

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Aquatic Resources  
Honolulu, Hawaii 96813

December 11, 2015

Board of Land and Natural Resources  
State of Hawaii  
Honolulu, Hawaii

REQUEST FOR FINAL APPROVAL TO ADOPT A NEW CHAPTER UNDER HAWAII  
ADMINISTRATIVE RULES AS TITLE 13 CHAPTER 86.1, "SEA CUCUMBER  
MANAGEMENT," TO REGULATE THE HARVEST OF SEA CUCUMBERS  
FROM STATE WATERS

Submitted for your consideration and final approval is a request to adopt Hawaii Administrative Rules ("HAR") chapter 13-86.1 to regulate the harvest of sea cucumbers from state waters.

The new rules address the recent spike in the commercial consumptive harvest of sea cucumbers and generally manage the various other uses of these species. Specifically, the rules generally prohibit the take of sea cucumbers for sale for human consumption or for any other commercial purpose. There is a narrow exception carved out to allow for limited commercial harvest for aquarium purposes. This exception, which allows licensed commercial aquarium collectors to harvest two species of sea cucumber from Oahu waters only—up to 20 per person per day and up to 3,600 per year for the entire fishery, is intended keep the small commercial aquarium fishery open at the current level of take. The rules would also allow a small level of take for personal, non-commercial use.

On August 28, 2015, the Board approved the proposed rules for public hearing. On September 16, 2015, the Small Business Regulatory Review Board voted to recommend that the rules proceed to public hearing. On September 30, 2015, the Governor approved the proposed rules for public hearing.

The Division of Aquatic Resources ("DAR") accepted public testimony on the proposed rules from October 9, 2015 to November 20, 2015 and held public hearings statewide on November 9, 10, and 12, 2015. DAR received a total of 11 verbal and written testimonies. One testimony was in full support of the rules as proposed; one testimony requested allowing the aquarium harvest of three additional species; two testimonies requested a higher non-commercial bag limit; two testimonies opposed allowing any aquarium harvest; one testimony requested a complete ban on all harvest of sea cucumber; and four testimonies were unclear in their support or opposition to the proposed rules. The minutes from the public hearings and written testimonies are attached as **Exhibit 1**.

Based on the written and oral public testimony received by DAR through the chapter 91 public hearings process, DAR recommends increasing the non-commercial bag limit for sea cucumbers from five to ten per person per day. This change is intended to accommodate persons who

harvest a nocturnal species of sea cucumber known as *namako* for personal and family consumption. It is highly unlikely that this change will have any impact on sea cucumber populations given the highly specific nature of this fishery and the virtual absence of any other known harvest of sea cucumber for personal use. One additional non-substantive change was made to section 13-86.1-2 to correct a reference to the following section regarding the exception for limited commercial aquarium harvest. The incorrect reference to section 13-86.1-4 was corrected to read section 13-86.1-3. A Ramseyer draft of the proposed rules, as amended based on results from the public hearing process, is attached as **Exhibit 2**.

## RECOMMENDATION:

“That the Board give final approval to adopt Hawaii Administrative Rules chapter 13-86.1, Sea Cucumber Management.”

Respectfully submitted,



for

BRUCE ANDERSON, Administrator  
Division of Aquatic Resources

## APPROVED FOR SUBMITTAL



SUZANNE D. CASE, Chairperson  
Board of Land and Natural Resources

## Attachments:

- Exhibit 1 – Public Hearing Minutes
- Exhibit 2 – Ramseyer Draft

## Exhibit 1

Summary Public Hearing Minutes  
Adoption of Hawaii Administrative Rules  
CHAPTER 13-86.1  
Sea Cucumber Management

Hearing Dates,  
Locations, and  
Scheduled start  
times:

Monday, November 9, 2015

Lihikai School Cafeteria

333 S. Papa Avenue; Kahului, Maui; 5:30 PM

Tuesday, November 10, 2015

Mitchel Pauole Center

90 Ainoa Street; Kaunakakai, Molokai; 1:00 PM

Stevenson Middle School Cafeteria

1202 Prospect Street; Honolulu, Oahu; 6:00 PM

Hawaii County Aupuni Center

101 Pauahi Street, Suite 101; Hilo, Hawaii; 6:00 PM

Kealakehe High School Cafeteria

74-5000 Puohuluhli Street; Kailua-Kona, Hawaii; 6:00 PM

Thursday, November 12, 2015

Lanai Public Library

555 Fraser Avenue; Lanai City, Lanai; 1:00 PM

Chiefess Kamakahahei Middle School

4431 Nuhou Street; Lihue, Kauai; 5:30 PM

### I. Introduction

#### A. Opening

Statewide Public Hearings were held at seven locations listed above.

The Kahului public hearing was called to order at 5:35 P.M. Russell Sparks, DAR Maui Aquatic Biologist, conducted the Kahului hearing. Also present was Skippy Hau, DAR Maui Aquatic Biologist and Adam Wong, DAR Maui Education Specialist. There were three persons from the public in attendance, listed under the Public Attendance section.

