

**DAVID Y. IGE**  
Governor

**JOSH GREEN**  
Lt. Governor



**JAMES J. NAKATANI**  
Executive Director

STATE OF HAWAII  
**AGRIBUSINESS DEVELOPMENT CORPORATION**

235 S. Beretania Street, Room 205  
Honolulu, HI 96813  
Phone: (808) 586-0186 Fax: (808) 586-0189

TESTIMONY OF JAMES J. NAKATANI  
EXECUTIVE DIRECTOR  
AGRIBUSINESS DEVELOPMENT CORPORATION

BEFORE THE HOUSE COMMITTEE ON JUDICIARY & HAWAIIAN AFFAIRS

Monday, March 21, 2022  
2:00 p.m.  
Conference Room 325  
Via Videoconference

SENATE BILL NO. 2480, SD2  
RELATING TO THE WAHIAWA IRRIGATION SYSTEM

Chairperson Nakashima and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill No. 2480, S.D. 2. The Agribusiness Development Corporation (ADC) supports S.B. 2480 S.D. 2, which authorizes the department of agriculture, department of land and natural resources, and agribusiness development corporation to acquire the Wahiawa irrigation system, on terms negotiated and agreed upon by the office of the governor, and to purchase, repair, and maintain the associated spillway.

The Wahiawa Irrigation System (WIS) has a critical role in the economy of Hawaii by providing an essential input for agricultural production in the Wahiawa-Waialua-Haleiwa area. Like for many other types of infrastructure such as roads, airports, harbors and power grid, the economic impact of an irrigation system is most crucial in the service it provides that makes possible for other economic activities to take place and thrive

Thank you for your consideration of our testimony.

**SB-2480-SD-2**

Submitted on: 3/18/2022 3:20:46 PM

Testimony for JHA on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Brian Kau	Dept of Ag - Agricultural Resource Management Division	Comments	Remotely Via Zoom

Comments:

I will be available for questions, if necessary.

DAVID Y. IGE  
GOVERNOR



CRAIG K. HIRAI  
DIRECTOR

GLORIA CHANG  
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM  
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND  
OFFICE OF THE PUBLIC DEFENDER

**STATE OF HAWAII**  
**DEPARTMENT OF BUDGET AND FINANCE**  
P.O. BOX 150  
HONOLULU, HAWAII 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE  
BUDGET, PROGRAM PLANNING AND  
MANAGEMENT DIVISION  
FINANCIAL ADMINISTRATION DIVISION  
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

**WRITTEN ONLY**  
**TESTIMONY BY CRAIG K. HIRAI**  
**DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE**  
**TO THE HOUSE COMMITTEE ON JUDICIARY & HAWAIIAN AFFAIRS**  
**ON**  
**SENATE BILL NO. 2480, S.D. 2**

**March 21, 2022**  
**2:00 p.m.**  
**Room 325 and Videoconference**

**RELATING TO THE WAHIAWA IRRIGATION SYSTEM**

The Department of Budget and Finance (B&F) offers comments on this bill.

Senate Bill No. 2480, S.D. 2: authorizes the Department of Agriculture (DOA), Department of Land and Natural Resources (DLNR), and the Agribusiness Development Corporation (ADC) to acquire the Wahiawa Irrigation System (WIS) on terms negotiated and agreed upon by the Office of the Governor and to purchase, repair, and maintain the associated spillway; appropriates \$26,000,000 in general funds for FY 23 for the DOA to repair, expand, and acquire a fee simple interest in the WIS spillway; appropriates \$800,000 in general funds for FY 23 for the ADC to manage and maintain its acquired portion of the WIS; and appropriates \$1,500,000 in general funds for FY 23 for the DLNR to manage and maintain its acquired portion of the WIS, including the creation of four full-time positions for this purpose.

B&F notes that, with respect to the general fund appropriations in this bill, the federal Coronavirus Response and Relief Supplemental Appropriations Act requires that states receiving Elementary and Secondary School Emergency Relief (ESSER) II funds

and Governor's Emergency Education Relief II funds must maintain state support for:

- Elementary and secondary education in FY 22 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

Further, the federal American Rescue Plan (ARP) Act requires that states receiving ARP ESSER funds must maintain state support for:

- Elementary and secondary education in FY 22 and FY 23 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 and FY 23 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

The U.S. Department of Education has issued rules governing how these maintenance of effort (MOE) requirements are to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai'i complies with these ESSER MOE requirements.

Thank you for your consideration of our comments.

