

# Keauhou Water Use and Development Plan Update

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Prepared by the Staff of the Commission on Water Resource Management

November 16, 2021

# Outline

- State Water Code and the Hawaii Water Plan
- Objectives and Elements of the Water Use and Development Plans
- How should the Water Use and Development Plans be utilized?
- Keauhou Water Use and Development Plan Approval Process
- Petition to Designate Keauhou Aquifer System Area as a Groundwater Management Area
- Aha Moku Council and Native Hawaiian Traditional and Customary Practices in Keauhou Aquifer System Area
- Next Steps

# State Water Code and the Hawaii Water Plan

*There is a need for a **program of comprehensive water resources planning** to address the problems of supply and conservation of water. **The Hawaii water plan**, with such future amendments, supplements, and additions as may be necessary, is accepted as the guide for developing and implementing this policy. (§174C-2(b) HRS)*

*\*Additional direction in the admin rules and framework guidance document*

# State Water Code and the Hawaii Water Plan

## Balancing protection of water resources with the efficient use of water resources

- Water Resource Protection Plan (WRPP)
- Water Quality Plan (WQP)
- Agricultural Water Use and Development Plan (AWUDP)
- State Water Projects Plan (SWPP)
- **County Water Use and Development Plans (WUDP)**

**THE WATER RESOURCE PROTECTION PLAN**  
Prepared by the  
Commission on Water Resource Management



**THE WATER QUALITY PLAN**  
Prepared by the  
Hawaii Department of Health

**WHAT IS THE QUALITY AND QUANTITY OF HAWAI'I'S FRESHWATER RESOURCES AND HOW DO WE PROTECT IT?**

**THE STATE WATER PROJECTS PLAN**  
Prepared by the  
DLNR Engineering Division

**THE AGRICULTURAL WATER USE AND DEVELOPMENT PLAN**  
Prepared by the  
Hawaii Department of Agriculture

**HOW MUCH WATER DO WE NEED FOR STATE FACILITIES (SCHOOLS, HOSPITALS), DHHL AND AGRICULTURE?**

**COUNTY LAND USE PLANS**  
Prepared by the  
County Planning Departments

**THE COUNTY WATER USE AND DEVELOPMENT PLANS**  
Prepared by the  
County Water Departments

**HOW WILL OUR LAND USE POLICIES IMPACT OUR FRESH WATER RESOURCES?**

# THE HAWAI'I WATER PLAN



# Objectives of the WUDPs

## Requirements from the State Water Code:

1. Prepared by each of the four counties and adopted by ordinance
2. Consistent with County land use plans and policies
3. Sets forth the allocation of water to land use through the development of policies and strategies to guide the County in its planning, management, and development of water resources to meet projected demands
4. Periodic updates to maintain consistency with changing land use policies

# Elements of the WUDPs

Recommended elements to meet statutory requirements from Hawaii Water Plan Framework:

1. Status of water and related land development & inventory of existing uses
2. Future land uses and related water needs
3. Regional water development plans
4. Consistent with WRPP & WQP
5. Incorporation of AWUDP and SWPP
6. Consistent with State and county land use plans & policies
7. Stakeholder and public involvement
8. Protect water rights, including traditional & customary rights and the needs of DHHL
9. 20-year projection period

