'a Hawaiian approach that is core to the Pu'u Opae Farm Plan.

Demonstrating Land and Water Stewardship and Restoration Through Hawaiian Values



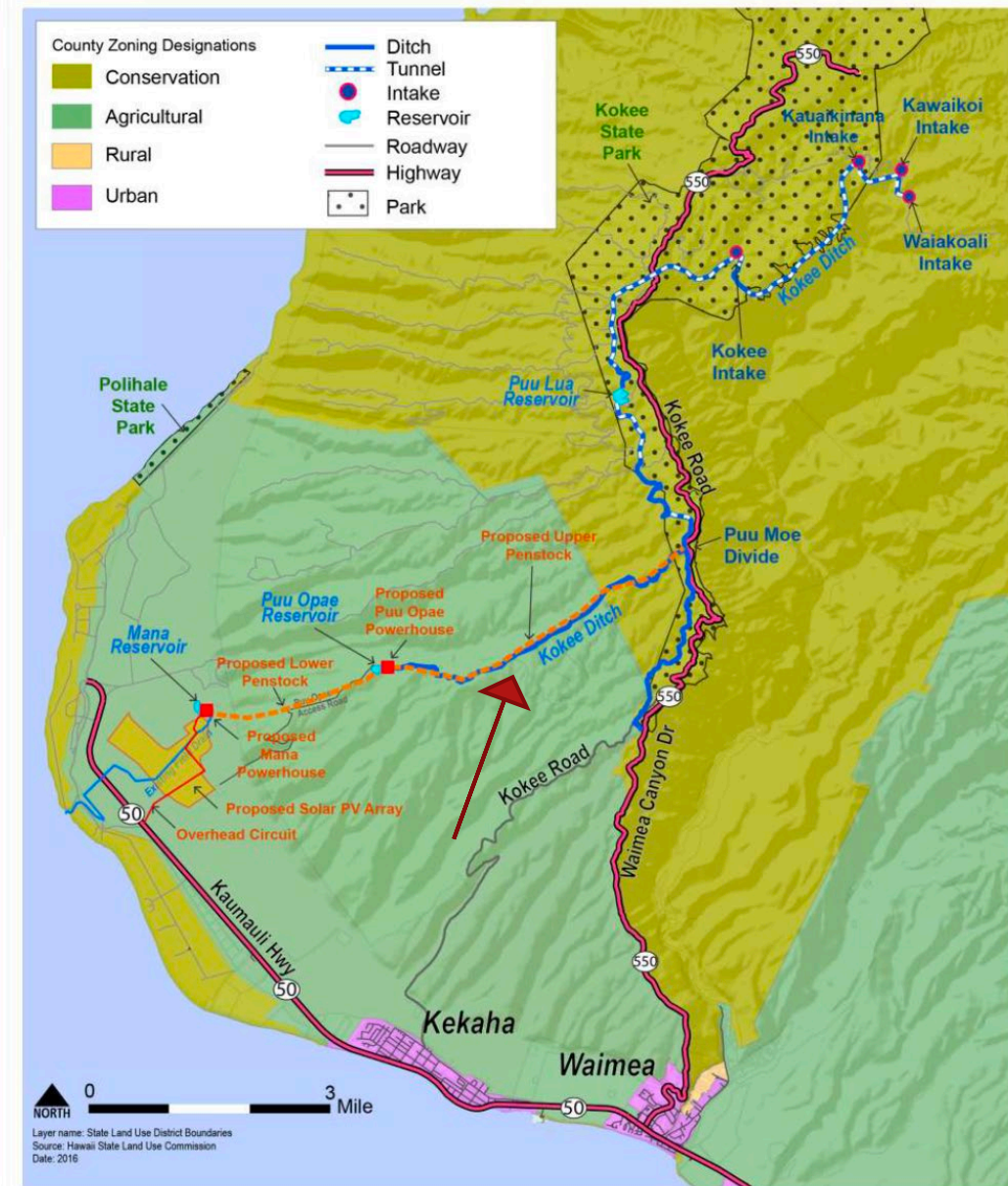
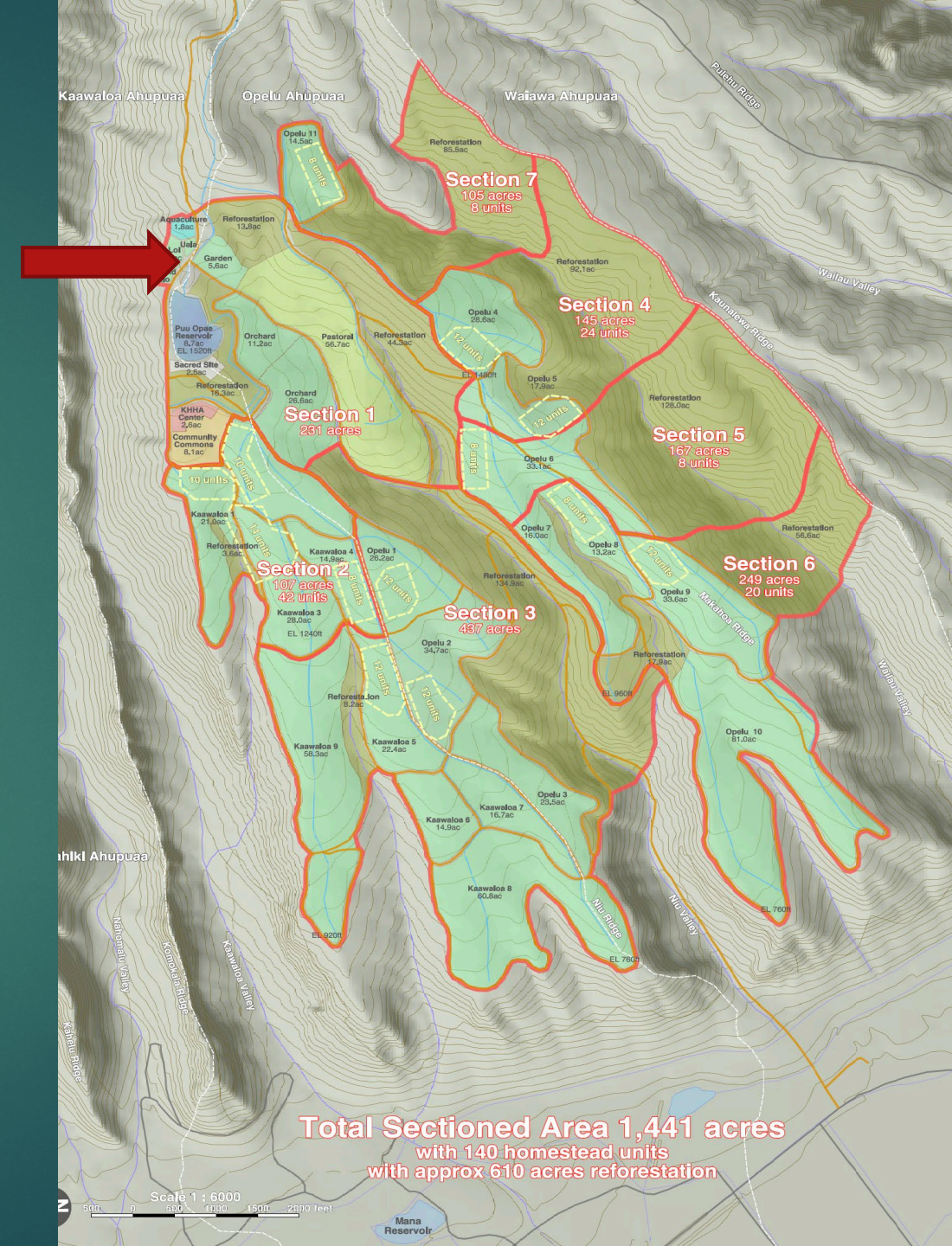


