

SB 1144

NEIL ABERCROMBIE
Governor



RUSSELL S. KOKUBUN
Chairperson, Board of Agriculture

JAMES J. NAKATANI
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 **RUSSELL S. KOKUBUN**
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE SENATE COMMITTEES ON AGRICULTURE AND WATER, LAND &
HOUSING

SATURDAY, FEBRUARY 12, 2011
2:45 P.M.
CONFERENCE ROOM 225

SENATE BILL NO. 1144
RELATING TO AQUACULTURE

Chairpersons Nishihara and Dela Cruz and Members of the Committees:

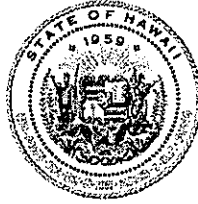
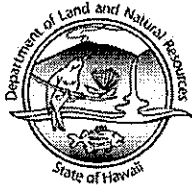
Thank you for the opportunity to testify on Senate Bill No. 1144 that increases aquaculture leases from 35 to a maximum 45 years, provides lessees in good standing the right of first refusal for the property and allows for supportive activities that are relating to aquaculture. Additionally, the bill includes aquaponics and taro production in the definition of aquaculture and instructs the Departments of Agriculture (HDOA) and Land and Natural Resources (DLNR) to conduct a comprehensive study to identify parcels of land suitable and available for taro production.

The Department **supports the intent of the bill, with the following amendment**, but defers discussion of lease terms to the DLNR, which is the State's lease administering entity.

The inclusion of aquaponics and taro production into the aquaculture definition further strengthens the aquaculture segment by providing diversity and community support to its efforts. However, current staffing levels cannot support the mandating of an unfunded comprehensive report regarding the taro industry. Upon further review, the Department respectfully suggests that the language directing the taro study be removed from the bill unless appropriate resources are provided.

Thank you for your consideration of Senate Bill No. 1144 as the Department recognizes that we must continue to support aquaculture as the State pushes toward self-sufficiency.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Testimony of
WILLIAM J. AILA, JR.
Chairperson

Before the Senate Committees on
AGRICULTURE
and
WATER, LAND AND HOUSING

Saturday, February 12, 2011
2:45 PM
State Capitol, Conference Room 225

In consideration of
SENATE BILL 1144
RELATING TO AQUACULTURE

Senate Bill 1144 amends subsection (b) of Section 171-59, Hawaii Revised Statutes (HRS), to increase the maximum term for aquaculture leases from thirty-five (35) to forty-five (45) years; and provides aquaculture lessees in good standing the right of first refusal. The bill also directs the Department of Agriculture (DOA) and the Department of Land and Natural Resources (Department) to conduct a comprehensive study to identify parcels of land that can be rehabilitated for or are suitable and available for taro production. The purpose of this bill is to encourage commercial aquaculture production in the State by providing favorable terms for leasing of public lands and to gather information on opportunities to increase taro production in the State. The Department respectfully **opposes** this bill.

The amendments proposed by the bill affect direct negotiation leases that, pursuant to Section 171-59(b), HRS, already benefit by being exempt from the public auction process and the public participation requirement that would ordinarily be required for such leases. While this bill would provide a benefit to aquaculture operations, it does so at the expense of ensuring fair competition for the leasing of public lands by excluding other potential bidders seeking to participate in the public disposition process.

The Department acknowledges the need for long term leases in order for certain business ventures to be economically viable, however, notes that potential aquaculture lessees are in fact eligible for leases up to sixty-five years through the public auction process and other public processes, in addition to direct negotiation through subsection (a) of Section 171-59, HRS, which is a form of public process akin to requests for proposals.

WILLIAM J. AILA, JR.
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
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

A right of first refusal is essentially an option to extend a lease that can be exercised unilaterally by a lessee. Such options have a chilling effect on other prospective bidders' willingness to bid on the property. Many prospective bidders would be reluctant to invest the substantial time, effort and resources to prepare and submit a bid with the knowledge that the existing lessee can exercise his or her right and nullify the bid at any time. Rights of first refusal provide an unfair benefit to the current lessee by depriving persons awaiting the published termination of the lease a fair opportunity to compete for the use of those lands at public auction. That inherent inequity ensures lower bids and consequently less revenue to the State.

A right of first refusal clearly goes against all the provisions for fairness in the leasing of state land in Chapter 171, HRS, and inappropriately impinges on the Board of Land and Natural Resources' (Board) discretionary authority to control the use of state lands. When seeking public lands for private use, potential lessees are well aware of the benefits and drawbacks of leasing state lands as opposed to conducting their activities on private lands. First and foremost is the knowledge that those lands are public assets that must serve primarily the interests of the general public and the public trust purposes, and secondarily the needs of a private user.

The safeguards and terms for leasing public lands are codified in Chapter 171, HRS, to ensure transparency and fairness in the disposition of State assets. Paramount in that process is the need to ensure and maintain the State's ability to use its land resources when and as needed to meet all of the State's obligations and priorities as well as the greater public needs of all of Hawaii's residents. Fundamental to that responsibility is the preservation and protection of the discretionary authority of the Board to consider and determine the most appropriate use of State land at any given time, including when and if an ongoing use should continue. The Board's ability to fulfill its fiduciary obligations to promote all five public trust purposes equally should never be compromised by any erosion of this authority.

