



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

**TESTIMONY OF THE CHAIRPERSON
OF THE COMMISSION ON WATER RESOURCE MANAGEMENT
DEPARTMENT OF LAND AND NATURAL RESOURCES**

on House Bill 2965 – Relating To Agricultural Water Security

**BEFORE THE HOUSE COMMITTEES ON
AGRICULTURE
AND
WATER, LAND, OCEAN RESOURCES AND HAWAIIAN AFFAIRS**

February 1, 2008

The purpose of House Bill 2965 is to ensure and enhance the security of the water supply for agriculture in the State. The Department of Land and Natural Resources (Department) comments are limited to SECTION 3 of this measure, which amends the State Water Code (Water Code) §174C, Hawaii Revised Statutes (HRS) to establish an agricultural water security revolving fund.

While the Department recognizes the need for food and agricultural security in the State, the Department opposes SECTION 3 of this measure because it is not the role of the Department's Commission on Water Resource Management (Commission) to provide maintenance, or project development support or assistance for water supply infrastructure.

The Commission administers the Water Code and acts as the trustee of the water resources for the State. The role of the Commission is to balance maximum beneficial uses with protection of the water resources of the State by setting policy and establishing programs and plans for this purpose. The Water Code declaration of policy §174C(2)(c), HRS, states:

The state water code shall be liberally interpreted to obtain maximum beneficial use of the waters of the State for purposes such as domestic uses, aquaculture uses, irrigation and other agricultural uses, power development, and commercial and industrial uses. However, adequate provision shall be made for the protection of traditional and customary Hawaiian rights, the protection and procreation of fish and wildlife, the maintenance of proper ecological balance and scenic beauty, and the preservation and enhancement of waters of the State for municipal uses, public recreation, public water supply, agriculture, and navigation. Such objectives are declared to be in the public interest.

The Commission administers statewide water-related regulatory, planning, and protection programs in conformance with the above declaration of policy. Administration of an agricultural water security revolving fund would result in a conflict of interest because the Commission's stewardship role requires impartiality and neutrality in its weighing and balancing of competing public interests and objectives.

In 1992, the Commission was administratively separated from the Department's Engineering Division (formerly called the Division of Water and Land Development) due to such perceived conflict. Presently, the Commission's role in infrastructure development is limited to the construction of monitoring wells, which serve to ensure the protection and sustainability of ground-water resources for the benefit of all of the current and future citizens of the State. The Commission interest in water infrastructure is appropriately limited to the goals of resource protection.

Thank you for the opportunity to testify on this measure.

WRITTEN ONLY

TESTIMONY BY GEORGINA K. KAWAMURA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE HOUSE COMMITTEES ON AGRICULTURE AND
WATER, LAND, OCEAN RESOURCES AND HAWAIIAN AFFAIRS
ON
HOUSE BILL NO. 2965

February 1, 2008

RELATING TO AGRICULTURAL WATER SECURITY

House Bill No. 2965 proposes to ensure the security of the water supply and irrigation systems for agriculture in the State by creating the Agricultural Water Security Revolving Fund from legislative appropriations.

As a matter of general policy, this department does not support the creation of any special or revolving fund which does not meet the requirements of Section 37-52.3 of the Hawaii Revised Statutes. Special or revolving funds should: 1) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries of the program; 2) provide an appropriate means of financing for the program or activity; and 3) demonstrate the capacity to be financially self-sustaining. It is difficult to determine whether the proposed funds meet any of the above criteria.

Rep. Clift Tsuji, Chair
Rep. Tom Brower, Vice Chair
COMMITTEE ON AGRICULTURE
And
Rep. Ken Ito, Chair
Rep. Jon Riki Karamatsu, Vice Chair
COMMITTEE ON WATER, LAND, OCEAN RESOURCES & HAWAIIAN AFFAIRS
09:00 Friday, February 1, 2008
Testimony in Support of HB2965
RELATING TO AGRICULTURAL WATER SECURITY.
Submitted by:
Donald Thomas

The decline of the sugar and pineapple industries during the last several decades has caused severe economic dislocations, but need not be viewed in an entirely negative light. The availability of arable land today is much greater than it was at any time during the “plantation era”; the diversity of crops that are being successfully cultivated today is many times higher than was possible during years past. However, Hawaii is still critically dependent on outside sources of foodstuffs with more than 90% of our food being imported from offshore. The barriers to our becoming more nearly self-sufficient in our food supply are many and varied, but it’s clear that the availability and the cost of providing water to the agricultural community are among the most critical issues this industry faces.

