

**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 COMMITTEES ON WATER AND LAND  
&  
AGRICULTURE AND ENVIRONMENT

Wednesday, February 16, 2022  
1:00 p.m.  
Conference Room 229

SENATE BILL NO. 2480  
RELATING TO WAHIAWA IRRIGATION SYSTEM

Chairpersons Inouye and Gabbard, and Members of the joint Committees:

Thank you for the opportunity to testify on Senate Bill No. 2480. The Agribusiness Development Corporation (ADC) submits comments on this measure, which authorizes the issuance of bonds for the Department of Land and Natural Resources (DLNR) and the ADC to purchase the Wahiawa Irrigation System on the Island of Oahu.

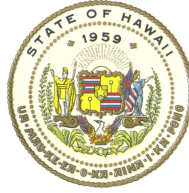
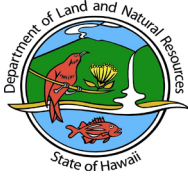
The intent of this measure is to preserve the Wahiawa Irrigation System and Lake Wilson for irrigation purposes, but there are other stakeholders besides agriculture that have a vested interest in the lake. Instead of putting the onus on two agencies, the ADC strongly believes the acquisition of Lake 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.

Several of the Tax Map Keys listed in the measure have large homeless encampments that are resistant to services and the dam and spillway are facing ongoing regulatory and legal challenges, which has been confirmed in discussions with the State Attorney General's Office. Additionally, there is no appropriation in this bill for short-term repairs to the dam and spillway, which is a critical safety issue that needs to be addressed immediately.

All of ADC's lands it has acquired are slated for diversified agriculture production and other agricultural activities. These activities are consistent with ADC's mission to acquire and manage arable lands, water systems, and infrastructure. The acquisition of lands submerged underwater, aquatic resources, and boat launches would be difficult to defend. However, once the State secures the ownership of these resources, ADC would consider managing the irrigation ditch system. We would be open to discuss this possibility with whatever agency, or agencies, acquires the dam and spillway.

Thank you for your consideration of our testimony.

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 Senate Committees on  
WATER AND LAND  
and  
AGRICULTURE AND ENVIRONMENT**

**Wednesday, February 16, 2022  
1:00 PM**

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The Department opposes this measure because it would impose a significant, unfunded management burden for a responsibility that is outside of the Department's mission for the management and protection of the public trust natural, cultural, historical and recreational resources. The measure contemplates the Department acquiring the fee interest in multiple parcels upon which the irrigation system is situated, consisting of a ditch system and a reservoir. The measure also provides for ADC to retain fee ownership in the ditch system. While the measure provides funding for land acquisition, it does not provide any support for long term management of the acquired land and improvements. Although the irrigation system would be under the fee ownership of ADC<sup>1</sup>, it appears that the Department would be left with the remaining lands and improvements, including any reservoirs, located thereon. The Department estimates that it would be responsible for managing approximately 206.5 acres of land and at least one reservoir.

As to the reservoir, the Department has already incurred significant monetary and staff time expenses to manage other reservoirs located on its lands. The Wailua reservoir on Kauai, for example, was successfully rehabilitated and the Upper Kapahi reservoir was removed and replaced with a smaller reservoir. Both of these facilities are part of the east Kauai irrigation system that was previously under the management of the East Kauai Irrigation Cooperative via revocable permit. The cooperative has since discontinued the revocable permit and the system has reverted back to the Department's Land Division's management. Land Division uses its limited operating

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The 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.<sup>2</sup> 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.

Furthermore, this acquisition poses significant legal, regulatory and financial burdens for the Department if acquired. 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 million<sup>3</sup>, for which this measure provides no funding. Additionally, there may be other reservoirs and irrigation infrastructure that likely require significant repair and maintenance. Furthermore, as no due diligence has been conducted on the properties, the Department is unaware whether there are any other issues with the properties such as the presence of hazardous materials or other contaminants.