Finally, the Department is concerned about the scope of its participation in the study to assess lands for suitability and availability for taro production. The bill requires a suitability analysis of site conditions, water sources, infrastructure availability, acreage, site location, and other relevant information for every targeted parcel. The Department lacks the expertise to conduct a suitability analysis for taro production. That function is one that is usually performed by DOA in conjunction with the University of Hawaii's Tropical Agriculture Program. The Department's role would require a substantial amount of staff time and funding that the Department simply does not have to undertake the additional duties required under this bill.

Requiring the Department to assist in conducting the comprehensive study would place a tremendous burden on the Department's already severely limited fiscal, administrative and personnel resources. The Department continues to face severe budget cutbacks. The Department's general fund appropriations and special fund revenues have dropped significantly over the last several years, and the Department lost more than 10% of its positions over the past three years.



2343 Rose Street, Honolulu, HI 96819
Phone: (808) 848-2074; Neighbor Islands: 1-800-482-1272
Fax: (808) 848-1921; e-mail: info@hfbf.org

February 11, 2011

TESTIMONY

RE: SB1144 RELATING TO AQUACULTURE

Chair Nishihara, Chair Delacruz and Members of the Committees:

Hawaii Farm Bureau Federation on behalf of our commercial farm and ranch families and organizations across the State, **strongly supports the intent with comment SB1144, extending the lease term for aquaculture to 45 years, but requests passage of SB1511.**

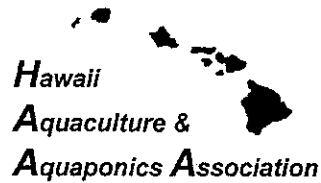
Aquaculture, like all businesses, requires significant capital investment. And then, not everything is under your control. Environmental conditions beyond one's control impact the growth of fish and other aquaculture species in addition to challenges faced by other businesses such as manufacturers. Long term leases are critical to the development of business plans and going to the bank for loans.

Laws currently allow leases of public lands up to a maximum of 65 years. This year, there are measures to extend the leases for certain uses such as hotels to this maximum period of 65 years. We respectfully request the same be applied to aquaculture .

There is another measure considered, SB1511 which accomplishes this intent. We request passing of that bill to accomplish the goal of this measure.

This bill contains Section 3, relating to identification of lands for taro cultivation. This section does not appear to be totally in line with the title of this measure. Taro is an agricultural crop -- e.g. rice which is also grown in paddies is not considered aquaculture but agriculture. Should this section be considered it should be associated with agricultural lands as there is both wetland and dryland taro. Additionally, this measure will require considerable resources to an already strained department. If this measure is included in another vehicle, adequate funding to the Department of Agriculture to carry out this measure should be included. Additionally, it may make sense to include DHHL to explore DHHL lands in the review.

We request your support by passing SB1511 in place of this measure. Thank you for this opportunity to provide our opinion on this matter. If there are any questions, please contact Warren Watanabe at 2819718.



THE SENATE
THE TWENTY-SIXTH LEGISLATURE
REGULAR SESSION OF 2011

COMMITTEE ON WATER, LAND, AND HOUSING
Senator Donovan M. Dela Cruz, Chair
Senator Malama Solomon, Vice Chair

COMMITTEE ON AGRICULTURE
Senator Clarence K. Nishihara, Chair
Senator Gilbert Kahele, Vice Chair

DATE: Saturday, February 12, 2011

TIME: 2:45pm

PLACE: Conference Room 225, State Capitol
415 South Beretania Street

RE: Testimony In Support of SB 1144 - Relating to Aquaculture

Aloha Chairs Dela Cruz and Nishihara, Vice Chairs Solomon and Kahele, and Committee Members,

The Hawaii Aquaculture and Aquaponics Association supports the concept of SB 1144 but prefers the updated wording of SB 1511 which we strongly support and which will be also on the agenda of this hearing.

SB1144 appears to be essentially the same as HB2409 HD2 SD1 from the Twenty-fifth Legislature which ran into problems in Conference due to House concerns about the addition of Section 3. which required a comprehensive statewide taro land study by the DLNR and HDOA for which the departments indicated they did not have funds available to carry out. As Departmental budgets continue to be constrained, this concern likely remains.

In addition, since the last session, the aquaculture and aquaponics industry has become aware of several relevant USDA Rural Development loan programs that offer Federal loans up to 40 years but require a remaining lease term to be at least 50% longer than the loan term, i.e., at least 60 years remaining on a lease term for a 40 year loan. As such, the HAAA requests that the lease term be amended to allow direct aquaculture leases up to 65 years. This requested change is accommodated in SB1511.