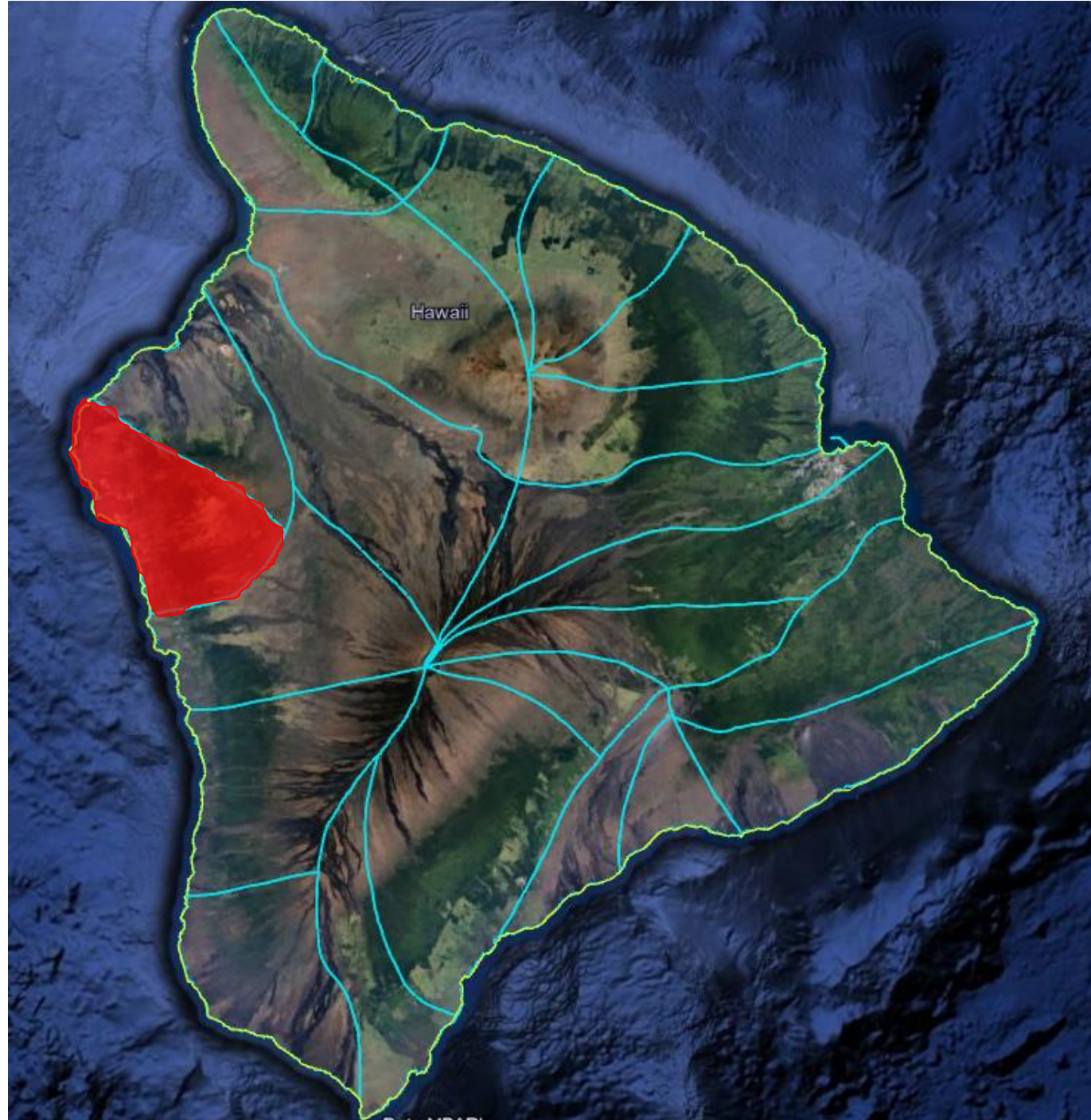
# How would the WUDPs be utilized by CWRM?

- **Balance the protection of water resources with the efficient use of water resources**
- Identify where demand for water will exceed the sustainable limits of the resources
- Guide permitting
- Ensure protection of public trust uses
- Encourage the utilization of water conservation and alternative sources where applicable
- Guide monitoring programs
- Encourage strategies to address the impacts from climate change
- Identify community concerns related to water use and development



# How could the WUDPs be utilized by the County?

- Integrate land use policies
- Inform future land use decisions
- Ensure the protection of public trust uses of water
- Facilitate the planning and budgeting of water infrastructure to meet future water demands
- Facilitate coordination and communication across County agencies
- Communicate to the public how land use plans and policies are balanced with protection of public trust resources





