<u>SB-2946</u> Submitted on: 2/15/2022 8:54:15 AM

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

<b>Submitted By</b>	Organization	<b>Testifier Position</b>	Remote Testimony Requested
Brian Kau	Testifying for Dept of Ag - Ag Resource Mgt Division	Support	Yes

## Comments:

Able to answer questions, if necessary.



Hawai'i Aquaculture & Aquaponics Association

Hawai'i Cattlemen's Council

Hawai'i Farm Bureau Federation

Hawai'i Farmers' Union United

Hawai'i Food Industry Association

Hawai'i Food Manufacturers Association

Kohala Center

Land Use Research Foundation of Hawai'i

Maui Farm to School Network (Maui F2SN)

Ulupono Initiative

College of Tropical Agriculture and Human Resources - University of Hawai'i at Manoa

## SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT SENATE COMMITTEE ON WATER AND LAND February 16, 2022 – 1:00 p.m. – Via Videoconference

#### RE: SB 2946 - Relating to Irrigation - In Support

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

The Local Food Coalition **supports** SB 2946, which appropriates funds to the Department of Agriculture for water source infrastructure and the maintenance and improvement to the Peekauai Ditch Irrigation System on Kauai.

Waimea taro farmers do not have enough water for taro production because of the present condition of the Peekauai Ditch, also known as Menehune Ditch. Investing in this irrigation system will assist these farmers and the state in its efforts to increase local food production and food security.

The Local Food Coalition is an organization comprising of farmers, ranchers, livestock producers, investors and other organizations working to provide Hawaii's food supply.

We respectfully request your support of SB 2946. Thank you for the opportunity to submit testimony.

Kendall Matsuyoshi 808-544-8345 kmatsuyoshi@wik.com



Email: <a href="mailto:communications@ulupono.com">communications@ulupono.com</a>

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

#### Ulupono Initiative supports SB 2946, Relating to Irrigation.

Dear Chair Gabbard, Chair Inouye, 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** <u>supports</u> SB 2946, which appropriates funds to the Department of Agriculture (DOA) for water source infrastructure and the maintenance and improvement of the Peekauai Ditch Irrigation System located in Kaua'i.

Ulupono supports funding for critical agricultural infrastructure across the State. This bill identifies the needs of the Menehune Ditch on Kaua'i. There are other similar projects proposed in the Hawai'i Department of Agriculture's CIP Budget that 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.

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 twothirds 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.

#### <u>Irrigation Infrastructure IS Part of Climate Change Adaptation</u>

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



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

February 16, 2022

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

# **TESTIMONY ON SB 2946**RELATING TO IRRIGATION

Conference Room 229 & Videoconference 1:00 PM

Alohas Chairs Gabbard and Inouye, Vice-Chairs Nishihara and Keith-Agaran, 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 2946, which appropriates funds to the Department of Agriculture for water source infrastructure and the maintenance and improvement to the Peekauai Ditch Irrigation System (Menehune Ditch) located on Kauai.

The repair and maintenance of our irrigation systems are critical because our farmers and ranchers depend on these irrigation systems 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 Peekauai Ditch irrigation system is the lifeline for farmers in the Waimea, Kauai area, especially taro growers. Kauai farmers in Waimea presently do not have enough water for taro production because of the present condition of the Menehune Ditch

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

DAVID Y. IGE

EMPLOYEES' RETIREMENT SYSTEM
HAWAI'I EMPLOYER-UNION HEALTH BENEFITS TRUST FUND

OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAI'I
DEPARTMENT OF BUDGET AND FINANCE

P.O. BOX 150 HONOLULU. HAWAI'I 96810-0150 CRAIG K. HIRAI

GLORIA CHANG DEPUTY DIRECTOR

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 SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT AND
WATER AND LAND
ON
SENATE BILL NO. 2946

#### February 16, 2022 1:00 p.m. Room 229 and Videoconference

#### **RELATING TO IRRIGATION**

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

Senate Bill No. 2946 appropriates an unspecified amount of general funds in FY 23 to the Department of Agriculture for maintenance and improvements to the Peekauai Ditch Irrigation System on Kaua'i.

B&F notes that, with respect to the general fund appropriation 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 Phone: (808) 973-9600 FAX: (808) 973-9613

# TESTIMONY OF PHYLLIS SHIMABUKURO-GEISER CHAIRPERSON, BOARD OF AGRICULTURE

# BEFORE THE SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT AND WATER AND LAND

FEBRUARY 16, 2022 1:00 P.M. VIA VIDEOCONFERENCE

#### SENATE BILL NO. 2946 RELATING TO IRRIGATION

Chairpersons Gabbard, Inouye, and Members of the Committees:

Thank you for the opportunity to testify on Senate Bill 2946. The purpose of this bill is to appropriate moneys for water source infrastructure for water delivery and for maintenance and improvements to the Peekauai Ditch Irrigation System located on the Island of Kauai. The Department of Agriculture supports this measure provided it does not adversely impact the Department's priorities in the Executive Budget.