Even with the completion of immediate repairs, ownership of the reservoir would incur significant, long-term obligations for ongoing repair and maintenance to remain in compliance and mitigate potential liability. Even if the immediate repairs are funded by a legislative appropriation, the Department would likely need to pay for the long-term, ongoing repair and maintenance from its operating funds. The Department does not support using its limited operating funds to support this additional management burden that is not consistent with its mission. The revenues collected by the Department's Land Division cover the entire annual operating budget for the Land Division, the Department's Office of Conservation and Coastal Lands, and the Dam Safety and Mineral Resources Programs of the Department. The revenues fund over 80 Department staff positions, including 5 positions within the Commission on Water Resource Management, and provide funding support to the Division of State Parks and various resource protection programs administered by the Division of Forestry and Wildlife such as the protection of threatened and endangered species, removal of invasive species, wildland firefighting and lifeguard services. Revenues collected by other divisions have supported watershed protection, preservation of cultural and historical sites and public recreational resources. In addition, the Department has

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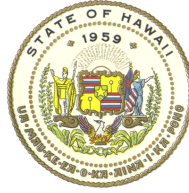
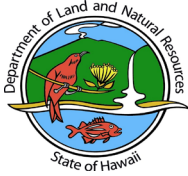
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provided lands to other agencies in support of a variety of agricultural, educational, transportation and affordable housing projects, often at the expense of generating revenue to support its own programs.

Thank you for the opportunity to comment on this measure.

DAVID Y. IGE  
GOVERNOR OF HAWAII



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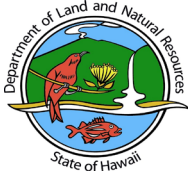
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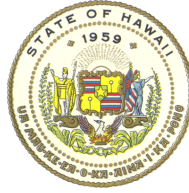
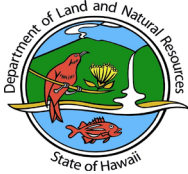
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# HAWAII CROP IMPROVEMENT ASSOCIATION

In Support of SB2480  
Relating to the Wahiawa Irrigation System

Senate Committees on Agriculture and Environment and Water and Land

Date: Wednesday, February 16, 2022

Time: 1:00 p.m.

Place: Videoconference

Chair Tarnas, Vice Chair Branco, and members of the committee:

Thank you for allowing the Hawaii Crop Improvement Association the opportunity to provide testimony in **support** of SB2480, which authorizes the issuance of bonds for the Department of Land and Natural Resources 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. 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)

SENATE COMMITTEES ON WATER & LAND AND AGRICULTURE & ENVIRONMENT  
Wednesday, February 16, 2022 — 1:00 p.m.

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

Dear Chair Inouye, Chair Gabbard, and Members of the Committees:

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**, which authorizes the issuance of bonds for the Department of Land and Natural Resources (DLNR) and 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 much needed water to local producers in the region. The State should look to obtain this system in order to ensure critical water access for both recreation and production agriculture. 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



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February 16, 2022

HEARING BEFORE THE  
SENATE COMMITTEE ON WATER AND LAND  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

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

Conference Room 229 & Videoconference  
1:00 PM

Alohas Chairs Inouye and Gabbard, Vice-Chairs Keith-Agaran and Nishihara, and Members of the Committees:

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

**The Hawaii Farm Bureau supports SB 2480**, which authorizes the issuance of bonds for the Department of Land and Natural Resources 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 Hawaii'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.



Committee on Agriculture and Environment  
Senator Mike Gabbard, Chair  
Committee on Water and Land  
Senator Lorraine R. Inouye, Chair

February 16, 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.

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

**SB-2480**

Submitted on: 2/12/2022 11:25:20 AM

Testimony for WTL on 2/16/2022 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Remote Testimony Requested</b>
Marvin Min	Individual	Support	No

Comments:

Aloha Chair and COmmittee Members,

I am in support of SB2480.

Water is a need for farming, ranching, landscaping and all other agricultural activities. Without adequate water/ irrigation supply, we will not be able to meet our states sustainable agricultural goal(s) to produce local products. Our recent drought(s) has plagued the entire community of farming, ranching, landscaping and all other agricultural activities. The opportunity for this acquisition comes at a much needed time- as there are existing water resources available from Dole that we will be able to acquire and utilize these exsiting wells/ resovoir, which will be beneficial for the public interest as tis bill will support our local sustanable goals and circular-economy.

Mahalo,

Marvin Min