

Senator Clayton Hee, Chair  
Senator Russell S. Kokubun, Vice Chair  
Senate Committee on Water and Land  
Senator Ron Menor, Chair  
Senator Gary L. Hooser, Vice Chair  
Senate Committee on Energy and Environment

Monday, February 11, 2008  
2:30PM, Conference Room 414

**In Support of SB2638, Making an Appropriation for the Super Sucker**

Chairs Hee and Menor, Vice Chairs Kokubun and Hooser, and committee members. I am Roy Morioka, a fisherman and I thank you for this opportunity to testify in support of funding the “super sucker” in its effort to control the invasive algae that has established itself in Kaneohe Bay and altering the fragile and unique marine ecosystem there. Such mitigation and control efforts are essential to the health and protection of the native species that inhabit this bay, before irreversible damage occurs.

Additionally, I call your attention to another introduced invasive species, the leather mudweed (*Avrainvillea amadelpha*) that is devastating weke nono (Pfeugers goatfish, sometimes erroneously referred to as weke ula) grounds off the leeward coast of Oahu. This invasive seaweed has blanketed the habitat preferred by the weke nono and is rapidly spreading its range from Kalaeloa (where it is thought to have been introduced via ballast water discharge) all the way now to Waianae as observed by fishermen from the area. Such displacement of essential habitat for the weke nono will eventually result in the loss of another prized food fish in Hawaii. It would be interesting to learn if the “super sucker” could also be effective in mitigating this new invasive species before it expands its range any further.

Thank you for addressing the necessary funding to control the spread of alien algae in Kaneohe Bay and I truly hope that similar attention will be given the leather mudweed invasion off the leeward coast.

Sincerely Yours,  
Roy Morioka



**SB 2638, MAKING AN APPROPRIATION FOR THE SUPER SUCKER**  
Senate Committees on Water and Land,  
and Energy and Environment

February 11, 2008  
Room: 414

2:30 p.m.

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The Office of Hawaiian Affairs **SUPPORTS** SB 2638, which seeks to provide one year's funding for the full-time operation of the super sucker project in Kāne'ōhe Bay and for the purchase of a portable super sucker unit.

For more than 70 million years in Hawai'i, the evolution of new species greatly exceeded losses to extinction. This led to the wondrous biological diversity for which our State is known. Hawai'i actually surpasses the Galapagos Islands in the number and variety of species that evolved from a small set of colonizing ancestors, and about 25 percent of Hawaii's reef fish, coral, and algae species occur no where else.

Native Hawaiians successfully managed these natural resources as cultural resources and for sustenance for centuries. Many of the resources upon which they used to rely, and which are specifically named in the creation chant, Kumulipo, are now extinct or endangered by alien, invasive species, such as gorilla ogo, which has taken over Kāne'ōhe Bay, causing a dearth of our precious, native limu species.

Not only are we reliant on our natural resources for healthy subsistence, but they are also something upon which we are dependent. According to an August 2007 Honolulu Advertiser article, a federal study estimates that recreational fishing, hunting and wildlife-watching in Hawai'i generated \$402.3 million in spending in 2006. Much of this income is ocean related, and this tremendous benefit to our state is dependant upon healthy nearshore ecosystems and coral reef habitats.

However, Hawai'i is now also well known as the extinction capital of the world. For example, the Hawaiian Islands

support more than 30 percent of the nation's species listed under the Endangered Species Act. Invasive algae are over-running our marine ecosystems and threatening our imperiled reefs with even more species loss. These losses would be more than symbolic; it would impact our statewide economy as well and in unexpected ways.

However, we can prevent this. The super sucker program has proven itself to be effective in the removal of invasive and damaging algae from coral reefs in a very cost-effective way. A five person crew can remove 800 pounds of algae - including gorilla ogo - an hour. These are remarkable effects; and considering the investment made to get them - they are achieved at bargain rates. The funding that this bill proposes will be recouped many times over in the results received.

OHA asks that the legislature keep in mind the urgency of the issues that this bill addresses. We also ask that if not the super sucker, then what other tools of this efficacy do we possess to accomplish this meaningful and needed task?

Therefore, OHA urges the Committees to PASS SB 2638. Thank you for the opportunity to testify.

**Testimony of The Nature Conservancy of Hawai'i  
Supporting S.B. 2638 Making an Appropriation for the Super Sucker  
Senate Committee on Water and Land  
Senate Committee on Energy and Environment  
Monday, February 11, 2008, 2:30PM, Room 414**

The Nature Conservancy of Hawaii supports S.B. 2638 Making an Appropriation for the Super Sucker.