Many of the ag water systems in use today are remnants of resources established by the plantations; with the absence of the plantation management and maintenance, these systems have suffered deterioration and loss of supporting infrastructure over time. If Hawaii intends to sustain its agriculture industry, and see it expand, we need to better manage the critical infrastructure that supports it and we need to look for opportunities to make this infrastructure more cost effective. House Bill 2965 is a well-considered first step toward that goal. I would also like to urge your committees to consider implementation of a proactive effort, involving a collaboration among the ag/ranching community, our power production industry, and the Water Commission, be undertaken for a comprehensive, state-wide assessment of ground/surface water availability, the viability of innovative power production technologies, and the administrative and regulatory measures that need to be taken to ensure that reliable and affordable water will be available to sustain our agriculture community on a sustained basis.

Thank you for this opportunity to offer testimony.



Legislative Testimony
HB 2965, RELATING TO AGRICULTURAL WATER SECURITY
House Committees on Water, Land, Ocean Resources & Hawaiian
Affairs
and Agriculture

February 1, 2008
Room: 325

9:00 a.m.

The Office of Hawaiian Affairs **SUPPORTS** HB 2965, which seeks to ensure and enhance the security of the water supply for agriculture in the State.

As the recent October 2006 earthquake demonstrated, there is a need to ensure and further protect the security of the water supply for agriculture in our state. Many farmers are still trying to recover from the effects of that event.

As such, this bill proposes to divert excess power, to the fullest extent possible and at reasonable rates, to agricultural water systems for irrigation of agricultural lands in an emergency situation. This only makes good and common sense and will prevent unnecessary hardship.

Further, money is needed to maintain and upgrade water and irrigation systems not operated by the Department of Agriculture or Agribusiness Development Corporation. This bill has a mechanism to do just that.

This bill would help the legislature to achieve the worthy mandates established by the numerous laws and legislation that all try to support a strong agricultural economic base in this State. It would support farmers and farms in both an emergency situation as well as daily operations.

Therefore, OHA urges the Committees to **SUPPORT** HB 2965.
Thank you for the opportunity to testify.



KAMEHAMEHA SCHOOLS

January 31, 2008

Honorable Cliff Tsuji, Chair, and Members
Agriculture Committee
Honorable Ken Ito, Chair, and Members
Water, Land, Ocean Resources and Hawaiian Affairs Committee
Hawaii State Capitol
415 South Beretania Street, Room 414
Honolulu, Hawaii 96813

Hearing Date: Friday, February 01, 2008
9:00 a.m., Conference Room 325

Dear Representatives Tsuji and Ito and Committee Members:

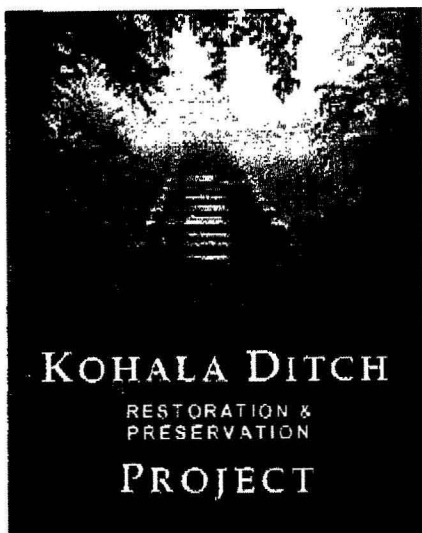
Subject: Support for HB 2965, Relating to Agricultural Water Security

I am Kaeo Duarte, Water Resources Manager for Kamehameha Schools (KS). As a KS representative to Kohala and Hamakua, I have seen firsthand the serious effects of the October 15, 2006 Kiholo Earthquake on the agricultural community and infrastructure of those regions. As private and public entities and individuals have united to repair the important water systems of these regions, numerous lessons have been learned and weaknesses exposed. The lack of back-up water sources and of energy sources necessary to effectively utilize these sources is at the top of the list.