Furthermore, as the aquaculture industry evolves and as the global marketplace becomes ever more competitive, the aquaculture and aquaponics industry needs the flexibility to maximize its use and reuse of farm inputs and to develop multiple profit centers. SB1144 clarifies that aquaculture tenants may engage in supportive activities that are related to aquaculture, which we strongly support, but the subsequent amendment to the definition of aquaculture to include “aquaponics and the growing of plants with aquaculture effluents” falls one step short of what is really needed and could later be misinterpreted by staff. Aquaculture effluents can indeed be used successfully for aquaponics and the growing of plants, and in the process help the aquaculture farm meet current EPA and DOH discharge requirements. However, some or all of these aquaculture effluent-fertilized plants could include *Azola* (duckweed), forage grasses, algae, or cellulosic crops which in turn could be fed to secondary animals, eg., ducks, poultry, and livestock, or used to help power the aquaculture operation’s water pumps and aeration devices. As such, we recommend that the definition (page 3, line 18) be amended to read “the growing of plants and animals with aquaculture effluents...” Again, this requested change has been addressed in SB1511.

Finally, DLNR has expressed concerns about the right of first refusal, but we see this as absolutely critical for the long term development of a viable aquaculture industry in Hawaii for our future sustainable seafood production. Aquaculture is a high investment and long term investment industry. Without the opportunity to be able to renew leases, as allowed for terrestrial agriculture, future aquaculture investment and industry expansion will be constrained. Current law affords DLNR the opportunity to terminate problematic tenants or to even change the State’s purpose for a subject property in light of future public needs, but does not currently afford DLNR the opportunity to retain positive and community-supported tenant in good standing on their existing leased property beyond their initial lease term. The right of first refusal will make this option possible such that Hawaii can keep and support its good aquaculture farmers and encourage their continued investment into this public resource. Both SB1144 and SB1511 support this important goal.

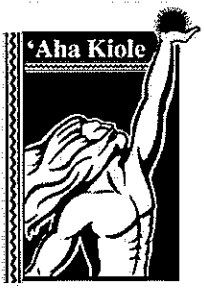
In conclusion, the HAAA supports the intent of SB1144 and it could be amended to address our noted and requested additions and deletions. However, such adjustments have already been made to SB1511, so we feel this would be the better version to move forward.

Thank you for the opportunity to comment.

Respectfully submitted,



Ronald P. Weidenbach
HAAA President



Aha Kiole Advisory Committee

TESTIMONY RELATING TO
AQUACULTURE

REQUEST TO DEFER

Submitted to: Hearing of the Committee on Water, Land and Housing, Senator Dela Cruz;
Committee on Agriculture, Senator Nishihara

Hearing Date: February 10, 2011, 10:00 a.m., Room 225

Submitted by: The Aha Kiole Advisory Committee (AKAC): Vanda Hanakahi, Moloka'i
(Chair), Leslie Kuloloio, Kahoolawe, (Vice-Chair); Timmy Bailey, Maui; Winifred Basques,
Lana'i; Pi'ilani Ka'awaloa, (Po'o) Hawai'i; Charles Kapua, O'ahu; Sharon Pomroy, Kaua'i;
Keith Robinson, (Konohiki) Ni'ihau.

Aloha Chair Dela Cruz, Vice-Chair Solomon; Chair Nishihara and Vice Chair Kahele and
Members of the Water, Land and Housing and Agriculture Committees

Thank you for the opportunity to testify on SB 1144 which increases the terms for aquaculture
ventures from 35 to 45 years and requires the DOA and DLNR to conduct a review of the State's
public land inventory and identify lands available and suitable for taro farming.

Our testimony stems from the aquaculture perspective. We ask that this bill be deferred for the
following reasons:

1. While there are those who believe that direct leasing of public lands has been a
cornerstone for building a successful aquaculture industry in the state, there has not been
enough research or scientific data on open ocean farming or the impacts of fish cages on
the marine ecosystem to ensure that this industry has no adverse effect on Native
Hawaiian fishing rights or gathering rights.
2. Leasing submerged lands for up to 45 years without any input from the traditional host
culture on areas that have been used generationally for fishing is wrong.
3. SB 1144 states in Section 2 that the disposition of public lands in the case of maritime
and maritime-related operations, which may provide for a maximum term of seventy
years may seek to renew a lease and engage in supportive activities that are related to
aquaculture. Native Hawaiians engaged in the Aha Moku System need to have a voice in
decisions that impact their ahupua'a and moku, particularly in the areas where

subsistence fishing occurs. Selections of fish farming and aquaculture operations have been known to almost always occur in traditional fishing koa.

It is not the intention of the AKAC to stall any bill that will increase opportunities for taro production in the State. However, because aquaculture is tied to agriculture, it is necessary to comment and give input to SB 1144. There have been examples of fish cages and development put in subsistence fishing koa that have adversely affected the coastline, the currents, and the habitat of species used for food.

We do support an investigation of DLNR's survey of state lands and the DOA's survey of agricultural lands. Currently, there is a bill in the Legislature that creates an Aha Kiole Commission within DLNR. If passed, this Commission could assist in identifying lands and ocean sites that have been and are still used by Native Hawaiians for farming, including the traditional practices of open ocean farming and fishponds – aquaculture practices that Hawaiians have done for centuries.