The Kaunakakai public hearing was called to order at 1:10 P.M. Russell Sparks, DAR Maui Aquatic Biologist, conducted the Kaunakakai hearing.

Also present was Adam Wong, Maui DAR Education Specialist. There were four persons from the public in attendance, listed under the Public Attendance section.

The Honolulu public hearing was called to order at 6:05 P.M. Alton Miyasaka, the DAR Acting Commercial Fisheries Program Manager, conducted the Honolulu hearing. Also present were David Sakoda, DAR Marine Law Fellow, and David Cohen, DAR urchin nursery project leader. There were four persons from the public in attendance, listed under the Public Attendance section.

The Hilo public hearing was called to order at 6:00 P.M. John Kahiapo, the DAR-HI Education Specialist, conducted the Hilo hearing. Also present was Gerri Kahili from the Hilo DAR office. There was one person from the public in attendance, listed under the Public Attendance section.

The Kailua-Kona public hearing was called to order at 6:00 P.M. William Walsh, the DAR Kona Aquatic Biologist, conducted the Kailua-Kona hearing. Also present were DAR-Kona staff Laura Jackson, Lindsey Kramer, Lydia Smith, and Ross Martin. There was no one from the public in attendance.

The Lanai City public hearing was called to order at 1:17 P.M. Russell Sparks, DAR Maui Aquatic Biologist, conducted the Lanai City hearing. Also present was Adam Wong, the DAR Maui Education Specialist. There were three persons from the public in attendance, listed under the Public Attendance section.

The Lihue public hearing was scheduled to start at 5:30 PM, no one from the public was in attendance, but called to order at 6:02 P.M. Alton Miyasaka, conducted the Kauai hearing. Also present were David Sakoda, DAR legal fellow and Katie Nalesere from the Kauai DAR office. There was no one from the public in attendance.

These were formal Public Hearings on the proposed adoption of new Administrative Rules of the Department of Land and Natural Resources relating to the harvest of sea cucumbers in state waters. The proposed rules would prohibit the commercial harvest of sea cucumber for consumption purposes and allow limited harvest of sea cucumber for commercial aquarium purposes and for personal non-commercial use and consumption.

The proposed rules have been developed to manage and protect the State's sea cucumber resources in light of the recent large-scale commercial take of sea cucumbers from nearshore waters of Maui and Oahu. DAR has developed the proposed new rules based on the best available information in consultation with scientists, cultural practitioners, and other resource

users. The proposed rules were explained in more detail later on in the hearings.

As required by law, the proposed rules have been drafted in Ramseyer format, and copies were available at the table near the entrance.

#### B. Purpose

The purpose of these hearing is to provide the public the opportunity to provide comments in the form of oral and written testimony on these proposed new administrative rules regulating the harvest of sea cucumbers from State waters.

The hearing officer provided information on the requirements to 1) conduct the hearings, 2) make a record of the hearings, 3) receive testimonies, and 4) next steps in the hearing process.

#### C. Public Attendance

1. Maui: Three - Alden Eda, Seferina Sedano, Alan Matshaa
2. Molokai: Four - Colette Y. Machado, Gayla Haliniak, Colleen Uechi, Melvin Dudoit
3. Oahu: Four – Joanna Philippoff, Matt Ramsey, Matt Ross, Jon Ching
4. Hilo: One
5. Kona: None
6. Lanai: Three - Winifred Basques, Christine C. Costales, Grazel Caceres
7. Kauai: None

### II. Background

- A. On June 26, 2015 the Board of Land and Natural Resources (BLNR) promulgated emergency rules, HAR Chapter 13-86, prohibiting all take of sea cucumbers from state waters. This was in response to the sudden emergence of a commercial sea cucumber fishery in which large quantities of sea cucumber were being harvested from State waters. The BLNR found that the emergency rule was necessary to prevent imminent peril to the State's natural resources. Following implementation of the emergency rules, DAR consulted with scientists from the University of Hawaii, aquarium collectors, native Hawaiian cultural practitioners, subsistence harvesters, and the individuals involved with the commercial sea cucumber harvesting operation to develop more long-term rules that would continue to protect the State's sea cucumber resources while allowing limited levels of harvest that the Department believes to be sustainable. These rules are based both on public concerns as well as the best available scientific information.
- B. Approvals to conduct this public hearing have been obtained from the Board of Land and Natural Resources on August 28, 2015, the Small Business

Regulatory Review Board on September 16, 2015, and Governor Ige on September 30, 2015.

- C. Copies of the proposed administrative rules are available for inspection at the table near the entrance. During this hearing we want to record your thoughts on the proposed rules.

III. Notice of public hearing

- A. The Legal Notice of this public hearing was published in the October 9, 2015, Friday issue of the Honolulu Star Advertiser. On October 9, 2015, the department issued a press release regarding this hearing.

