

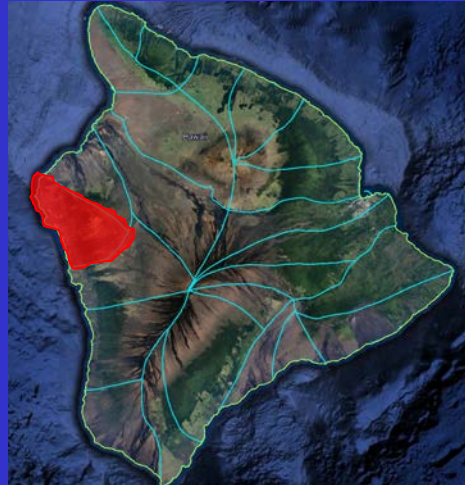


# Symposium

on

# Groundwater Dependent Ecosystems

## Keauhou Aquifer System Area, Island of Hawaii



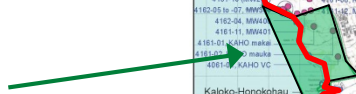
# Presentation Outline

- Introduction & Background of CWRM Action
- Ground Water Dependent Ecosystems (GDE) & Adaptive Management Framework (AMF)
- Symposium
- Takeaways & Next Steps

# Presentation Outline

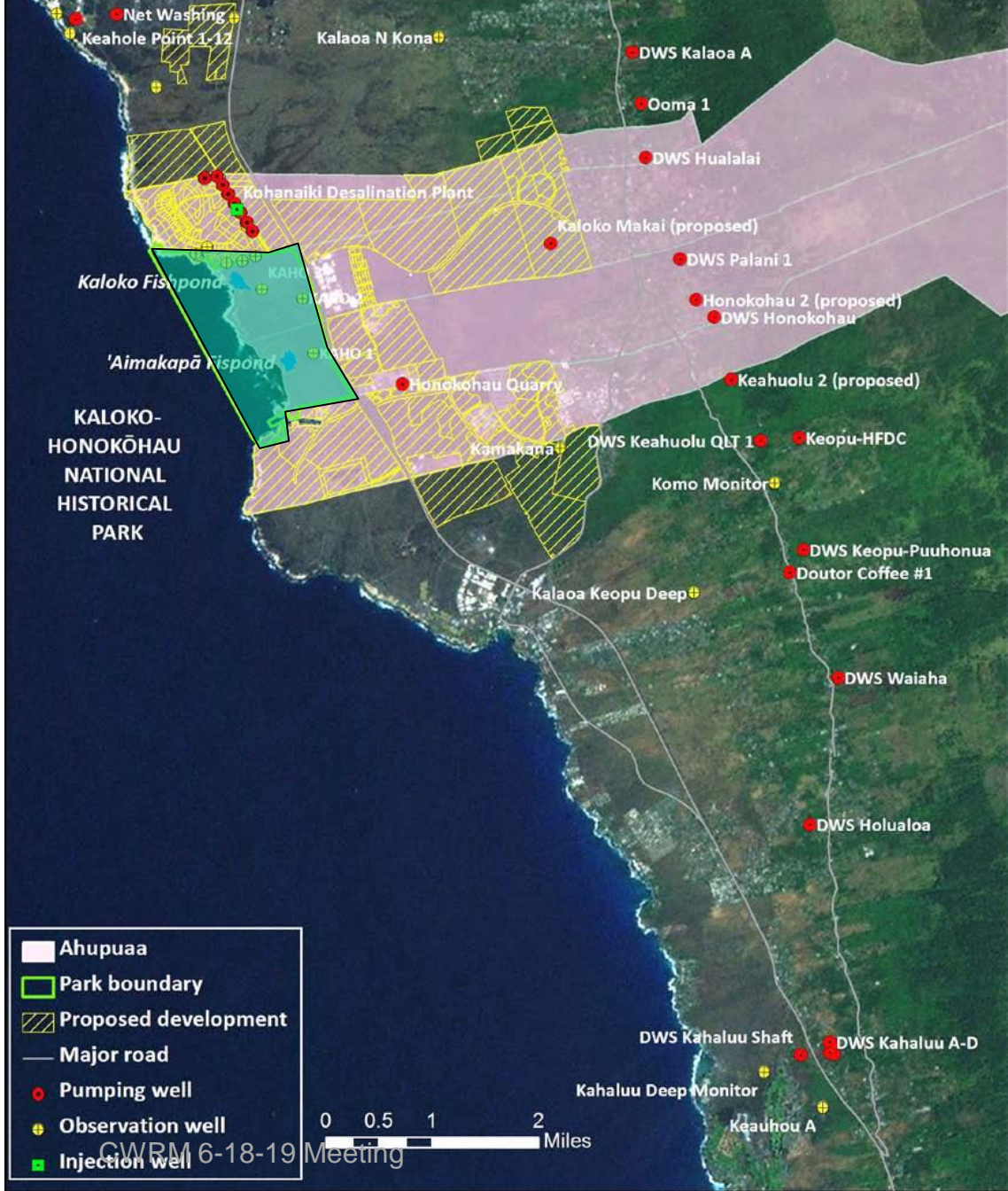
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# Kaloko-Honokōhau National Park