The AKAC's mandate is to provide input based on the indigenous management practices of each moku to state and county agencies; to aide in the comprehensive set of best practices for natural and cultural resource management; to continue to foster understanding of and the practical use of knowledge including Native Hawaiian methodology and expertise; and, to enhance community education and cultural awareness.

We urge you to defer SB 1144 until a mechanism is in place that will actively engage the Native Hawaiian community in consultation and decision-making on the use of public lands located within their ahupua'a and moku .

Mahalo nui loa,

Vanda Hanakahi

Aha Kiole Advisory Committee

P.O. Box 507

Hoolehua, HI 96729

Phone: 808-336-6184

Email: kaiwilauula@yahoo.com

nishihara5 - Randy

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 09, 2011 11:07 AM
To: AGL Testimony
Cc: clizzi@fwwatch.org
Subject: Testimony for SB1144 on 2/10/2011 10:00:00 AM
Attachments: Final FWW Testimony on SB 1144.pdf; SB 1144 PROPOSE AMENDMENT.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Testimony for AGL/WLH 2/10/2011 10:00:00 AM SB1144

Conference room: 225
Testifier position: oppose
Testifier will be present: Yes
Submitted by: Christina Lizzi
Organization: Food & Water Watch
Address: 1616 P S NW Ste 300 Washington, DC
Phone: 7248168350
E-mail: clizzi@fwwatch.org
Submitted on: 2/9/2011

Comments:
We oppose the bill as written, but would be able to support it with our suggested amendment.



Food & Water Watch • 1616 P St. NW, Suite 300 • Washington, DC 20036
www.foodandwaterwatch.org • T: +1.202.683.2500 • F: +1.202.683.2501

THE SENATE

THE TWENTY-SIXTH LEGISLATURE
REGULAR SESSION OF 2011

COMMITTEE ON AGRICULTURE
Senator Clarence K. Nishihara, Chair
Senator Gilbert Kahele, Vice Chair

COMMITTEE ON WATER, LAND & HOUSING
Senator Donovan M. Dela Cruz, Chair
Senator Malama Solomon, Vice Chair

DATE: Thursday, February 10, 2011

TIME: 10:00am

PLACE: Conference Room 225, State Capitol
415 South Beretania Street

RE: Testimony in Opposition to SB 1144 – Relating to Aquaculture

Aloha Chairs Nishihara and Dela Cruz, Vice Chairs Kahele and Solomon, and Committee Members,

Food & Water Watch (FWW) thanks you for the opportunity to provide testimony and voice strong opposition to SB 1144 as it is written. SB 1144 would extend lease terms for all aquaculture options from thirty-five to forty-five years, with the possibility of extension to sixty-five years for lessees in good standing after ten years.

FWW is a national consumer advocacy group with over 1,800 supporters in Hawai'i. We are also a founding member of the Pono Aquaculture Alliance, which is comprised of over thirty Hawai'i-focused organizations supporting responsible aquaculture practices. FWW advocates for safe, wholesome food produced in a humane and sustainable manner, and public rather than private control of water resources, including oceans, rivers and groundwater. We work with various community outreach groups around the world to create an economically and environmentally viable future. The FWW Fish Program works specifically to promote safe and sustainable seafood for consumers, while helping to protect the environment and support the long term well-being of coastal and fishing communities. We have worked in Hawai'i for the past three years to promote public control of ocean waters and prevent the reckless expansion of the open ocean aquaculture industry.

We support responsible and culturally appropriate forms of fish farming, such as small scale land-based recirculating aquaculture systems, *loko i'a* (traditional fish ponds) aquaponics and some shellfish culture. We have serious concerns, however, about expansion of the open ocean aquaculture industry (OOA), which already has resulted in



negative environmental and social impacts at just its present scale, discussed further below. The cumulative impacts of these operations and the ability of the marine environment to handle them, are largely unknown. Currently, State agencies have insufficient funding and are not well coordinated to be capable of carrying out oversight of ocean aquaculture. Also, there are not strong regulations in place to address cumulative impacts and prevent damage to the ocean, its wildlife and Hawai'i's traditional and cultural ocean uses from this highly experimental industry. Rather than further entrench this industry through lease extensions, we urge the State to take a precautionary approach and maintain or decrease current lease lengths until these issues are adequately addressed.

To address the issue of lease term extensions without impeding development of sustainable forms of aquaculture, SB 1144 could be amended to specifically exclude commercial finfish open ocean cage aquaculture operations from the general definition of "aquaculture" on page 3, line 15.

The following provides more information on community opposition to OOA, its environmental and social impacts, challenges in agency oversight, the need for more rigorous environmental review, and prior legislative efforts in the 2011 regular session pertaining to OOA.