KIHOLO

KEAUHOU

KEALAKEKUA

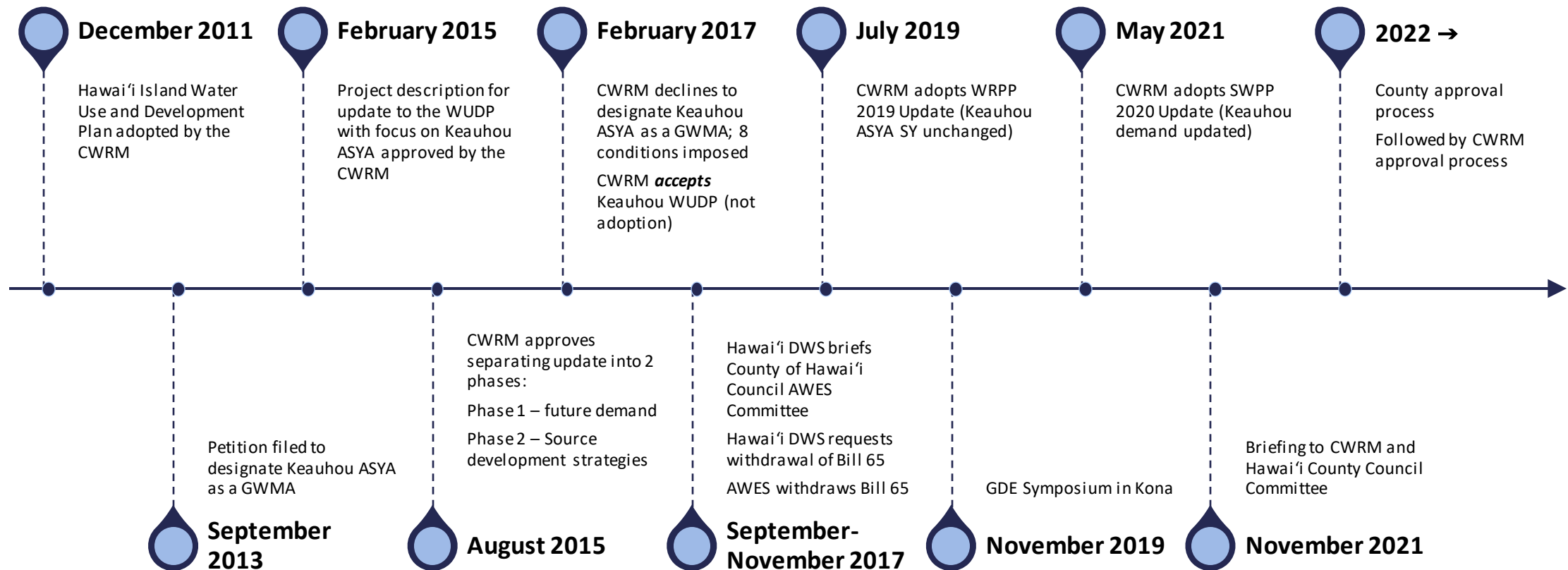
Kaloko-Honokohau National Historical Park