DAVID Y. IGE  
Governor

JOSH GREEN  
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER  
Chairperson, Board of Agriculture

MORRIS ATTA  
Deputy to the Chairperson

State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1428 South King Street  
Honolulu, Hawaii 96814-2512  
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TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER  
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON  
JUDICIARY & HAWAIIAN AFFAIRS

MARCH 21, 2022  
2:00 P.M.  
CONFERENCE ROOM 325 and VIA VIDEOCONFERENCE

SENATE BILL NO. 2480, SD2  
RELATING TO THE WAHIAWA IRRIGATION SYSTEM

Chairperson Nakashima and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill 2480, SD 2. This bill requires the Office of the Governor to negotiate the State's fee simple acquisition of the Wahiawa Irrigation System on the Island of Oahu. It also authorizes and appropriates moneys for the Department of Agriculture ("Department"), Agribusiness Development Corporation ("ADC"), and Department of Land and Natural Resources ("DLNR") to purchase, repair, and maintain the Wahiawa Irrigation Systems and an associated spillway. The Department supports the intent this measure, however, has strong concerns and offers the following comments.

The Wahiawa Irrigation Systems is an extremely complex system that serves numerous purposes that have evolved over time. The Waialua Sugar Company originally built the system to serve as a reliable water source and provide water to its sugar cane operations in central Oahu, Waialua, and Haleiwa. With the demise of the monocrop sugar industry, the system continues to provide irrigation to farmers in Wahiawa, Waialua, and Haleiwa on a significantly reduced scale while now serving more as a popular venue for recreational activities, public safety resource (flood control, wildfire mitigation), and public infrastructure asset (wastewater treatment, potential hydropower development). DLNR maintains conservation and recreational interests associated with the system and ADC is acquiring a portion of the irrigation ditch system that serves agricultural lands in the vicinity of the system under their management. The Department currently does not have any lands under its jurisdiction that is served by the system. **The Department is concerned that despite lacking land resources associated with the system, the measure requires it to acquire and repair the dam and spillway and assume responsibility and liability for these high hazard structures, while not providing essential operational funding to ensure that**



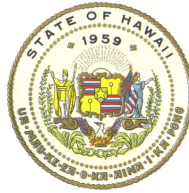
**ongoing maintenance, repairs, and operations can be performed in a safe and responsible manner.** The Department does not have the financial or staffing resources to operate and maintain this high hazard structure. The annual dam safety fee alone is over \$10,000 per year, and the annual maintenance costs may be six or seven figures per year. This measure provides annual appropriations for both ADC and DLNR for operations and maintenance of their respective portions of the system.

The Department was not one of the purchasing agencies of the system in the original version of this measure. The agricultural component of this system used by ADC consists of only a small portion of the irrigation infrastructure downstream of the dam spillway. It is our understanding that this is the portion of the system that is intended for purchase and use by ADC. Contrary to prior statements that agricultural activities and local food production are the primary and overwhelming beneficiaries of the system, its current uses consist of a complex mix of important public benefits that include , submerged lands leasing, aquatic resources management and research, fishing, boating, and park recreational activity, flood control, wastewater management, wild fire suppression, and renewable energy development. Accordingly, the Department concurs with the ADC's prior 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.

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**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of  
SUZANNE D. CASE  
Chairperson**

**Before the House Committee on  
JUDICIARY & HAWAIIAN AFFAIRS**

**Monday, March 21, 2022  
2:00 PM**

**State Capitol, Conference Room 325, Via Videoconference**

**In consideration of  
SENATE BILL 2480, SENATE DRAFT 2  
RELATING TO THE WAHIAWA IRRIGATION SYSTEM**

Senate Bill 2480, Senate Draft 2 proposes to require the Office of the Governor to negotiate the State's fee simple acquisition of the Wahiawa Irrigation System on the island of Oahu; and authorize and appropriate moneys for the Department of Agriculture (DOA), Agribusiness Development Corporation (ADC), and the Department of Land and Natural Resources (Department) to purchase, repair and maintain the Wahiawa Irrigation System and associated spillway. **The Department appreciates the importance of Wahiawa Dam to agriculture irrigation, flood control, wastewater management, and public recreation in central O'ahu, and offers the following comments on this measure.**

Wahiawa Dam was constructed in 1905 to create an great reservoir basin to capture waters in Kaukonahua Stream from the Koolau Mountains for a massive irrigation system for Central O'ahu farming that continues to this day. The system generated hydroelectric energy and has received R2 wastewater from the nearby treatment plant of the City and County of Honolulu. Since 1957, through a cooperative agreement with Castle & Cooke, Inc., the Department has managed a public fishing area on Wahiawa reservoir, and constructed and manages a boat ramp at the 66-acre Wahiawa State Freshwater Park.

