

DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture

MORRIS ATTA
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State of Hawaii
DEPARTMENT OF AGRICULTURE
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TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS

FEBRUARY 24, 2022
10:00 A.M.
VIA VIDEOCONFERENCE

SENATE BILL NO. 2480, SD1
RELATING TO THE WAHIAWA IRRIGATION SYSTEM

Chairperson Dela Cruz and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill 2480, SD 1. This bill authorizes the issuance of bonds for the Department of Agriculture (HDOA) and Agribusiness Development Corporation (ADC) to purchase the Wahiawa Irrigation System on the island of Oahu. The Department respectfully opposes this measure.

The original version of this bill identified the Department of Land and Natural Resources (DLNR), not the HDOA, as one of the purchasing agencies of the system. The agricultural component of this system used by ADC consists only of the irrigation infrastructure downstream of the dam spillway and is a small part of the system being acquired. It is our understanding that this is the portion of the system that is intended for purchase and use by the Agribusiness Development Corporation (ADC). Contrary to DLNR's statement that "the overwhelming public benefit of the system is to support agricultural activities and local food production," the agricultural use of and benefit from the system is far outweighed by other public benefits that are outside of the purview of HDOA's and ADC's vision and mission, including without limitation, submerged lands leasing, aquatic resources management and research, fishing, boating, and park recreational activity, flood control, wastewater management, and wild fire suppression. Due to the extremely complex uses of and issues pertaining to the system, we agree with the ADC's testimony that "...acquisition of Lake Wilson and the irrigation system should be a policy decision made and coordinated by the Governor and Mayor to address and resolve these long-standing issues collectively." Any long-term decisions regarding the future of the system requires careful and collaborative deliberations among all affected entities.

HDOA notes that the same "significant legal, regulatory and financial burdens" identified by DLNR as justification for not being the purchasing agency, are not only

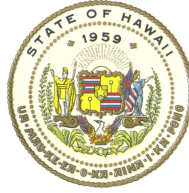


present, magnified exponentially for the HDOA as evidenced by the department's budget relative to other state agencies. We understand that the current landowner is in violation of dam safety standards, which include over twenty million (20,000,000) dollars of repairs and improvements to the dam spillway alone. We also understand that there are studies underway that potentially add hydropower to the spillway which is outside of the HDOA's core mission.

The Department of Agriculture appreciates any effort to encourage the survival and use of legacy irrigation systems to grow diversified agriculture. We also recognize that this system has significant importance to the public for conservation, recreational, research, public safety, infrastructure, and other purposes. We also understand that costly, critical improvements must be timely made to satisfy dam safety regulations to cease the continuing imposition of fines. A holistic approach to management of this resource would be beneficial to all persons in the State.

Thank you for the opportunity to testify.

DAVID Y. IGE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the Senate Committees on
WAYS AND MEANS**

**Thursday, February 24, 2022
10:00 AM**

State Capitol, Conference Room 211, Via Videoconference

**In consideration of
SENATE BILL 2480, SENATE DRAFT 1
RELATING TO THE WAHIAWA IRRIGATION SYSTEM**

Senate Bill 2480, Senate Draft 1 proposes to authorize the issuance of bonds for the Department of Agriculture (DOA) and Agribusiness Development Corporation (ADC) to purchase the Wahiawa Irrigation System on the Island of Oahu. **The Department of Land and Natural Resources (Department) offers the following comments on this measure.**

The Department agrees that this measure should require that either ADC or the DOA assume ownership of the entire irrigation system, including all reservoirs and additional infrastructure, not only the ditch system.¹ Although the Department's Division of Aquatic Resources uses the reservoir for some of its programs, supporting those programs is not sufficient justification for acquiring the system. The overwhelming public benefit of the system is to support agricultural activities and local food production. The irrigation system serves numerous agricultural users in the region. Those users engage in activities that support local food production, making the irrigation system a key component in achieving the State's food sustainability goals. Therefore, the system is the responsibility of the landowner and benefits agriculture.

