

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor



SHARON HURD
Chairperson, Board of Agriculture

MORRIS M. ATTA
Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE
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**TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE**

BEFORE THE HOUSE COMMITTEE ON AGRICULTURE AND FOOD SYSTEMS

**MONDAY, FEBRUARY 13, 2023
2:20 P.M.**

CONFERENCE ROOM 312 AND VIDEO CONFERENCING

**HOUSE BILL NO. 605
RELATING TO INFRASTRUCTURE**

Chairperson Gates and Members of the Committee:

Thank you for the opportunity to testify on House Bill 605 which establishes a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply. Appropriates funds. The Department supports this measure with the following comments.

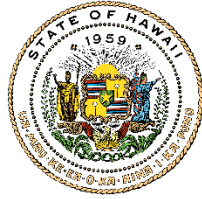
The Department comments that the measure provides for 11 members in the dam and reservoir working group and respectfully requests amending page 3, line 2, to "Four persons appointed by the governor, one from each county in the state;" and the addition of a representative of the Hawaii Farmers Union United, which would increase the number of farmer groups represented to three, joining the Hawaii Cattlemen's Council and the Hawaii Farm Bureau. This amendment would increase the number of members to 14 and expand the representation from the counties and farmer groups.

Thank you for your consideration on this measure.



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

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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 House Committee on
AGRICULTURE & FOOD SYSTEMS

Monday, February 13, 2023
2:20 PM

State Capitol, Conference Room 312

In consideration of
HOUSE BILL 605
RELATING INFRASTRUCTURE

House Bill 605 proposes to establish a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply. The bill also appropriates funds. **The Department of Land and Natural Resources (Department) opposes this measure as it is not necessary for the reasons discussed below.**

The Department believes the intent and purpose of the proposed measure was already addressed when Act 154 (Session Laws of Hawaii 2011) was enacted. This Act addressed the importance of dams and reservoirs as important water resources for the State of Hawaii and amended the dam safety law, pursuant to Hawaii Revised Statutes §179D-6(10), to provide the Board of Land and Natural Resources the authority to *“Consider dams and reservoirs as important water resources for the State that provide significant benefits to the general public, including irrigation for agriculture and other important uses, and acknowledge the need for dams and reservoirs to be consistently maintained and operated in a safe and feasible manner that sustains their roles as important water resources; provided that public safety concerns are addressed.”*

The proposed working group also duplicates work already being done by the Department over the past two decades after the Legislature passed the Dam and Reservoir Safety Act of 2007 as a result of the 2006 Kaloko Dam breach, which killed several people. The Department spent several years developing current dam safety Hawaii Administrative Rules, which are consistent with national dam safety standards and regulations through collaboration with the Federal Emergency Management Agency, the

United States Corps of Engineers, and the Association of State Dam Safety Officials. This rulemaking process required public hearings where input from the community was solicited, and comments were addressed and incorporated into the final regulations. Any deviation from these nationwide standards could increase the risk of a dam failure and jeopardize public safety. To assist dam owners with financing, the Department was successful in amending the State Constitution to allow the issuance of Special Purpose Revenue Bonds for Dams and Reservoirs specifically to “offer loans to assist dam and reservoir owners to improve their facilities to protect public safety and provide significant benefits to the general public as important water sources.”

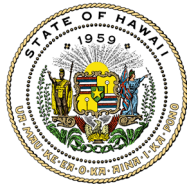
The Department continues to be a resource to dam and reservoir owners/operators and are willing to listen, educate and work collaboratively to enable them to bring their dams into compliance with the law. The Department does not believe a formal working group is necessary to accomplish this.

The Department’s Dam Safety Program does not receive State general funds and relies solely on special funds and user fees to fulfill its mandate. The subject measure appropriates an unspecified amount of funds to support the working group. If no funding is appropriated, the Department will not be able to support this task force.

It is in the Department’s core mission to preserve our water resources while at the same time ensuring dams and reservoirs are managed and operated safely for the benefit of the environment and the public.

Mahalo for the opportunity to testify on this measure.

