

National Park Service
U.S. Department of the Interior

Water Resources Division



Presentation to the Commission on Water Resource Management Public Meeting Agenda Item C.3.

Paula Cutillo, PhD
Water Rights Branch

June 18, 2019
Waimea, Hawai'i

Groundwater Sustainability



USGS SIR 2015-5164 (Izuka et al. 2018)

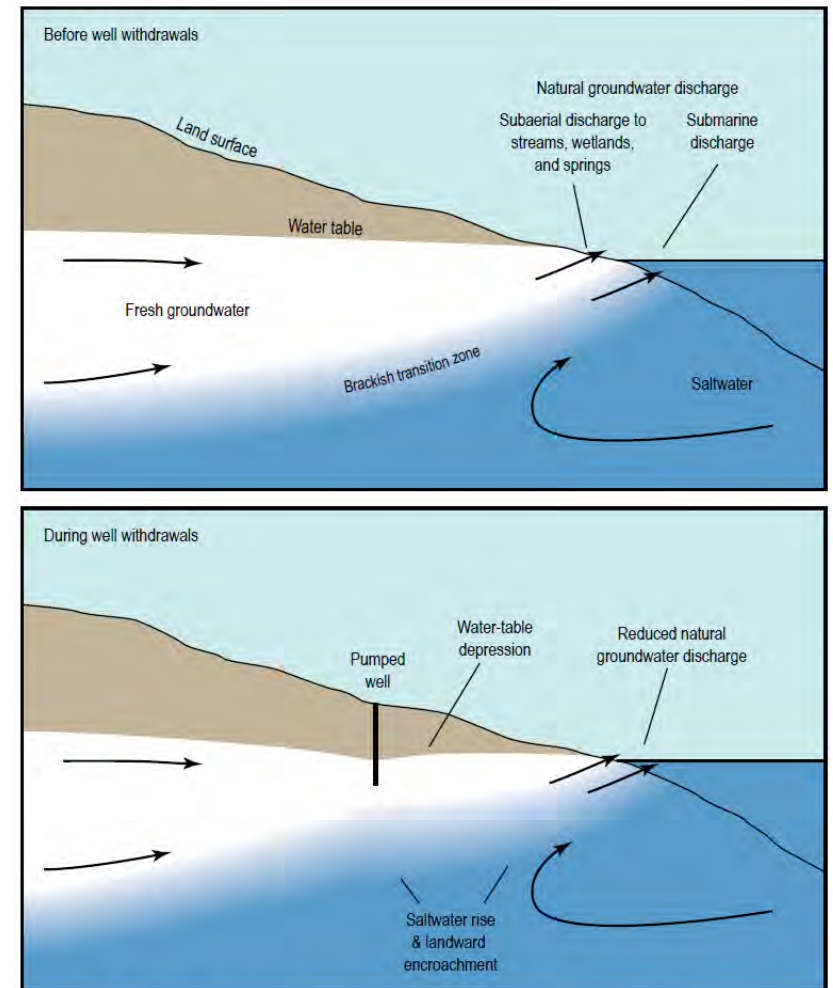


Figure 4. Effects of withdrawing water from a coastal aquifer.

Water Resources Protection Plan Update:

➤ **F.2.1 Groundwater Dependent Ecosystems and Sustainable Yield**

- The current approach for managing groundwater in Hawaii does not explicitly account for the groundwater discharge needs of GDEs.
- Based on the best available information, CWRM staff should propose action triggers and develop a suite of management actions for consideration by CWRM. It is recommended that CWRM build on the work done by NPS to establish an adaptive management approach for Kaloko-Honokōhau NHP as a priority pilot project.

➤ **Action Plan, Project 1.7, Task 1.7.2**

Develop a pilot adaptive management plan for protecting groundwater dependent ecosystems

