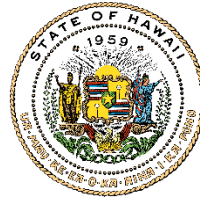


JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
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CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
DAWN N.S. CHANG
Chairperson

Before the House Committee on
HIGHER EDUCATION AND TECHNOLOGY

Friday, February 10, 2023
2:30 PM
State Capitol, Conference Room 309

In consideration of
HOUSE BILL 905, HOUSE DRAFT 1
RELATING TO SUSTAINABLE GROUNDWATER YIELDS

House Bill 905, House Draft 1 proposes to (1) require the University of Hawai'i, in consultation with the Commission on Water Resource Management (Commission) of the Department of Land and Natural Resources (Department), to develop a scope of work and cost analysis to complete a flexible groundwater model that proposes methods for determining the needs of traditional and customary Native Hawaiian practices, climate change history and projections, and groundwater ecosystems; and (2) The University of Hawaii, in consultation with the commission on water resource management, shall submit a report of its findings, recommendations, and scope of work and costs, including any proposed legislation, to the legislature no later November 1, 2023. **The Department supports this measure and offers the following comments.**

The Commission regulates groundwater in the State of Hawai'i using aquifer sustainable yields as the basis to manage withdrawals from aquifers. The Commission has an affirmative duty to protect traditional and customary Native Hawaiian rights as provided for in article XII section 7 of the Hawai'i State Constitution and in Hawai'i Revised Statutes 174-C section 101. The Hawai'i Supreme Court in its seminal opinion in "*Waiāhole I*"¹ further clarified that the protection of traditional and customary Native Hawaiian rights is a public trust purpose. Additionally, in the case of *Ka Pa'akai O Ka 'Aina vs. the Land Use Commission*², the Hawai'i Supreme Court created an analytical framework for addressing the preservation and protection of customary and traditional native practices specific to Native Hawaiian communities. For the Commission to adequately fulfill its constitutional duties and assess the Ka Pa'akai analysis, a

¹ 94 Hawai'i 97 (2000)

² 94 Hawai'i 31 (2000)

better understanding of future projections of sustainable yield along with shoreline groundwater seepage impacts is critical.

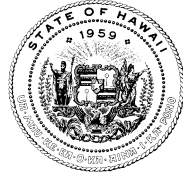
Further, a preliminary United States Geological Survey (USGS) report indicates that mid-century rainfall and aquifer recharge will decrease, thus reducing the availability of fresh water in the aquifer and consequently coastal discharge, which then has the potential to impact groundwater dependent ecosystems that support traditional and customary Native Hawaiian practices.

Finally, in our collective research efforts with the University of Hawai'i Water Resources Research Center and USGS, we note that water modeling can be an intensive process that requires proper data sets to develop.

Mahalo for the opportunity to provide testimony in support of this measure.

JOSH GREEN, M.D.
GOVERNOR
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*Ke Kia'āina o ka Moku'āina 'o
Hawai'i*

SYLVIA J. LUKE
LT. GOVERNOR
STATE OF HAWAII
*Ka Hope Kia'āina o ka Moku'āina
'o Hawai'i*



IKAIKA ANDERSON
CHAIRMAN DESIGNATE, HHC
Ka Luna Ho'okele

KATIE L. DUCATT
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DEPARTMENT OF HAWAIIAN HOME LANDS

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TESTIMONY OF IKAIKA ANDERSON, CHAIRMAN-DESIGNATE
HAWAIIAN HOMES COMMISSION
BEFORE THE HOUSE COMMITTEE ON HIGHER EDUCATION AND TECHNOLOGY
HEARING ON FEBRUARY 10, 2023, AT 2:30PM IN CONFERENCE ROOM 309

HB 905 HD1, RELATING TO SUSTAINABLE GROUNDWATER YIELDS

February 10, 2023

Aloha Chair Perruso, Vice Chair Kapela, and members of the Committee:

The Department of Hawaiian Home Lands (DHHL) **supports** this measure which requires the University of Hawaii, in consultation with the Commission on Water Resource Management (CWRM), to develop a scope of work and cost analysis to complete a flexible groundwater model that proposes methods for determining the needs of traditional and customary Native Hawaiian practices, climate change projections, and groundwater dependent ecosystems.

The determination of Sustainable Yields (SY) for groundwater is a key responsibility of CWRM. This kuleana that has profound impacts in determining how much water is available for development, including the protected public trust rights of DHHL to water that have been repeatedly affirmed by Hawaii Courts.

CWRM has since its inception repeatedly reduced its estimates of SY for aquifers around the state, including significant homesteading areas. For instance, the initial determination of SY for the Kualapuu Aquifer on Molokai was 7 million gallons per day (mgd), and it has been adjusted downward to 5 mgd. A recent study by the US Geological Survey indicated there may be less than 3 mgd actually available, and current SY methods do not account for climate change or the impacts of wells on groundwater dependent ecosystems (GDEs) like wetlands, fishponds, or limu beds. If water is allocated to private developments and SY is overestimated due to these issues, the consequences for future DHHL homestead development could be extremely significant.

DHHL is grateful that its suggested language was incorporated into the HD1 of this measure by the House Committee on Water and Land, and we support the measure in HD1.

Thank you for your consideration of our testimony.



SIERRA CLUB OF HAWAI'I

HOUSE COMMITTEE ON HIGHER EDUCATION AND TECHNOLOGY

February 10, 2022 2:30 PM Conference Room 309

In **SUPPORT** of **HB905 HD1**: Relating to Sustainable Groundwater Yields

Aloha Chair Perruso, Vice Chair Kapela, and Members of the Higher Education & Technology Committee,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **SUPPORTS** HB905 HD1, which would help to provide critically needed information to uphold the public trust in our water resources, and ensure the future resiliency of our islands.

Water is our most precious resource – as has been made abundantly clear through O'ahu's water contamination crisis, and in the growing impacts of the climate crisis on rainfall patterns, watershed integrity, and the water cycle. Our constitution accordingly establishes water as subject to the public trust doctrine, and the State Water Code requires the state to assess the "sustainable yield" of our groundwater resources to ensure that groundwater withdrawals do not unduly compromise the water needs of established public trust purposes, and of our future generations.

Unfortunately, as recognized in this measure, our islands' often complex hydrogeology makes an accurate assessment of "sustainable yield" for groundwater difficult as a general matter, and the Water Commission's past practices in establishing sustainable yields have also largely failed to account for Native Hawaiian traditional and customary practices – a highly protected public trust purpose – as well as the projected impacts of climate destabilization. Notably, an accounting for the water needs of Native Hawaiian traditional and customary practices, such as kalo cultivation and the gathering of nearshore resources such as limu and fish, may be critical to perpetuating traditional ecological knowledge, practices, and values recognized by climate experts as the key to our islands' food and water security. Moreover, an accounting of sustainable yield that ensures the availability of sufficient groundwater for Native Hawaiian traditional and customary practices will also ensure that the resources and ecosystems these practices rely upon – including our streams, watersheds, and reefs – remain intact, providing an additional necessary foundation of security, resiliency, and self-sustainability for our Hawai'i nei.

Therefore, this measure's proposed research investments and directives to develop a more accurate and fuller accounting of our groundwater resources may be critical not only to upholding our constitutional and statutory obligations and commitments under the public



SIERRA CLUB OF HAWAI'I

trust doctrine and State Water Code, but also to ensuring a livable, resilient, and sustainable home for ourselves, our keiki, and future generations.

Accordingly, the Sierra Club of Hawai'i respectfully urges the Committee to **PASS** HB905 HD1. Mahalo nui for the opportunity to testify.