Alien algae are overgrowing and killing coral reefs in Hawai'i. The Super Sucker was developed by the State Division of Aquatic Resources (DAR), The University of Hawai'i (UH), and The Nature Conservancy (TNC) in 2005 to begin to address this critical threat. The Super Sucker is very effective at removing mass quantities of alien algae from heavily impacted reefs.

We also developed the Super Sucker Junior because the large size of the Super Sucker Senior make it impractical and/or unsafe to operate in many other shallower reef habitats currently being degraded by alien algae on O'ahu, Maui, Moloka'i and the Big Island.

Due to limited funding, we have been operating with an inexperienced crew from multiple partner agencies on an infrequent schedule. While this has allowed us to learn how to most effectively use these machines in portions of Kāne'ohe Bay and a few other locations, it has prevented us from attacking the problem at the scale at which it must be addressed to stop the spread of alien algae throughout the islands and restore impacted reefs.

With an initial investment of \$500,000, we will be able to operate Senior full-time, and clear several hundred tons of alien algae from the reefs of Kāne'ohe Bay. At this rate, we believe we will be able control alien algae in the north end of the bay, and stop the northward spread of algae to new reefs. We will also be able to determine how quickly a trained crew can clear entire reefs, and the rate at which algae re-grow when cleared over a large area.

With an initial investment of \$256,000, we will be able to operate Junior full time, and remove algae from impacted reef habitats that have not yet been addressed by Senior in Kāne'ohe Bay, Maunaulua Bay, Waikīkī, and priority sites on the island of Maui. In addition, another version of Junior is being developed for use in Hilo, and Mini Suckers are being tested by community members to remove alien algae from He'eia fishpond and Maunaulua Bay.

A combined budget as well as individual budgets for Super Sucker Senior and Junior are attached.

Attachment

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**Super Sucker Senior and Junior Budget - Year 1**

<b>Salaries</b>	<b>Unit Cost</b>	<b>Total</b>	<b>Notes</b>
Aquatic Biologist IV (SR22 Step E)	\$49,332		
Aquatic Biologist III (SR 20 Step E)	\$45,576		
Fishery Technician IV (SR13 Step C) 7 @ \$33,756	\$236,292		4 Sr, 3 Jr
subtotal		\$331,200	
<b>Fringe (41.13%)</b>			
Aquatic Biologist IV	\$20,290		
Aquatic Biologist III	\$18,745		
Fishery Technician IV (x7)	\$97,187		4 Sr, 3 Jr
subtotal		\$136,223	
<b>Equipment</b>			
Replacement pump	\$25,000		Sr only
25-foot escort boats with shared trailer (3 @ \$35,000)	\$105,000		2 Sr, 1 Jr
2 full size 4x4 trucks with tow hooks	\$70,000		1 Sr, 1 Jr
subtotal		\$200,000	
<b>Supplies and Misc Costs</b>			
Super Sucker, boat, truck repair & maintenance, gas	\$15,000		\$10k Sr, \$5k Jr
Computer (2)	\$4,000		
Field gear (scuba, GPS, safety gear, etc...)	\$15,000		
Training	\$4,000		\$2k Sr, \$2k Jr
HIMB dock fee	\$12,000		
subtotal		\$50,000	
<b>Travel</b>			
Transportation	\$1,000		
Per Diem	\$36,000		
subtotal		\$37,000	
<b>Total</b>		\$754,423	

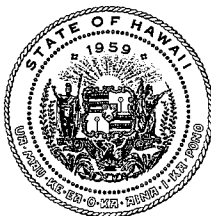
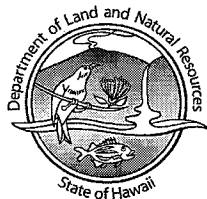
**Super Sucker Senior - Year 1**

<b>Salaries</b>		<b>Category Total</b>
Aquatic Biologist IV (SR22 Step E)	\$49,332	
Aquatic Biologist III (SR 20 Step E)	\$45,576	
Fishery Technician IV (SR13 Step C) 4 @ \$33,756	\$135,024	
subtotal		\$229,932
<b>Fringe (41.13%)</b>		
Aquatic Biologist IV	\$20,290	
Aquatic Biologist III	\$18,745	
Fishery Technician IV (x4)	\$55,535	
subtotal		\$94,571
<b>Equipment</b>		
replacement pump	\$25,000	
25 ft escort vessels w/ shared trailer , 2 @ \$35,000	\$70,000	
Full size truck 4x4 w/ tow hook	\$35,000	
subtotal		\$130,000
<b>Supplies Misc costs</b>		
supersucker, boat, truck repair maintenance, gas	\$10,000	
Computer (2)	\$4,000	
Field gear (scuba, GPS, saftey gear, etc...)	\$15,000	
Training costs	\$2,000	
HIMB dock fee	\$12,000	
subtotal		\$43,000
<b>Total Directs</b>		<b>\$497,503</b>