September 13, 2013  
NPS Petition:

To designate  
Keauhou Aquifer  
System Area as a  
Ground Water  
Management Area



On February 14, 2017, the Commission  
denied the NPS petition

...but there were follow-up action items

## Recommendation

That the Commission deny the petition to designate the Keauhou Aquifer System Area (KASA) as a groundwater management area and directs staff to further investigate the science of coastal leakage impacts for consideration in setting or adjusting sustainable yields in the upcoming Water Resource Protection Plan (WRPP) 2017 update. The Commission will continue to closely monitor the Keauhou Aquifer System Area (KASA) to protect and ensure the health of the aquifer and all public trust uses therein in accordance with the eight (8) actions described in the conclusion section of this submittal.

## Recommendation

to further investigate  
the science of coastal leakage impacts for consideration in  
setting or adjusting sustainable yields in the upcoming  
Water Resource Protection Plan (WRPP) 2018 update.



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# Published 2 months after CWRM decision: National Ground Water Associations (NGWA):

groundwater  [Explore this journal >](#)

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Issue Paper/  
**A Global Synthesis of Managing Groundwater Dependent Ecosystems Under Sustainable Groundwater Policy**  
by [Melissa M. Rohde](#) , [Ray Froend](#), [Jeanette Howard](#)

First published: 17 April 2017 [Full publication history](#)

DOI: 10.1111/gwat.12511 [View/save citation](#)

Cited by (CrossRef): 0 articles [Check for updates](#)  Citation tools ▾

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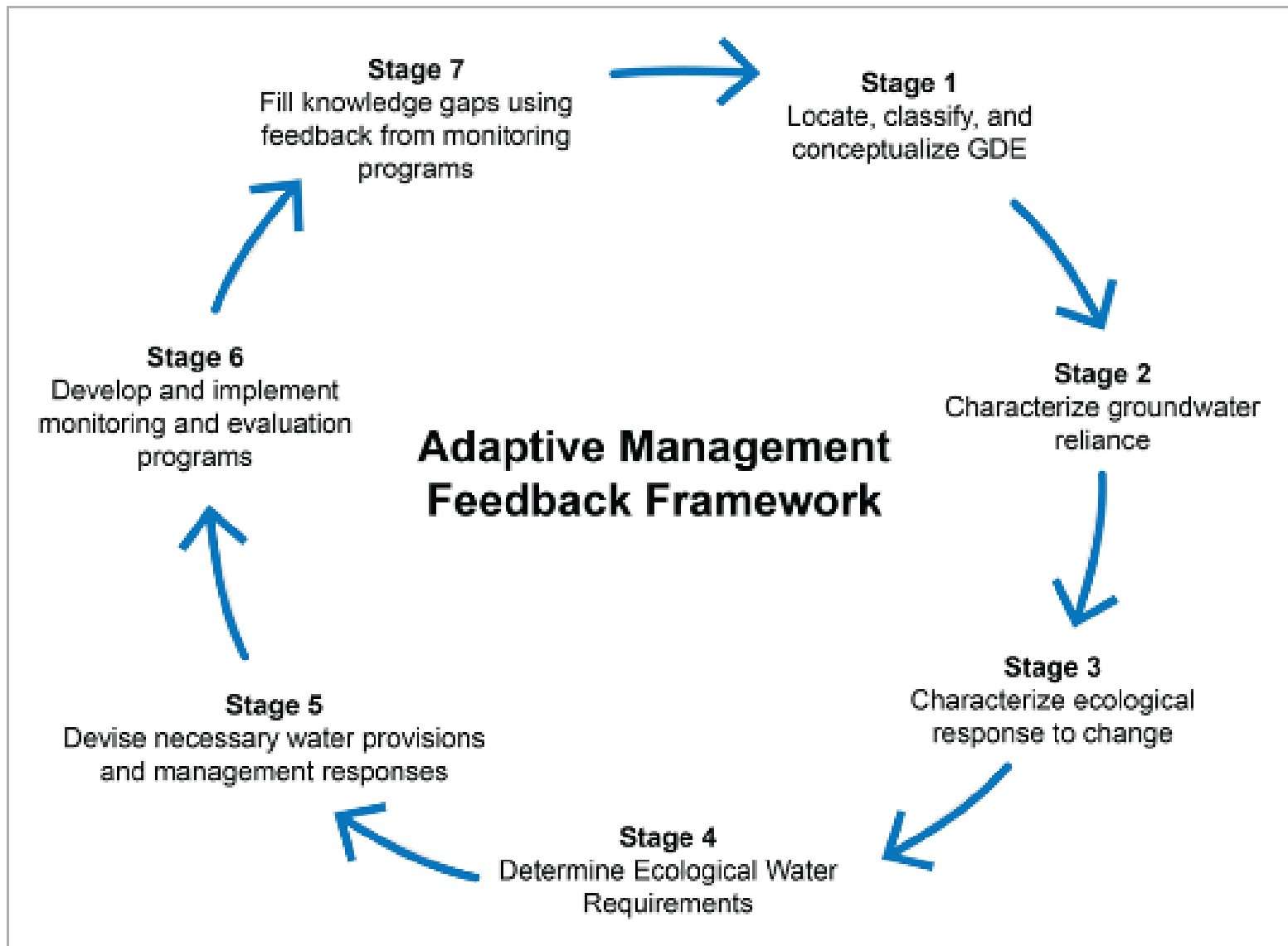
[Funding Information](#)