IV. Hearing procedures

- A. This hearing will be conducted as follows:
  - 1. I will explain the proposed changes to the administrative rules.
  - 2. Then I will call on those who have signed up to testify as they are listed on the sign in sheet.
  - 3. Please keep your testimony brief and on the subject in order to allow all those who came today, the opportunity to testify. Each person providing testimony will be given 3 minutes.
  - 4. After those who signed up have presented their testimonies, I will ask if anyone else wishes to testify.
  - 5. After all persons have given their testimonies, and if you wish to add to your testimony, you will be provided an additional 3 minutes.
  - 6. We are recording this hearing to make a written record, so please state your name for the record before giving your testimony. Make sure to speak clearly into the microphone so we accurately record your testimony for the record.
  - 7. Please remember to respect the opinions of all testifiers and that this hearing is not an opportunity for accusations or rebuttals. There may be differing opinions. Everyone will have an opportunity to voice their opinion for the department to consider.
  - 8. All testimony should be directed to me, not to the audience. If you have a question, please direct it to me, and I will find the most appropriate person to answer.

V. Rule Explanation

Summary of Draft Administrative Rules

The Division of Aquatic Resources proposes to adopt a new chapter of the Hawaii Administrative Rules to provide more long-term protection of sea cucumbers in

place of the temporary emergency ban that took effect on June 26, 2015. The new chapter is designated:

Chapter 13-86.1, Sea Cucumber Management

Section 13-86.1-1 Definitions: provides definitions for certain terms relevant to HAR Chapter 13-86.1.

Section 13-86.1-2 Commercial consumption fishery; prohibition: makes it unlawful for any person to sell or offer for sale any sea cucumber taken from State waters for consumption purposes, or to otherwise take any sea cucumber for commercial purposes, except for commercial aquarium purposes as provided in section 13-86.1-3.

Section 13-86.1-3 Commercial aquarium fishery; season; closure; restrictions: establishes an annual sea cucumber aquarium harvesting season for the taking of two species of sea cucumber for commercial aquarium purposes from the waters of Oahu only. Only *Holothuria hilla*, commonly known as the “tiger tail” sea cucumber, and *Holothuria edulis*, commonly known as the “hot dog” or “pink and black” sea cucumber, may be harvested for commercial aquarium purposes pursuant to this section. A person must possess a valid aquarium permit and a valid commercial marine license to take sea cucumbers for commercial aquarium purposes, and they may only take, possess, and sell up to twenty sea cucumbers per day during the open season. When the season is closed, it is unlawful for any person to take, possess, sell, or offer for sale any sea cucumber taken from State waters for commercial aquarium purposes, with the exception that aquarium dealers may continue to possess, sell, and offer for sale any sea cucumbers validly obtained during an open season, provided that proper receipts are kept on file. There is established an annual catch limit of 3,600 sea cucumbers for the entire commercial aquarium fishery. The aquarium harvesting season will remain open until the annual catch limit is reached. The chairperson of the Department will give notice of closure of the aquarium harvesting season when the annual catch limit is reached or exceeded or is anticipated to be reached or exceeded.

Section 13-86.1-4 Non-commercial fishery; daily bag limits: provides that any person may take and possess up to five sea cucumbers per day, provided that it is for personal human use or consumption and not for commercial use or sale.

Section 13-86.1-5 Licenses, permits, and other exemptions: provides that the Department may issue licenses and permits to exempt persons from the provisions of this chapter pursuant to the Department’s existing statutory authority.

Section 13-86.1-6 Penalty: sets forth the administrative and criminal penalties applicable to violations of this chapter.

VI. Testimonies

A. Maui: No testimony submitted

B. Molokai

1. Colette Y. Machado

- *Question (CM): What are the requirements to be able to commercially harvest sea cucumbers?*
- *Answer (RS): You would need a valid commercial marine license, and you would need a valid aquarium permit, and then you would only be able to harvest two species of sea cucumbers on the island of Oahu only and would be limited to 20 specimens per day.*
- *Question (CM): Where did the 3,600 number come from for the the annual catch limit for the aquarium fishery on Oahu?*
- *Answer (RS): That number came from the annual harvest amount reported in past years.*
- *Question (CM): Does that number seem high to you? From your professional background, does that seem like a high number to limit the fishery at?*
- *Answer (RS): What it seems to me is not important at this point but if you would like to provide formal testimony related to your concern about this number, I encourage you to do so.*
- *Question (CM): Well I have no idea what kind of number would be appropriate, but for me being born and raised on Molokai, I would like to know if there has been an issue with excessive harvest here on Molokai.*
- *Answer (RS): It has not been recorded to have been a problem anywhere in the state until this recent operation began and those harvests were on Maui and Oahu only.*
- *Question (CM): So you don't have any specific information that this fishery has affected Molokai?*
- *Answer (RS): No, we do not, but you are raising some very good issues and I encourage you to provide formal testimony for our records.*
- *Response (CM): I am a trustee for the Office of Hawaiian Affairs and I believe you have a few more community hearings coming up. I will relay my concerns to the Oahu staff and make sure they integrate them into their comments.*
- *Continuing Response (CM): Yea, I think 3,600 animals is kind of a substantial amount, but for us on Molokai I think the only issue would be if it interfered with our subsistence use of them, but I don't know too many cultural practitioners who consume or use sea cucumbers. So that is my only concerns, I will just integrate my comments with the Honolulu Office of OHA as they are actually monitoring all of your meetings.*

C. Oahu:

Matt Ross (oral testimony only): My name is Matt Ross. I'm a commercial aquarium fisherman. I support the proposed rules. I believe they are a

good balance between restricting commercial take of certain species with life histories that are incompatible with commercial fisheries providing a limited take of some species that can be harvested and providing for recreational use.