**Super Sucker Junior - Year 1**

<b>Salaries</b>		<b>Category Total</b>
Fishery Technician IV (SR13 Step C) 3 @ \$33,756	\$101,268	
subtotal		\$101,268
<b>Fringe (41.13%)</b>		
Fishery Technician IV (x3)	\$41,652	
subtotal		\$41,652
<b>Equipment</b>		
25 ft escort vessel w/ trailer	\$35,000	
Full size truck 4x4 w/ tow hook	\$35,000	
subtotal		\$70,000
<b>Supplies Misc costs</b>		
boat truck repair maintenance, gas	\$5,000	
Training costs	\$2,000	
subtotal		\$7,000
<b>Travel</b>		
Maui	\$37,000	\$37,000
<b>Total Directs</b>		<b>\$256,920</b>

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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TESTIMONY OF THE CHAIRPERSON OF THE  
BOARD OF LAND AND NATURAL RESOURCES

On Senate Bill 2638 –MAKING AN APPROPRIATION FOR THE SUPER SUCKER

SENATE COMMITTEES ON  
WATER AND LAND  
and  
ENERGY AND ENVIRONMENT

February 11, 2008

Senate Bill 2638 would appropriate funds to support operation of the “Super Sucker” device for control of invasive marine algae in Kaneohe Bay for one year, and would also appropriate funds to purchase one portable “Super Sucker Jr.” and support its operation for one year as well. The Department of Land and Natural Resources (Department) supports the intent of this bill, which is congruent with the Department’s objectives, but has concerns with the budgetary implications this bill will have on the Executive Supplemental Budget request. In addition, the Department notes that the proposed funding is not included in the State Multi-Year Financial Plan.

The Department appreciates the Legislature’s acknowledgment of the very serious threat that invasive marine algae pose to Hawaii’s coral reefs. It has taken many years of partnerships forged among researchers, resource managers, non-government organizations (NGOs), and community groups to reach the current high level of awareness in regard to this increasing threat to the State’s coral reefs. However, despite the large amount of time, effort and money put forth by the many different groups already dedicated to this problem, it has been a struggle to establish an appropriate level of response to this very prolific and destructive set of alien invasive species.

In 2003, Hawaii was confronted with the spectacular consequences of an unchecked alien invasive species when the freshwater weed *Salvinia molesta* overran Lake Wilson on Oahu. Government agencies, including city, state and federal military branches, joined forces with community members in an eradication effort that ultimately cost over \$1.3 million. State biologists were told at the time by experts that the situation was beyond reclaim, but faced with community pleas for action, coupled with outstanding dedication on the part of all parties involved, it was possible to not only remove the plant, but to eradicate it from Lake Wilson completely. Today, *Salvinia molesta* is no longer seen in the lake, which stands as a true success story in the battle against invasive species.

Meanwhile, on the State’s nearshore reefs, alien marine algae continue to spread.



Although there are many differences between marine alien algae and *Salvinia*, the resulting energy and focus of the response should be the same. Certain species of alien algae are more readily contained than others, and these species should be the first targets for control. Given the size of the marine environment, the scale and level of impact is also far greater for marine alien algae than it was for *Salvinia* in Lake Wilson. A cohesive program of action at the County, State and Federal level will be required to address this problem. The “Super Sucker” is one part of such an integrated solution.

The Department has been a partner in the “Super Sucker” project from its conception. To date, this technology has been deployed in research and testing phases. The Department has now proven that the device is effective, and is ready to move towards its deployment in large scale management operations. There still remain a number of research questions surrounding the project, and the Department fully recognizes that multiple factors contribute to increases in marine algae and concurrent decrease in coral cover on many of Hawaii’s reefs, but still feels that this project should move into full time deployment at the earliest available opportunity. If the Department waits until all of the contributing factors such as land-based pollution, nutrient enrichment and decreased herbivory are clarified and resolved through detailed research, the loss of coral cover could be so severe that it would take hundreds if not thousands of years for our reefs to recover.

*Carl Paoo Jellings Waianae resident and fishermen Aloha Chair Clayton Hee*

*I would like too send my support for SB 2638 it's a Win Win for everyone concerned  
there is no losers here except for alien algae, The reef could use a little boost whenever possible here in  
Waianae an alien algae the Leather Mudweed (*Ulva lactuca*) has had major impacts in  
Weke No.No grounds so We see first hand the impacts of Alien algae's. Take Care Mahalo for the  
opportunity to testify Carl*