Groundwater Discharge

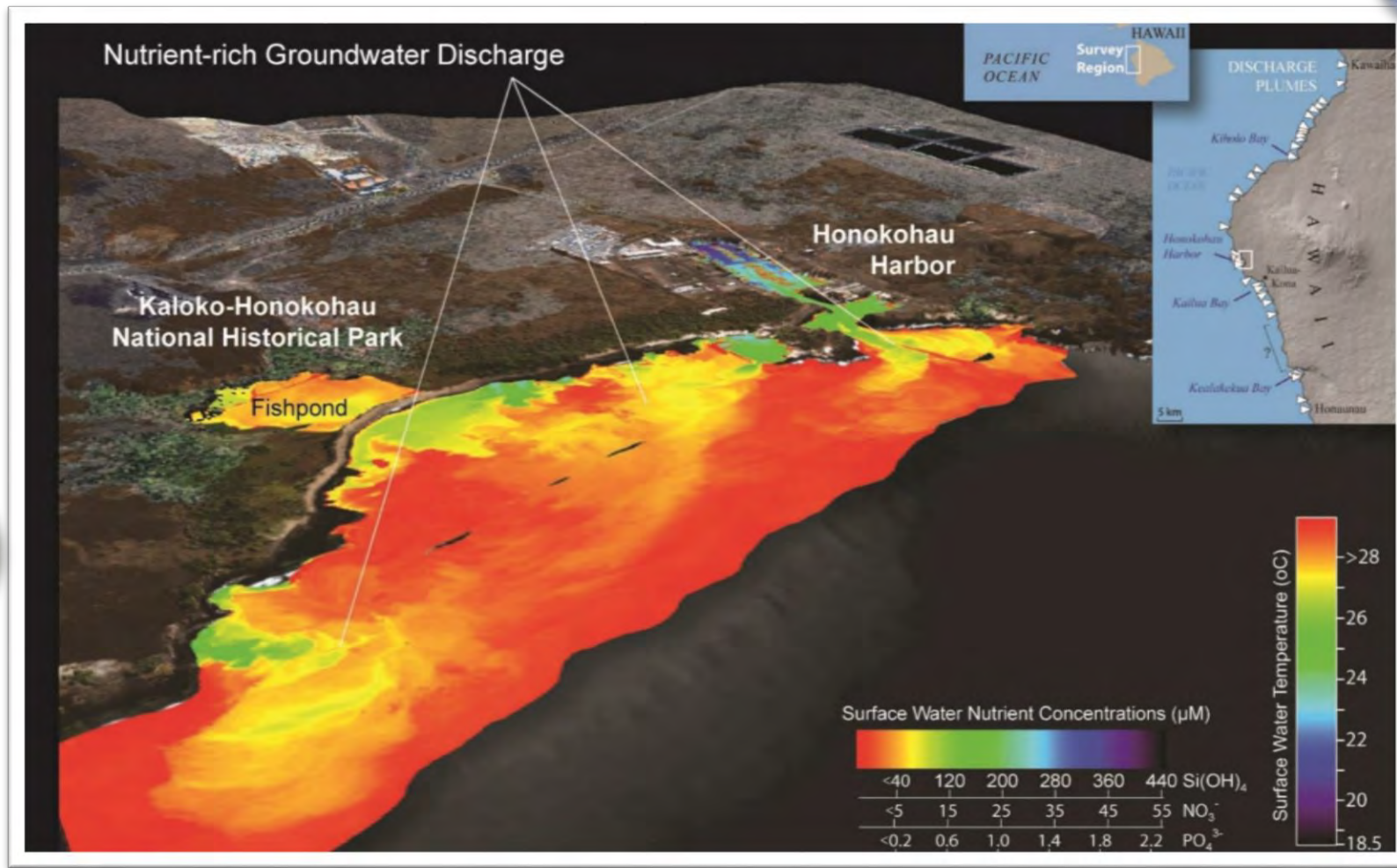


Image courtesy Craig Glenn/University of Hawai'i SOEST

Hui Kaloko-Honokohau

Before

After



Mahalo to all our 'ohana who have lowered their hands, lifted their voices, and offered their prayers to the healing of Kaloko.



Kaloko-Honokōhau National Historical Park

Mālama 'Aimakapā Community Work Day
Second Saturday of Every Month
8 AM to 12 PM



Please join us as we spend the day removing invasive plant species at 'Aimakapā Fishpond.

What to Bring

Expect hot weather and for clothes to get muddy as we wrestle the weeds. Make sure to bring:

- water bottle (we will have plenty of water on site to refill) and snacks. Light snacks will be provided.
- hat
- reef-safe sunscreen (non-nano zinc oxide)
- gloves
- sturdy boots/shoes