D. Hilo:

Dale M. Nagata (oral testimony only): I'm a recreational fisherman generally in support of the rule, except for the bag limit. We catch namako, night time sea cucumber, that is eaten raw. Times of high demand for namako is bon dance season and new year's. Throughout the year, I catch namako. Looking at your rules, I don't know where the science is. The brown and black sea cucumbers we see out there 24/7, we don't pick those. We only pick namako, half a gallon that's cut. We would need something like 12-14 namako, at least. I have some pictures if you want to see them. I could live with 20 per day, and I wouldn't be a criminal. My catch rate over the years hasn't changed. I take about 10 gallons a year. He submitted 5 years catch reports and pictures.

E. Kona: No testimony submitted

F. Lanai: No testimony submitted

G. Kauai: No testimony submitted

H. Emailed testimonies:

- Ron Tubbs (submitted 11/16/15, Oahu): Unable to attend the Sea cucumbers meeting on the 10th what kind of rules are you planning to do? Is it possible to do a bag limit on the ones we take and allow us to take the raspberry cucumbers, the spiny and the medusa?
- Rene Umberger (submitted 10/5/15, Maui): I was out of the country in Aug./Sept. and only learned of the proposed sea cucumber rule in the Oct. Environment Hawaii. In that story, it states that "for confidentiality reasons, data on aquarium harvest of sea cucumbers were not provided to the Land Board."  
Since that data is available to the public, one must wonder why it was not provided to you. It surely should have been a focal point of the discussion. The data below was provided to me over the years by DARs, Reginald Kokubun. The island-wide numbers for 2000 - 2011 are available by area (we just haven't requested that yet). Area 403 is the Makaha area, and Area 407 is Kaneohe Bay. As you can see, when broken down by area, the vast majority of the sea cucumbers are taken from Kaneohe Bay.

Questions you could have asked had you known the numbers:

- What valuable ecosystem services do these thousands of sea cucumbers provide in the particular areas they are taken from?
- Why is the recent take down by ~80% from the highs reported a decade ago?
  1. Has demand dropped? If so, why allow any commercial AQ take?
  2. Is demand strong, but sea cucumber abundance is now low? If so, why allow any commercial AQ take?

Year	Island	Area	Species	No. collectors	No. harvested	No. sold	Value
2000	Oahu	island	SC	4	3,013	3,013	\$2,452
2002	Oahu	island	SC	9	9,068	9,068	\$7,117
2003	Oahu	island	SC	5	10,738	10,737	\$8,362
2004	Oahu	island	SC	8	14,153	14,153	\$11,006
2005	Oahu	island	SC	6	8,615	8,615	\$7,297
2006	Oahu	island	SC	10	7,968	7,787	\$7,445
2007	Oahu	island	SC	9	7,395	7,393	\$7,083
2008	Oahu	island	SC	5	3,025	3,009	\$3,379
2009	Oahu	island	SC	6	1,976	1,976	\$2,002
2011	Oahu	island	SC	6	2,923	2,923	\$2,951
2012	Oahu	407	SC	5	3,564	3,226	\$3,260
2013	Oahu	403/407	SC	5	2,730	2,730	\$3,152
2014	Oahu	407	SC	5	2,260	2,260	\$2,342

I urge you to pull your recommendation to allow this rule to go to public hearing since this information was not part of that discussion.

- Dave and Laurie White (submitted 10/27/15, Honolulu)  
 First, thanks for the very important work that you do. My wife and I are retired science teachers, we both volunteer at the Waikiki Aquarium, and we spend lots of time snorkeling in our inshore waters. We were aghast months ago to see a commercial sea cucumber harvesting piece on the evening news. Yipes! Then we were delighted that the State quickly adopted a 120 day emergency rule prohibiting harvesting. While we can't attend the hearing, we both wish to go on record: Hawaii's sea cucumbers should be protected by law. There should be no annual season. (While that may sound like a reasonable compromise, history has taught us that the recurrent problem with wildlife laws is enforcement.) These reef cleaners are part of "Nature's Clean-Up Crew," and as such should be undisturbed. Without intact ecosystems, our inshore waters suffer. There may not be lots we can do to prevent global warming or El Nino events, both of which are now bleaching our coral, so we

must make pono choices when our decisions CAN have a positive effect protecting wildlife.

