

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

SYLVIA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621  
HONOLULU, HAWAII 96809

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

LAURA H.E. KAAKUA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
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 Senate Committee on  
WATER AND LAND

Monday, February 13, 2023  
12:30 PM

State Capitol, Conference Room 229 & Videoconference

In consideration of  
SENATE BILL 1066  
RELATING TO FRESH WATER SECURITY

Senate Bill 1066 proposes to: 1) establish within the Department of Land and Natural Resources (Department) a Water Security Working Group to study and recommend priority capital improvement projects for legislative consideration and approval that leverage public-private investment to increase Hawai'i's water security; and 2) appropriate \$200,000 of general funds to the Department for the purposes of this bill. **The Department supports this measure, provided that its passage does not replace or adversely impact priorities indicated in the Executive Budget request, and offers the following amendments.**

A variety of planning documents already exist to assist in the generation of a priority capital improvement projects list. This includes components of the Commission on Water Resource Management's (Commission) Hawai'i Water Plan (HWP) such as the:

- State Water Projects Plan (SWPP) – includes an inventory of State water resources including wells, stream diversions and State water systems and an inventory of State projects and water demands over the next 20 years.
- Agriculture Water Use and Development Plan (AWUDP) – includes an inventory of agricultural water systems, rehabilitation costs, and long-range strategies for irrigation system repairs and management.
- County Water Use and Development Plans (WUDPs) – includes an inventory of future water demands within each county and development strategies to meet projected demands.

Other supporting documents and initiatives include:

- Water Reuse Task Force Legislative Report – identifies potential demonstration projects for water reuse in Hawai‘i.
- Division of Forestry and Wildlife’s (DOFAW) Watershed Initiative – DOFAW curates and updates a list of priority watershed capital improvement projects statewide (aka: watershed fences).
- Commission on Water Resource Management’s (Commission) Water Audit Data – provides data on water loss and recommendations for public water system improvements.
- Act 170, SLH 2016, requires that the Hawaii water plan be directed toward achieving the utilization of reclaimed water for uses other than drinking and for potable water needs in 100% of state and county facilities by December 31, 2045. Since the Act was passed, there has been no coordinated strategy with state and county agencies to meet this goal.

The Department acknowledges that these documents and initiatives do not represent the full suite of potential water capital improvement projects. The Water Security Working Group could synthesize these existing resources to begin to generate a list of priority projects.

In addition to studying and recommending priority capital improvement projects, the Department recommends that the Water Security Working Group also come up with financing strategies for each project to illustrate the full spectrum of investment capital opportunities, ranging from State capital improvement funds as well as other non-State and federal grants, loans, and in-kind services from funding partners. Proposed amendment in grey highlight.

SECTION 2. (a) There is established within the department of land and natural resources a water security working group to study and recommend priority capital improvement projects, including funding and financing strategies for each project, for legislative consideration and approval that leverage public-private investment to increase Hawaii's water security. The working group shall consider projects that:

The Department also recommends amending Section 2. (c) of the bill to include the Department’s Division of Forestry and Wildlife (DOFAW) and the Department of Health (DOH) as members of the working group.

SECTION 2. (c) The working group shall consist of but not be limited to the following members:

- (1) A manager or chief engineer of a county water utility;
- (2) The deputy director of the commission on water resource management of the department of land and natural resources;

- (3) The administrator, or designee, of the division of forestry and wildlife of the department of land and natural resources;
- (4) The deputy director, or designee, of the department of health;

Another bill, House Bill 1212, proposes to establish a task force within the Department of Health (DOH) to create a water neutrality plan. The purposes of House Bill 1212, to develop a plan to reduce water usage and increase fresh water supply, has overlap with Senate Bill 1066 and could be informed by the list of projects and developed by the task force. The Department defers to the Legislature to decide which bill is the more appropriate vehicle to achieve the goal of water security and neutrality. The intent of Senate Bill 1066 could be folded into House Bill 1212.

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



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEE ON WATER & LAND  
Monday, February 13, 2023 — 12:30 p.m.

**Ulupono Initiative supports SB 1066, Relating to Fresh Water Security.**

Dear Chair Inouye and Members of the Committee:

My name is Micah Munekata, and I am the Director of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

**Ulupono supports SB 1066**, which establishes within the Department of Land and Natural Resources a Water Security Working Group to study and recommend priority capital improvement projects for legislative consideration and approval that leverage public-private investment to increase Hawai'i's water security.