The Department notes that the Wahiawa Dam/Reservoir does not meet current dam safety standards and needs significant repairs to bring it into compliance. The current landowner was notified by the Department's Dam Safety Program of these issues in 2009 and has not taken the action necessary to remediate them. Repairs needed to bring the reservoir into compliance include upgrading the undersized spillway and are estimated to be up to \$20 million², for which this measure provides no funding.

Thank you for the opportunity to comment on this measure.

¹ The Department does not have any agriculture tenants in the area, unlike ADC or the DOA. As such, if a state agency was to acquire the Reservoir, ADC or DOA ought to be considered candidates for such acquisition for their own tenants or uses.

² This estimate is not confirmed since there has been no confirmation as to whether the current repair plans are viable.

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
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

DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor



JAMES J. NAKATANI
Executive Director

LATE

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

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TESTIMONY OF JAMES J. NAKATANI
EXECUTIVE DIRECTOR
AGRIBUSINESS DEVELOPMENT CORPORATION
BEFORE THE COMMITTEES ON WAYS AND MEANS

Thursday, February 24, 2022
10:00 a.m.
Conference Room 211

SENATE BILL NO. 2480
RELATING TO WAHIAWA IRRIGATION SYSTEM

Chairperson Dela Cruz, and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill No. 2480. The Agribusiness Development Corporation (ADC) supports the intent of S.B. 2480 S.D. 1, which authorizes the issuance of bonds for the Hawaii Department of Agriculture (HDOA) and the ADC to purchase the Wahiawa Irrigation System on the Island of Oahu.

However, the current draft of this bill fails to address the immediate concerns regarding the system's dam and spillway. As soon as the lands are acquired, the current condition of the dam and spillway should be improved so that it is compliant with current safety regulations. Additionally, Dole Food Company has testified that it is willing to gift the Wahiawa Irrigation System to the State of Hawaii. Based on Dole's and ADC's testimony, we recommend the following amendments:

- Revisions to the preamble to better define purpose and intent;

- Require that DLNR acquire the fee simple interests in the Wahiawa Irrigation System as on pages 2 and 3;
- Change the appropriation from DOA to DAGS and amend the measure so the GO bonds are used to take necessary actions to repair the spillway and bring into compliance with dam safety requirements;
- Include a blank appropriation to DLNR for the management of fee simple interests associated with the Wahiawa Irrigation System;
- Include a blank appropriation to ADC for the management of ditch system associated with the Wahiawa Irrigation System;
- Include a blank appropriation to DLNR to purchase the fee simple interest of TMK 7-1-012-014.

Thank you for your consideration of our testimony.



Email: communications@ulupono.com

SENATE COMMITTEE ON WAYS & MEANS
Thursday, February 24, 2022 — 10:00 a.m.

Ulupono Initiative supports SB 2480 SD 1, Relating to the Wahiawa Irrigation System.

Dear Chair Dela Cruz 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 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; and better management of freshwater and waste.

Ulupono supports SB 2480 SD 1, which authorizes the issuance of bonds for the Department of Agriculture (DOA) and the Agribusiness Development Corporation (ADC) to purchase the Wahiawa Irrigation System on the island of O'ahu.

Ulupono supports funding for critical agricultural infrastructure across the State. The Wahiawa Irrigation System provides critical water access to local producers in the region. The system also provides recreation to the local community under the jurisdiction of the Department of Land and Natural Resources. It is prudent for the State to acquire the Wahiawa Irrigation System to support both recreation and production agriculture, therefore some sort of collaborative agreement across multiple state departments may be necessary. Having such an important system abandoned, or sold to a private entity, may have drastic ripple effects to local agriculture and communities alike. We support keeping this water resource within the purview of the State and maintaining affordable water access island-wide. It is important to note that there are other maintenance and repair projects proposed in the Hawai'i Department of Agriculture's CIP Budget that also merit strong consideration by the Legislature.

Ulupono closely tracked the federal Infrastructure Investment and Jobs Act and advocated for key strategic investments in water infrastructure for agriculture. Unfortunately, the federal bill did not provide resources specifically targeted to support agricultural water systems. Agricultural water system infrastructure (irrigation systems) is an essential component of our state's efforts to achieve its goals of increasing local food production and food security.