- Clifton Hasegawa (submitted 10/15/15, Honolulu):  
It is an eventful moment that the Board of The Department of Land & Natural Resources is considering the implementating an Emergency Rule for Sea Cucumbers based on the recommendation from the Division of Aquatic Resources, approved by the Chairperson of The Department of Land & Natural Resources that, “[T]here is an imminent peril to the State’s natural resources related to the harvest of sea cucumbers from state waters, which requires the adoption of a rule with less than 30 days’ notice of hearing.” <http://files.hawaii.gov/dlnr/meeting/submittals/150626/F-4-Exhibit2a.pdf>  
The for the recommendation from the Division of Aquatic Resources, approved by the Chairperson of The Department of Land & Natural Resources is based on the reported harvesting by a commercial concern in waters off Oahu and Maui and generalized statements of Departmental concern. Absent from the request to the Board the from the Division of Aquatic Resources, approved by the Chairperson of The Department of Land & Natural Resources is factual and scientific evidence and analysis to support the determination of “imminent peril” and the selected methodology, approach and strategy to regulate the harvest of sea cucumbers in Hawaiian waters.

Recommendation: The Board implement an Emergency Rule for a complete ban on the harvest of sea cucumbers for a period not to exceed 6 months from the adoption of the Emergency Rule, including and not limited to harvest and any taking of all species of sea cucumbers in waters under the jurisdiction of the State of Hawaii (Seaward up to 24 nautical miles from the High Water Mark) by individuals, commercial concerns and the aquarium trade, to provide management officials and staff from the Division of Aquatic Resources and The Department of Land & Natural Resources to consult with members of the scientific community to determine the population status of sea cucumbers in the Hawaiian Archipelago, determine the environmental and human intervention impacts, complete an analysis of the data collected, and to develop for the Board’s review and approval a marine spatial management or ecosystem-based management plan to ensure that Hawaii’s marine resources are conserved, protected, maintained and restored in harmonization with the complex relationships of nature and science.

Background

Kinch, J.; Purcell, S.; Uthicke, S.; Friedman, K. 2008. Population status, fisheries and trade of sea cucumbers in the Western Central Pacific. In V. Toral-Granda, A. Lovatelli and M. Vasconcellos. Sea cucumbers. A global review of fisheries and trade. FAO Fisheries and Aquaculture Technical Paper. No. 516. Rome, FAO. p. 8.

<http://www.fao.org/3/a-i0375e/i0375e01.pdf>

In the Western Central Pacific region, most sea cucumber fisheries have exhibited boom-and-bust cycles since the late nineteenth century. Since the 1980s, elevated export prices and demand from Asian markets have been the catalysts for increased fishing. At many localities, high-value species have been depleted and previously unfished species are now exploited. The sustainability of these fisheries is of widespread concern. The development of sustainable management in the Western Central Pacific region has been difficult. Management tools like size limits, gear restrictions, spatial and temporal closures, quotas and marine reserves have not curbed overfishing. Much of their ineffectiveness can be attributed to a lack the necessary funds and technical capacity for adequate awareness raising in most PICTs [Pacific Island Countries and Territories] [Clarification Supplied] Commonly, there are also conflicts of interest within differing levels and agencies of government, politicians and influential business people. Fishing moratoria have been declared in some countries, including Solomon Islands, Fiji, Tonga and Vanuatu.

Although breeding populations at some localities have recovered, empirical studies show that populations for other species have failed to rebuild after years of respite. International support is needed to evaluate CITES listing<sup>1</sup> for the conservation of rare and threatened species. Restocking using hatchery-produced juveniles is technically feasible, but will be an expensive remedy to overfishing. International translocation of stocks for restocking or sea ranching is discouraged. Recent research has focused on underwater population surveys, to assess population densities, and socio-economic surveys. In particular, the SPC PROCFish/C programme<sup>2</sup> has trained fisheries officers in these survey methods and is providing comparative analyses of stock status in PICTs. Effort must now turn to aiding PICTs to develop practical management frameworks that allow breeding populations to recover to productive levels with a limited institutional capacity for compliance and enforcement of regulations. [Emphasis Supplied]

Skillings, D.J.; Bird, C.E.; Toonen, R.J. [University of Hawai‘i at Mānoa] 2011. Gateways to Hawai‘i: Genetic Population Structure of the Tropical Sea Cucumber *Holothuria atra*. *Journal of Marine Biology*, Volume 2011 (2011). <http://www.hindawi.com/journals/jmb/2011/783030/>

The Hawaiian Archipelago lies at the periphery of the tropical Central Pacific and is the most isolated island chain in the world, making it biogeographically partitioned from the rest of the Pacific Islands.

Skillings, D.J.; Bird, C.E.; Toonen, R.J. [University of Hawai‘i at Mānoa] 2013. Comparative population structure of two edible Indo-Pacific coral reef sea cucumbers (Echinodermata: Holothuroidea). *Bulletin of Marine Science*, Volume 90, Number 1. January 2014.