In Kohala the community was lucky to have a few wells that could be used to keep some farmers alive. However, as repairs to the Kohala Ditch drag on, funding for fuel to continue pumping water is about to run out. It is a travesty that the Hawi wind farm turbines sit idle only a few pastures away. In Hamakua, they are not so lucky in back-up well sources and that is an item being pursued for the future. When these back-ups sources are developed, having affordable energy in emergency situations will be essential. Underutilized firm power in Hamakua could easily satisfy that need.

HB 2965 takes an important step towards providing critical emergency "insurance" for Hawai'i's remaining agricultural lands and rural communities. In true periods of emergency, which should be clarified in this bill, a mechanism needs to exist for energy firms to assist in a fashion which is economically feasible for these firms and the agricultural community. Let us learn from the 2006 Kiholo Earthquake and provide for reliable, robust water and energy systems that will weather future disasters. It is not a question of if, but when.

Thank you for the opportunity to express our views on this matter.



THE KOHALA DITCH PROJECT

P.O. Box 681 • Kapaau, HI 96755
 Email: e-scape@hawaiiantel.net
 Tel: 808-885 5941 • Cell: 937-2826



Testimony RE: HB 2965, Relating to Agricultural Water Security

January 30, 2008

Honorable Clift Tsuji
 Chair, Agriculture Committee
 Honorable Ken Ito
 Chair, Water, Land, Ocean Resources & Hawaiian Affairs Committee
 Hawaii State Capitol, House Conference Room 325

Dear Representatives Tsuji and Ito and Committee Members:

This is a mahalo letter.

Since February 2007, I have had the pleasure of working with an *ad hoc* steering committee formed in North Kohala to restore and preserve the historic Kohala Ditch. Its members have worked diligently with the Legislature, the office of U.S. Senator Daniel K. Inouye, State Civil Defense, the USDA Rural Development Office, the North Kohala Community Resource Center, and landowner Surety Kohala Corporation to accomplish a daunting task – the rebuilding of the Kohala Ditch after the October 15, 2006 Kiholo earthquake.

Since the earthquake, our committee members, along with dozens of Kohala farmers and ranchers, have learned firsthand the vital relationship of water security and energy costs. One of our members, Kirk Eubank, a sod farmer, daily starts and shuts down a 450Kw generator that pumps water to 17 farmers. It is yeoman's work and the interim pumping project provides only .5 million gallons per day. Before the Kiholo earthquake, the Kohala Ditch provided 8-10 mgd to many more farmers and ranchers.

The high cost of this stopgap pumping project illuminates the need for passage of HB2965. Farmers need access to affordable energy. This bill takes a major step to provide affordable electricity to farmers who irrigate.

As you consider this bill, I wish you to consider the remarkable volunteer effort mounted by people in North Kohala during the past year. Without a doubt, federal and state funding has facilitated the ditch rebuilding effort. But well over a hundred people, most of them volunteers, have pitched in. The Kohala Ditch Project is a testament to the determination of Kohala's people.

Kohala Unupa 'a – Kohala, Land of the Determined People. Let's thank them by name.

A project to restore and preserve the historic Kohala Ditch to provide water security for farms, ranches, dairies, aquaculture ventures, recreation and ecological stewardship throughout the 21st century; and to sustain the community traditions of the people of North Kohala.

Steering Committee

- Ed Botelho
- Stephen P. Bowles
- John Ray
- Kirk Eubank
- Bill Shontell
- Ted Matsuda
- Herbert M. "Monty" Richards, Jr.
- Shiro Takata
- Joe Carvalho

Staff

- Rory Flynn

Mahalo Kohala Ditch Project Steering Committee Members. They are: Ed Boteilho, Cloverleaf Dairy; Steve Bowles, Hawi Ag & Enrgy; John Ray, Kukuipahu Ranch; Kirk Eubank, E-Scape Enterprises; Bill Shontell, Kohala Preserve Conservation Trust; Ted Matsuda, Kohala Nursery; Monty Richards, Kahua Ranch; Shiro Takata, Kohala Kentia Nursery; Joe Carvalho, community volunteer.

