

Impacts of climate change in loko i‘a (traditional Hawaiian fishponds) management I

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Project Summary

Groundwater springs are fundamental to providing nutrients to coastal environments. However, these systems are challenging to understand due to the complex interactions between hydrogeologic, oceanographic, and climatologic processes. In Hawai‘i groundwater plays a significant role in the functioning and sustainability of coastal loko i‘a (fishpond), so understanding the interactions between groundwater and seawater in these environments is important to their persistence.

The focus of this project is to identify how groundwater flow changes over different timescales at three loko i‘a in Keaukaha, Hawai‘i. The work will also examine the socio-ecosystems of place by soliciting information from the perspectives of various individuals who have an experience-based relationship to these loko i‘a. This research will provide fishponds managers details of groundwater flow changes through time that can be used to enhance loko i‘a practices and sustainability.



Fig. 1. Cherie Kauahi explores the complexities of groundwater sources in coastal environment of the loko i‘a (tradaitional fishpond).