This is affirmed in the DOA's 2019 Agricultural Water Use and Development Plan (AWUDP), which documents how Hawai'i's agricultural industry relies on these water systems to deliver inexpensive water to meet and expand agricultural production even during times of drought. The DOA has identified agricultural water systems as the most important infrastructural requirement needed to expand Hawai'i's diversified agriculture industry. However, most of the large-scale irrigation systems in the state are or will soon be more than 100 years old.

Additionally, 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.

Investing in a Sustainable Hawai'i

In the AWUDP, the DOA estimates the five-year cost of repairs and maintenance for Hawai'i's most critical agricultural water systems at approximately \$168 million - of that amount, about \$90 million is needed specifically for DOA-managed agricultural water systems over that same period. This is substantial for our small state, requiring an average of more than \$33 million per year for five years. While the price tag to repair and maintain these systems may seem high, the cost to replace these plantation-era water systems would be in the billions of dollars. More importantly, continuing to let these systems fall into disrepair puts Hawai'i's food security at risk, particularly the food security of the next generation who will be forced to adapt to a hotter and dryer planet.

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 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.

Food Pricing & Availability in Hawai'i

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. Some estimate this will require an increase in global food production of 60%, if we are to ensure enough food for all.

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.

An analysis of top food producing states California and Iowa paints a grim picture:

- California, based on available data, produces over a third of the nation's vegetables and two-thirds of its fruits and nuts. Yet, California is expected to see a 50% increase in the number of severe droughts by the end of this century, with research predicting a decrease in California's

yields by more than 10% for walnuts, almonds, avocados, table grapes, rice, wheat, and tomatoes.

- Iowa is the largest producer of corn in the United States, with Iowa farms producing more than 19% of American corn, eggs (14%), hogs (30%), and soybeans (17%) in 2008. Iowa could see up to a 25% drop in corn yields by mid-century (from 200 to 150 bushels per acre), according to the Fourth National Climate Assessment, a federal study mandated by Congress and completed every four years, significant decreases are on the horizon.

Left dependent on imports, Hawai'i residents will experience greater volatility of food prices and food availability because of the impact of climate change on national and global food production. It can no longer be assumed that there will always be an unlimited supply of affordable food from overseas to feed Hawai'i's population.

Irrigation Infrastructure IS Part of Climate Change Adaptation

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.

The DOA's AWUDP plan concludes: "The investment into these agricultural water systems is the key to provide adequate water to continue to grow diversified agriculture. As the saying goes, ...without water there is no agriculture..., which is the reason these agricultural water systems were originally constructed—and why they need to be maintained for another 100 years."

We strongly agree. For generations to come, local food production will depend on these 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



Hawaii Senate Ways and Means Committee
Senator Donovan Dela Cruz, Chair

February 22, 2022

I am the General Manager of Dole Food Company Hawaii, a division of Dole Food Company, Inc. I am submitting testimony in favor of Senate Bill 2480 introduced by Senator Dela Cruz. This bill proposes that the State of Hawaii fund the purchase of the Wahiawa Irrigation System (WIS) from Dole Food Company for an estimated \$20M. Dole and Castle & Cooke met with Governor Ige and some of his cabinet to discuss this possibility on Wednesday, Feb. 9. This bill has passed out of the Water and Land Committee and the Agriculture and Environment Committee. SB2480 SD1 now has recommendations to replace DLNR with DOA as a purchasing agency for the State of Hawaii. Dole is fully in support of that change as the DOA already has experience operating irrigation systems and with the ADC will be able to manage the WIS effectively. Dole is not opposed to the other technical changes in this version. Our testimony below is substantially the same as presented at the first two committee meetings.