Mahalo North Kohala Community Resource Center. The Resource Center has served as the nonprofit agency handling funds and invoices for the ditch rebuilding effort. They are: Bob Martin, Chris Helmuth, Christine Richardson

Mahalo – State of Hawaii Civil Defense. They are: Ed Teixiera, Gary Greenly, Harry Miller

Mahalo – Surety Kohala Corporation: Bill Shontell, Hermann Fernandez, and Mike Gomes.

Mahalo – Joel Kennedy, Editor, Kohala Country News.

Mahalo – State and County of Hawaii Drought Mitigation Committees. We thank: Neal Fujii, State Drought Coordinator, and Troy Kindred, former County of Hawaii Civil Defense Director

Mahalo Cheri and Gino Gallo. They led the effort to sell and distribute over 500 Kohala Ditch Project t-shirts variously titled *Save the Ditch*, *Support Kohala Ag*, *Water Sustains Life*, *Engineering Marvel*, and *Gravity is Free*. They also helped us man a Kohala Ditch presentation booth at the Kamehameha Day Festival in Hawi and Kohala Country Fair.

Mahalo – USDA Rural Development Office, Hilo. They are: Lorraine P. Shin, Director, and Alton Kimura

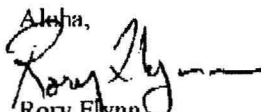
Mahalo Kamehameha Schools. When it was clear that additional funds were needed for ditch repairs in Honokane Nui, Kamehameha Schools stepped up and contributed \$292,000. We thank Kaeo Duarte, Kama Dancil, Kapu Smith and the trustees of Kamehameha Schools.

Mahalo – AT&T foundation. The Foundation contribution \$100,000 for ditch repairs and support for the interim pumping project.

Mahalo – OUR COMMUNITY WORKERS. Since August 2007, many dozens of North Kohala citizens have lent a hand on Saturday workdays cleaning up sections of open field ditch, including chainsaw removal of Christmasberry trees and other debris. Their volunteer work has been supported by a \$5,000 contribution from Bob Acree of Kohala Ranch. They include:

Cheri Gallo, Gino Fordiani, Courtney Jones, Silvinia Pugliese, Sara Gordon, Jerome Patino, Lance Caspary, Donald Rich, J.R. Patino, Nathan Ulrych, Wally Ching, Anthony Kealoha, Owen Ching, Shane Ching, Ralph Blancato, Karl Taubman, Micah Barclay, Jerry Kotz, Michelle Mabe, Michelle Rae, Isaiah Price, Lani Eubank, Kimo Kaaua, Aka Benjamin, Joe Jardin, Hoku Kekanua, Bradford Yamamoto, Jardin Cardoza, Eric Poepoe, Kelly Hokama, Duke Abraham, Robert Naihe, Jr., Robert R. Watkins, Jean Sunderland, Kenneth Heibert, Ralph Galan, Ben and Fara Nicholson, Forrest Arnold, Abel Nazara, Carol Barco, Nelson Crawford, Kelly Asai, Leonard Bettlegren, Cody Birk, Clayton Griffith, Eric Collins, George Slain, Brooks Thomas, Joshua Bowman, Christina Hoffman, Kaleopono Norris, Richard Leibman and Catherine Curry.

All these good men and women have stood up for agriculture and Kohala. Please stand with them.

Aloha,

 Rory Flynn
 Facilitator, Kohala Ditch Project Committee

H.M. RICHARDS
MANAGER



P.O. BOX 837
KAMUELA, HAWAII 96743

PHONE (808) 882-4646
FAX (808) 882-4444

January 30, 2008

RE: House Bill 2965, Relating to Agricultural Water Security

Dear Chairmen Tsuji and Ito, and Committee Members:

The subject before your committees today is irrigation and energy. At Kahua Ranch, we developed a 'village power system.' We employ windmills, solar, pumped hydro and a demonstration hydrogen project. I believe we need a symphony of energy sources. All the parts need to work together, and it is essential that locally produced power supports irrigation for agriculture.