<http://www.ingentaconnect.com/content/umrsmas/bullmar/2014/00000090/00000001/art00014?crawler=true>

<sup>1</sup> CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its

aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

<https://www.cites.org/eng/disc/what.php>

2 The Western Central Pacific region (for purposes of this report) is an area that encompasses the 22 Pacific Island Countries and Territories (PICTs) that are affiliated to the Secretariat of the Pacific Community (SPC), Australia and New Zealand; but excludes, Hawaii (United States of America) and Easter Island (Chile).

In conclusion, many echinoderm species are the target of artisanal or commercial fishing, and properly managing these fisheries requires a detailed understanding of dispersal pathways and population connectivity within a spatial management network. Lying at the periphery of the tropical Central Pacific, it has long been debated why some species maintain connectivity and species cohesion between the Hawaiian Islands and the rest of the Pacific, whereas others diverge to become Hawaiian endemics, and yet others fail to colonize the Hawaiian Archipelago at all.

Considerable evidence is accumulating that it is indefensible to make predictions of connectivity based solely on proxies such as ecological or phylogenetic similarity, pelagic larval duration, developmental mode, or species range sizes. The differences in population structuring among congeneric sea cucumbers *H. atra* and *H. whitmaei* provides yet another example that single exemplar species make a poor basis for management decisions in the absence of additional information. We argue that in cases where there are clashing patterns of population structure, place-based management approaches, such as marine spatial management or ecosystem-based management, are the best bet for responding to the complex relationships between populations that defy simple rules of thumb. [Emphasis Supplied]

Thank you for the opportunity to share my thoughts and concerns.

- Josh DeMello (submitted October 9, 2015, Honolulu): Problem I see is that for the commercial aquarium harvest, they are allowed 3,600 animals. At 20 per day, that leaves either 180 participants or 180 days, or some combination. It also says that the fishery is subject to a fishing season but doesn't mention the season at all in the draft rules.

Another problem is that they will have to fast-track their aquarium reporting so that they can actually close or project to close the fishery. Its a difficult thing that they are going to have to work through. Also, you have a noncommercial bag limit of 5 per day. Problem is you don't know what the noncommercial universe is and you don't know how many they are taking. Thus, you can have a range of ZERO harvest to a max harvest of [5 (per day) x 1.25 Million (people in Hawaii) x 365 (days) + any tourist take + 3,600 (aquarium limit)]. I'm being facetious but because you don't know who the participants in the fishery are, you can never know how many are being taken out, and thus never truly know the stock status.

- Mark Schacht (submitted 10/11/15 from Albany, CA) I write in strong opposition to allowing ANY commercial harvest for the aquarium trade. It continues to mystify me that DLNR cannot find the evidence needed to justify a ban on the taking of any reef life as part of this dubious for-profit commercial purpose.  
You would think the fact that the inshore reef habitats of small islands are naturally quite limited in size, that the lack of a ban (or even of any enforceable limits) have already produced observable declines in reef fish populations, and that the rapacious ethic of the aquarium collectors is remorseless extraction until nothing is left to take, would be enough. Please adopt a final regulation on this subject matter that bans all commercial taking, anywhere in the islands, ever.
- Kenneth Kitabayashi (submitted 11/13/15, Kauai) I would like to offer my comments on the proposed rules for home consumption of sea cucumbers. Section 13-86.1-4 of the proposed rules allow the taking of 5 sea cucumbers per a day. I would like to start by saying that I have been taking sea cucumbers for more than 40 years for home consumption. The sea cucumbers that my family and I harvest are found only during the night on the shallow reefs. We are limited to the winter months when the tide is exceptionally low. However, along with the low tides there must gentle winds and no high surf. As such, while the tides may be low during the months from October to about February, we are able to take these night sea cucumbers approximately 6 to maybe a maximum of 8 nights due to the tides, weather, and surf condition. We take approximately 1 gallon in a night.  
I am not specifying any specific limit for taking of these night sea cucumbers which incidentally requires special handling since they melt. However, taking 5 cucumbers per day for 365 days in a year amounts to 1,825 sea cucumbers in a year. If in our excursion we take 30 sea cucumbers in a gallon in 8 days, we would take about 240 sea cucumbers. We would be taking about 7.5 times less than the proposed rules. (Please note that 8 nights is very optimistic and it would be impossible to stuff 30 reasonable sized sea cucumbers in a gallon). I would like to recommend that the rules clarify the types of sea cucumbers that can be taken. Additionally, there should be a higher limit for the night sea cucumbers.  
Your consideration on this matter is sincerely appreciated.
- Dr. Amy Brown (submitted 11/18/15, Honolulu): I think a complete ban is necessary because there are not that many sea cucumbers and they have already been harvested down to almost zero. The price they fetch will only guarantee their demise.

I think the people making the decision need to go for a swim and see for themselves. Kaimaina beach to Waikiki no longer has these sea cucumbers living in peace. They've been sent to Asia.

VII. Decision-making on the proposals:

- A. Based on the testimonies presented, the Department will submit its findings and recommendations to the Board of L&NR at its December 2015 meeting.
- B. If approved by the Board, the Department of the Attorney General will conduct a final legal review. If approved, the proposed rules will be given to the Governor for his final approval.
- C. Should the Governor grant approval, certified copies will be filed with the Lt. Governor's office, and after 10 days, it becomes effective as law.
- D. Are there any questions regarding this process?