Directions

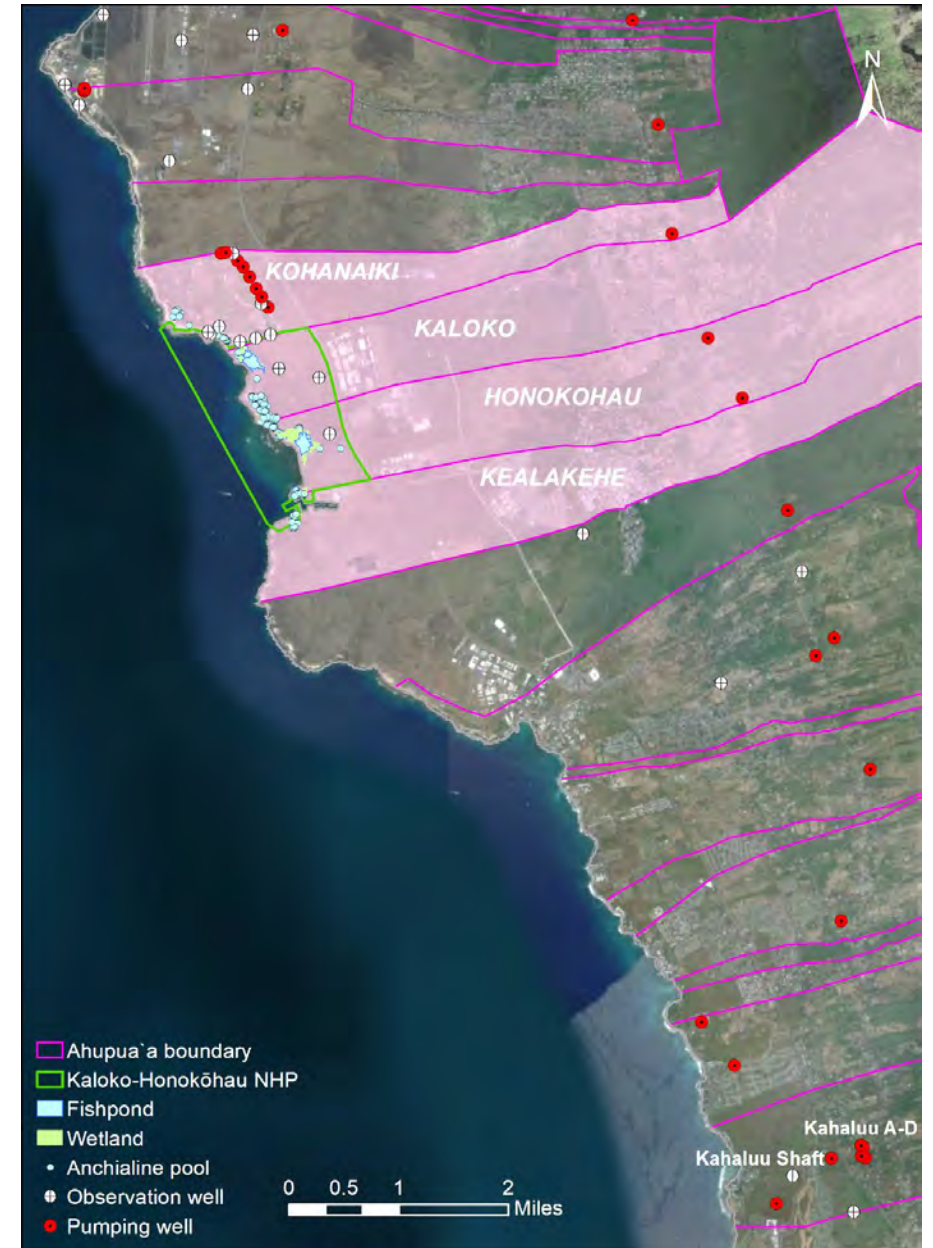
Kaloko-Honokōhau National Historical Park is located on the west coast of the island of Hawai'i, approximately 3 miles south of the Kona International Airport and 3 miles north of the town of Kailua-Kona, on the ocean side of Highway 19. We will meet at the visitor center at 8 AM and walk the trail down to 'Aimakapā Fishpond.

PLEASE RSVP, and if you have any questions contact Jackson Letchworth by email at jackson_leitchworth@nps.gov or by phone at 808-557-2533