Briefly, let's look at what irrigation provides to all of us. The benefits are many. Irrigation increases crop yields. Globally, the 17% of land in agriculture that is irrigated produces 40% of the food. The production value of irrigated cropland worldwide is \$625 per hectare per year. Compare that to rain-fed cropland (\$95/hectare/year) or rangelands (\$17.50/hectare/year).

Irrigation allows for improved timing and spatial distribution of water. It allows double cropping. It enables reliable production and stable supply. It enables production of vegetables and fruits, our most nutritious foods. For the rancher, irrigation enriches pastureland for fattening cattle. Irrigation increases food security, employment and farm income. Irrigation spurs high productivity; intensive agriculture grows the most food on the least amount of land. Worldwide, agricultural irrigation slows the expansion of deforestation.

Periodically, the U.S. Department of Agriculture surveys the costs of irrigation to American farmers and ranchers. In 2003, the USDA survey computed the costs of irrigation water by source and category. Energy costs in 2003 averaged \$40 per acre nation-wide. Costs ranged from \$7 per acre in Maryland to \$79 per acre in California, \$92 in Arizona, and over \$175 per acre in Hawaii – the highest cost in the nation. Hawaii's high costs were most related to energy expenses for pumping ground water.

The cost of irrigation is inseparable from the cost of energy. We know this intuitively; the cost of water is not just its source, but the cost of getting water on the land. The cost of water is tied to the price of electricity.

HB2965 provides one answer to this critical cost for agriculture in Hawaii. By allowing independent power producers to sell surplus power – that power in excess of their contractual obligations to Hawaiian Electric Industries and its neighbor island subsidiaries – we can lower irrigation costs for our farmers.

This simple solution requires no government subsidy. It is merely sensible resource allocation and management. Independent power producers – many of whom produce electricity through renewable resources – will profit by new revenue. Farmers and ranchers will profit by virtue of lowered costs.

Today, we hear a lot about the themes of energy security and food security. State Senator Russell Kokubun rightly decries our "cargo culture." Overall, our energy supply remains dependent on foreign oil. Our supermarkets are flooded with food shipped from the mainland. We want to be

more secure in our energy and food supply. But food and energy are vitally linked to water supply and the energy costs associated with the transmission of water.

HB2965 addresses this critical need for water security. It begins with coupling agriculture to affordable energy.

Beyond that, we must protect our water storage infrastructure – our reservoirs and dams. For reservoirs and irrigation systems not managed by the Department of Agriculture and Agribusiness Development Corporation, we need a revolving fund. It needs a hefty appropriation to get started. Please be generous. Agricultural infrastructure is one of the wisest investments we can make.

Last year, farmers on the Big Island learned a tough lesson about irrigation and energy. After the Kiholo earthquake shut down the Kohala Ditch, we paid dearly for pumps, generators and diesel fuel to keep water on the land. Nearby independent power producers could have helped. In Hawi, we have the Hawi Wind Farm, producing 10.5MW. In Honokaa, the Hamakua Energy Partners facility generates 60MW. Both producers could aid immeasurably in the costs of pumping water for farmers and ranchers in Kohala and Hamakua. With passage of HB2965, they can do so.

Sustainability begins with a plan. When we keep water on the land, we make the land productive. To keep water on the land, we need affordable energy. With affordable energy and water on the land, we keep our people on land.

Thank you for your consideration of HB2965 for agricultural water security in Hawaii.

Aloha,


Herbert M. "Monty" Richards

Island Resources Ltd.

"Resource management with imagination"

Water Land Energy

Stephen P. Bowles

President

Cell (808)937-2826

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Home (808) 885-4759

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January 30, 2008

**RE: House Bill 2965, Relating to Agricultural Water Security
House Conference Room 325 – February 1, 2008; 9:00 a.m.**

Dear Representative Tsuji and Representative Ito, and Members of the House Committees on Agriculture and Water, Land, Ocean Resources & Hawaiian Affairs

A major drawback to Hawaii's agricultural production is adequate and inexpensive water for irrigation. Our present system lacks the cohesiveness in water supply of our former major agribusiness – sugar.

We have abundant water resources and no way to pump the water for agriculture inexpensively as sugar did using biomass (bagasse). Today we must buy our power from the electric monopolies at retail prices while Independent Power Producers (IPP's) have surplus generating capacity lying idle. Wind farms, geothermal wells, solar power, wave energy, hydroelectric and other sources of power are or will be available but remain idle much of the time. They can be made more efficient and more valuable.