The Department's Dam Safety Program regulates dams in Hawai'i to ensure landowner compliance with dam safety laws and regulations. The Department notes that the Wahiawa Dam does not meet current dam safety standards and needs significant repairs to bring it into compliance. These deficiencies were first identified in the 1978 United States Army Corps of Engineers dam safety report. The current landowner was notified by the Department's Dam Safety Program to remedy these issues in 2009 and has not taken the all the necessary actions to remediate the dam. Repairs needed to bring the dam into compliance are estimated to be up to \$21 million, but the Department cannot confirm that amount.

**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

The Department agrees that this measure should require that either ADC or the DOA assume ownership of the irrigation system infrastructure needed for water delivery, such as the dam and spillway, not only the ditch system.<sup>1</sup> Although the Wahiawa State Freshwater Park is adjacent to the subject parcels and the Department's Division of Aquatic Resources uses the reservoir for some of its programs serving about 500 fishers annually, supporting those programs is not sufficient justification for the Department solely acquiring and managing the entire irrigation 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 has not conducted detailed planning for the duties of the Department under this bill, and therefore notes the funding provided in this bill are rough estimates for the Department to implement its portion of this bill, which the Department understands are:

1. Support for the land acquisition of the Wahiawa Irrigation System.

The Department requests funding in the amount of \$500,000 be added to this measure for due diligence for the acquisition. Some of the items required would be a survey map and description, title reports for all the parcels, and a Phase I Environmental Site Assessment (ESA) to determine whether any hazardous materials or other contaminants are present of the parcels, and a Phase II ESA if necessary.

Based on a cursory review of the parcels to be acquired, there are issues that need to be resolved prior to an acquisition. Parcel (1) 7-3-005:005 is not adjacent to the other parcels contemplated to be acquired in this measure, nor other state land. As there does not appear to be any public purpose for the State to acquire this parcel combined with the challenges to manage this standalone parcel, the Department recommends that this parcel be deleted from the measure. Parcel (1) 7-3-013:003 appears to support the ditch system so it should be acquired separately by either DOA or ADC. Additionally, several of the parcels appear to have improvements potentially encroaching from adjacent parcels, which will require resolution prior to acquisition.

2. Management of the lands underlying and adjacent to the reservoir, not including the dam and irrigation ditches, as an extension of the Wahiawa State Freshwater Park and public fishing area.

The Department appreciates that the measure provides \$1,500,000 to the Department to manage and maintain its portion of the irrigation system, i.e. the reservoir lands, including creating 4 full time equivalent (FTE) positions. The Department notes that there will be significant ongoing challenges to manage this area and that future recurring funding will be required. Given the significant management responsibilities that will involve multiple divisions of the Department, 4 FTE positions may not be sufficient staff resources to

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<sup>1</sup> 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 irrigation system infrastructure that serves to deliver water (dam, spillway, ditches, etc.), ADC or DOA ought to acquire it for their own tenants or uses, not the Department.

adequately manage this area. Specifically, additional officers from the Department's Division of Conservation and Resources Enforcement will be required to respond to homeless and other enforcement issues.

- a. The Department estimates that it would be responsible for managing approximately 206.5 additional acres resulting from this acquisition.
- b. The Department understands that as many as 50 homeless people occupy various areas of the parcels and a commitment of substantial resources will be required to manage the area to provide clean, safe recreational opportunities to the public.<sup>2</sup>
- c. In addition to addressing the homeless issue, the Department will need to manage the submerged land areas and approximately 20 miles of shoreline for public use by regularly removing trash, debris and other hazards, including aging Eucalyptus trees that abut the adjacent residential properties.

The Department supports the appropriation of funds to DOA to conduct the needed repairs. As the Department is acting in its regulatory capacity through its administration of the Dam Safety Program, DOA being outside of the Department's jurisdiction would avoid the appearance of a conflict of interest.

The Department does not have a solid estimate on the funding needed to be provided to the DOA and to ADC to bring the dam into compliance and operate the dam and irrigation system so the funding provided in the measure may not be sufficient.<sup>3</sup>

Thank you for the opportunity to comment on this measure.

<sup>2</sup> The Department also understands that there are more homeless in the general vicinity that may migrate to the subject parcels once they become publicly accessible.