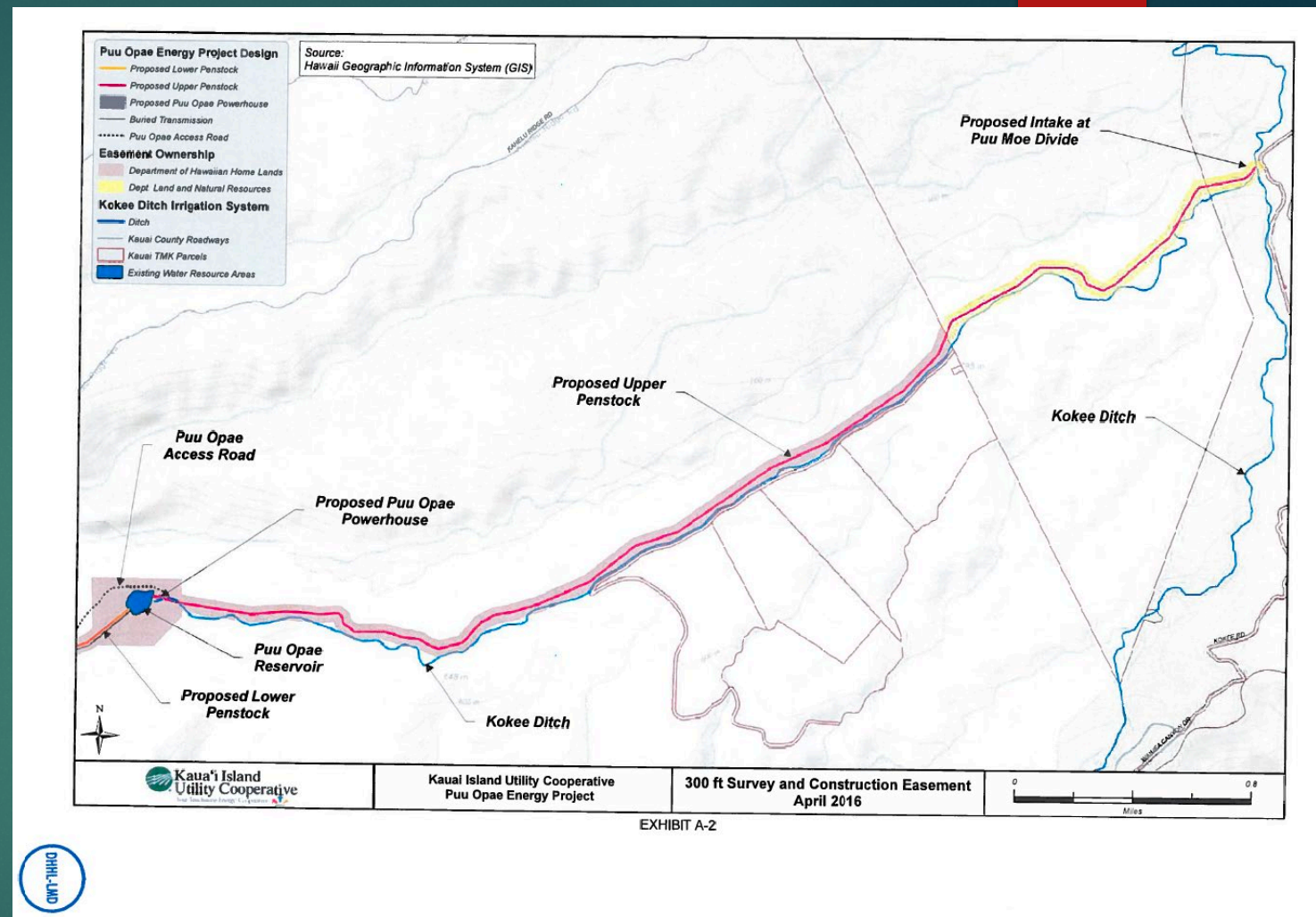
Figure 9: State Land Use Districts

Pu'u Opae Energy Project – Kauai

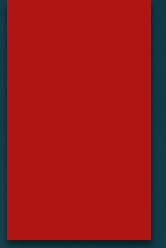
KIUC Penstock
Pipeline path
may infiltrate
the existing
Koke'e
Ditchline

The ditch is
the only
source of
water for our
mauka settling
basin that
irrigates our
231 acres and
all of
Makahoa
Ridge.





Based on the Pu'u Opae Farm Plan, 1.5 mgd is needed to be pumped back uphill from the Pu'u Opae Reservoir.