The Peekauai Ditch Irrigation System, also known as the Menehune Ditch, is operated by the local farmers. While it is not a state-owned system, we support the improvements of all irrigation systems that encourage the growth of Hawaii's diversified agricultural community.



## Page 2

Thank you for the opportunity to testify on this measure



# HAWAII CROP IMPROVEMENT ASSOCIATION

## In Support of SB2946 Relating to Irrigation

Senate Committees on Agriculture and Environment and Water and Land

Date: Wednesday, February 16, 2022

Time: 1:00 p.m.

Place: Videoconference

Chairs Gabbard and Inouye, Vice Chairs Nishihara and Keith-Agaran, and members of the committee:

Thank you for allowing the Hawaii Crop Improvement Association the opportunity to provide testimony in **support** of SB2946, which appropriates funds to the Department of Agriculture for water source infrastructure and the maintenance and improvement to the Peekauai Ditch Irrigation System located on Kauai.

The Peekauai Ditch Irrigation System is an essential water source for farmers in the Waimea, Kauai area. The present condition of the Menehune Ditch does not provide enough water for agricultural production, especially taro. The irrigation system is a reliable lifeline for farmers and ranchers to maintain and expand agricultural production.

Mahalo for this opportunity to testify in support of SB2946. 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.



February 11, 2022

Senator Mike Gabbard, Chair Senator Clarence K. Nishihara, Vice Chair Senate Committee on Agriculture and Environment

Senator Lorraine R. Inouye, Chair Senator Gilbert S.C. Keith-Agaran, Vice Chair Senate Committee on Water and Land

Comments in Support of SB 2946 Relating to Irrigation (Appropriates funds to the Department of Agriculture [DOA] for water source infrastructure and the maintenance and improvement to the Peekauai Ditch Irrigation System located on Kauai.)

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

The Land Use Research Foundation of Hawaii (LURF) is a private, non-profit research and trade association whose members include major Hawaii landowners, developers, and utility companies. LURF's mission is to advocate for reasonable, rational, and equitable land use planning, legislation and regulations that encourage well-planned economic growth and development, while safeguarding Hawaii's significant natural and cultural resources, and public health and safety.

LURF appreciates the opportunity to express its **support of SB 2946**, and of the various agricultural stakeholder groups who defend the goals of viable agricultural operations and the conservation and protection of agriculture, including important agricultural lands (IAL) in Hawaii.

**SB 2946.** This bill proposes to appropriate moneys for water source infrastructure for water delivery and for maintenance and improvements to the Peekauai ditch irrigation system located on the island of Kauai.

<u>LURF's Position</u>. Well-functioning irrigation systems are vital to Hawaii's agricultural industry to ensure that the State's agricultural crops receive a reliable and consistent supply of water to support and maintain productivity. LURF understands that Waimea taro farmers currently do not have adequate water for taro production due to the present condition of the Waimea Menehune Ditch. In

Senate Committee on Agriculture and Environment Senate Committee on Water and Land February 11, 2022 Page 2

order to ensure that these local taro farmers may continue to receive a dependable supply of water for crops, funding is necessary to improve, repair and maintain the Peekauai ditch irrigation system.

Local farmers and ranchers who rely on irrigation systems to service their agricultural lands consider such resources critical to conduct their agricultural operations and to sustain their businesses. These agricultural stakeholders believe measures such as SB 2946 will greatly assist by providing funding and support necessary to make improvements to irrigation systems for the long-term betterment of the State's agricultural industry and are relying on legislation such as this to help them work toward the expansion of diversified agriculture; promote the agricultural self-sufficiency of the State; and to protect water as a valuable and significant resource.

For the above reasons, LURF **<u>supports</u> SB 2946**, and respectfully urges your favorable consideration.

Thank you for the opportunity to provide comments in support of this measure.

LARRY JEFTS FARMS, LLC PO BOX 27 KUNIA, HAWAII 96759 (808) 688-2892

SB2946, Relating to Irrigation Senate AEN/WTL Hearing Wednesday, February 16, 2022 1:00pm

Testimony By: Larry Jefts Position: Support

Chair Gabbard and Chair Inouye, Vice Chair Nishihara and Vice Chair Keith-Agaran, and Members of the Senate AEN/WTL Committee:

I am Larry Jefts, owner and operator of Larry Jefts Farms, LLC. We have more than 42 years of Hawaii farm experience on Molokai and Oahu. Our family farms grow about 1 million pounds weekly of import replacement produce. I am a volunteer director, serving as Chair of the West Oahu Soil and Water Conservation District (SWCD). I have been an officer of the Hawaii Farm Bureau for many years.