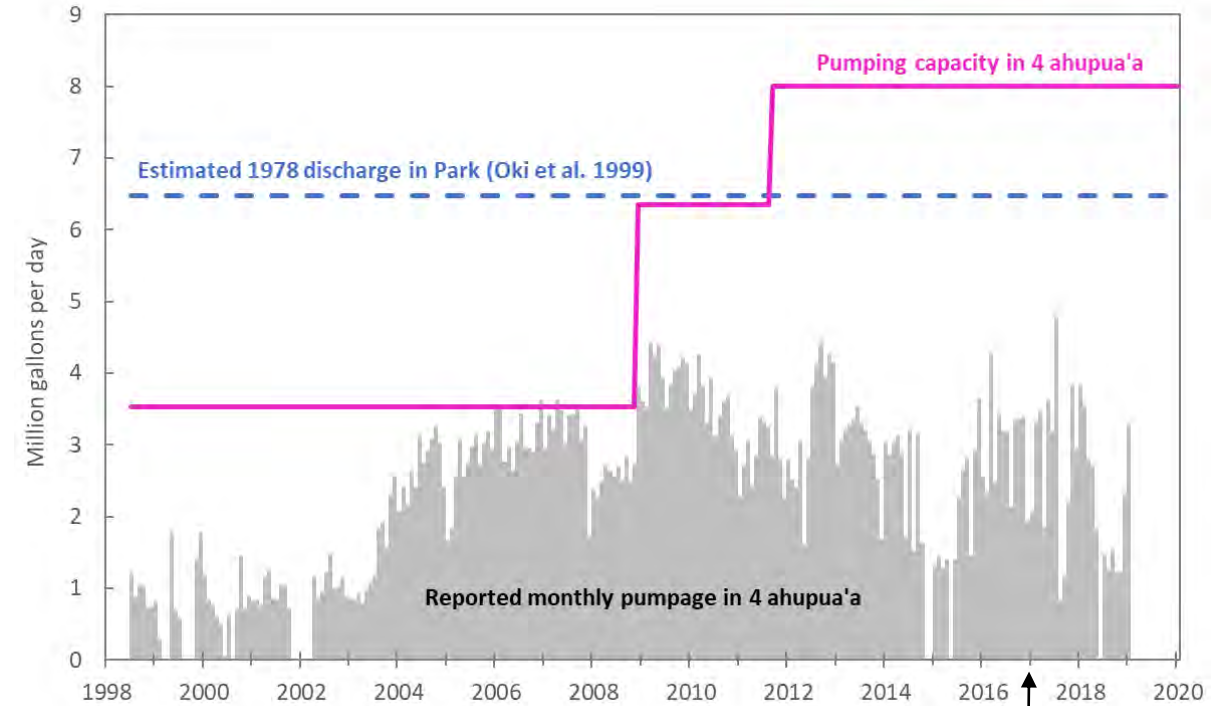
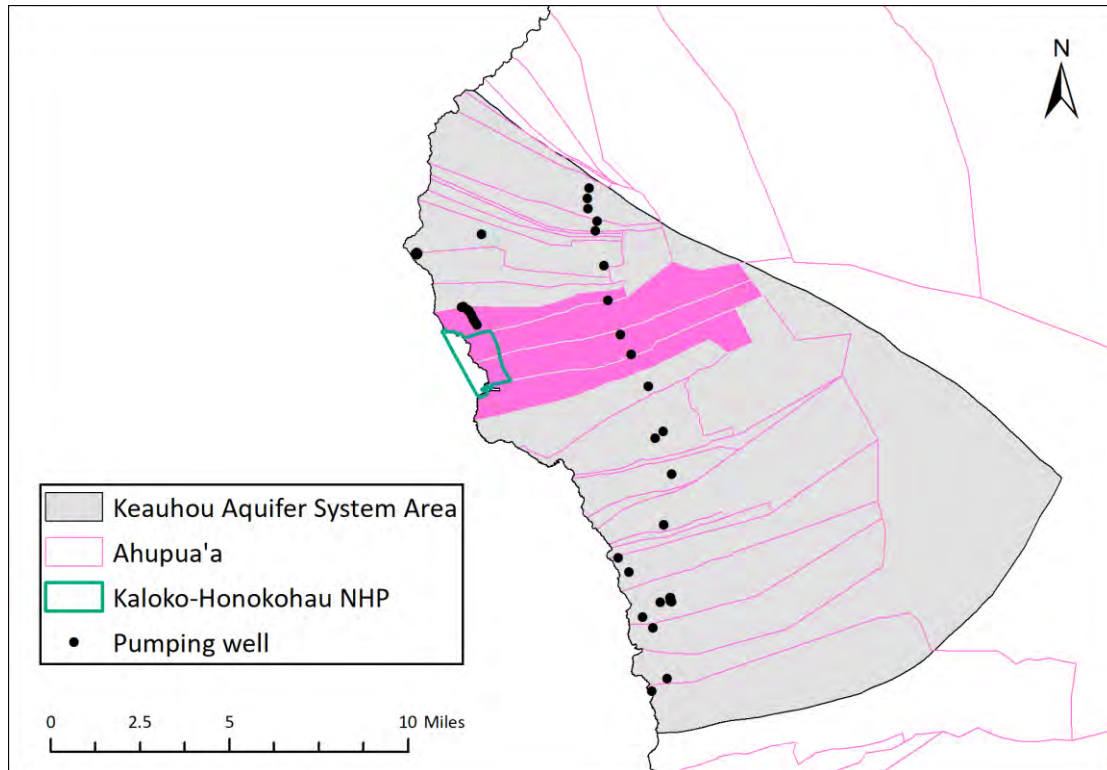
1978 Enabling Legislation:

The Secretary shall consult with and may enter into agreements with other governmental entities and private landowners to establish adequate controls on air and water quality and the scenic and esthetic values of the surrounding land and water areas. In consulting with and entering into any such agreements the Secretary shall to the maximum extent feasible utilize the traditional native Hawaiian Ahupua'a concept of land and water management.

[16 USC 396d]

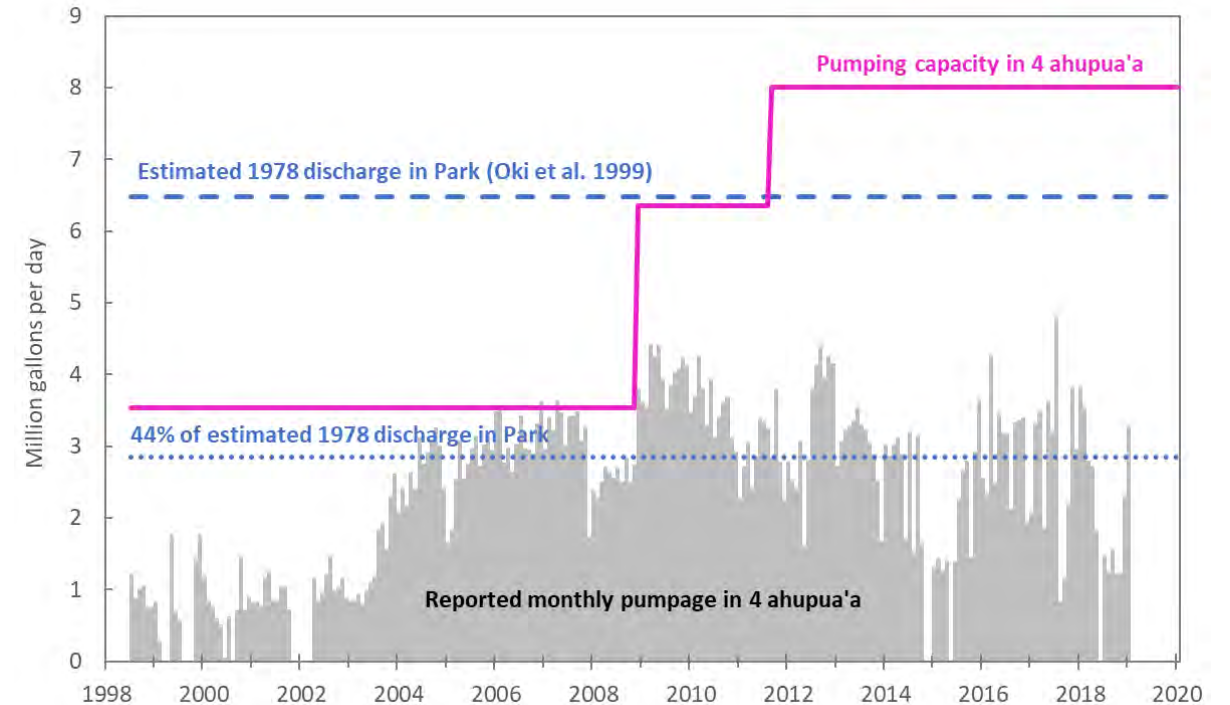
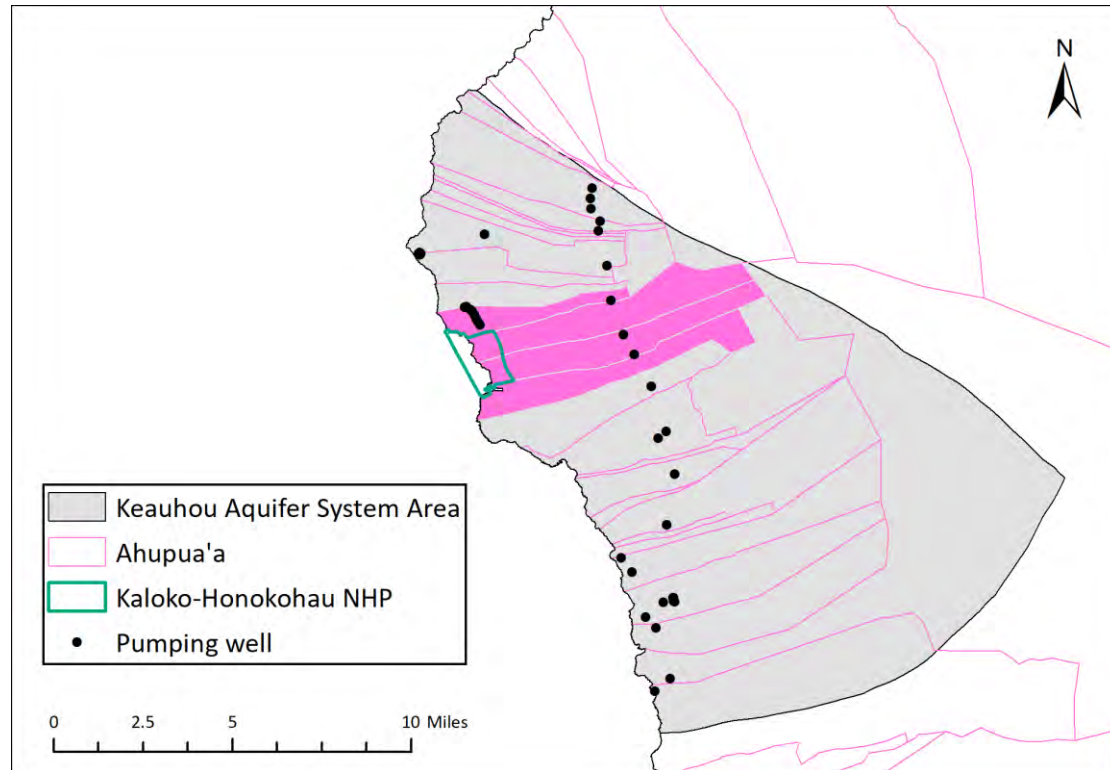