The WIS is essential to continued agricultural production in Central and North Oahu. Dole is facing mandated spillway design expansion at Wahiawa Reservoir Dam that may cost as high as \$20M. This would essentially put Dole Hawaii out of business. If Dole cannot afford the expansion, then the system may have to be decommissioned with the breach of Wahiawa Dam. This would mean the loss of the flood control and recreational assets that the State and the community now enjoy and the loss of irrigation water for a major portion of agricultural production on Oahu. Dole set an asking price to reflect the cost of the spillway expansion and other improvements and could negotiate with the State to discount the price based on the State taking on the cost of the expansion. Dole is prepared to gift the system for no cost in exchange for delivery of a maximum 6 MGD of irrigation water at no cost. Dole will only draw what is needed each day. The system currently delivers about 4 MGD to other users for a total of 10MGD on average. Currently the maximum daily outflow is 20 MGD. This can be increased with future improvements. The reservoir holds 3 billion gallons, water is abundant for future use opportunities. To fund the cost to expand the spillway the State will be able to float bonds as per this bill and access federal infrastructure funds that a private owner cannot access. This system currently serves fifty farmers with over 500 farm jobs and will serve more in the future once the State of Hawaii Agribusiness Corporation lands are fully leased out in Central and North Oahu. For food security it is essential that Hawaii expands agricultural production, and this is an opportunity for the State to do just that.

In addition to the current uses of this system the future uses could include hydroelectricity to meet State of Hawaii renewable energy goals and possibly power a water purification system that can provide potable water security to the island of Oahu as our aquifers face threats from contamination and saltwater intrusion from over pumping.

WIS is a historically important asset for Oahu and the State of Hawaii and this opportunity for the State to own, manage, and improve the system is critical to agriculture, flood control, energy security, and water security. I urge you to pass this bill and capitalize on this opportunity.

Thank you for your consideration.

Aloha,

A handwritten signature in black ink that reads "Daniel X. Nellis". The signature is written in a cursive, flowing style.

Daniel X. Nellis
General Manager
Dole Food Company Hawaii



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February 24, 2022

HEARING BEFORE THE
SENATE COMMITTEE ON WAYS AND MEANS

TESTIMONY ON SB 2480, SD1
RELATING TO THE WAHIAWA IRRIGATION SYSTEM

Room 211 & Videoconference
10:00 AM

Aloha Chair Dela Cruz, Vice-Chair Keith-Agaran, 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 SB 2480, SD1, which authorizes the issuance of bonds for the Department of Agriculture and Agribusiness Development Corporation to purchase the Wahiawa Irrigation System on the island of Oahu.

The Wahiawa Irrigation System is critical for Oahu farmers and ranchers that depend on it for their operations. Water availability is a basic necessity for farmers and ranchers to maintain and expand their production, particularly in times of drought manifested on many islands as a result of a changing climate. Moreover, a reliable water supply is a key factor when Hawai'i's farmers and ranchers are making decisions to start new or to expand existing operations.

The Dole Food Company has listed the Wahiawa Irrigation System for sale. We can't afford to lose this critical agricultural water source. No farming entity can afford the \$20,000,000 listed price. We are concerned about the potential impact on farmers if a private individual or entity purchases the system. They may raise water rates or even discontinue supplying water to farmers.

Oahu growers, especially those in Waiialua and Haleiwa, need the reliable source of water that the Wahiawa Irrigation System provides, to continue to produce cabbage, bell pepper, tomato, cucumber, taro, eggplant, okra, papaya, citrus, avocado, banana, dragon fruit, watermelon, and green onion, and to expand production to better serve our communities.

Thank you for this opportunity to testify in support of this measure.



HAWAII CROP IMPROVEMENT ASSOCIATION

In Support of SB2480 SD1
Relating to the Wahiawa Irrigation System

Senate Committee on Ways and Means

Date: Thursday, February 24, 2022

Time: 10:00 a.m.

Place: Videoconference

Chair Dela Cruz, Vice Chair Keith-Agaran, and members of the committee:

Thank you for allowing the Hawaii Crop Improvement Association the opportunity to provide testimony in **support** of SB2480 SD1, which authorizes the issuance of bonds for the Department of Agriculture and Agribusiness Development Corporation to purchase the Wahiawa Irrigation System on the island of Oahu.

The Wahiawa Irrigation System is a valuable system that services prime and productive agricultural lands. It is an essential water source for farmers in Waialua and Haleiwa.

Mahalo for this opportunity to testify in support of SB2480 SD1. If you have any questions, please contact me at your convenience.

Sincerely,

Pono Chong
Hawaii Crop Improvement Association

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.