*Aquifer system boundary*

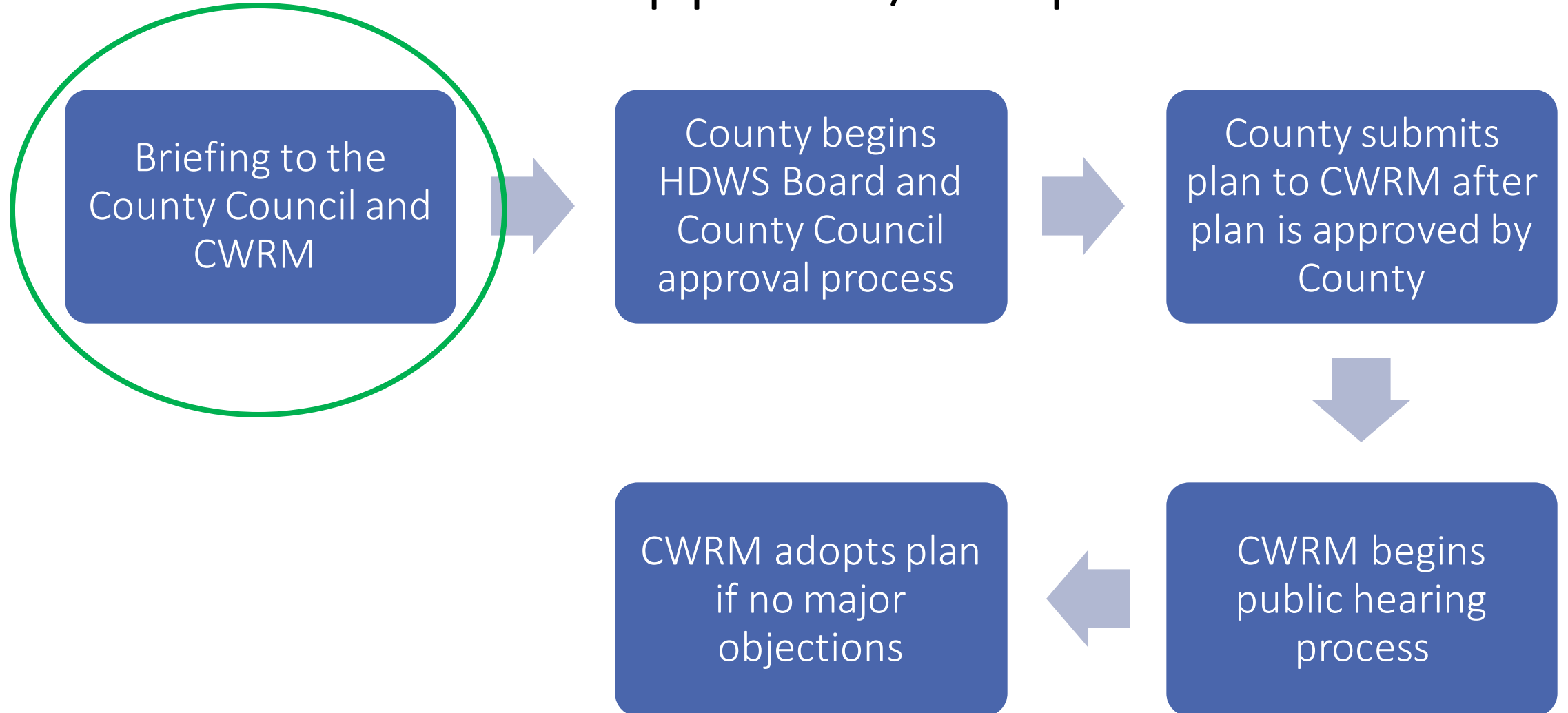
*Aquifer system boundary*



# Timeline of the Keauhou Water Use and Development Plan



# Keauhou WUDP Approval/Adoption Process



# Petition to Designate Keauhou Aquifer System Area as a Groundwater Management Area

## Alternative actions to Keauhou designation (02/14/2017)

1. Aha Moku and DHHL review of well construction & pump installation permits and, if necessary, set conditions to address traditional & customary practices (T&C)
  - New well applications are now sent to the Aha Moku Advisory Commission, DHHL, the National Park Service, and Hawai'i DWS for review and comment
2. New private wells in Ahupua'a of Kaloko, Honokohau 1-3, or Kealakehe to be encouraged to put in a deep monitor well (DMW), if none already exist;
  - There have been no new applications for wells in these areas since 2017

# Petition to Designate Keauhou Aquifer System Area as a Groundwater Management Area

## Alternative actions to designation (02/14/2017)

3. Finish remediation of Keopu DMW and construction of new Keopu DMW 2
  - Both have been completed
4. Convert Kaloko Irrigation Well 1 (Well No. 4160-001) to a DMW
  - Alternate well chosen for new Kaloko DMW (4159-001), on track for completion by end of 2021/early 2022.
5. Enforcement of monthly water reports from all production and monitor wells
  - 94% compliance as of May 2021

# Petition to Designate Keauhou Aquifer System Area as a Groundwater Management Area

## Alternative actions to designation (02/14/2017)

6. If Authorized Planned Use (APU) reaches 80% (30.4 mgd), staff will commence public information meetings
  - Anticipated demand estimated at 28.21 mgd (FAINC 2021).
7. If plans of the Keauhou WUDP are not followed and 12-MAV pumpage reaches 17.1 mgd, staff will commence public information meetings
  - 12.943 as of May 2021.
8. When USGS 3-D Model is finished, the CWRM will be briefed in a regular meeting
  - Model completed and Commissioners were briefed at the April 20, 2021 meeting.