Groundwater Development



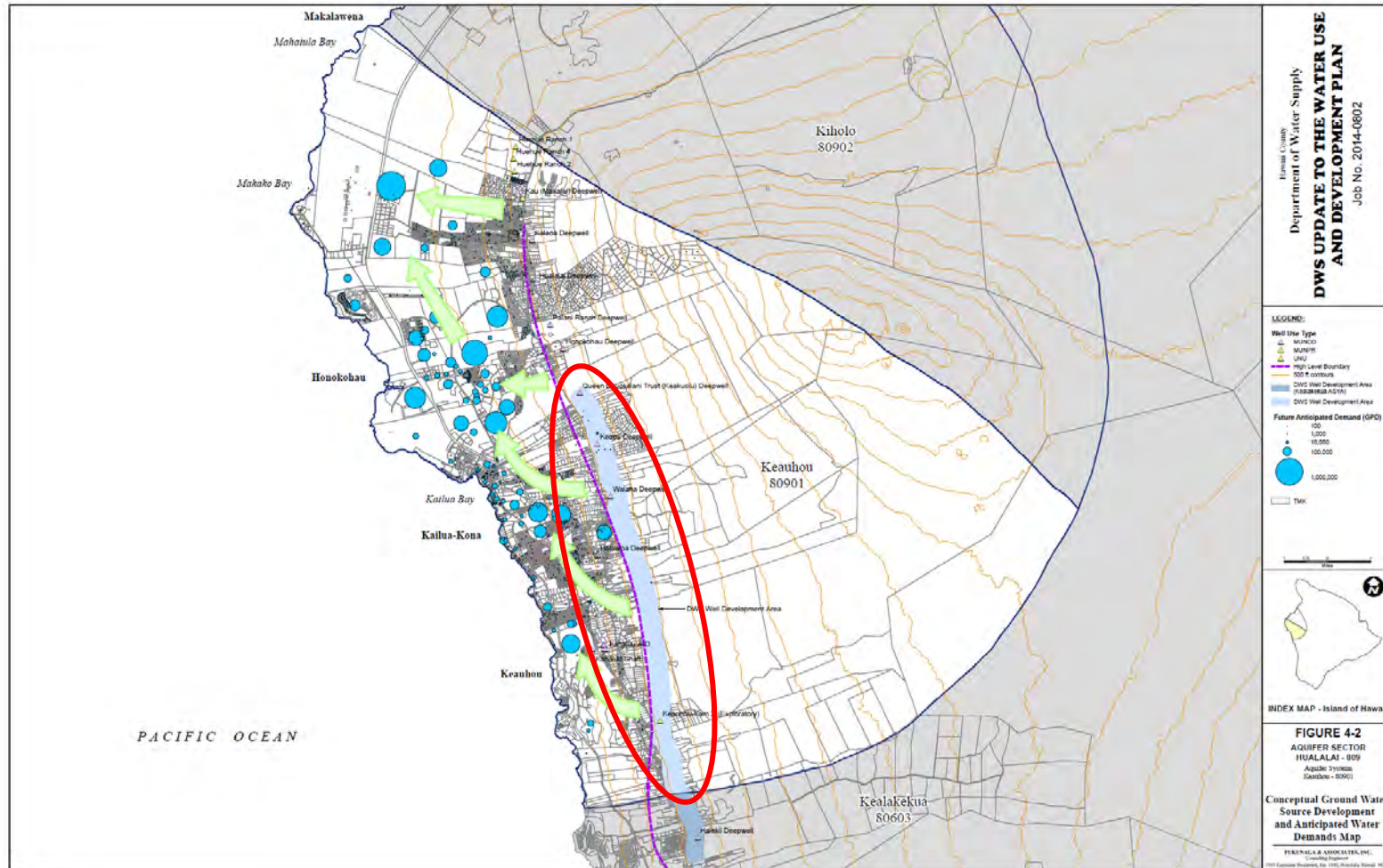
Commission directed staff to investigate the science of coastal leakage impacts for consideration in setting or adjusting sustainable yields.