I. Abundant Demonstration of Community Opposition to Open Ocean Aquaculture

Since Hawai'i chose to allow leasing of ocean land for the purpose of commercial aquaculture, a number of companies have applied for or received leases all have faced community opposition. To date, five farms – Ahi Nui Tuna Farms LLC, Ahi Farms, and Pacific Ocean Venture, Maui Fresh Fish, and Indigo Seafood – have been unsuccessful in obtaining the needed community support permits and/or financing for open ocean operations, though some are making a repeated attempt.^{1,2} In 2002, a Native Hawaiian group filed a contested case against Ahi Nui Tuna Farms LLC. Two cases were also filed, though ultimately dismissed, against Hawaii Oceanic Technology, Inc.'s (HOTI) prospective *ahi* operation. Again, the cases were filed by Native Hawaiians, one on behalf of the Kanaka Council and another by Michael Lee, a cultural practitioner.^{3,4}

¹ Report to the Twenty-Fourth Legislature of Hawai'i 2008 Regular Session. Implementation of Chapter 190D, Hawai'i Revised Statutes Ocean and Submerged Lands Leasing. Prepared by Department of Agriculture and Department of Land and Natural Resources. November 2007. Page 9-10.

² Report to the Twenty-Sixth Legislature of Hawai'i 2011 Regular Session. Implementation of Chapter 190D, Hawai'i Revised Statutes Ocean and Submerged Lands Leasing. Prepared by Department of Agriculture and Department of Land and Natural Resources. December 2010. Page 6.

³ Petition for contested case hearing, filed by Mike Lee, cultural practitioner with Board of Land and Natural Resources for its decision to award a Conservation District Use Permit to Hawai'i Oceanic Technology for 90 acres off of the North Kohala Coast, Hawai'i Island for the purpose of an open ocean fish farm. Filed on 23 October 2009.

⁴ Petition for contested case hearing, filed by Kale Gumapac on behalf of Kanaka Council Moku 'O Keawe with Board of Land and Natural Resources for its decision to award a Conservation District Use Permit to



Additionally, due to lack of opportunity for involvement earlier in the permitting process, hundreds of people petitioned the Army Corps of Engineers to hold a public hearing regarding HOTI's Department of Army permit application. These requests, however, were denied. After facing strong opposition from communities in Lanai, Maui Fresh Fish is shifting to an alternate location for its operation and is continuing the permitting process.

Kona Blue Water Farms (KBWF) has met with numerous expressions of opposition over the years. The Kanaka Council, a Native Hawaiian organization, expressed frustration that Native Hawaiians were not adequately involved or consulted in the decision-making process for siting the KBWF facility which they saw is now located in a traditional fishing area directly off the coast of Kailua-Kona. This frustration led to a backlash in 2007 when KBWF applied to expand its cages that year, resulting in the filing of two contested cases. In response, the company decided to withdraw the application.^{5,6}

These experiences are all relevant to highlight the massive public opposition in Hawai'i to the expansion of this industry.

II. Ecological Concerns with Open Ocean Aquaculture

There are many serious issues related to OOA. Some of the primary concerns are: potential for pollution; effects on wild fish populations; effects on other marine animals, including mammals; and conflicts with the fishing and tourism.

Some proponents have argued that discharge from aquaculture facilities will have minimal ecological impacts because it will be diluted throughout the ocean, but in reality there is still little knowledge about the long-term effects. The Marine Aquaculture Task Force, assembled by the Woods Hole Oceanographic Institution found that: "Little is known about the assimilative capacity of marine ecosystems for the wastes produced by aquaculture operations,"⁷ A 2006 study of a the University of Hawaii/Cates open ocean facility found that waste from fish cages in deep ocean waters had "grossly polluted" the seafloor and "severely depressed" marine life at some sampling sites close to fish cages. It also found that these effects spread to sites 80 meters away over the course of 23 months.⁸

Hawai'i Oceanic Technology for 90 acres off of the North Kohala Coast, Hawai'i Island for the purpose of an open ocean fish farm. Filed on 23 October 2009.

⁵ "Kona fish farm facing expansion opposition." Associated Press, January 21, 2008. Available at: savekauai.org/oceans/kona-fish-farm-facing-expansion-opposition

⁶ Kona Blue Water Farms, LLC. "Final Supplemental Environmental Assessment for a Modification to Net Pen Designs within the Existing Production Capacity and Farm Lease Area for Kona Blue's Offshore Open Ocean Fish Farm off Unualoha Point, Kona, Hawaii." April 2009 at 3.

⁷ "Sustainable Marine Aquaculture: Fulfilling the Promise; Managing the Risks." Report of the Marine Aquaculture Task Force, Takoma Park, MD, p. 3, Jan 2007. Available at: http://darc.cms.udel.edu/Sustainable_Marine_Aquaculture_final_1_07.pdf

⁸ Lee, Han W., et al. "Temporal changes in the polychaete infaunal community surrounding a Hawaiian mariculture operation." *Marine Ecology Progress Series*, 307:175-185, January 2006.



Additionally, operations may impact insular Hawaiian false killer whales (*pseudorca crassidens*), which are a candidate for the endangered species list.⁹ ¹⁰ Impacts on whales, dolphins, sharks, seals and sea turtles are also a concern, especially in Hawai'i since Kona Blue is located within the HIHWNMS, and other proposed projects are located just outside its boundaries.