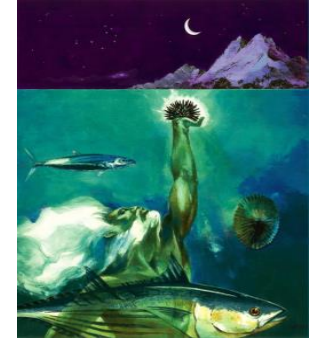
# Keauhou WUDP Desired Outcomes

While the Keauhou WUDP meets the statutory requirements, CWRM is looking at the plan for information to assist with:

- Protection of Groundwater Dependent Ecosystems (GDE)
- Protection of Traditional and Customary Rights
- Refined estimates of APU
- Strategies to meet future water demands with alternative water sources
- Development of an adaptive management plan to protect public trust resources while allowing for their efficient utilization
- Developing a groundwater monitoring plan

The Keauhou WUDP will not influence sustainable yield (SY) of the Keauhou Aquifer System Area. It is important to note that any impacts to GDE and T&C practices in the Keauhou ASYA, as a result of setting SY and withdrawal of groundwater, are not currently known.

# Hawaii State Aha Moku



Background: *Ka Pa'akai O Ka Aina (2000)*\*(*The Salt of the Land*)

## Findings of Fact and Conclusions of Law

- ❖ Identification and scope of “valued cultural, historical, or natural resources” in petition or impacted area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- ❖ The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed actions;
- ❖ The feasible action, if any, to be taken to reasonably protect native Hawaiian rights if they are found to exist.

*Note: Ka Pa'akai O Ka Aina comes out of the people of Kona and within the area of the Keauhou Aquifer*

\* *Ka Pa'akai O Ka'Aina v. Land Use Commission, State of Hawai'i, 2000 Supreme Court of Hawai'i*

## The restoration of the Aha Moku System

2004: Vision of John Kaimikaua

- Translation of ancient chants and oral histories dating back to the 9<sup>th</sup> Century by Kawaikapuokalani Hewett who brought forward the Foundation of the Aha Moku:
  - *Malama Ke Akua – Honor the God*
  - *Malama I Ka'Aina – Honor the Land, the water, the ocean*
  - *Malama Na Hanau 'Iwi O Ka 'Aina – Honor those born of the land*
- 2006-2012: Over 100+ Kupuna and expert practitioners of all disciplines met and authored the Aha Moku Process which ultimately became the process now used which is connected to Ka Pa'akai O Ka Aina
- 2012: Act 288, SLH2012, Governor Abercrombie
- 2013: the Aha Moku becomes attached administratively to DLNR, is mandated to advise the Chairperson of the Land Board on issues of natural and cultural resources
- Pae 'Aina, the eight main Hawaiian Islands that participate in the Aha Moku
  - Mokupuni: 8 Islands
  - Moku: 46
  - Ahupua'a: 606
- Keauhou Aquifer covers and impacts the ahupua'a from Kealakekua, Kaumo'o, Honuaino, Keauhou, Kahalu'u, Kaumalumalu, Holualoa, Puapua'a, Honokohauiki, Kaloko, Ooma, Kalaoa, Koelehuluhulu and Kaupulehu.



Logo of Aha Moku  
Visual Painting of John  
Kaimikaua's Vision

Community Kuka – Charles Young,  
Kahu Nui O Moku O Keawe  
Discussions with traditional generational 'ohana on petition  
to designate Keauhou Aquifer System Area as GWMA

## Aha Moku Facilitation

- Aha Moku representatives help facilitate small group meetings between community/family members and CWRM.
- Community/family participation represented a broad geographic range from the north, central and south Kona regions.
- Participants were native Hawaiians of different age groups with diverse knowledge, backgrounds and experiences.
- All expressed interest/concerns about water resources from mauka to makai.
- Covid restrictions/guidelines affected how/when meetings could occur resulting in expanding the timeline for meaningful consultation.
- Participants were very cooperative and thorough on the subject matter.
- Aha Moku representatives feel that a sufficient number of individuals participated in the consultation process yielding a reliable consensus of the community's views.

# Next Steps

- Hawai'i County Council / HDWS approval process
- HDWS formally transmits final approved Keauhou WUDP
- CWRM action to approve public hearing
- CWRM public notice period
- CWRM action to adopt Keauhou WUDP

Thank you for your time



Commission on Water  
Resource Management

<http://hawaii.gov/dlnr/cwrn/>