Groundwater Development

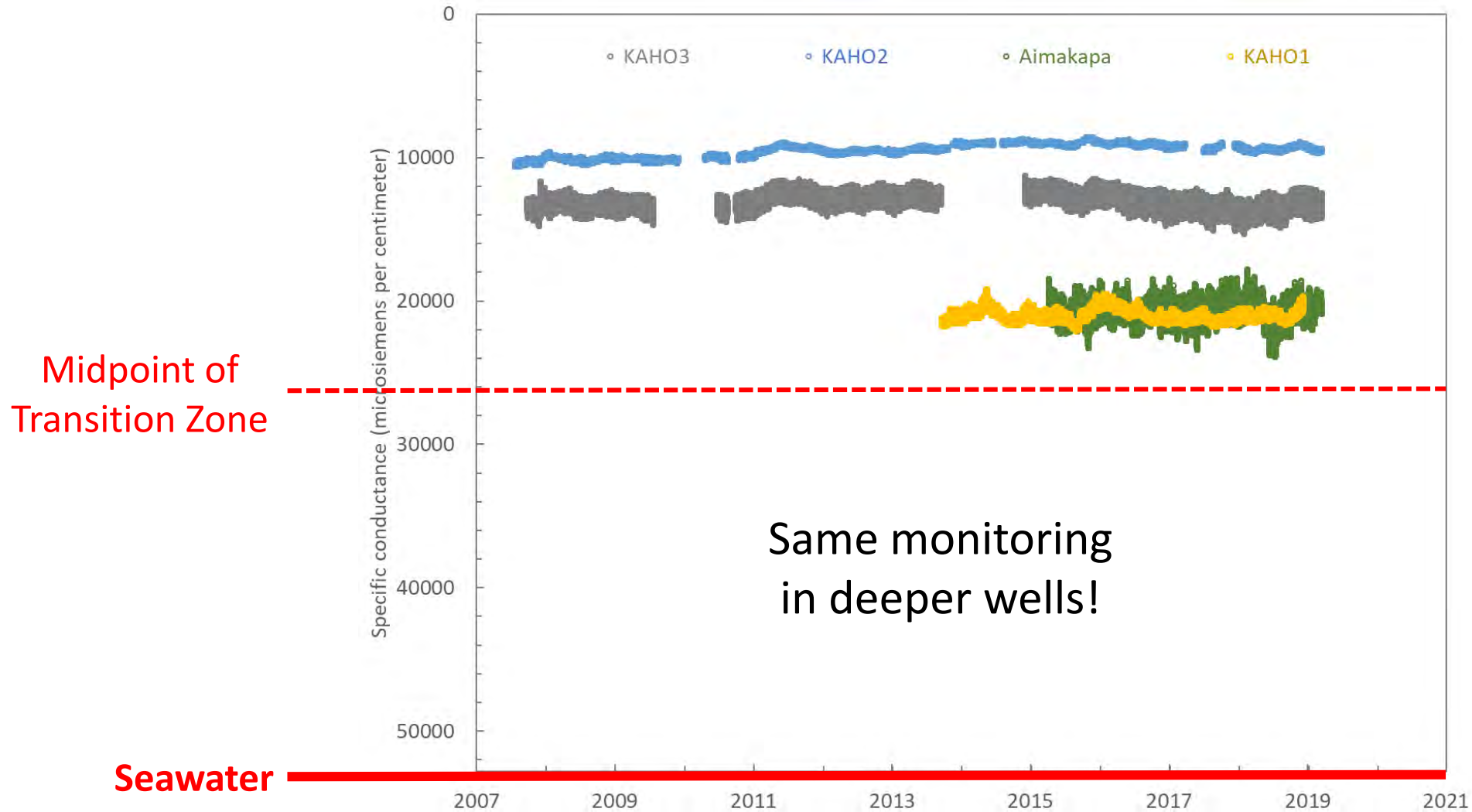


Does limiting pumping to the sustainable yield protect mauka to makai flows for non-consumptive uses of groundwater?

DWS Well Development Area

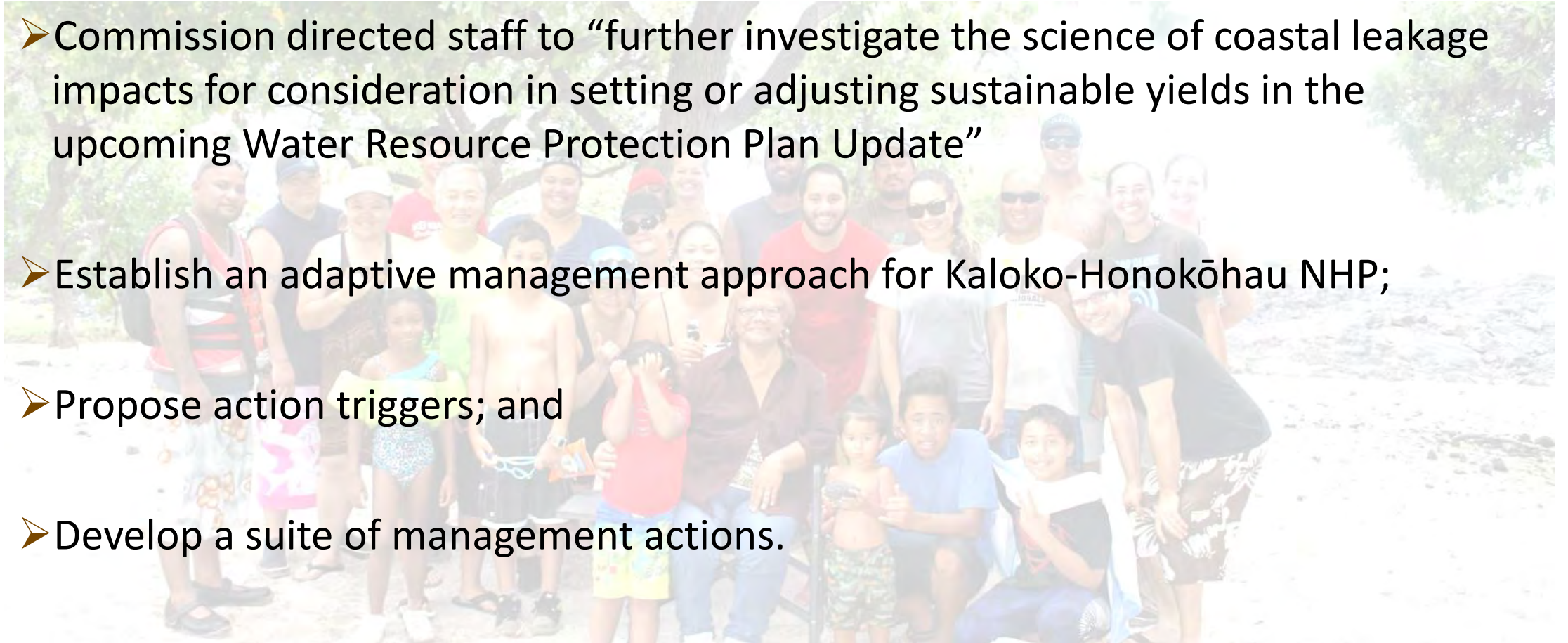


Groundwater Monitoring



Water Resources Protection Plan Update:

- Commission directed 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 Update”
- Establish an adaptive management approach for Kaloko-Honokōhau NHP;
- Propose action triggers; and
- Develop a suite of management actions.



Water Resources Division
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Example of Deep Observation Well Data