A recent study showed that the incidence of some species of sharks increased at Hawaiian OOA sites.¹¹ Sharks can be attracted to the fish in the cages, which can also be a threat to other wild fish or marine animals that congregate around the cages. They also serve as a threat to fishermen who are allowed to fish near the cages. In 2005, Kona Blue killed a 16-foot tiger shark that was stalking one of its divers.¹² In September 2009, 500-1000 fish were reported to have escaped from Kona Blue's operation after a Galapagos shark bit through a cage.¹³ The shark then entered the cage and had to be removed using a seine net.¹⁴ Ocean aquaculture facilities' interactions with sharks is also problematic due to the significant role they play for culturally practicing Native Hawaiians as 'aumakua.¹⁵

Ocean fish farms operations in other parts of the world provide an example of how aquaculture facilities can damage wild fish stocks if not carefully regulated. Escapes continue to be a major issue.

Some recent examples of escapes include:

- From late December of 2008 through early January of 2009, a series of massive escapes in Chile – totaling more than 700,000 salmon and trout from various farms – prompted the leader of the Chilean Senate's Environmental Committee to proclaim the incidents an "environmental disaster."¹⁶
- In October of 2009, 40,000 fully-grown Atlantic salmon escaped from a net pen facility in British Columbia when a machine removing dead fish from the bottom of the pen broke a hole in the net; the company reportedly recovered less than 3%

⁹ Baird, Robin et al. "False Killer Whales (*Pseudorca crassidens*) around the main Hawaiian Islands: Long-term site fidelity, inter-island movements, and association patterns." *Marine Mammal Science*, vol. 24, iss. 3. January 2008. Pages 598-599.

¹⁰ 50 Fed Register 70169-70187, (Nov. 17, 2010)

¹¹ Papastamatlou, Yannis P. et. al. "Site fidelity and movements of sharks associated with ocean-farming cages in Hawaii." *Marine and Freshwater Research*, vol. 61, iss. 12. December 13, 2010 at 1.

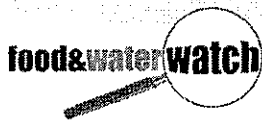
¹² Lucas, Carolyn. "Fish farm seeks second location." *West Hawaii Today*, May 6, 2006.

¹³ Note from Office of Conservation and Coastal Land. Titled September 2009.

¹⁴ E-mail communication. Neil Simms, President, Kona Blue Water Farms to Justin P. Viezbicke; William J. Walsh; Stephen M. Cain; and Nick Whitey. Subject: Galapagos freed. 15 September 2009.

¹⁵ Minerbi, Luciano. "Sanctuaries, Places of Refuge and Indigenous Knowledge in Hawaii." In Morrison, R.J. and Linda Crowl (Eds.). (1994) *Science of Pacific Island Peoples Land Use and Agriculture Vol. 2*. Institute of Pacific Studies, University of the South Pacific. Page 108.

¹⁶ Witte, Benjamin. "Thousands of salmon and trout escape in southern Chile." *The Patagonia Times*, January 19, 2009.



of the escaped fish at the time the article was written, though efforts to recover the fish were ongoing.¹⁷

- In October of 2010, 70,000 harvest-ready salmon escaped from a farm in Norway, resulting in a loss to the company of at least \$600,000; the same location had suffered from an outbreak of pancreatic disease resulting in high levels of mortality only months earlier.¹⁸

When farmed fish escape, they can compete with wild fish for resources and habitat.¹⁹ Disease transfer from farmed to wild fish is another risk. Wild pink salmon populations in British Columbia were depressed due to outbreaks of sea lice – marine parasites that cause viral or bacterial infection and ultimately death – increased incidences of which are associated with salmon farms.²⁰

Although aquaculturists have argued that the industry can bring jobs and a local food source to Hawai'i, the actual job numbers are limited, as the industry is highly mechanized (for example, Kona Blue is modified net pens so that cleaning the cages will be easier and diver jobs can be eliminated). Moreover, the bulk of the product from offshore aquaculture has been, and in the case of proposed farms, is planned to be, exported to the U.S. mainland and other countries where it will fetch higher prices.

If local food and economy were a true priority for offshore aquaculturists, they could focus on developing land based facilities, or traditional fish ponds, which many environmentalists and Native Hawaiians consider a more sustainable option.

III. Consequences from Hawaiian Ocean Aquaculture and Inability to Regulate or Mitigate Them

Recent information released by the State after the submission of a FOIA request highlighted additional flaws with Kona Blue Water Farm's operation. Between 2005 and 2008, the company did little benthic testing. In their application for a modified permit in 2008, they provided only five samples from three sample dates, over three years. These included one sample for each site, with no replicates for any site sampled. The small sample size and lack of repetition call into question the accuracy of any analysis provided by the company regarding their impact on the benthos. In March 2007, the Office of Conservation and Coastal Lands (OCCL) notified KBWF that their current benthic

¹⁷ Lavoie, Judith. "40,000 fish escape farm." *The Times Colonist*, October 24, 2009.