*Article Impact Statement* : Global synthesis of opportunities and challenges for managing groundwater dependent ecosystems under sustainable water management policies.

[View issue TOC](#)  
Volume 55, Issue 3  
May/June 2017  
Pages 293-301

PDF  
Info  
References  
Figures

CWRM 6-18-19 Meeting



# Adaptive Management Framework

Adaptive management is a “learning by doing” management strategy that utilizes ongoing monitoring and research to inform management decisions.

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# Symposium Details

- **Objectives**

- Workshop invited professionals and experts
- Develop pilot Adaptive Management Framework Plan (AMF) for GDEs in vicinity of Kaloko-Honokōhau Historical National Park (NHPS)

- **Hired a professional facilitator Accord 3.0 Network**

- \$75,000 Budgeted and Approved

- **Held in Keauhou Kona**

- 1-day workshop, ½ day site visit to NP
- November 8-9, 2018

# Symposium Summary

- **Participants**

- **44 cultural, technical, & scientific experts**
- **13 other scientists**
- **9 Kaloko-Honokōhau Historical National Park (NHPS)**
- **8 Aha Moku**
- **7 DLNR (CWRM, DAR, Parks)**
- **5 Ike Wai**
- **2 QLT**

- **T&C Video**

- **Vimeo link**
- **Nov 8 & Jan 10**



The screenshot shows a Vimeo video player interface. At the top, the Vimeo logo is on the left, and navigation links for 'Join', 'Log in', 'Pricing', 'Features', 'Watch', and 'Stock' are on the right. The main title of the video is 'Adaptive Management Symposium on Groundwater Dependent Ecosystems at Kaloko-Honokohau National Historical Park'. Below the title, there are two video thumbnails. The left thumbnail is titled 'Traditional & Custom...' and the right one is 'Kaloko-Honokohau Fi...'. Both thumbnails show a person walking in a natural setting. Below the thumbnails, the video is attributed to 'Hawaii DLNR' and includes a brief description: 'This video is about Traditional & Customary Knowledge about KHNHP'.

# Final Report

December 2019

Participants emailed  
for comments

NPS February 4,  
2019 comments  
attached to report

Posted to CWRM  
website

Adaptive Management Symposium on  
Groundwater Dependent Ecosystems at  
Kaloko-Honokōhau National Historical Park (KHNHP)

## Meeting Record and Summary

Peter S. Adler, PhD. and Katie Ranney  
|The Accord3.0 Network

Kona, Hawaii  
November 8-9, 2018

*Uē ka lani, ola ka honua*  
When the heavens cry, the land lives



December 31, 2018



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# **Symposium Takeaways & Next Steps**

- Fresh water flow is absolutely essential for the public trust resources but there are other threats (which rightfully are beyond CWRM) which influence the longer term sustainability.**
- Many of those other threats, especially invasives and sea level rise inundation predicted scenarios, will change the picture. Adaptive management has to be responsive to those. Fresh water continuance by itself cannot guarantee what the NPS wants.**
- Local knowledge from the practitioners is essential and ongoing engagement can inform policies and reduce unnecessary future conflict.**

# **Symposium Takeaways & Next Steps**

- Pumping impacts to GDEs is not a settled science and more work is needed to assess impacts as specified in the Draft 2019 Water Resource Protection Plan F.2.1. regarding affect on sustainable yields.**
- Continue to develop an Adaptive Management Framework Plan for Keauhou GDEs with NPS and stakeholders.**
- Recognize Draft Keauhou Water Use and Development Plan by bringing well applications to the Commission for approval that are contrary to the WUDPs direction to develop larger municipal wells in the southern portion of high-level aquifer and the entire basal aquifer.**