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



KENNETH S. HARA
MAJOR GENERAL
ADJUTANT GENERAL
DIRECTOR OF EMERGENCY
MANAGEMENT

JAMES DS. BARROS
ADMINISTRATOR OF
EMERGENCY MANAGEMENT

STATE OF HAWAII
KA MOKU'ĀINA O HAWAI'I
DEPARTMENT OF DEFENSE
KA 'OIHANA PILI KAUA
HAWAI'I EMERGENCY MANAGEMENT AGENCY
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STATE OF HAWAI'I
DEPARTMENT OF DEFENSE
HAWAI'I EMERGENCY MANAGEMENT AGENCY

TESTIMONY ON HOUSE BILL 605
RELATING TO INFRASTRUCTURE

BEFORE THE HOUSE COMMITTEE ON **AGRICULTURE & FOOD SYSTEMS**

BY

JAMES DS. BARROS
ADMINISTRATOR
HAWAI'I EMERGENCY MANAGEMENT AGENCY

FEBRUARY 10, 2023

Aloha Chair Gates, Vice-Chair Kahaloa, and members of the committee:

I am James Barros, Administrator of the Hawai'i Emergency Management Agency (HI-EMA).

HI-EMA provides written testimony to **OFFER COMMENTS** on HB605.

This measure would establish a dam and reservoir working group regarding the availability and operation of dams and reservoirs in the State and considering their role in drought mitigation and the maintenance of a dependable water supply, and appropriate funds.

Drought is one of the hazards which HI-EMA addresses and the agency recognizes the value of a focused effort to examine the role of dams and reservoirs in mitigating the hazard. The agency would note that that drought mitigation is an element of the State Hazard Mitigation Plan, which is being updated by HI-EMA this year, and the associated County hazard mitigation plans, and recommends that the working group could benefit from incorporating information from the existing plans and hazard mitigation framework.

Thank you for the opportunity to provide testimony on HB605. HI-EMA supports the bill provided that its passage does not replace or adversely impact priorities indicated in the administration's Executive Budget.

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February 13, 2023

HEARING BEFORE THE
HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

TESTIMONY ON HB 605
RELATING TO INFRASTRUCTURE

Conference Room 312 & Videoconference
2:20 PM

Aloha Chair Gates, Vice-Chair Kahaloa, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawai'i Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawai'i's voice of agriculture to protect, advocate and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawai'i Farm Bureau supports HB 605, which establishes a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply.

While dam and reservoir safety rules represent an important public safety initiative, the rules codified in HRS chapter 179D are having an adverse effect by reducing water storage capacity across the state. At a time when changing weather patterns have demonstrated alternating periods of drought punctuated by significant storm events, coupled with the noble goal of achieving food security for our island state, water storage is more critical than ever. The new rules will discourage new dam and reservoir construction, and in many cases cause dam and reservoir owners to minimize the capacity or decommission existing storage capability.

Many of the reservoirs – built in an era of plantation agriculture—no longer generate enough revenue to be economically sustainable. But they are needed in ways few people have yet imagined. The issue of how to pay for the upgrading and maintenance of this critical infrastructure is now gaining more attention as the state's budget comes into focus.

Dams and reservoirs are the keys not just to a future of sustainable agricultural system in Hawai'i, but to the entire water and environmental health of the State. In addition to the conventional benefits of storing and delivering reliable water for agriculture in dry times, wildlife habitats, flood control during large storms, erosion control, and the reduction of sediment loading on our nearshore ocean reefs, reservoirs also ensure a supply of potable drinking water (after treatment) and provide water to help battle wildfires.

Reservoirs also help recharge our groundwater aquifers by capturing stormwater (for later release) that would otherwise rush to the ocean. There is growing evidence that there will be a pattern of fewer, but larger storms separated by longer intervals of drought. If the large rainfall flows are not captured, overall groundwater recharge may be significantly reduced. Groundwater is our primary source of drinking water and demand is relentlessly rising. We already face declining groundwater recharge every time we place hard impermeable surfaces (e.g. concrete) over previously open ground (agriculture).

Recent Dam and Reservoir Safety rules will levy an additional burden on reservoir owners and Hawai'i farmers. Fuel, labor, equipment, transportation, and other expenses are already higher in Hawai'i than on the mainland, placing locally-grown products at a competitive disadvantage. Inevitably, increased costs will be passed on to consumers and are counterproductive to efforts to grow more food in Hawai'i. Some landowners will simply decommission their dams, abandon their reservoir systems and decide what to do with their now-fallow lands when agriculture is no longer viable.