¹⁸ Grindheim, Joar. "Costly salmon escape." *IntraFish*, October 15, 2010.

¹⁹ Naylor, R., et al. "Fugitive Salmon: Assessing Risks of Escaped Fish from Aquaculture." *BioScience*, 55: 427-437, 2005.

²⁰ Krkosek, M., et al. "Declining wild salmon populations in relation to parasites from farmed salmon." *Science*, 2007. Peeler, E.J., et al.



monitoring system was unsatisfactory. They proposed a minimum of quarterly monitoring by drop camera, but as of March 2008, KBWF had not complied.²¹

KBWF has introduced antibiotics in Hawaiian waters at their site, without approval by Hawaiian officials. The permission to use an antibiotic was given to KBWF by officials at the United States Fish and Wildlife Service in Montana and approved by a federal agency, the Center for Veterinary Medicine at the Food and Drug Administration.²² After the drug was applied, OCCL questioned whether these outside agencies knew they were approving extra-label use of the drug to be deposited directly into Hawaiian waters, not a land-based tank.²³

The State also documented cases of deliberate interference with bottle-nosed dolphins at KBWF's operation, and according to the Hawai'i Department of Aquatic Resources, the animals have begun to exhibit "unnatural behaviors."²⁴

These examples all serve to illustrate the complexity of regulating open ocean aquaculture. Clearly, in these instances, the state agencies have not had the resources to stop problems from occurring, and extending lease durations to sixty-five years will make it even more difficult for the State to avoid undesirable environmental consequences. To envision such a facility not being required to update its technology until the year 2075, regardless of what harm occurs in the interim period, wholly fails to protect Hawaii's ecological, cultural and traditional ocean interests and ignores scientific progress.

IV. Insufficient Environmental Review Process

Issues regarding the environmental review process for OOA operations must be addressed before lengthening their lease times. Currently, companies are not necessarily required to submit an Environmental Impact Statement (EIS). When applying for conservation district use, an aquaculture company must provide: "an environmental assessment or, if required, an environmental impact statement which shall be prepared and accepted in compliance with the rules adopted under Chapter 343."

²¹ Public comment. Dan Polhemus, Administrator, Division of Aquatic Resources, Department of Land and Natural Resources, to Sam Lemmo, Administrator Office of Conservation and Coastal Lands, Department of Land and Natural Resources. Review of Draft EA/CDUA HA-3443 for the Expansion of Kona Blue Water Farms Offshore Aquaculture Facility. 3 March 2008. Page 7.

²² E-mail correspondence. November 2, 2007. Susan Storey, Aquaculture Drugs Team, FDA-CVM, Office of New Animal Drug Evaluation, Division of Therapeutic Drugs for Food Animals to Neil Anthony Simms, President, Kona Blue Water Farms. Subject: Florfenicol for your fish. On file with Office of Conservation and Coastal Lands, DLNR

²³ Letter dated November 15, 2007. Dan A. Polhemus, Administrator to Samuel J Lemmo, Administrator of Office of Conservation and Coastal Lands, DLNR. RE: Bacterial Outbreak at Kona Blue Offshore Fish Farm On file with Office of Conservation and Coastal Lands, DLNR.

²⁴ Memorandum. Dan Polhemus, Administrator, Division of Aquatic Resources and Jeff Walters, Co-manager of Hawai'i Humpback Whale National Marine Sanctuary to Sam Lemmo, Office of Conservation and Coastal Lands, Department of Land and Natural Resources. Subject: Kona Blue Water Farms open ocean fish farm, concerns regarding dolphin interactions. 20 February 2008.



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According to HRS §343-2 an Environmental Assessment (EA) is a “written evaluation to determine whether an action may have a significant effect.” An EIS is “an informational document prepared in compliance with the rules adopted under section HRS §343-6 and which discloses economic welfare, social welfare, and cultural practices of the community and State, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects.”

Based on an EA, the agency, in this case the Department of Land and Natural Resources Office of Coastal and Conservation Lands, determines whether there is a “finding of no significant impact,” meaning, “a determination... that the subject action will not have a significant effect.” If significant impacts are expected, the applicant must go on to prepare an EIS. This determination and the final approval or disapproval of an EA or EIS must take public comment into consideration.

Unlike an EA, an EIS: must explore alternatives to the proposed action; must evaluate the environmental setting in greater detail; must give an in depth discussion of the probable impacts, including cumulative impacts, direct and indirect impacts, and impacts on cultural practices and resources; must discuss the relationship between short-term use of the environment and long-term productivity; must detail unavoidable environmental effects; must discuss mitigation measures; and in the final EIS, must discuss how each comment was evaluated or give reasons why a specific comment was not accepted. Given the waste discharge, potential impacts on marine animals and fish stocks, and potential cultural ramifications, it is not reasonable to expect that any OOA facility would not result in “significant effects.” Despite this, DLNR has not required all OOA applicants to conduct an EIS, and has even issued findings of no significant impacts for applicants.

Worse, in the case of HOTI, OCCL accepted the FEIS despite finding that “there are still unresolved issues regarding the level of environmental and project disclosure, analysis regarding the engineering design of the proposed engine, fish feed components, lack of benthic studies in the project area, and lack of shark, marine mammal and endangered species plan.”