Ulupono supports the State's efforts to increase our water security for the health and well-being of our communities. This working group seeks to identify priority infrastructure projects to support our important watersheds, dams and reservoirs, water transmission, and irrigation systems, all while encouraging responsible water re-use and increasing our quality and quantity of community water supply. With recent events such as the Red Hill fuel contamination as well as longer term trends such as declining rainfall over the last 20 years due to climate change, there is more need to protect and enhance our freshwater resources than ever before. This group will be beneficial as we look to meet our sustainability goals around water security here in Hawai'i.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata  
Director of Government Affairs

*Investing in a Sustainable Hawai'i*

**Testimony of Michael G. Buck**  
**on**  
**S.B. 1066**  
**Relating to Fresh Water Security**  
**Senate Committee on Water and Land**  
**Monday February 13, 2023**  
**Conference Room 229**

Thank you for the opportunity to submit testimony in strong support of SB 1066. I have been involved in freshwater security issues in Hawaii for over 30 years working professionally for DLNR and currently serving my second term as a Water Commissioner. During my tenure at DLNR, we started the Watershed Partnerships, which protect the source of all of Hawaii's fresh water. During the last 8 years on the Water Commission, the majority of the conflicts we have dealt with have been aggravated by the lack of investment in our freshwater security infrastructure.

The deliverable, if this measure is passed, is a priority list of CIP projects for legislative consideration, that increase Hawai'i's water security through projects that increase recharge, boost water reuse, and improve water efficiency across the state. These projects can kick start public-private partnerships that utilizes the full spectrum of investment capital, ranging from State capital improvement funds to leverage other grants, loans, and in-kind services from funding partners.

One current example is the Watershed Partnerships, where targeted public funding and leadership with private landowners created and support partnerships of diverse stakeholders contributing and working together to protect Hawai'i's forested watersheds. Public capital improvement bond funding is currently providing a key source of support that encourages this voluntary agreement of public, private, and non-governmental entities to actively participate.

Attached to this testimony is a Honolulu Star-Advertise September 2022 editorial that provides context for this measure, which I strongly support.

Michael Buck

## Honolulu Star-Advertiser - 09/11/2022

By Michael Buck, Neil Hannahs and En Young

The continuing Red Hill saga and Ka‘eo Duarte’s recent appeal to “Protect Hawaii’s water supply before it’s too late” bring needed attention to the urgency and challenges of ensuring water security (Star-Advertiser, Island Voices, Aug.7). Optimizing recharge, prudent use and future abundance involves multi-party, inter-disciplinary issues that cut across myriad agencies and public/private interests. Here are four priority action areas that will increase our water supply, modernize essential infrastructure and catalyze co-investment from diverse sources.

>> ***Protect and manage Hawaii’s forested watersheds.*** Mauka forests are the source of Hawaii’s fresh water. Watershed partnerships have formed across the state, but erratic funding compromises the efficacy of these voluntary agreements between public and private landowners. Funding should be increased and sustained to not simply delay the inevitable impacts of existential threats, but produce compelling and enduring returns. A University of Hawaii Economic Research Organization (UHERO) study estimated that investing \$43.2 million in watershed restoration in the Koolau mountains alone could result in over \$900 million in realized water value for Oahu.

>> ***Renovate dams and reservoirs.*** Most reservoirs are privately owned, unlined, not maintained to current safety standards, and more liabilities than assets for the owners. Many have been decommissioned or are operated at reduced capacities. Public/private investments can address safety concerns, provide flood control and energy, capture episodic deluges and store water for agriculture and recreation. Reservoirs should have intakes that can be opened in real time to divert and capture water during storm events and closed to limit diversion and ensure streamflow through extended dry periods.

>> ***Improve efficiency of irrigation systems.*** Most surface water delivery systems are ancient, inefficient, privately owned, and not designed for our changing climate. Losses from open ditches and leaky infrastructure typically exceed 20%, often by a lot! These systems need to be piped, lined, and patched. Modernized infrastructure will benefit our agricultural economy, as well as constitutionally protected public trust requirements of ecosystems, traditional cultural practices, Department of Hawaiian Homelands, drinking water and food production. All have cause to make proportional contributions to defray costs.

>> ***Increase gaging and monitoring.*** It is difficult to manage what is not measured. An unpredictable climate requires consistent and comprehensive gathering and analysis of water data. More gaging stations, monitoring wells and reporting from private users are needed to inform sound decision-making. The state Water Commission and county agencies should be provided sufficient staffing to implement Hawaii's progressive water laws.

In 2016, the Fresh Water Council recommended a pilot Natural Capital Investment Partnership to leverage state funds with federal, county, and private dollars. The goal was to amass, coordinate and unleash public and private resources. This was a good idea six years ago and a better one today. Watershed partnerships have proven that collaborative funding works. We should now broaden the spectrum of financial tools to include grants, loans, guarantees, and interest subsidies ... investments seeking a blend of outcomes, as well as capital expecting commercial returns.

Capital improvement bonds could be deployed to create a water security project fund that enables government appropriation to pay for societal benefits and private capital to finance impacts that generate business revenue streams or land value appreciation. The risks of doing nothing are enormous. The Red Hill fuel leak and the climate change-induced water crisis unfolding around the globe offer potent reminders of the human, economic and environmental harms of dramatic reduction in fresh water supply. These alarming circumstances demand innovative strategies that braid streams of capital to make long-needed projects viable.

We call upon political officials, as well as business and community leaders to invest cooperatively and equitably in the water needed to support our existence.  
Ola i ka wai!