Thank you for the opportunity to testify on this matter of great importance to the agricultural community.



HAWAII CROP IMPROVEMENT ASSOCIATION

In Support of HB605
Relating to Infrastructure

House Committee on Agriculture and Food Systems

Date: Monday, February 13, 2023
Time: 2:20 PM
Place: Conference Room 312

Aloha Chair Gates, Vice Chair Kahaloa, and Members of the Committee:

The Hawaii Crop Improvement Association (HCIA) appreciates the opportunity to provide testimony **in support of HB605**, which establishes a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply.

Dams and reservoirs are vital pieces of infrastructure that's function is necessary to, among other things, store and deliver water for agriculture during dry periods and supply drinking water to the residents of our state. We know that as one example, ranchers in Kohala are finding it difficult to navigate drought conditions and an area topography that does not match the current reservoir regulations. This working group would potentially provide solutions for Kohala and other important dam and reservoir issues statewide.

Mahalo for the opportunity to testify in support of this measure.

The Hawaii Crop Improvement Association is a Hawaii-based non-profit organization that promotes modern agriculture to help farmers and communities succeed. Through education, collaboration, and advocacy, we work to ensure a safe and sustainable food supply, support responsible farming practices, and build a healthy economy.



Hawaii Cattlemen's Council, Inc.

COMMITTEE ON AGRICULTURE & FOOD SYSTEMS

Rep. Cedric Asuega Gates, Chair

Rep. Kirstin Kahaloa, Vice Chair

HB605

RELATING TO INFRASTRUCTURE

Monday, February 13, 2023, 2:20 PM

Conference Room 312 & Videoconference

Chair Gates, Vice Chair Kahaloa, and Members of the Committee,

The Hawaii Cattlemen's Council (HCC) is the Statewide umbrella organization comprised of the four county-level Cattlemen's Associations. Our member ranchers represent over 60,000 head of beef cows; more than 75% of all the beef cows in the State. Ranchers are the stewards of over 750 thousand acres of land in Hawaii, or 20% of the State's total land mass. We represent the interests of Hawaii's cattle producers.

The Hawaii Cattlemen's Council **supports HB605** which establishes a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply.

Water is life. It is crucial that we wisely utilize and manage water for agricultural purposes for the longevity of the industry. With the continuing impacts of climate change, we can expect drought and severe weather to continue in the future, and planning for that needs to happen now. Current infrastructure needs to be maintained so that previous investments in dams and reservoirs can remain viable for years to come. Unused and unmaintained infrastructure will dilapidate, so a working group to address the existing infrastructure is a smart step to take. We appreciate that the Hawaii Cattlemen's Council is included in this to provide a perspective from Hawaii's cattle producers and we look forward to working with the group to provide findings and recommendations to the legislature.

We appreciate the opportunity to testify on this measure.

Nicole Galase
Hawaii Cattlemen's Council
Managing Director



HB-605

Submitted on: 2/12/2023 12:05:51 PM

Testimony for AGR on 2/13/2023 2:20:00 PM

| Submitted By | Organization | Testifier Position | Testify |
|---------------------|-------------------------|---------------------------|---------------------------|
| Yoshito L'Hote | Aina Ho'okupu o Kilauea | Support | Written Testimony Only |

Comments:

I am in support of this bill because the management of our waters is critical to our ability to farm and maintain the ecosystem that supports us on the most isolated archipelago on the planet; if we don't maintain our surface water system, we will be jeopardizing our ability to provide for ourselves leaving us vulnerable to world events that affect shipping to Hawaii.

We have to have a proactive approach as the status quo will cost us way more in the long run.



Email: communications@ulupono.com

HOUSE COMMITTEE ON AGRICULTURE & FOOD SYSTEMS
Monday, February 13, 2023 — 2:20 p.m.

Ulupono Initiative supports HB 605, Relating to Infrastructure.

Dear Chair Gates 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 HB 605, which establishes a dam and reservoir working group to ensure and enhance the continued availability and operation of dams and reservoirs in the State and consider their role in drought mitigation and the maintenance of a dependable water supply.

Ulupono supports funding for critical water infrastructure across the State. The working group established in this measure will be useful for the State as we seek to provide safe, reliable water resources for local agriculture and our communities. According to the Association of State Dam Safety Officials' latest Dam Safety Performance Report, more than a third of Hawai'i's dams are rated either in poor or unsatisfactory condition. Many of our dams and reservoirs require our attention, and walking away from such important infrastructure will not serve our communities as we look to battle climate change.