The recent Kiholo earthquake caused many agricultural gravity ditch systems to fail at a critical time in our agricultural future. Expensive pumping of wells using fossil fuels is the only way we could survive. All this while nearby IPP generating power plants were idle. This is wrong.

HB 2965 begins to address this issue. Without a sure, secure and adequate low cost water supply, Hawaii's agriculture is neither sustainable nor competitive. According to USDA statistics, California pays an average of \$79/acre/year for irrigation water. In Hawaii the average cost is \$175/acre. We are neither affordable nor competitive. We cannot have Important Ag. Lands, nor can we have sustainable agriculture without addressing this fundamental.

We need access to affordable energy and maintenance for our decaying sugar gravity and storage infrastructure. The fear of dam failure has created a groundswell of bureaucratic intrusion and chaos to the total destruction of sustainable agriculture opportunity. Water security is critical.

Buying subsidized water from operating potable water utilities is wrong and diverts attention from the real farming needs of the future.

I urge you to pass House Bill 2965 quickly to cover the emergencies and then move on to the next step. This would allow renewable IPP's to divert uncommitted power directly to the support of sustainable agriculture at costs equal to or less than the avoided cost values of power sold to the electric monopolies.

Mahalo,



Post Office Box 1656 Kamuela, Hawaii 96743

From: edboold@netzero.net
Sent: Wednesday, January 30, 2008 8:59 PM
To: AGRtestimony
Subject: Agricultural Water Security - HB2965

FROM: Ed Boteilho Jr
Cloverleaf Diary
P.O. Box 190, Hawi HI 96719
TO: AGR - WLH, Rep. Ken Ito, Chair
Friday, Feb 1, 2008, 9:00 am, Conference RM 325
HB2965

Dear Representative

I fully support establishing measures for preserving the security of the state's agricultural water supply in the event of an emergency. Creating the agricultural water security revolving fund to be administered by DLNR.

Respectfully,
Edward Boteilho Jr

Brower's office

rec'd on 2/1/08 11:50am

Late

HAMAKUA/NORTH HILO AG COOPERATIVE
PO Box 1335 - Honokaa, Hawaii 96727**RE: House Bill 2965, Relating to Agricultural Water Supply**

Dear Representative Tsuji and Representative Ito, and Members of the House Committee on Agriculture and Water, Land, Ocean Resources, Hawaiian Affairs

I am writing in support of this bill from two perspectives. I am president of the Hamakua/North Hilo Agricultural Cooperative, an almost 400-member organization that administers approximately 1,000 acres of prime agricultural land, and I am one of the few farmers whose business managed to survive the most recent, and the most devastating, of the recent challenges to our agricultural water supply, the October 2006 earthquake.

As president of the Co-op I am in constant dialogue with other members of the Board regarding what is clearly the most singular and excellent opportunity in the state for a community-based agriculture that can have widespread favorable effects, from sustaining the local economy to supplying other communities island-wide with quality, fresh local farm products. Nowhere else in the state that I am aware of does the combination of access to important agricultural land, available labor and, at least heretofore, affordable water come together in a community that has stated very emphatically that diversified agriculture is its fondest desire for its future.

As one of the few farmers (a nurseryman actually) who survived the earthquake, I can only attribute that to a raw survival instinct, having everything I own invested in my farm and having it as my sole source of income. I lost my water supply the hour of the earthquake and had to go for more than three months hand-watering a one-acre nursery before our area of the farm lots was hooked up to County water. In that time I had to take on another \$12,000 in debt to pay for labor for all the extra hours spent watering

I have seen from both perspectives what has been clear for millennia: that agriculture cannot happen without reliable water. In the face of the daunting vulnerability this entire state is exposed to in the matter of food security, in the face of the spectacular opportunity this particular community represents as one of the state's richest and most effective suppliers of quality, locally-grown food, and in the face of the individually survivability of existing farmers, such bills as House Bill 2965 are essential building blocks to all of our futures. I urge you to pass it with all due haste.

Mahalo,
Michael Gibson



2/1/2008