VIII. Adjournments

- A. Maui: 5:48 PM; hearing was open for 13 minutes
- B. Molokai: 1:25 PM; hearing was open for 25 minutes
- C. Oahu: 6:21 PM; hearing was open for 16 minutes
- D. Hilo: 6:15 PM; hearing was open for 15 minutes
- E. Kona: 6:30 PM; hearing was open for 30 minutes (no public attended)
- F. Lanai: 1:28 PM; hearing was open for 11 minutes
- G. Kauai: 6:03 PM; hearing was open for one minute (no public attended)



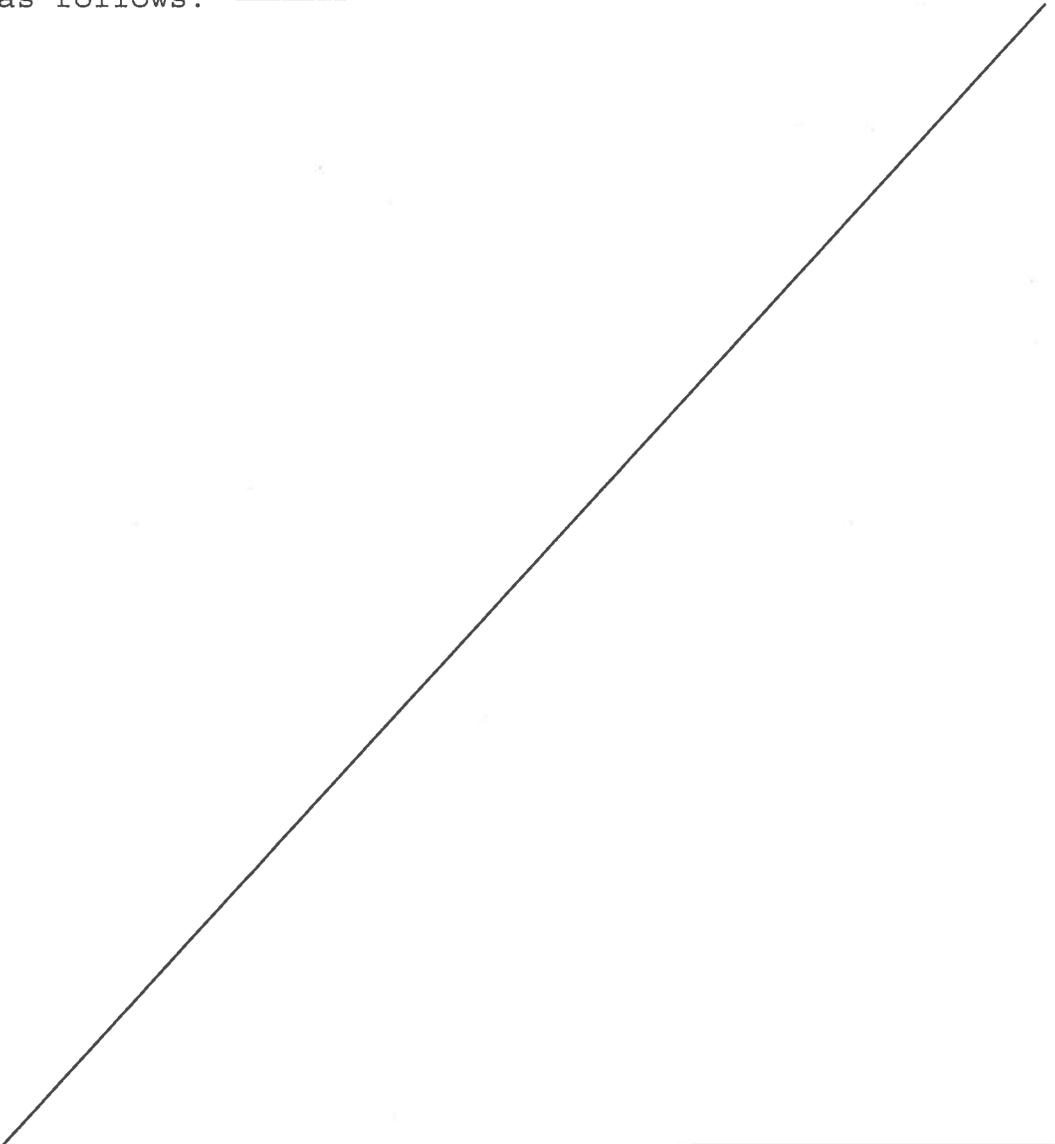
Exhibit 2

DEPARTMENT OF LAND AND NATURAL RESOURCES

Adoption of Chapter 13-86.1  
Hawaii Administrative Rules

(Date)

1. Chapter 13-86.1, Hawaii Administrative Rules,  
entitled "Sea Cucumber Management", is adopted to read  
as follows: \_\_\_\_\_





"HAWAII ADMINISTRATIVE RULES

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 4 FISHERIES

PART V PROTECTED MARINE FISHERIES RESOURCES

CHAPTER 86.1

SEA CUCUMBER MANAGEMENT

§13-86.1-1	Definitions
§13-86.1-2	Commercial consumption fishery; prohibition
§13-86.1-3	Commercial aquarium fishery; season; closure; restrictions
§13-86.1-4	Non-commercial fishery; daily bag limits
§13-86.1-5	Licenses, permits, and other exemptions
§13-86.1-6	Penalty

§13-86.1-1 Definitions. As used in this chapter, unless otherwise provided:

"Aquarium permit" means the permit issued by the department pursuant to section 188-31, HRS.