Water is the lifeblood of all farmers, and without affordable and accessible water, there will be no farming. No farming, no locally grown produce and livestock.

This measure provides appropriations to the HDOA for the maintenance and improvement to the Peekauai Ditch Irrigation System, also known as the Menehune Ditch. Without this support, many Kauai farmers including taro growers will not have ready access to water.

Thank you for the opportunity to present testimony.

<u>SB-2946</u> Submitted on: 2/14/2022 2:17:01 PM Testimony for AEN on 2/16/2022 1:00:00 PM

Submitted By	Organization	<b>Testifier Position</b>	Remote Testimony Requested
Alan Gottlieb	Testifying for Ponoholo Ranch Limited	Support	No

Comments:

Please support SB 2946

<u>SB-2946</u> Submitted on: 2/14/2022 10:25:36 AM

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

Submitted By	Organization	Testifier Position Requested	
J Ashman	Individual	Support	No

## Comments:

This bill will support farming in the area. Thank you.

## **SB-2946**

Submitted on: 2/14/2022 5:43:28 PM

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

<b>Submitted By</b>	Organization	Testifier Position Requested	
John R. Gordines	Individual	Support	No

#### Comments:

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

I support SB 2946, which appropriates funds to the Department of Agriculture for water source infrastructure and the maintenance and improvement of the Peekauai Ditch Irrigation System (Menehune Ditch) located on Kauai.

The repair and maintenance of our irrigation systems are critical because our farmers and ranchers depend on these irrigation systems 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 Peekauai Ditch irrigation system is the lifeline for farmers in the Waimea, Kauai area, especially taro growers. Kauai farmers in Waimea presently do not have enough water for taro production because of the present condition of the Menehune Ditch

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

Mahalo,

John Gordines

## **SB-2946**

Submitted on: 2/15/2022 12:10:50 AM

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

<b>Submitted By</b>	Organization	Testifier Position Requested Requested	
Frederick M. Mencher	Individual	Support	No

#### Comments:

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

I support SB 2946, which appropriates funds to the Department of Agriculture for water source infrastructure and the maintenance and improvement of the Peekauai Ditch Irrigation System (Menehune Ditch) located on Kauai.

The repair and maintenance of our irrigation systems are critical because our farmers and ranchers depend on these irrigation systems 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 Peekauai Ditch irrigation system is the lifeline for farmers in the Waimea, Kauai area, especially taro growers. Kauai farmers in Waimea presently do not have enough water for taro production because of the present condition of the Menehune Ditch

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

Mahalo,

Frederick M. Mencher

<u>SB-2946</u> Submitted on: 2/15/2022 8:11:11 AM

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

Submitted By	Organization	Testifier Position Request Request	
Randy Cabral	Individual	Support	No

Comments:

Strongly support

<u>SB-2946</u> Submitted on: 2/15/2022 1:43:32 PM

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

Submitted By	Organization	<b>Testifier Position</b>	Remote Testimony Requested	
Jimmy Gomes	Individual	Support	No	

#### Comments:

I support this bill and need funds for infrastructure to DOA for water source.

#### OFFICE OF ECONOMIC DEVELOPMENT

**NALANI K. KAAUWAI BRUN, DIRECTOR** 



**Testimony of Nalani Kaauwai Brun**Director, Office of Economic Development

Before the
Senate Committees on Agriculture and
Environment & Water and Land
February 16, 2022; 1:00 PM
Conference Room 229 & Videoconference

In consideration of Senate Bill 2946 Relating to Irrigation

Aloha Chair Gabbard, Chair Inouye, and members of the Committees:

Thank you for the opportunity to testify on Senate Bill 2946. The County of Kauai's Office of Economic Development (OED) strongly **supports SB2946**, which appropriates funds for water source infrastructure for water delivery and for maintenance and improvements to Kauai's Peekauai ditch irrigation system.

The Peekauai Ditch system is a critical irrigation system for many ranchers and farmers on Kauai's west side. Also known as the Menehune Ditch, this historic irrigation system has been on the National Register of Historic Places since 1984. Ongoing maintenance and repair is paramount to ensure this irrigation system can continue to deliver water resources that agriculturalists depend on to operate their agribusiness.

Mahalo for your consideration of this bill.