Climate Change in Hawai'i

The importance of well-maintained agricultural water systems becomes even greater when the impacts of climate change on Hawai'i's food security are considered. In April 2021, Hawai'i became the first state to declare a climate emergency, when the State Legislature passed [Senate Concurrent Resolution 44 SD1 HD1](#), which also requested "statewide collaboration toward an immediate just transition and emergency mobilization effort to restore a safe climate."

The people of Hawai'i are seeing first-hand local impacts consistent with the effects of climate change: rising air temperatures; decreased rainfall and stream flow; increased rain

Investing in a Sustainable Hawai'i

intensity; increased frequency of drought; and increased frequency of powerful storms.

For example:

- Since 1950, temperatures across the Hawaiian Islands have been on the rise, ranging from increases of 0.2 to 0.4 degrees Fahrenheit per decade;
- The annual total precipitation measured at Hilo International Airport decreased by nearly 20 inches since 1950—the most among Hawai‘i’s four major airports;
- Rain intensity is becoming as much a destructive factor as drought, with the amount of rain falling in the very heaviest downpours from 1958 to 2007 increasing by approximately 12%;
- The area in Hawai‘i burned annually by wildfires has increased four-fold in recent decades, according to University of Hawai‘i wildland fire researcher Clay Trauernicht; and
- Powerful storms are anticipated to become more frequent, as warmer climates tend to amplify existing weather patterns and variability, according to Hawai‘i’s state climatologist, Pao-Shin Chu.

These are each detrimental to local food production on their own; and yet, as an isolated island state we are also susceptible to climate change impacts far from our shores due to Hawai‘i’s continuing over-reliance on food from imports.

Irrigation Infrastructure IS Part of Climate Change Adaptation

For international and domestic food producers, meeting the global demand of a projected 10 billion people by 2050—an increase of 2.3 billion people over just a quarter of a century—will become increasingly challenging as the Earth’s climate continues to warm. Researchers estimate this will require an increase in global food production of 60%, if we are to ensure enough food for all.

In the Biden Administration’s fact sheet outlining the Infrastructure Investment and Jobs Act, the White House highlighted investments in **infrastructure to make communities more resilient to the impacts of climate change, including** “funds to protect against droughts and floods...”

Irrigation plays an essential role in increasing food production and is an effective method of climate change adaptation. Globally, irrigated land represents only 16% of arable land, but produces 44% of total crop production. For most crops, irrigation can double or triple crop yields. For example, irrigated crop yields for corn, soybean, and wheat are 165%, 75%, and 140% higher than rain-fed yields. In regards to climate change adaptation, irrigation systems mitigate the impact of decreasing rainfall, increasing frequency of drought, and increasing temperatures; and irrigation can help capture more rainfall during storm events, so that water can be used in the future.

According to research by The Nature Conservancy, climate change will bring increased moisture deficits across the United States. Nationally, the total area irrigated will need to



increase by 11-54 million acres (an increase of 19-94%) by 2090 in order to maintain food production.

For generations to come, local food production will depend on our irrigation systems and their ability to provide water for local farmers and ranchers. This represents a singular opportunity to make Hawai'i more self-sufficient and resilient.

Thank you for this opportunity to testify.

Respectfully,

Micah Munekata
Director of Government Affairs

HB-605

Submitted on: 2/10/2023 4:16:37 PM

Testimony for AGR on 2/13/2023 2:20:00 PM

| Submitted By | Organization | Testifier Position | Testify |
|---------------------|---------------------|---------------------------|---------------------------|
| Dana Keawe | Individual | Support | Written Testimony Only |

Comments:

support

HB-605

Submitted on: 2/12/2023 12:52:47 PM

Testimony for AGR on 2/13/2023 2:20:00 PM

| Submitted By | Organization | Testifier Position | Testify |
|---------------------|---------------------|---------------------------|---------------------------|
| John R. Gordines | Individual | Support | Written Testimony Only |

Comments:

I support this bill. There are several reservoirs on Kauai that are considered to be decommissioned. The Dam and reservoir working group must be formed to insure the future of water for agriculture and our future farmers need to be assured of these valuable resources.

Respectfully,

John Gordines