An EIS should be required of every OOA project and each project should be more rigorously reviewed.

V. Lack of Demonstrated Economic Benefits

SB 1144 states that “direct leasing of public lands had been a cornerstone for building a successful commercial aquaculture industry in the State,” but it does not discuss whether a successful aquaculture industry will **benefit** the State.

As ocean aquaculture is scheduled to increase in Hawai`i, projections for the amount of direct employment it will provide have decreased. Prior to modifications or expansions, Hukilau LLC and Kona Blue Water Farms employed a total of 44 people, including jobs



at both of their land-based hatcheries. After recently approved modifications are made to both the Hukilau and Kona Blue Water Farms site, the industry estimates it will only be providing 39 jobs. This is despite anticipated increases in production of about 2.5 million pounds to 6 million pounds annually.²⁵ In 2010, Hukilau declared bankruptcy, putting their promise of jobs in question.²⁶

Furthermore, it is questionable whether employment by the aquaculture industry is safe or stable. For example, a diver employed by KBWF filed suit against KBWF, alleging that it failed to provide a safe environment, ultimately leading to personal injury. According to the suit: "Kona Blue, acting through its managerial agents, was guilty of outrageous conduct owing to gross negligence, willful, wanton, and reckless indifference to the rights of others, and/or conduct even more deplorable..."²⁷

In addition, the aquaculture industry in Hawai'i has not sufficiently proven that it can achieve profitability with existing operations filing for bankruptcy or transferring leases.

VI. Other Legislative Efforts

The controversy surrounding ocean aquaculture in Hawai'i is further evidenced by the introduction of two other bills this legislative session: one in the Hawai'i Senate and one in the House of Representatives). HB 221 Relating to Mariculture lends support to the development of land-based, closed-loop re-circulating aquaculture systems, and would suspend the development, expansion or transfer of any existing permits of open water commercial finfish operations. SB 626 calls for tougher requirements for open ocean aquaculture, requiring that applicants submit a full EIS.

Conclusion

²⁵ Information derived from the following sources: Consent to Assign General Lease No. S-5654, Cates International, Inc., Assignor, to Grove Farm Fish and Poi, LLC, Assignee, Oahu, Tax Map Key:(1)9-1-005:Seaward. Land Submittal to State of Hawai'i Department of Land and Natural Resources Land Division Board of Land and Natural Resources on 9 February 2007; Aquaculture Planning & Advocacy LLC. Final Environmental Assessment Proposed Expansion of Hukilau Foods Offshore Fish Farm, Mamala Bay, Oahu, Hawai'i. Prepared for Office of Conservation and Coastal Lands, Department of Land and Natural Resources. 24 July 2009. Page 8; Kona Blue Water Farms, LLC Final Supplemental Environmental Assessment for a Modification to Net Pen Designs within the Existing Capacity and Farm Lease Area for Kona Blue's Offshore Open Ocean Fish Farm off Unualoha Point, Kona, Hawai'i prepared for Land Division, Department of Land and Natural Resources. Dated April 21, 2009. Page 17; Aquaculture Planning & Advocacy LLC. Final Environmental Assessment Proposed Expansion of Hukilau Foods Offshore Fish Farm, Mamala Bay, Oahu, Hawai'i. Prepared for Office of Conservation and Coastal Lands, Department of Land and Natural Resources. 24 July 2009. Page 8.

²⁶ Gomes, Andrew. "Hukilau Foods files for bankruptcy." Star Advertiser. November 3, 2010.;

²⁷ Wagner v Kona Blue Water Farms LLC United States District Court for the District of Hawai'i No CVO9 00600 Filed 16 December 2009.



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Experiences with Hawaiian open ocean aquaculture indicate that the state of Hawai'i should proceed with extreme caution in regulating the industry's expansion. Opposition voiced by the local community, especially by Native Hawaiian groups, indicates that many constituents support this approach. We urge the legislature not to extend the maximum lease term, or include an option for renewal, as stated SB 1144, as that would allow the industry to completely circumvent meaningful oversight over the long term, and increase this State's difficulty in sufficiently regulating the industry and protecting natural and cultural resources.

Thank you for the opportunity to testify in opposition to the Bill, and in favor of a precautionary approach in protecting Hawai'i's ecological and cultural resources.

Sincerely,

A handwritten signature in black ink, appearing to read "Marianne Cufone". The signature is fluid and cursive, written over a white background.

Marianne Cufone, Esq.
Director, Fish Program
202.683.2511

A handwritten signature in black ink, appearing to read "Christina Lizzi". The signature is fluid and cursive, written over a white background.

Christina Lizzi
Policy Analyst, Fish Program
202.683.2495

SB 1144 PROPOSED AMENDMENT

To address the issue of lease term extensions without impeding development of sustainable forms of aquaculture, SB 1144 could be amended to specifically exclude commercial finfish open ocean cage aquaculture operations from the general definition of “aquaculture” on page 3, line 15.