Koke'e Ditch Water Must Be Guaranteed
Regardless of Hydroproject, Administration
Changes, Staff Shortages or Lack of Public Funds

On Our Own, We are Proactively Securing our Water:

Ditch Maintenance Activities are currently being donated **pro bono** by Pu'u Opae Committee Members and Beneficiaries:

- April 2019: Began cleaning and repairing the ditch
- Removed 12 severe leaks
- Repaired 2 major breaches that were losing about 200,000 GPD (gallons per day)
- Installed an 8' pipe near the DHHL original water intake for five DHHL pastoral lots
- Pipe will direct water to the Pu'u Opae licensed lands
- In 2013 2 pani/discharge outlets were installed (to clean loose dirt from the ditch and to guide the excess water into storm drain valley (approved by KAA)
- Mauka irrigation filters cleaned
- The settling basin has been cleaned and drains refurbished

Pu'u Opae Committee Adds Value

- Backhoe rental: \$18,700
- Backhoe operation: \$12,320
- Manual labor: \$27,216
- Admin professional coordination: \$24,640
- Policy, planning and capacity consultants: \$33,000
- Food: \$700
- Fuel: \$700
- Equipment parts: \$700

Running total (March 1-September 1, 2019):
\$117,976 +tax

= approx. \$128,000




Alaka'i Ho'omaukaukau!











Currently
NO GUARANTEE or RESPONSIBILITY
by any agency to provide
pipes and longterm pipe maintenance for
Pu'u Opae home lands
in any agreement to date

By leaving the West Branch of the Koke'e Ditch
intact, Hawaiians will always be able to ensure that
water will flow to the Pu'u Opae home lands.

Which Entities are Responsible for Ditch Maintenance and Water Provision up to Pu'u Opae?

Answer: ADC (Dept of Ag) and KAA

1. *Mediation Agreement dated April 18, 2017, overseen by the Commission on Water Resource Management (CWRM):*

"Unless and until the KIUC hydroproject has received all required approvals, the current system will be maintained by the ADC and its licensee Kekaha Agriculture Association" (a private non-profit ag cooperative of corporate members).

2. Under Executive Order 4287 (August 18, 2009), ADC was given the responsibility to manage and operate improvements on lands formerly under jurisdiction of DLNR, including the 1.5 mile long **West Branch of the Koke'e Ditch from Pu'u Moe to Pu'u Opae Reservoir (see Map).**

3. KAA is responsible for maintaining all irrigation components to "safely and effectively convey waters through **the entirety of...**Koke'e Ditch" by Agreement with ADC on April 1, 2007 and an Amendment Agreement dated August 29, 2008 (Sec 1.a.(A))

Why an Intact Ditch is Important:

1. Provides a teaching opportunity re: ahupua'a and malama honua principles: "Water doesn't just come out of a pipe."
2. Gravity-fed is preferable to water pumped back uphill
3. The Ditch pathways ensure the irrigation water of Makahoa Ridge and Pu'u Opae Farm Plan home lands.
4. It is the best teaching tool at Pu'u Opae to help Hawaiians understand the importance of maintaining mauka to makai water flows to keep lands balanced and healthy
5. Ditch waterflow is ideal for taro, watercress, aquaculture
6. Being in the water is restorative, connects those who clean the ditch back to the wai
7. Touching the water helps re-focus on the theme of "water brings life"
8. Ditch cleaning provides opportunities for physical conditioning
9. The ditch centralizes the Pu'u Opae Farm Plan as a water-based ahupua'a restoration plan
10. Allows clean water to seep back into the aquifer and wells that were compromised during the plantation era
11. Open ditch provides water to the forest watershed and wildlife
12. The existing ditch is a valuable agricultural asset with years of proven integrity during plantation era



We request HHC support now to obtain a conduit for water (either a formal contract by all parties

1. to **keep the ditch**, or
2. for KIUC/DHHL **to provide all pumps, pipework, electricity and maintenance**) to irrigate our 231 acres and Makahoa Ridge. (on next month HHC meeting agenda to work out the resolution).

Ola I Ka Wai.

Mahalo.