"Aquarium purposes" means to hold the sea cucumber alive in a state of captivity, whether as a pet, for scientific study, for public exhibition, for public display, or for sale for these purposes.

"Board" means the board of land and natural resources.

"Consumption purposes" means for food, medicine, or any other use whereby the sea cucumber is killed.

"Sea cucumber" means any echinoderm species of aquatic life in the class Holothuroidea.

"Take" means to catch, kill, remove, capture, confine, or harvest, or to attempt to catch, kill, remove, capture, confine, or harvest. [Eff  
] (Auth: HRS §190-3) (Imp: HRS  
§190-3)

§13-86.1-2 Commercial consumption fishery; prohibition. It is unlawful for any person to sell or offer for sale any sea cucumber taken from State waters for consumption purposes, or to otherwise take any sea cucumber from State waters for commercial purposes, except for commercial aquarium purposes as provided in section 13-86.1-3. [Eff  
(Auth: HRS §§189-10, 190-3) (Imp: HRS §§189-10, 189-11, 190-3)

§13-86.1-3 Commercial aquarium fishery; season; closure; restrictions. (a) There is established an annual sea cucumber aquarium harvesting season for the taking of certain species of sea cucumber for commercial aquarium purposes from waters of Oahu only. For purposes of this section, "waters of Oahu" means all ocean waters within three nautical miles seaward from the highest wash of the waves on the shores of Oahu.

(b) Only *Holothuria hilla* and *Holothuria edulis* may be harvested for commercial aquarium purposes pursuant to this section.

(c) When a sea cucumber aquarium harvesting season is open, any person issued a valid aquarium permit and a valid commercial marine license may take, possess, and sell up to twenty sea cucumbers per day for aquarium purposes, subject to the provisions of this chapter, and as may be otherwise provided by law.

(d) When a sea cucumber aquarium harvesting season is closed, it is unlawful for any person to take, possess, sell, or offer for sale any sea cucumber taken from State waters for commercial aquarium purposes, except that aquarium dealers may possess, sell, and offer for sale sea cucumbers

validly obtained during an open season, provided that proper receipts are kept on file pursuant to HRS §189-11.

(e) There is established an annual catch limit for sea cucumber when taken for commercial aquarium purposes. The annual catch limit for sea cucumber for commercial aquarium purposes shall be 3,600 animals per year.

(f) The chairperson shall give notice of closure of the sea cucumber aquarium harvesting season when the annual catch limit is reached or exceeded or is anticipated to be reached or exceeded. [Eff  
] (Auth: HRS §§189-10, 190-3) (Imp:  
HRS §§189-10, 189-11, 190-3)

§13-86.1-4 Non-commercial fishery; daily bag limits. Any person may take and possess up to ten sea cucumbers per day, provided that the sea cucumbers are taken and possessed for personal human use or consumption and not for commercial use or sale. [Eff  
] (Auth: HRS §§187A-5, 190-3) (Imp:  
HRS §§187A-5, 190-3)

§13-86.1-5 Licenses, permits, and other exemptions. Notwithstanding the provisions of this chapter, the department may issue the following licenses and permits to exempt persons from the provisions of this chapter:

- (1) Licenses issued pursuant to sections 187A-3.5 or 189-6, HRS;
- (2) Permits issued pursuant to sections 187A-6, 188-37, or 190-4, HRS;
- (3) As may be otherwise provided by law. [Eff  
] (Auth: HRS §§187A-3.5,  
187A-6, 188-37, 189-6, 190-3) (Imp: HRS  
§§187A-3.5, 187A-6, 188-37, 189-6, 190-4)

§13-86.1-6 Penalty. (a) Any person violating any provision of this chapter shall be subject to:



2. The adoption of chapter 13-86.1, Hawaii Administrative Rules, shall take effect ten days after filing with the Office of the Lieutenant Governor.

I certify that the foregoing are copies of the rules, drafted in the Ramseyer format, pursuant to the requirements of sections 91-4 and 91-4.1, Hawaii Revised Statutes, which were adopted on \_\_\_\_\_ and filed with the Office of the Lieutenant Governor.

\_\_\_\_\_  
SUZANNE CASE  
Chairperson  
Board of Land and Natural  
Resources

APPROVED AS TO FORM:

\_\_\_\_\_  
Deputy Attorney General