<sup>3</sup> This estimate is speculative since there has been no confirmation as to whether the current repair plans are viable.

**SB-2480-SD-2**

Submitted on: 3/20/2022 1:45:24 PM

Testimony for JHA on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Curt Cottrell	DLNR	Comments	Remotely Via Zoom

Comments:

I am available for questions to DLNR. Please allow me Zoom access.

**SB-2480-SD-2**

Submitted on: 3/20/2022 1:46:25 PM

Testimony for JHA on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Russell Tsuji	DLNR	Comments	Remotely Via Zoom

Comments:

I am available for questions to DLNR. Please allow me Zoom access.

**SB-2480-SD-2**

Submitted on: 3/20/2022 1:47:41 PM

Testimony for JHA on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Carty Chang	DLNR	Comments	Remotely Via Zoom

Comments:

I am available for questions to DLNR. Please allow me Zoom access.

**SB-2480-SD-2**

Submitted on: 3/20/2022 1:48:35 PM

Testimony for JHA on 3/21/2022 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Tony Koyamatsu	DLNR	Comments	Remotely Via Zoom

Comments:

I am available for questions to DLNR. Please allow me Zoom access.



Hawaii House of Representatives Committee on Judiciary and Hawaiian Affairs  
Representative Mark M. Nakashima, Chair  
Representative Scot Z. Matayoshi, Vice Chair

March 18, 2022

I am the General Manager of Dole Food Company Hawaii, a division of Dole Food Company, Inc. I am submitting testimony in support of Senate Bill 2480 SD2 which has passed from the Senate to the House of Representatives and is scheduled to be heard by your HR Committee on Judiciary and Hawaiian Affairs on March 21, 2022. 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. Some changes in the bill occurred before it passed the Senate regarding the source of funding and the ownership and operational responsibilities of the State agencies that will manage the Wahiawa Irrigation System (WIS). This bill also requires the office of the Governor to negotiate a fee simple purchase of the WIS with Dole. Dole supports the changes that are in the version passed by the Senate and subsequently passed by the HR Committee on Agriculture.

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 10 MGD 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 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,

Daniel X. Nellis  
General Manager  
Dole Food Company Hawaii



# HAWAII CROP IMPROVEMENT ASSOCIATION

In Support of SB2480 SD2  
Relating to the Wahiawa Irrigation System

House Committee on Judiciary & Hawaiian Affairs

Date: Monday, March 21, 2022

Time: 2:00pm

Place: Videoconference

Chair Nakashima, Vice Chair Matayoshi, and members of the committee:

Thank you for allowing the Hawaii Crop Improvement Association the opportunity to provide testimony in **support** of SB2480 SD2, which requires the Office of the Governor to negotiate the State's fee simple acquisition of the Wahiawa Irrigation System on the island of Oahu, and authorizes and appropriates moneys for the Department of Agriculture, Agribusiness Development Corporation, and Department of Land and Natural Resources to purchase, repair, and maintain the Wahiawa Irrigation System and an associated spillway.

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. This measure will ensure that it will continue to operate for the benefit of the public.

Mahalo for this opportunity to testify in support of SB2480 SD2. 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.*



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

HOUSE COMMITTEE ON JUDICIARY & HAWAIIAN AFFAIRS  
Monday, March 21, 2022 — 2:00 p.m.

**Ulupono Initiative supports SB 2480 SD 2, Relating to the Wahiawa Irrigation System.**

Dear Chair Nakashima 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 2**, 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 Muneata  
Director of Government Affairs



P.O. Box 253, Kunia, Hawai'i 96759  
Phone: (808) 848-2074; Fax: (808) 848-1921  
e-mail [info@hfbf.org](mailto:info@hfbf.org); [www.hfbf.org](http://www.hfbf.org)

March 21, 2022

HEARING BEFORE THE  
HOUSE COMMITTEE ON JUDICIARY & HAWAIIAN AFFAIRS

**TESTIMONY ON SB 2480, SD2**  
RELATING TO THE WAHIAWA IRRIGATION SYSTEM

Room 325 & Videoconference  
2:00 PM

Aloha Chair Nakashima, Vice-Chair Matayoshi, 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, SD2**, which requires the Office of the Governor to negotiate the State's fee simple acquisition of the Wahiawa Irrigation System on the island of Oahu and authorizes and appropriates moneys for the Department of Agriculture, Agribusiness Development Corporation, and Department of Land and Natural Resources to purchase, repair, and maintain the Wahiawa Irrigation System and an associated spillway.

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 Waialua 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.